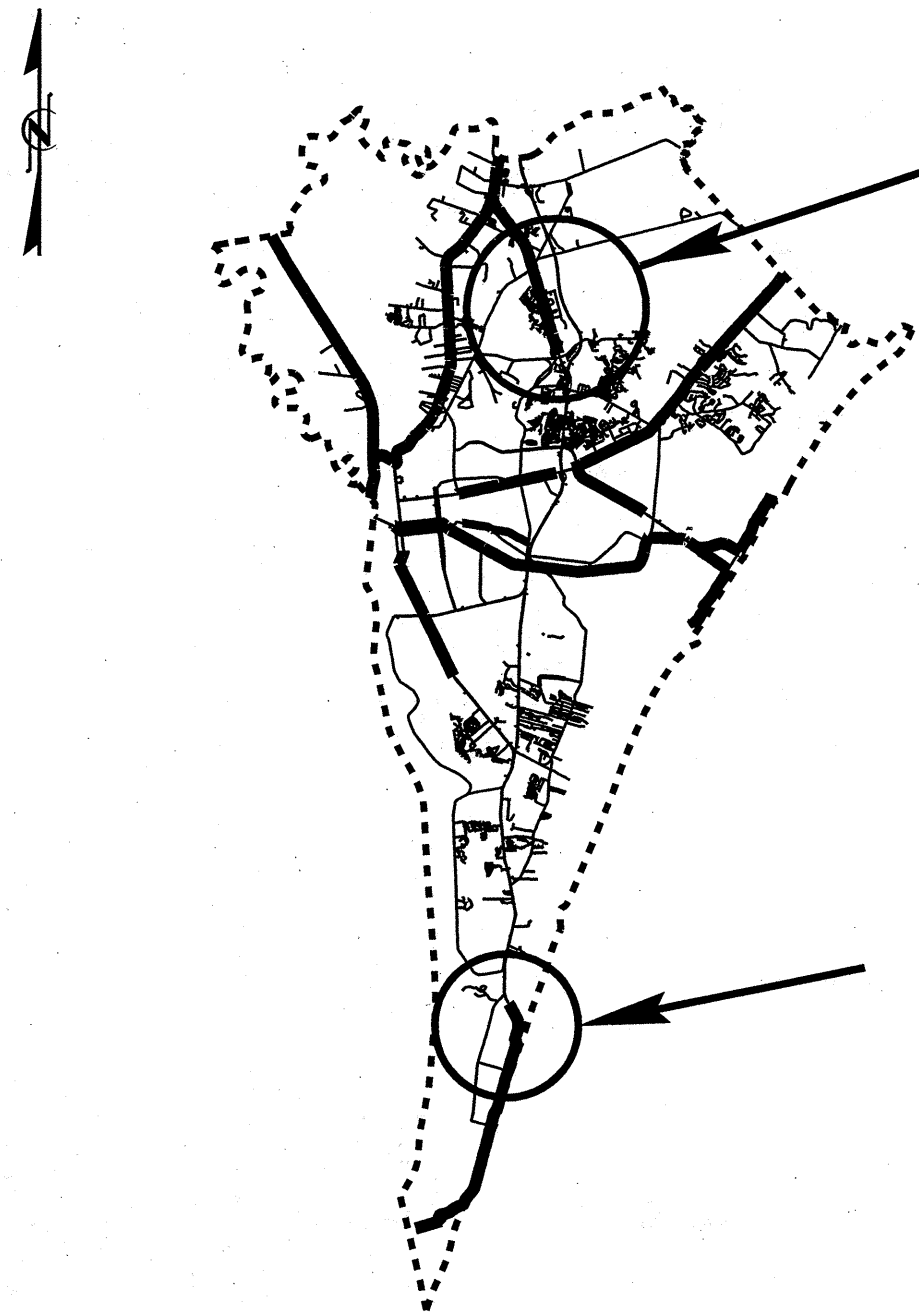
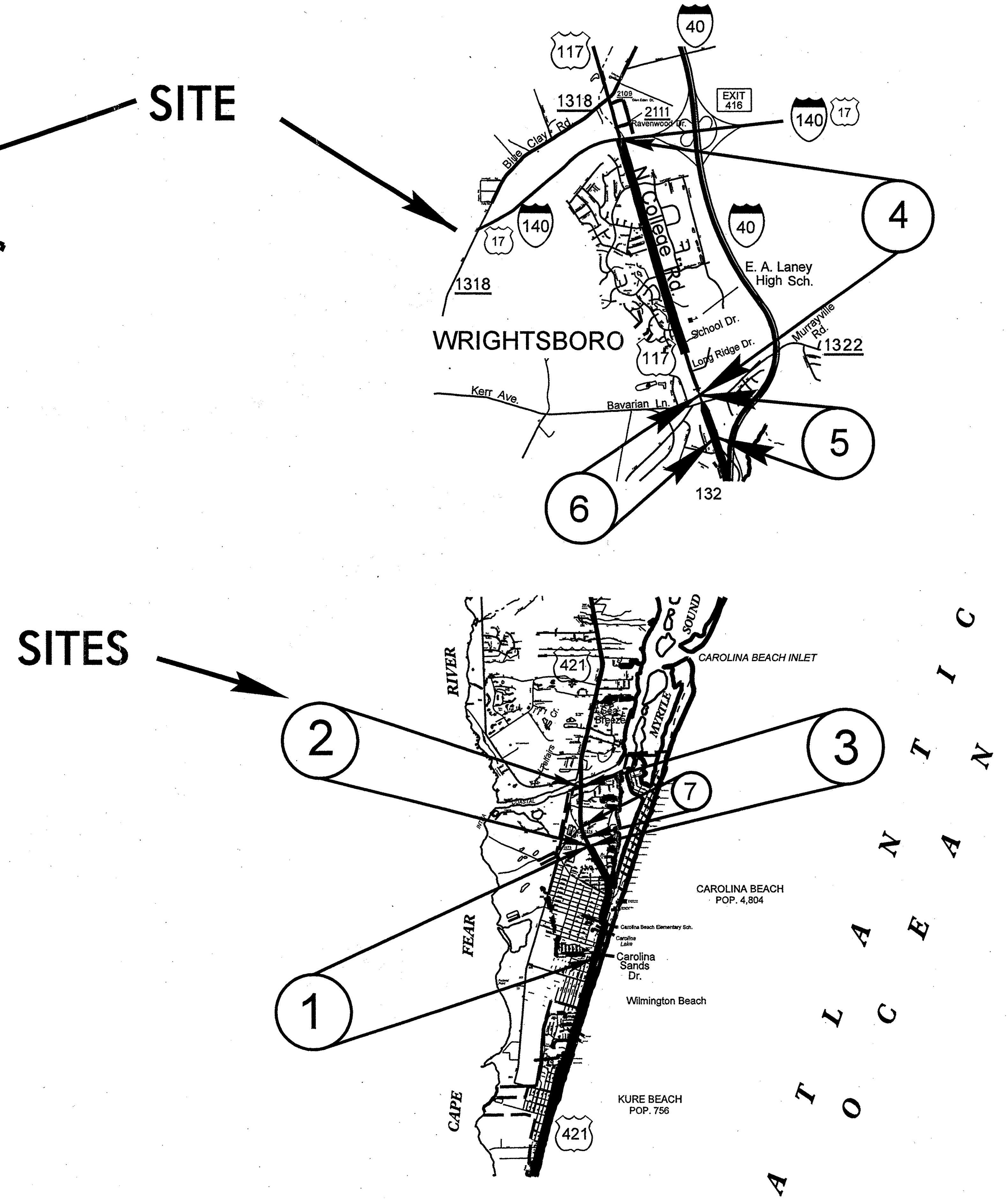
WBS ELEMENT	SHEET
3CR.10651.67 3CR.20651.67	1

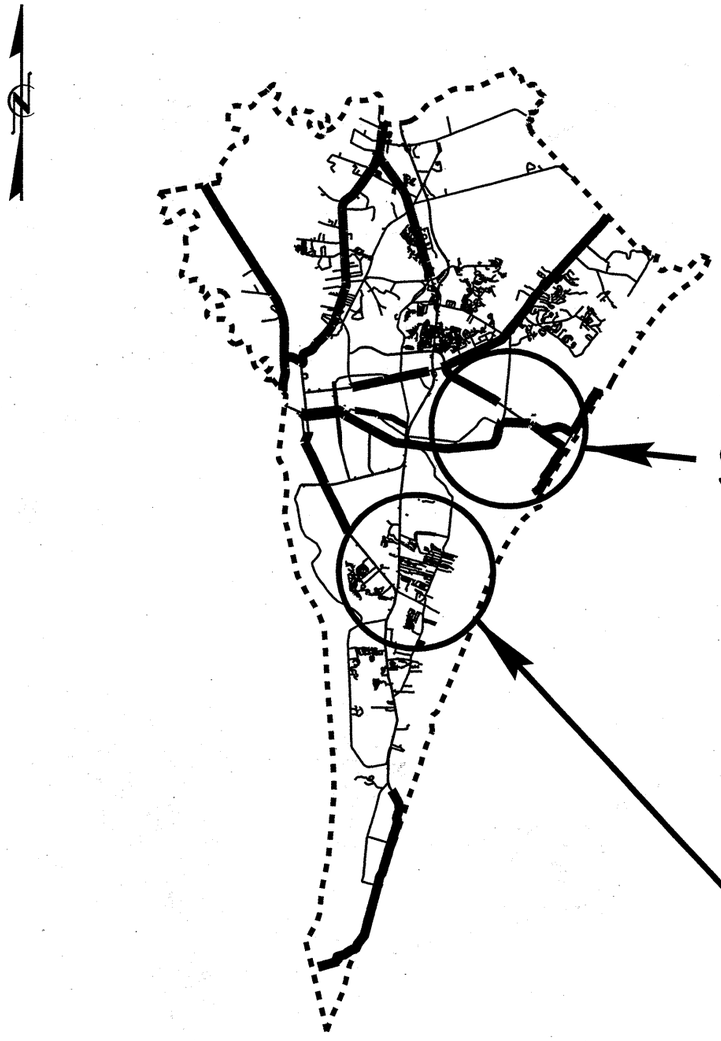




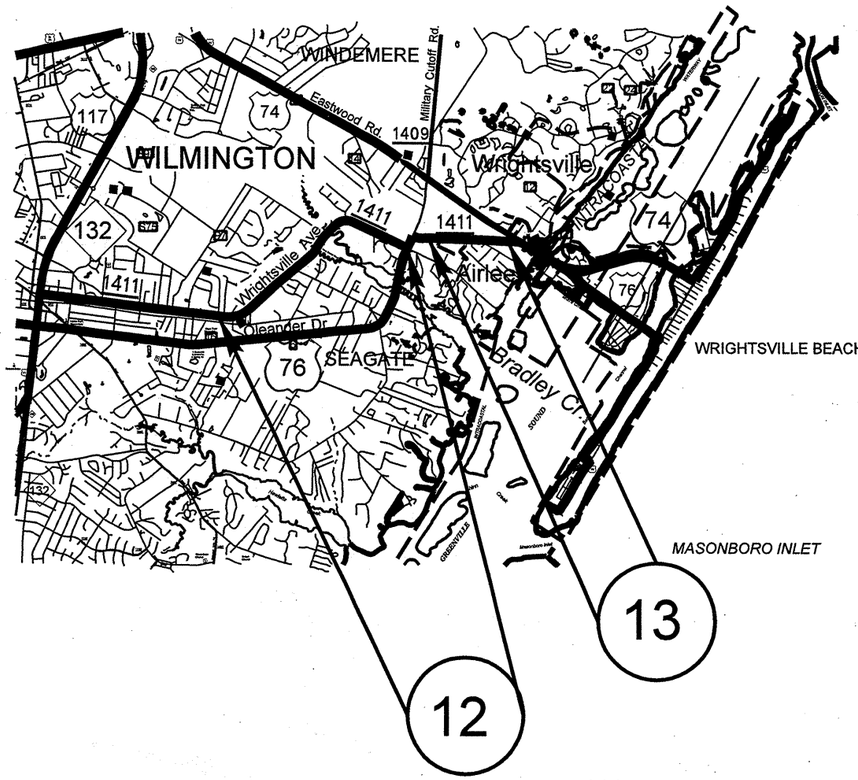
NEW HANOVER COUNTY

NOT TO SCALE

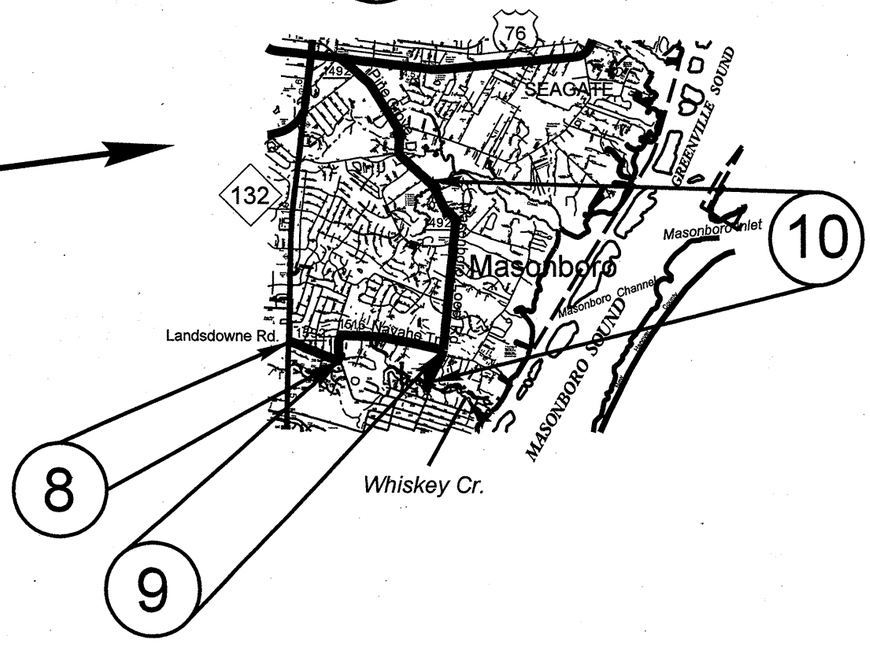
WBS ELEMENT	SHEET
3CR.10651.67	2
3CR.20651.67	



SITE



SITES

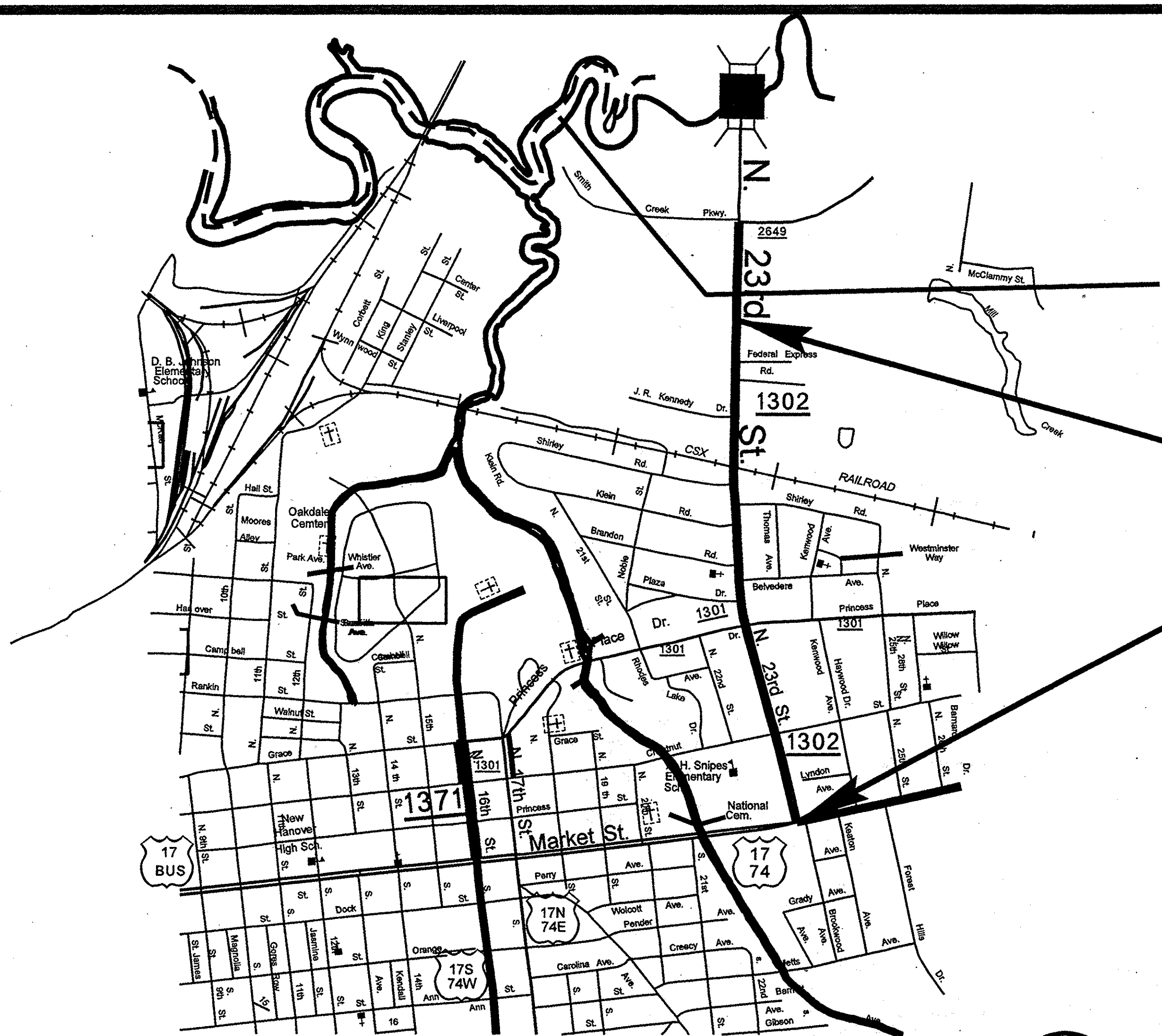


NEW HANOVER COUNTY

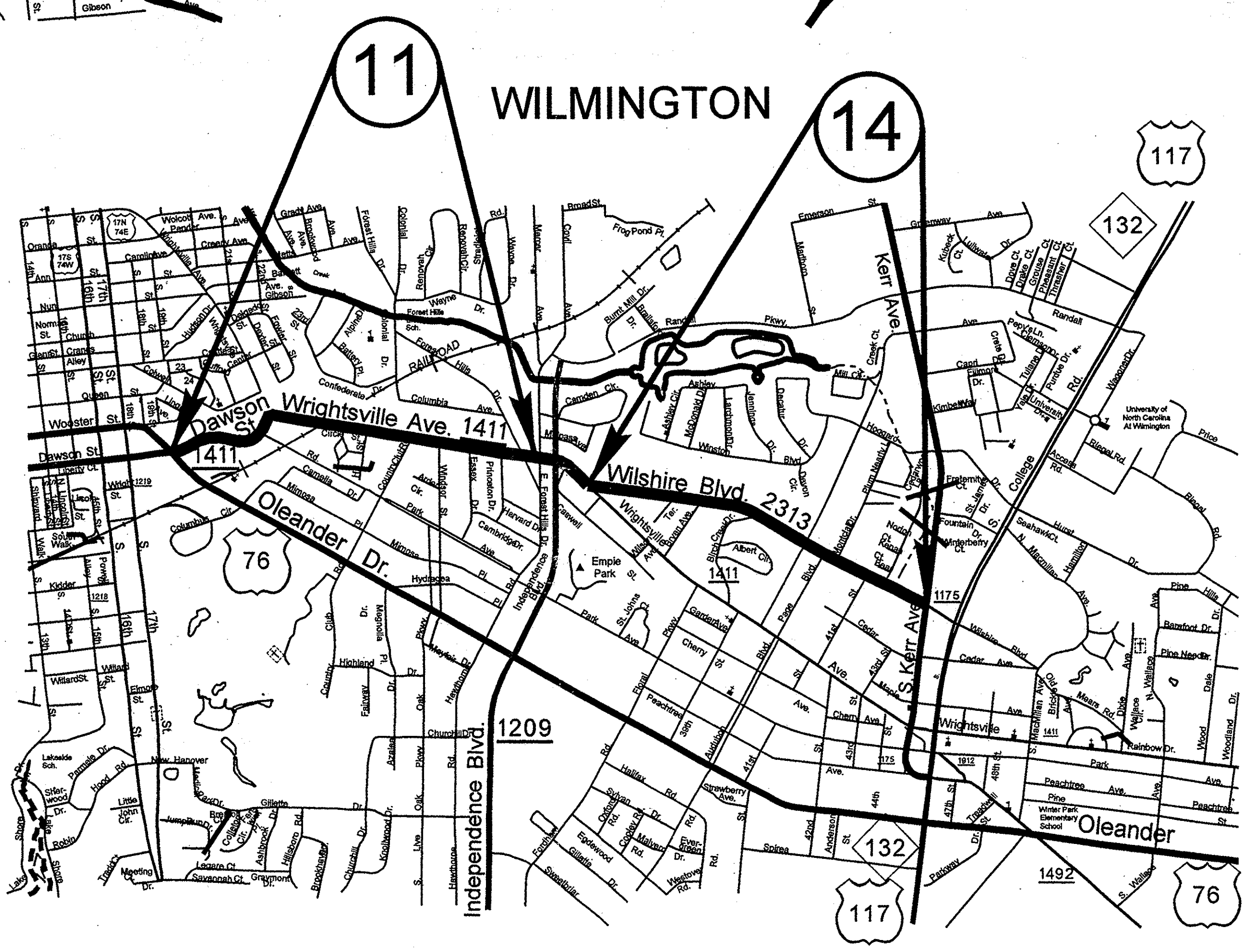
NOT TO SCALE

$$$$$$$SYSTIME$$$$$$
$$$$$$USERNAME$$$$$

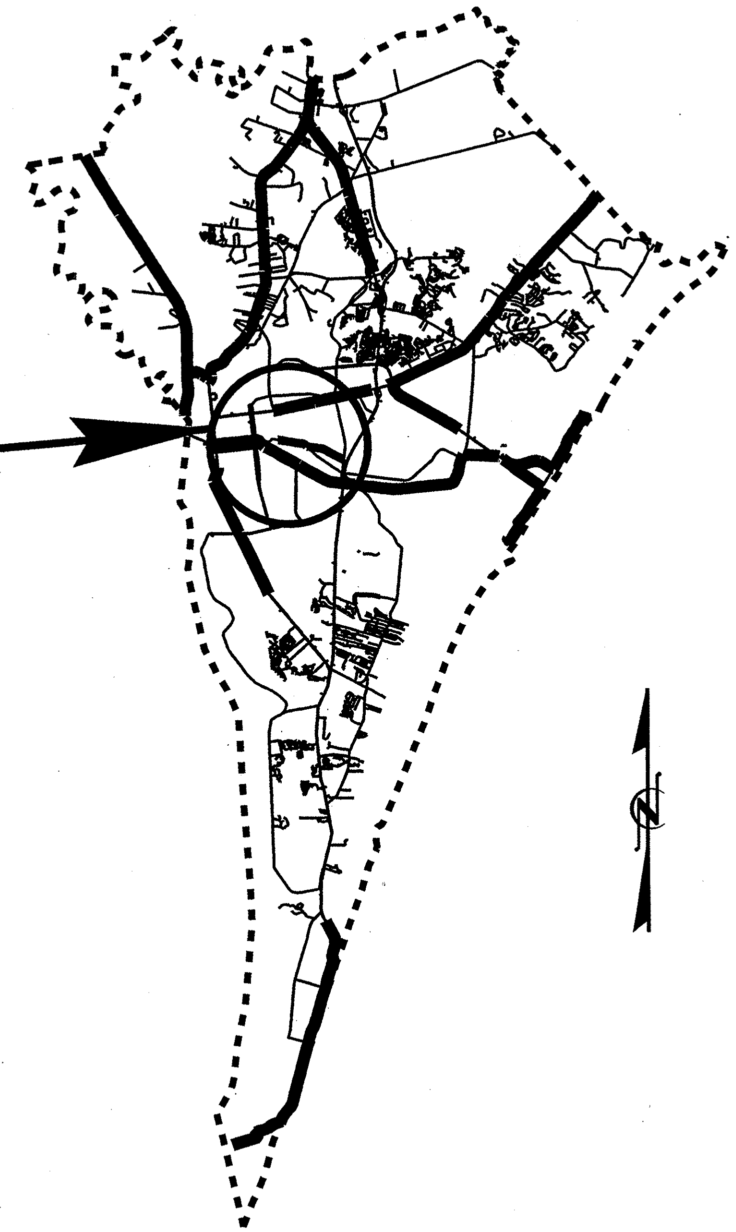
WBS ELEMENT	SHEET
3CR.10651.67	3
3CR.20651.67	



SITES



NOT TO SCALE

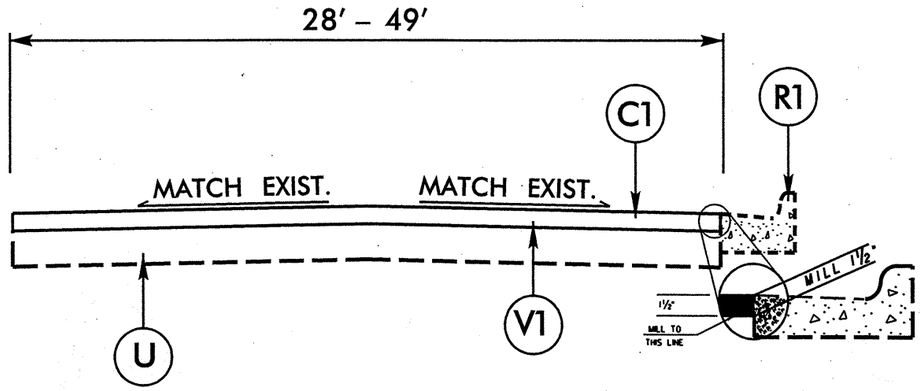


NEW HANOVER COUNTY

NOT TO SCALE

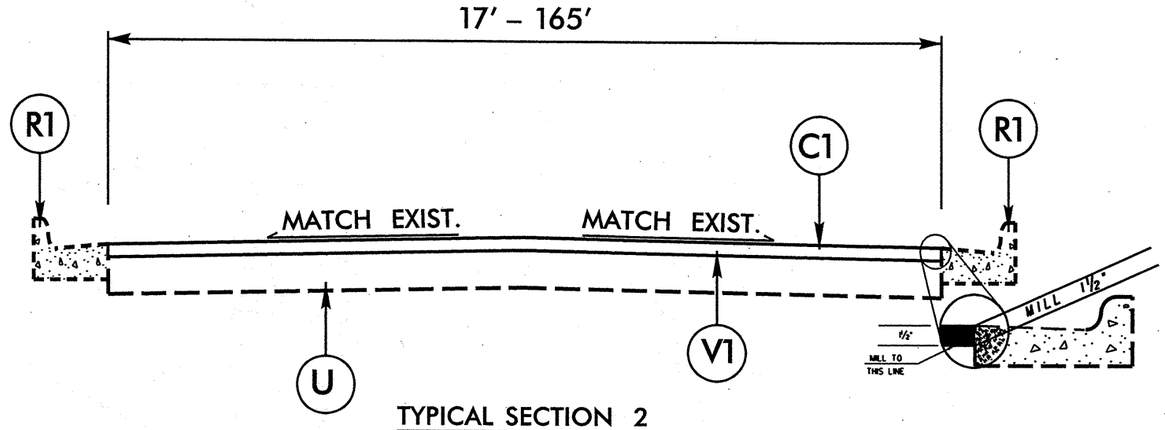
$$$$$$SYSTIME$$$$$
$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$
$$$$$$USERNAME$$$$$

WBS ELEMENT	SHEET
3CR.10651.67	4
3CR.20651.67	



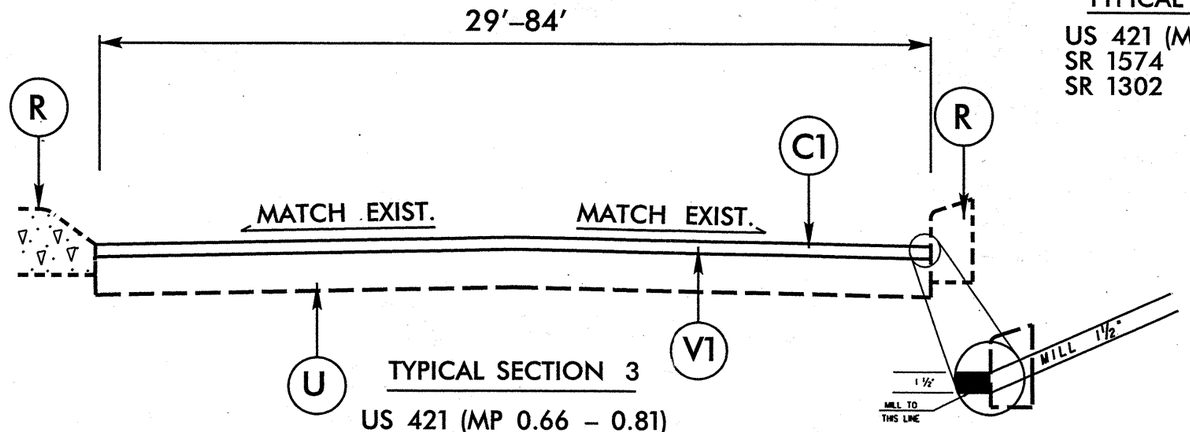
TYPICAL SECTION 1

US 421 (MP 0.0 – 0.02)
SR 1302



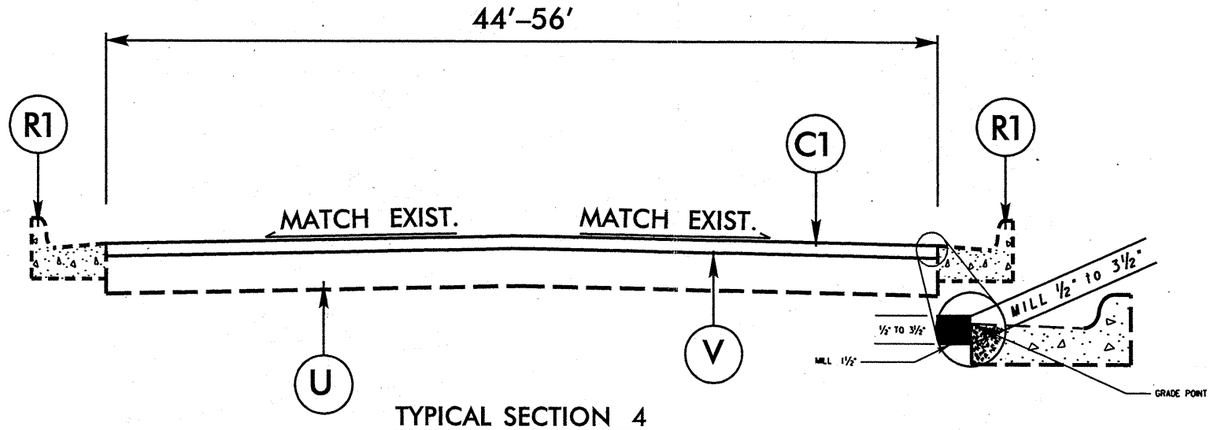
TYPICAL SECTION 2

US 421 (MP 0.02 – 0.66)
SR 1574
SR 1302



TYPICAL SECTION 3

US 421 (MP 0.66 – 0.81)
US 421 NBL
US 421 SBL



TYPICAL SECTION 4

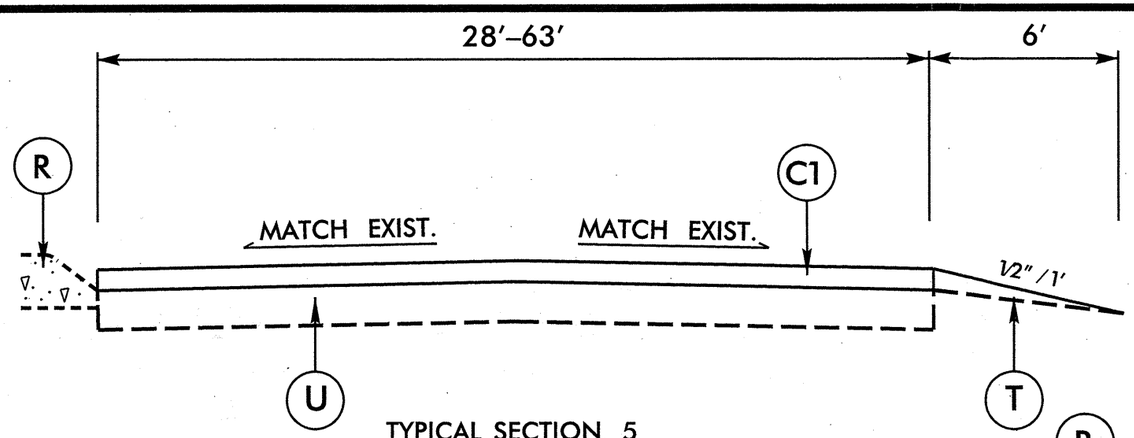
US 421 (MP 0.81 – 1.65)

NOT TO SCALE

PAVEMENT SCHEDULE	
C	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
P	FIBERGLASS POLYESTER INTERLAYER-PAVING MAT.
R	EXISTING ASPHALT/CONCRETE/GRANITE CURB OR CONCRETE ISLAND.
R1	EXISTING 2′ 6" CURB & GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT ½" TO 3½" DEPTH.
V1	MILLING ASPHALT PAVEMENT 1½" DEPTH.

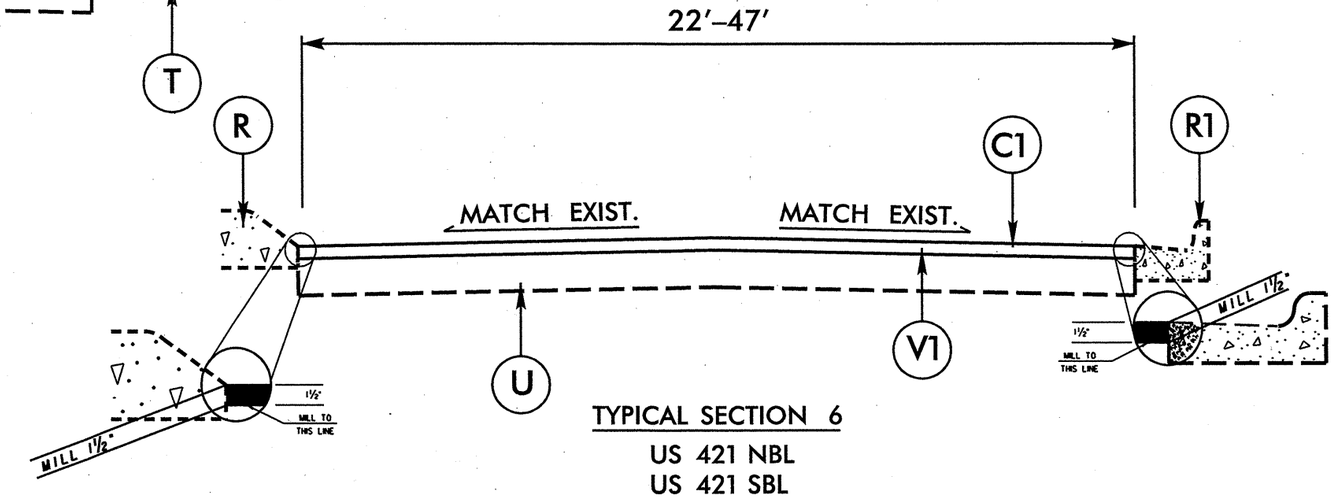
$$$$$$$SYSTIME$$$$$$
$$$$$USERNAME$$$$$

WBS ELEMENT	SHEET
3CR.10651.67	5
3CR.20651.67	



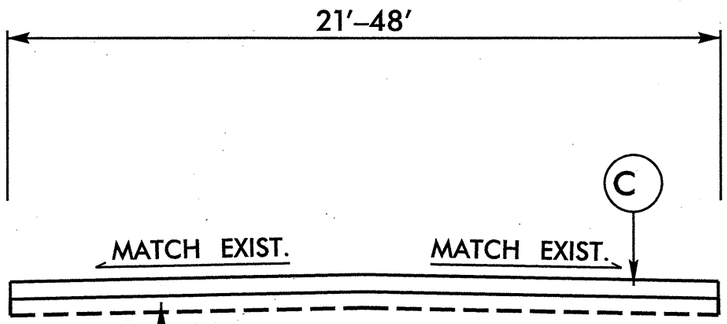
TYPICAL SECTION 5

US 421 NBL US 117 NBL
US 421 SBL US 117 SBL



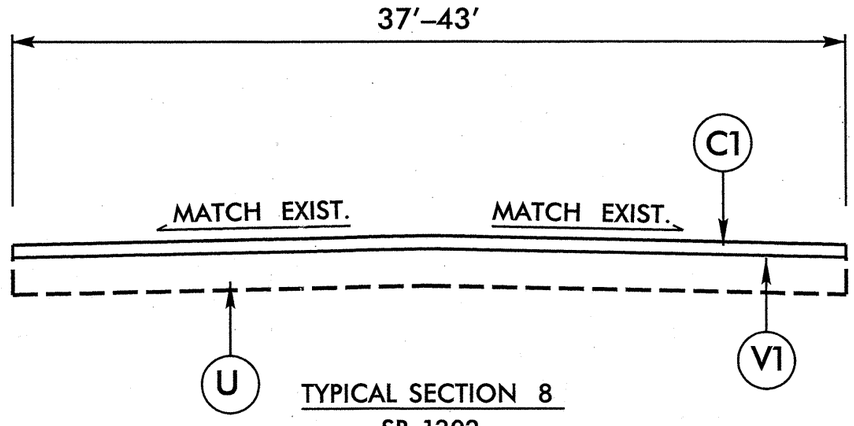
TYPICAL SECTION 6

US 421 NBL
US 421 SBL



TYPICAL SECTION 7

SR 1592 SR 1492
SR 1516



TYPICAL SECTION 8

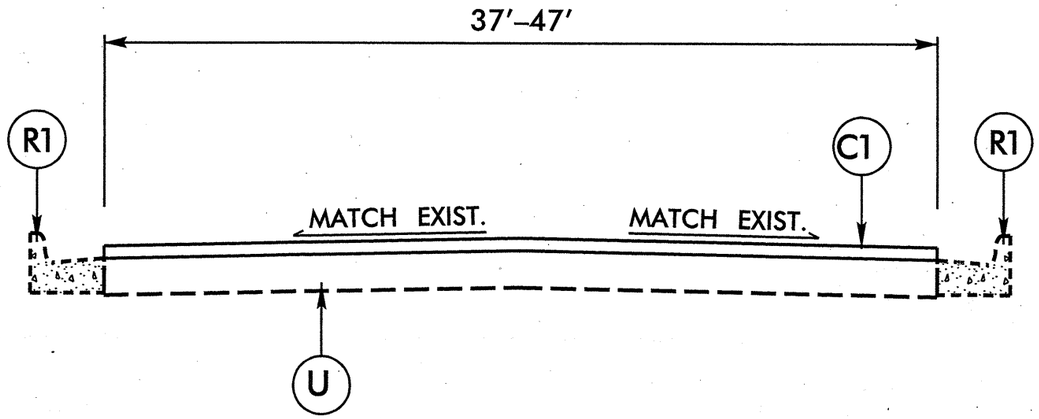
SR 1302

PAVEMENT SCHEDULE	
C	PROP. APPROX. 1½″ ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C1	PROP. APPROX. 1½″ ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E	PROP. APPROX. 5½″ ASPHALT CONCRETE BASE COURSE, TYPE B25.B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
P	FIBERGLASS POLYESTER INTERLAYER-PAVING MAT.
R	EXISTING ASPHALT/CONCRETE/GRANITE CURB OR CONCRETE ISLAND.
R1	EXISTING 2′ 6″ CURB & GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT ½″ TO 3½″ DEPTH.
V1	MILLING ASPHALT PAVEMENT 1½″ DEPTH.

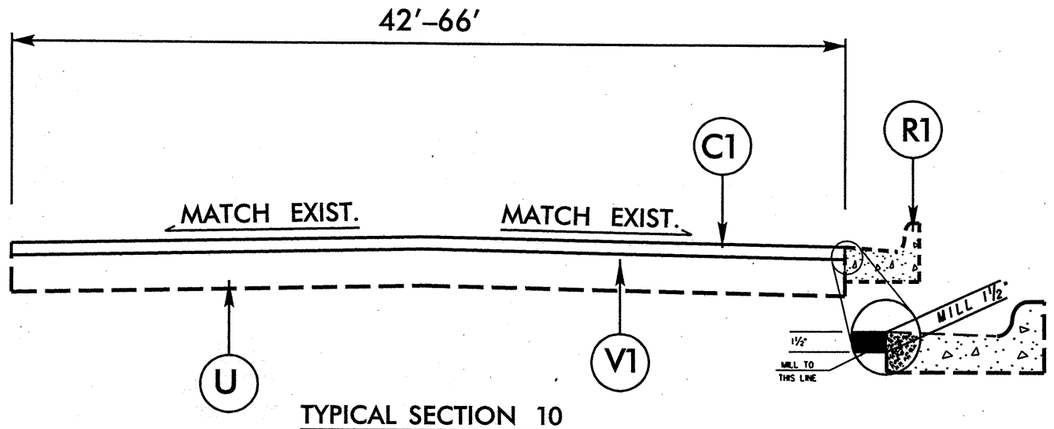
NOT TO SCALE

$$$$$$$SYSTIME$$$$$$$
$$$$$USERNAME$$$$$

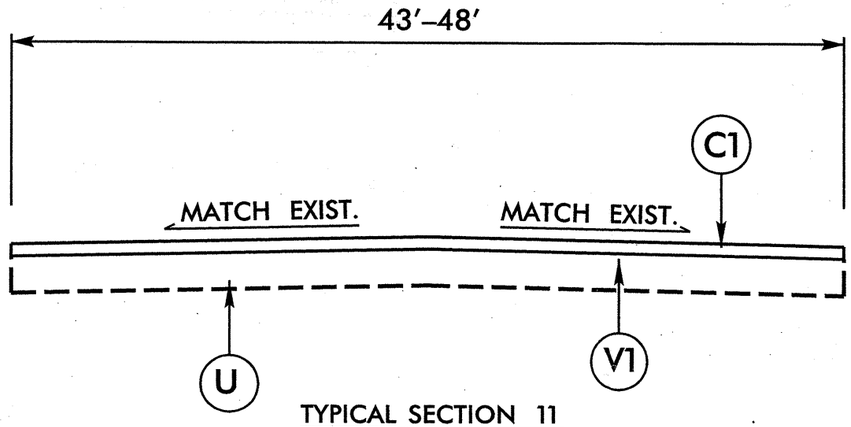
WBS ELEMENT	SHEET
3CR.10651.67	6
3CR.20651.67	



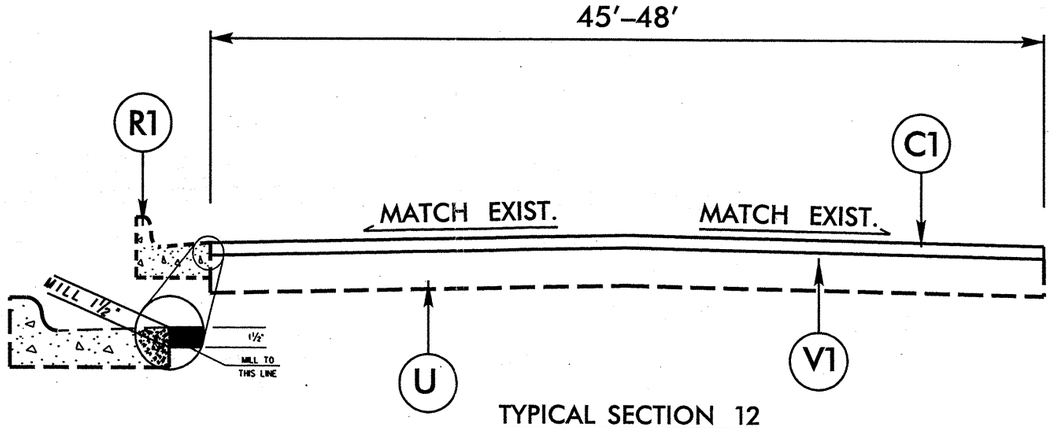
TYPICAL SECTION 9
SR 1411



TYPICAL SECTION 10
SR 2782



TYPICAL SECTION 11
SR 2782

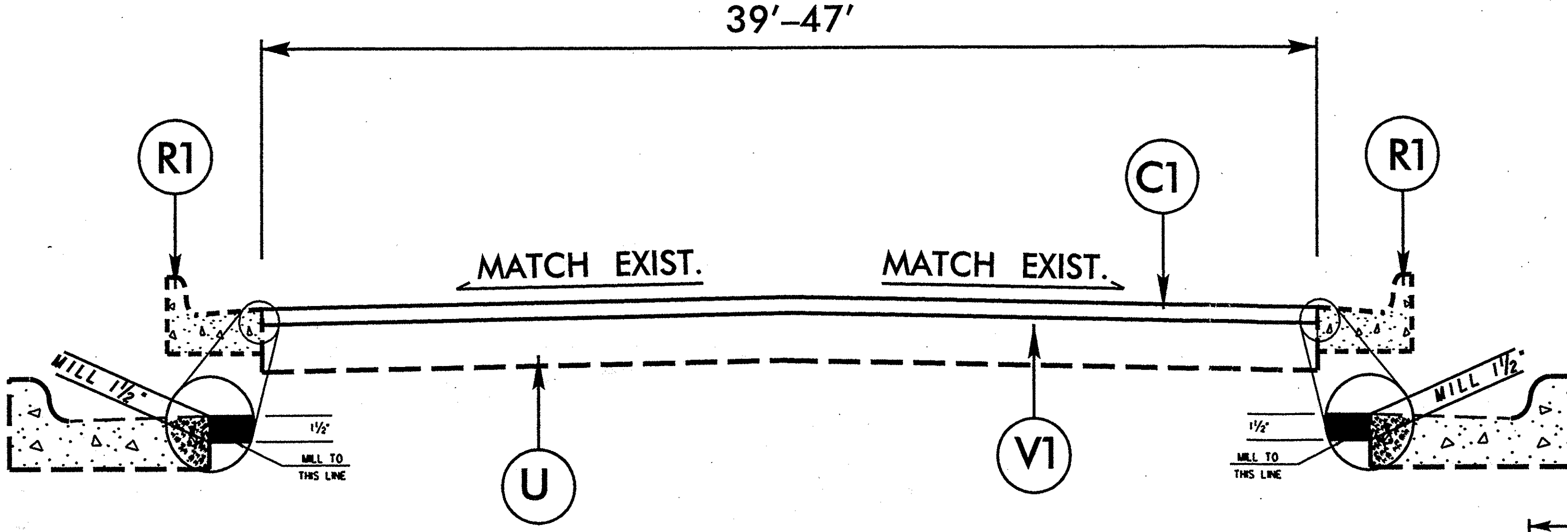


TYPICAL SECTION 12
SR 2782

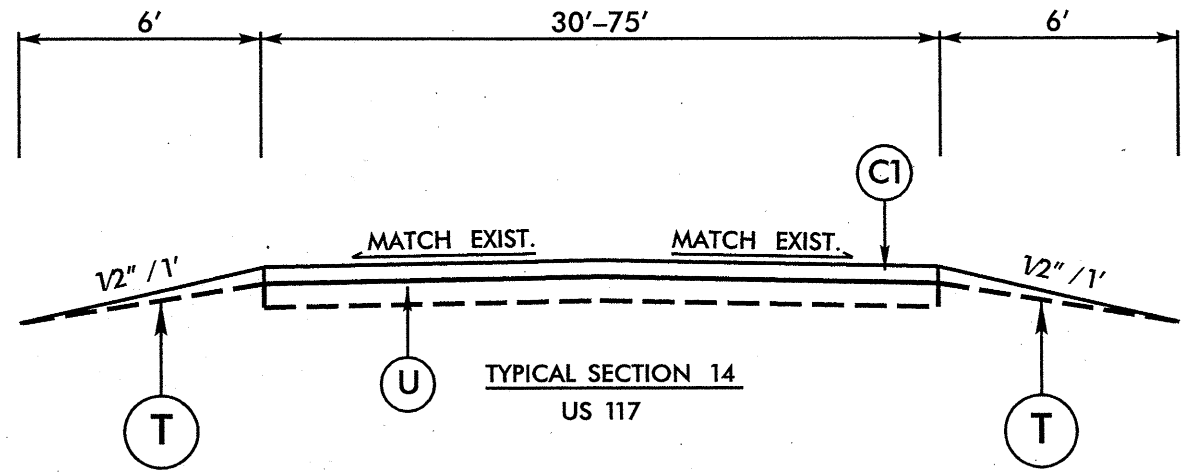
NOT TO SCALE

PAVEMENT SCHEDULE	
C	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
P	FIBERGLASS POLYESTER INTERLAYER-PAVING MAT.
R	EXISTING ASPHALT/CONCRETE/GRANITE CURB OR CONCRETE ISLAND.
R1	EXISTING 2' 6" CURB & GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT ½" TO 3½" DEPTH.
V1	MILLING ASPHALT PAVEMENT 1½" DEPTH.

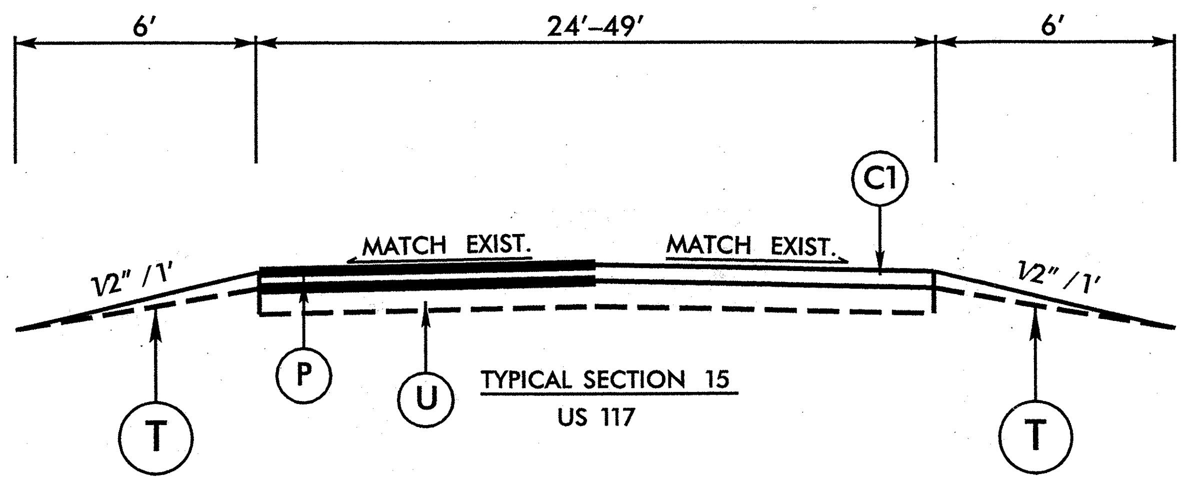
WBS ELEMENT	SHEET
3CR.10651.67 3CR.20651.67	7



TYPICAL SECTION 13
SR 2782

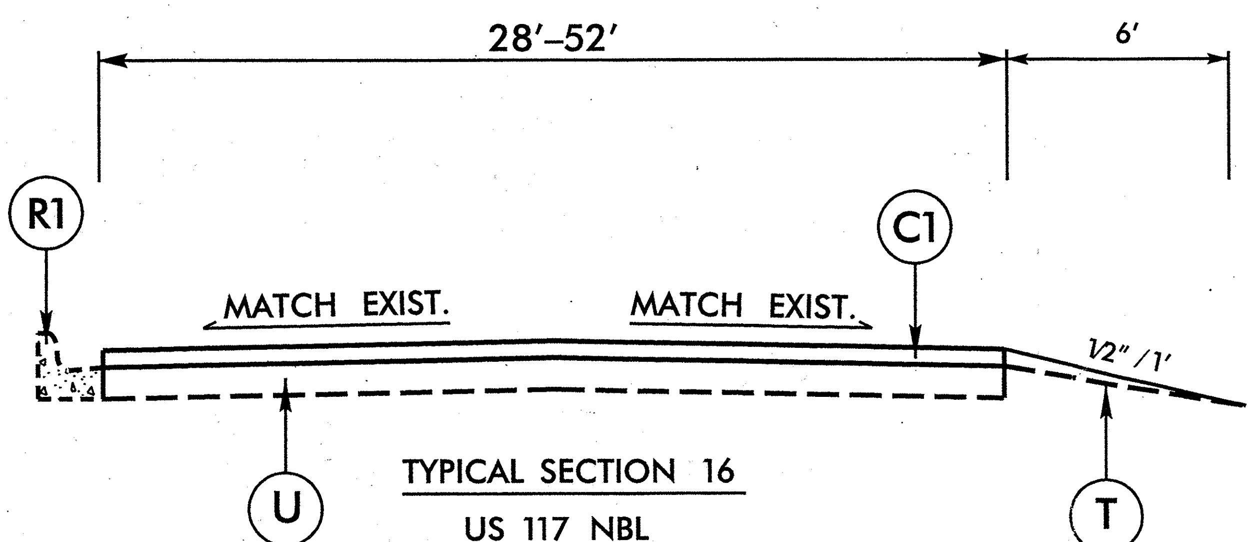


TYPICAL SECTION 14
US 117



TYPICAL SECTION 15
US 117

FIBERGLASS /POLYESTER INTERLAYER-PAVING MAT SHALL BE PLACED IN THE SOUTHBOUND LANE OF US 117 ONLY, FROM MP 0.296 TO MP 0.631 & MP 1.043 TO MP 1.511 OF MAP #4.

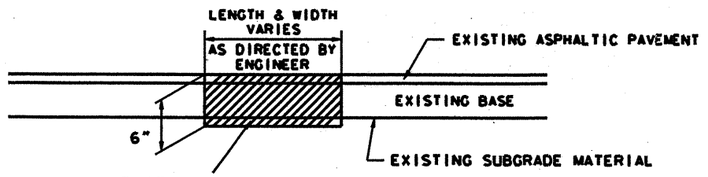


TYPICAL SECTION 16
US 117 NBL
US 117 SBL

PAVEMENT SCHEDULE	
C	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E	PROP. APPROX. 5½" ASPHALT CONCRETE BASE COURSE, TYPE B25.B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
P	FIBERGLASS POLYESTER INTERLAYER-PAVING MAT.
R	EXISTING ASPHALT/CONCRETE/GRANITE CURB OR CONCRETE ISLAND.
R1	EXISTING 2' 6" CURB & GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT ½" TO 3½" DEPTH.
V1	MILLING ASPHALT PAVEMENT 1½" DEPTH.

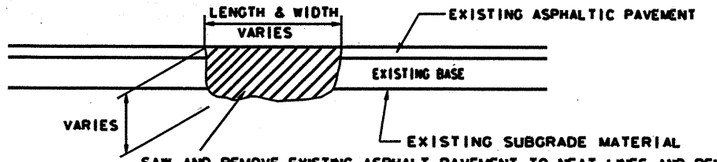
NOT TO SCALE

DETAILS OF REPAIRING EXISTING PAVEMENT PRIOR TO RESURFACING FOR FULL DEPTH AND MILLING



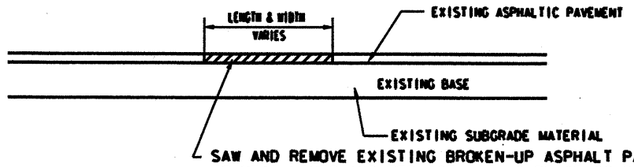
EXISTING ASPHALT PAVEMENT BASE AND/OR SUBGRADE MATERIAL TO BE REMOVED AND REPLACED WITH BASE COURSE, INTERMEDIATE COURSE OR SURFACE COURSE OR A COMBINATION OF BASE, INTERMEDIATE AND SURFACE COURSE, AND PAVEMENT REMOVAL, AS DIRECTED BY THE ENGINEER.

DETAIL NO. 1



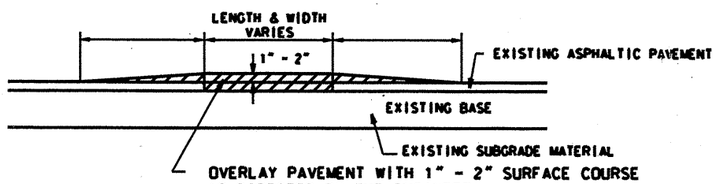
SAW AND REMOVE EXISTING ASPHALT PAVEMENT TO NEAT LINES AND REMOVE EXISTING LOOSE BASE AND/OR SUBGRADE MATERIAL AND REPLACE WITH BASE COURSE, INTERMEDIATE COURSE, OR SURFACE COURSE OR A COMBINATION OF BASE, INTERMEDIATE AND SURFACE COURSE, AND PAVEMENT REMOVAL, AS DIRECTED BY THE ENGINEER.

DETAIL NO. 2



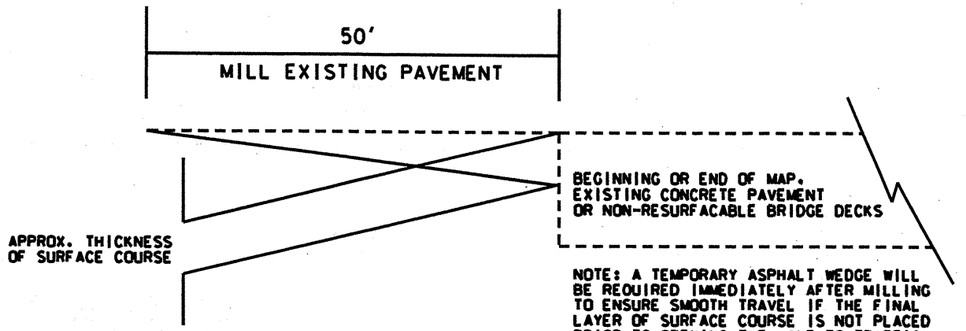
SAW AND REMOVE EXISTING BROKEN-UP ASPHALT PAVEMENT TO NEAT LINES AND REPLACE WITH SURFACE COURSE, AS DIRECTED BY THE ENGINEER

DETAIL NO. 3

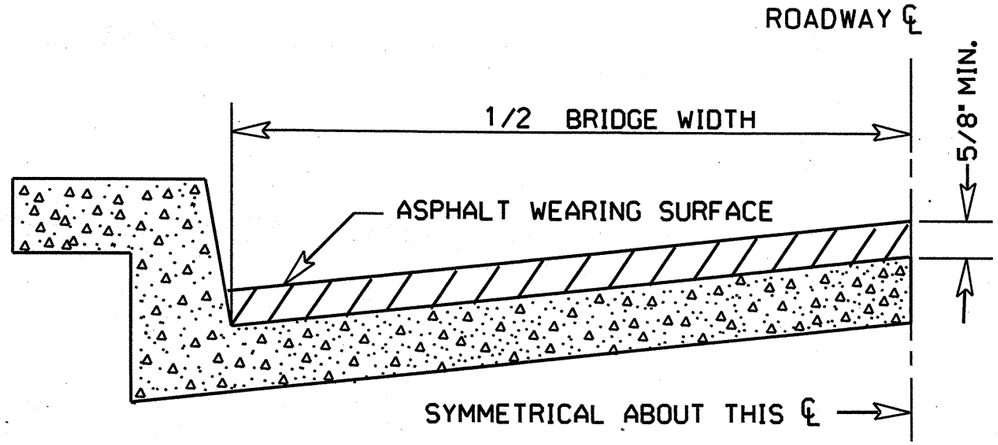


OVERLAY PAVEMENT WITH 1" - 2" SURFACE COURSE AS DIRECTED BY THE ENGINEER.

DETAIL NO. 4



NOTE: A TEMPORARY ASPHALT WEDGE WILL BE REQUIRED IMMEDIATELY AFTER MILLING TO ENSURE SMOOTH TRAVEL IF THE FINAL LAYER OF SURFACE COURSE IS NOT PLACED PRIOR TO OPENING THE LANE TO TRAFFIC.



BRIDGE HALF TYPICAL SECTION

FOR BRIDGES WITH FLOOR DRAINS, CARE SHALL BE EXERCISED IN PLACING THE WEARING SURFACE AROUND FLOOR DRAINS SO AS NOT TO HINDER EFFECTIVE DRAINAGE. ALL DRAINS SHALL BE LEFT OPEN.

THE PROPOSED WEARING SURFACE SHALL VARY IN THICKNESS AS NECESSARY TO PROVIDE A SMOOTH RIDING SURFACE. A THICKNESS OF NOT LESS THAN 5/8" SHALL BE PROVIDED. THE MAXIMUM THICKNESS SHALL PREFERABLY BE 1-1/2" UNLESS IT IS IMPRACTICAL TO PROVIDE A SMOOTH RIDING SURFACE OTHERWISE.

SUMMARY OF QUANTITIES

PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10651.67 and 3CR.20651.67	9	

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	LENGTH MI	WIDTH FT	BORROW EXC. CY	INC. STONE BASE TONS	SHOULDER RECON. SMI	1.5" MILLING SY	1/2" TO 3 1/2" MILLING SY	INC. MILLING SY	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	LEVELING COURSE, SF9.5A TONS	PG 64-22 PLANT MIX TONS	PATCHING (MILL) TON	PATCHING (FULL DEPTH) TONS	FIBERGLASS POLY INTERLAYER-PAVE MAT SY	2'-6" CURB & GUTTER, REMOVE AND LF	RETROFIT EXIST W/C RAMPS EA	W/C RAMPS EA	GENERIC PAVING ITEM INC. CONC SY	ADJ. CATCH BASIN EA	ADJ. DROP INLET EA	ADJ. MAN-HOLE EA	ADJ. MONUMENTS EA	ADJ. METER OR VALVE BOX EA	REMOVE, REPLACE & ADJUST MANHOLE EA	PORTABLE LIGHTING LS	TEMP. SILT FENCE LF	STONE FOR EC CLASS B TON	SEDIMENT CONTROL STONE TON	TEMP. MULCHING ACR	SEED FOR TEMP. SEEDING LBS	FERTILIZER FOR TEMP. SEEDING TON	1/4" HARDWARE CLOTH LF	SEED & MULCHING AC	INDUCTIVE LOOP SAWCUT LF	LEAD-IN CABLE (18-4) LF
3CR.10651.67	New Hanover	1	US 421 (28')	FULL WIDTH (MP 0.00 TO MP 0.02)	1	0.02	28				329			30			2																									
		"	"	TAPER 35' TO 46' (MP 0.02 TO MP 0.04)	2	0.02	40				469			44			3																									
		"	"	FULL WIDTH (MP 0.04 TO 0.06)	2	0.02	46				540			50			3																									
		"	"	FULL WIDTH (MP 0.06 TO MP 0.33)	2	0.27	40				6336			784			47																									
		"	"	TAPER 40' TO 32' (MP 0.33 TO 0.37)	2	0.04	36				845			105			6																									
		"	"	FULL WIDTH (MP 0.37 TO MP 0.55)	2	0.18	32				3379			418			25																									
		"	"	FULL WIDTH (MP 0.55 TO MP 0.66)	2	0.11	54				3485			431			26																									
		"	"	FULL WIDTH (MP 0.66 TO 0.73)	3	0.07	82				3368			416			25																									
		"	"	FULL WIDTH (MP 0.73 TO 0.81)	3	0.08	84				3942			487			29																									
		"	"	FULL WIDTH (MP 0.81 TO 1.59)	4	0.78	44					20134		1,860			149																									
		"	"	FULL WIDTH (MP 1.56 TO 1.65)	4	0.06	56					1971		244			15																									
		"	"	.03 MILES SOUTH OF CAROLINA SANDS DR. TO 0.15 MILES SOUTH OF SR 1573 (DOW RD) (29 NON-SYSTEM INTERSECTIONS AT 20 TONS EA)			46						6500	580			35	100			250	12	11	15		2	23	2	14		*									2,000	1,500
TOTAL FOR MAP NO. 1						1.65					22693	22105	6500	5,449			365					250	12	11	15		2	23	2	14		*									2,000	1,500
		2	US 421 SBL	0.39 MILES NORTH OF SR 1573 (DOW RD.)(SNOWSCUT BRIDGE) TO 0.15 MILES SOUTH OF SR 1573 (DOW RD.)					22									50				2											54	14	14	0.54	27	0.14	27			
		"	"	FULL WIDTH	3	0.1	34				1995			185			11																									
		"	"	TAPER 34' TO 47'	3	0.02	40.5				481			45			3																									
		"	"	TAPER 47' TO 58'	5	0.02	52.5	6		0.02				57			3																								0.02		
		"	"	FULL WIDTH	5	0.05	58	16		0.05				158			9																								0.04		
		"	"	TAPER 40' TO 41'	5	0.12	40.5	38		0.12				268			16																								0.10		
		"	"	TAPER 41' TO 51'	5	0.03	46	10		0.03				75			5																								0.03		
		"	"	FULL WIDTH	5	0.05	51	16		0.05				139			8																								0.04		
		"	"	FULL WIDTH	5	0.03	30	10		0.03				49			3																								0.03		
		"	"	TAPER 30' TO 40'	5	0.02	35	6		0.02				38			2																								0.02		
		"	"	FULL WIDTH	5	0.03	40	10		0.03				65			4																								0.03		
		"	"	TAPER 28' TO 40'	5	0.02	34	6		0.02				37			2																								0.02		
		"	"	FULL WIDTH	5	0.02	40	6		0.02				44			3																								0.02		
		"	"	TAPER 27' TO 35'	6	0.03	31				546			51			3						2																			
TOTAL FOR MAP NO. 2						0.54		124	22	0.39	3022			1,211			72						4											54	14	14	0.54	27	0.14	27	0.35		
		3	US 421 NBL (29'-22')	0.15 MILES SOUTH OF SR 1573 TO 0.39 MILES NORTH OF SR 1573 (SNOW'S CREEK BRIDGE) TAPER 29' TO 22'	6	0.06	25.5				915			85			5	75																								525	150
		"	"	TAPER 22' TO 35'	6	0.03	28.5				510			47			3																									
		"	"	FULL WIDTH	6	0.05	35				1027			95			6																									
		"	"	FULL WIDTH	5	0.02	58	6		0.02				63			4																								0.02		
		"	"	FULL WIDTH	5	0.01	28	3		0.01				15			1																								0.01		
		"	"	TAPER 28' TO 37'	5	0.03	32.5	10		0.03				54			3																								0.03		
		"	"	TAPER 37' TO 55'	5	0.03	46	10		0.03				75			5																								0.03		
		"	"	TAPER 55' TO 57'	5	0.01	56	3		0.01				30			2																								0.01		
		"	"	FULL WIDTH	5	0.03	57	10		0.03				93			6																								0.03		
		"	"	FULL WIDTH	5	0.08	49	25		0.08				213			13																								0.07		
		"	"	FULL WIDTH	5	0.04	28	13		0.04				61			4																								0.03		
		"	"	TAPER 28' TO 34'	5	0.02	31	6		0.02				34			2																								0.02		
		"	"	FULL WIDTH	5	0.01	34	3		0.01				18			1																								0.01		
		"	"	TAPER 34' TO 35'	3	0.12	34.5				2464			228			14																											
TOTAL FOR MAP NO. 3						0.54		89		0.28	4916			1,111			69																								0.26	525	150
		4	US 117	0.085 MILES NORTH OF SR 1322 TO 0.319 SOUTH OF I-140			42		68																							*	170	42	42	1.70	85	0.42	85			
		"	"	TAPER 75' TO 49'	14	0.1	62	64		0.2				352			21																								0.17		
		"	"	TAPER 49' TO 33'	14	0.038	41	24		0.08				89			5																								0.06		
		"	"	FULL WIDTH	15	0.206	33	131		0.41				387			23			1,228																				0.35		
		"	"	FULL WIDTH	15	0.041	39	26		0.08				91			5			236																				0.07		
		"	"	TAPER 31' TO 37'	15	0.051	34	32		0.1				99			6	20		295																				0.09		
		"	"	FULL WIDTH	15	0.077	43.5	49		0.15				193			12	20		413																				0.13		
		"	"	FULL WIDTH	15	0.035	49	22		0.07				97			6	20		195																				0.06		
		"	"	TAPER 48' TO 30'	15	0.066	39	42		0.13				146			9	20		377																				0.11		
		"	"	FULL WIDTH	15	0.023	30	15		0.05				39			2	20		130																				0.04		
		"	"	TAPER 30' TO 43'	14	0.038	37	24		0.08				80			5	20																								0.06		
		"	"	TAPER 43' TO 49'	14	0.061	46	39		0.12				159			10	20																								0.10		
		"	"	FULL WIDTH	14	0.135	36	86		0.27				276			17	20																								0.23		
		"	"	TAPER 36' TO 46'	14	0.03	41	19		0.06				70			4	20																								0.05		
		"	"	FULL WIDTH	14	0.052	46	33		0.1				136			8	20																								0.09		
		"	"	FULL WIDTH	14	0.03	48	19		0.06				82			5	20																								0.05		
		"	"	TAPER 48' TO 24'	15	0.063	36	40		0.13				129			8	20		354																				0.11		
		"	"	FULL WIDTH	15	0.219	24	139		0.44				299			18			1,239																				0.37		
		"	"	TAPER 24' TO 47'	15	0.048	36	31		0.1				98			6			277																				0.08		
		"	"	FULL WIDTH	15	0.032	47	20		0.06				85			5			177																				0.05		
		"	"	FULL WIDTH	15	0.066	37	42		0.13				139			8			378																				0.11		
		"	"	TAPER 37' TO 24'	15	0.065	31	41		0.13				115			7			372																				0.11		
		"	"	FULL WIDTH	15	0.04	24	25		0.08				55			3			229																				0.07		
		"	"	TAPER 24' TO 35'	14	0.044	30	28		0.09				75			5																								0.07		
		"	"	TAPER 35' TO 40'	14	0.023	38	15		0.05				50			3																								0.04		
		"	"	TAPER 40' TO 49'	14	0.037	45	24		0.07				95			6																								0.06		
		"	"	FULL WIDTH	14	0.039	49	25		0.08				109			7																								0.07		
		"	"	FULL WIDTH	14	0.012	52	8		0.02				35			2																								0.02		
		"	"	TAPER 52' TO 61'	14	0.027	57	17		0.05			339	87			5	10																								0.05		
TOTAL FOR MAP NO. 4						1.698		1080	68	3.39			339	3,667			221	250		5,900											*	170	42	42	1.70	85	0.42	85	2.87		

SUMMARY OF QUANTITIES

PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10651.67 and 3CR.20651.67	10	

PROJECT NO	COUNTY	MAP NO	ROUTE NO	DESCRIPTION	TYP NO	LENGTH Mi	WIDTH FT	BORROW EXC. CY	INC. STONE BASE TONS	SHOULDER RECON. SMI	1.5" MILLING SY	1/2" TO 3 1/2" MILLING SY	INC. MILLING SY	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	LEVELING COURSE, SF9.5A TONS	PG 64-22 PLANT MIX TONS	PATCHING (MILL) TON	PATCHING (FULL DEPTH) TONS	FIBERGLASS POLY INTERLAYER-PAVE MAT SY	2'-6" CURB & GUTTER, REMOVE & REPL LF	RETROFIT EXIST W/C RAMPS EA	W/C RAMPS EA	GENERIC PAVING ITEM INC. CONC SY	ADJ. CATCH BASIN EA	ADJ. DROP INLET EA	ADJ. MANHOLES EA	ADJ. MONUMENTS EA	ADJ. METER OR VALVE BOX EA	REMOVE, REPLACE & ADJUST MANHOLE EA	PORTABLE LIGHTING LS	TEMP. SILT FENCE LF	STONE FOR EC CLASS B TON	SEDIMENT CONTROL STONE TON	TEMP. MULCHING ACR	SEED FOR TEMP. SEEDING LBS	FERTILIZER FOR TEMP. SEEDING TON	1/4" HARDWARE CLOTH LF	SEED & MULCHING AC	INDUCTIVE LOOP SAWCUT LF	LEAD-IN CABLE (18-4) LF
		5	US 117 NBL-ALL	0.185 MILES SOUTH OF SR 1322 TO 0.085 MILES NORTH OF SR 1322			46		11																								27	7	7	0.27	13	0.07	13			
		"	"	TAPER 32' TO 46' (BEG. C & G WEST SIDE)	16	0.039	39	12		0.04			256	86			5																						0.03		
		"	"	TAPER 46' TO 50' (BEG. CONC. ISLAND WEST SIDE)	5	0.014	48	4		0.01				38			2																						0.01		
		"	"	FULL WIDTH	5	0.03	50	10		0.03				85			5																						0.02		
		"	"	TAPER 50' TO 63'	5	0.03	57	10		0.03				97			6																						0.02		
		"	"	FULL WIDTH	5	0.07	63	22		0.07				250			15																						0.06		
		"	"	FULL WIDTH (C & G WEST SIDE)	16	0.085	28	27		0.09				135			8																						0.07		
TOTAL FOR MAP NO. 5						0.268		85	11	0.27			256	691			41																27	7	7	0.27	13	0.07	13	0.21		
		6	US 117 SBL-ALL	0.085 MILES NORTH OF SR 1322 TO 0.185 MILES SOUTH OF SR 1322			41		11																								27	7	7	0.27	13	0.07	13			
		"	"	TAPER 42' TO 44' (BEG. C & G EAST SIDE)	16	0.025	43	8		0.03			244	61			4																						0.02		
		"	"	TAPER 44' TO 52'	16	0.027	48	9		0.03				74			4																						0.02		
		"	"	FULL WIDTH	16	0.033	52	10		0.03				97			6																						0.03		
		"	"	FULL WIDTH (BEG. CONC. ISLAND EAST SIDE)	5	0.05	41	16		0.05				117			7																						0.04		
		"	"	FULL WIDTH	5	0.04	40	13		0.04				91			5																						0.03		
		"	"	TAPER 41' TO 32'	5	0.05	37	16		0.05				105			6																						0.04		
		"	"	TAPER 32' TO 29' (BEG. C & G EAST SIDE)	16	0.02	31	6		0.02				35			2																						0.02		
		"	"	FULL WIDTH	16	0.023	29	7		0.02				38			2																						0.02		
TOTAL FOR MAP NO. 6						0.268		85	11	0.27			244	618			36																27	7	7	0.27	13	0.07	13	0.22		
TOTAL FOR PROJ NO. 3CR.10651.67						4.964		1463	112	4.6	30631	22105	7339	12,747			804	475		5,900	250	16	11	15		2	23	2	14		1	278	70	70	2.78	138	0.70	138	3.91	2,525	1,650
3CR.20651.67		7	SR 1574	0.15 MILES SOUTH OF SR 1573 (DOW RD) TO SR 1573 (TAPER 20' TO 17')	2	0.06	19				669			62			4																								200	75
		"	"	TAPER 17' TO 18'	2	0.03	18				317			29			2																									
		"	"	TAPER 18' TO 18'	2	0.05	19				557			52			3																									
TOTAL FOR MAP NO. 7						0.14					1543			143			9																								200	75
		8	SR 1592	NC 132 TO SR 1516	7	0.56	21		56							658			43	250	25							1	6													
		9	SR 1516	SR 1592 TO SR 1492	7	1.34	21		134							1,576	20	104	125	13									5													
		10	SR 1492	0.12 MILES NORTH OF SR 1517 (TRAILS END RD.) (WHISKEY CREEK BRIDGE) TO 0.22 MILES SOUTH OF BEASLEY RD. (NORTH)			25		225				780				50	3	250	25						2	5		2													
		"	"	FULL WIDTH (MP 0.0-0.09, 0.25-0.31, 0.56-0.71, 0.90-1.0, 1.46-1.81)	7	0.75	25									1,049			68																							
		"	"	FULL WIDTH (MP 0.15-0.18, 0.37-0.5, 0.78-0.84, 1.06-1.29, 1.37-1.40)	7	0.48	36		9							965			63																							
		"	"	FULL WIDTH (MP 1.29-1.32, 1.40-1.43)	7	0.06	48		20							161			10								1		1													
		"	"	TAPER 48' TO 36' (MP 1.32-1.37)	7	0.05	42		11							112			7								1															
		"	"	TAPER 48' TO 25' (MP 1.43-1.46)	7	0.03	36.5		9							59			4																							
		"	"	PATCH ONLY (MP 1.81-2.29)	PATCH	0.48	31												90	9																							
		"	"	TAPER 25' TO 36' (MP 0.09-0.15, 0.18-0.25, 0.31-0.37, 0.5-0.56, 0.71-0.78, 0.84-0.9, 1.0-1.06)	7	0.44	30.5		9							750			49							1																
TOTAL FOR MAP NO. 10						2.29			283				780			3,098	50	204	340	34					3	7		3													
		11	SR 1411 (47' TO 37')	TAPER 47' TO 37'	9	0.04	42							91			5																									
		"	"	TAPER 37' TO 44'	9	0.06	40.5							132			8																									
		"	"	FULL WIDTH	9	0.22	44							526			32																									
		"	"	SR1411 (DAWSON ST. EXT) TO 0.10 MILES WEST OF INDEPENDENCE BLVD.	PATCH	0.75	44												250	25																							
		"	"	US 76 (OLEANDER DR.) TO 0.10 MILES WEST OF INDEPENDENCE BLVD			44							500					400	40		70	2	1		2		12				*									375	150
TOTAL FOR MAP NO. 11						1.07							500	749			45	650	65		70	15	1		2		12				*									375	150
		12	SR 1411	HUNTINGTON RD. (0.2 MILES EAST OF HAWTHORNE RD.) TO US 76 (OLEANDER DR.)	PATCH	1.96	24												300	30																							
		13	SR 2782	0.135 MILES EAST OF US 76 (OLEANDER DR.) TO 0.151 MILES WEST OF US 74 (EASTWOOD RD.)			50												100	35																							
		"	"	TAPER 50' TO 58'	10	0.027	54				855			79			5																									
		"	"	TAPER 58' TO 66'	10	0.017	62				618			57			3																									
		"	"	TAPER 50' TO 54'	10	0.036	52				1098			102			6																									
		"	"	TAPER 54' TO 51'	10	0.032	53				995			92			6																									
		"	"	TAPER 42' TO 45'	10	0.029	44				749			69			4																									
		"	"	FULL WIDTH	10	0.03	45				792			73			4																									
		"	"	TAPER 45' TO 49'	10	0.039	47				1075			100			6																									
		"	"	FULL WIDTH	10	0.067	49		50		1926		375	178			11																									
		"	"	TAPER 43' TO 48'	11	0.102	46				2753			255			15																									
		"	"	TAPER 48' TO 45'	12	0.103	47				2840			263			16																									
		"	"	TAPER 45' TO 46'	11	0.017	46				459			43			3																									
		"	"	TAPER 46' TO 47'	12	0.011	47				303			28			2																									
		"	"	TAPER 47' TO 39'	13	0.081	43				2043			189			11																									
TOTAL FOR MAP NO. 13						0.591			50		16506		375	1,528			92	100	35			6	6				2		2												
		14	SR 2313	SR 1411 (WRIGHTSVILLE AVE.) TO SR 1175 (KERR AVE.)	PATCH	0.93	20												300	25																							
		15	SR 1302	US 17 BUS (MARKET ST.) TO 0.26 MILES NORTH OF RAIRLROAD TRACKS			37												70	7			13	17					18	5	19		*									1,500	150
		"	"	FULL WIDTH	3	0.311	33				6021		250	558			34																									
		"	"	TAPER 33' TO 29'	3	0.058	31				1055			98			6														1											
		"	"	FULL WIDTH	3	0.008	29				136			13			1																									
		"	"	TAPER 165' TO 44'	2	0.019	105				1170		450	108			6																									
		"	"	FULL WIDTH	2	0.031	44				800		74	74			4																									
		"	"	FULL WIDTH	3	0.216	37				4689		394	435			26																									
		"	"	FULL WIDTH, NO C&G	8	0.244	37				5296			491			29																									
		"	"	FULL WIDTH, NO C&G	8	0.017	43				429			40			2																									
		"	"	FULL WIDTH C&G RT SIDE)	1	0.071	49				2041			189			11																									
		"	"	TAPER 29' TO 165'	2	0.009	97				512			47			3																									
TOTAL FOR MAP NO. 15						0.984					22149		1168	2,053			122	70	7			13	17				18	5	19	1	*									1,500	150
TOTAL FOR PROJ NO. 3CR.20651.67						9.865			523		40198		2823	4,473	5,330	70	619	2,135	234		70	34	24		2	3	40	11	29	1	1									2,075	375
GRAND TOTAL						14.829		1463	635	4.6	70829	22105	10162	17,220	5,330	70	1,423	2,610	234	5,900	320	50	35	15	2	5	63	13	43	1	1	278	70	70	2.78	138	0.70	138	3.91	4,600	2,025

PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10651.67 and 3CR.20651.67	11	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4415000000-E FLASHING ARROW PANELS, TYPE C EA	4420000000-E CHANGEABLE MESSAGE SIGN EA	4480000000-E TMIA EA	4685000000-E 4" X 90 M WHITE THERMO LF	4686000000-E 4" X 120 M WHITE THERMO LF	4686000000-E 4" X 120 M YELLOW THERMO LF	4695000000-E 8" X 90 M YELLOW THERMO LF	4697000000-E 8" X 120 M WHITE THERMO LF	4710000000-E 24" X 120 M WHITE THERMO LF	4721000000-E THERMO MSG ONLY 120 M EA	4721000000-E THERMO MSG SCHOOL 120 M EA	4725000000-E THERMO RT ARROW 90 M EA	4725000000-E THERMO STR & LT ARROW 90 M EA	4725000000-E THERMO STR & RT ARROW 90 M EA	4725000000-E THERMO LT ARROW 90 M EA	4725000000-E THERMO STR ARROW 90 M EA	4810000000-E 4" YELLOW PAINT LF	4810000000-E 4" WHITE PAINT LF	4820000000-E 8" WHITE PAINT LF	4820000000-E 8" YELLOW PAINT LF	4830000000-E 16" WHITE PAINT LF	4835000000-E 24" WHITE PAINT LF	4840000000-N PAINT MSG ONLY EA	4840000000-N PAINT MSG SCHOOL EA	4840000000-N PAINT MSG RXR EA	4845000000-N PAINT RT ARROW EA	4845000000-N PAINT STR & LT ARROW EA	4845000000-N PAINT STR & RT ARROW EA	4845000000-N PAINT LT ARROW EA	4845000000-N PAINT STR ARROW EA	4845000000-N PAINT LT & RT ARROW EA	4900000000-N YELLOW & YELLOW MARKERS EA	4900000000-N CYAN & RED MARKERS EA	4905000000-N SNOW PLOWABLE MARKERS (Y/Y) EA	4905000000-N SNOW PLOWABLE MARKERS (C/R) EA
3CR.10651.67	New Hanover	1	US 421 (28')	FULL WIDTH (MP 0.00 TO MP 0.02)					27	211		1,000	350								211	27	1,000			350											2	
		"	"	TAPER 35' TO 46' (MP 0.02 TO MP 0.04)					26	211												211	26															2	
		"	"	FULL WIDTH (MP 0.04 TO 0.06)					132	211												211	132															2	
		"	"	FULL WIDTH (MP 0.06 TO MP 0.33)					1,783	2,851												2,851	1,783															18	
		"	"	TAPER 40' TO 32' (MP 0.33 TO 0.37)					53	422												422	53															3	
		"	"	FULL WIDTH (MP 0.37 TO MP 0.55)					2,138	1,901				8		4						1,901	2,138					8			4							12	24
		"	"	FULL WIDTH (MP 0.55 TO MP 0.66)					1,453	1,162												1,162	1,453															7	19
		"	"	FULL WIDTH (MP 0.66 TO 0.73)					1,110	739							4	4				739	1,110									4	4					5	11
		"	"	FULL WIDTH (MP 0.73 TO 0.81)					1,137	845		500	100				4	4				845	1,137	500			100					4	4					5	15
		"	"	FULL WIDTH (MP 0.81 TO 1.59)					2,109	8,437		500	150			5	7	7	4	6		8,437	2,109	500			150				5	7	7	4	6			55	118
		"	"	FULL WIDTH (MP 1.56 TO 1.65)					158	634	75		100									634	158		75		100											4	10
		"	"	.03 MIILES SOUTH OF CAROLINA SANDS DR. TO 0.15 MILES SOUTH OF SR 1573 (DOW RD) (29 NON-SYSTEM INTERSECTIONS AT 20 TONS EA)																																			
TOTAL FOR MAP NO. 1									10,126	17,624	75	2,000	700	8		9	15	15	4	6	17,624	10,126	2,000	75		700	8			9	15	15	4	6			114	197
		2	US 421 SBL	0.39 MILES NORTH OF SR 1573 (DOW RD.)(SNOWSCUT BRIDGE) TO 0.15 MILES SOUTH OF SR 1573 (DOW RD.)	1	1	1																															
		"	"	FULL WIDTH				548	132													680																7	
		"	"	TAPER 34' TO 47'				110	52													162																2	
		"	"	TAPER 47' TO 58'				110	52													162																3	
		"	"	FULL WIDTH				274	298				50	4		2			2	4		572				50	4			2			2	4				9	
		"	"	TAPER 40' TO 41'				658	317					4		2		2		4		975					4			2		2		4				16	
		"	"	TAPER 41' TO 51'				164	99													263																4	
		"	"	FULL WIDTH				274	396				50	4		2			2	4		670				50	4			2			2	4				30	
		"	"	FULL WIDTH				164	40													204																2	
		"	"	TAPER 30' TO 40'				110	40													150																1	
		"	"	FULL WIDTH				164	198							1						362								1								10	
		"	"	TAPER 28' TO 40'				110	40													150																1	
		"	"	FULL WIDTH				110	132							1						242								1								7	
		"	"	TAPER 27' TO 35'					59													59																2	
TOTAL FOR MAP NO. 2					1	1	1	2,795	1,854				100	12		8		2	4	12		4,651				100	12			8		2	4	12				93	
		3	US 421 NBL (29'-22')	0.15 MILES SOUTH OF SR 1573 TO 0.39 MILES NORTH OF SR 1573 (SNOW'S CREEK BRIDGE) TAPER 29' TO 22'					79													79																4	
		"	"	TAPER 22' TO 35'					59													59																2	
		"	"	FULL WIDTH					330				40						2	4		330				40							2	4				17	
		"	"	FULL WIDTH				110	16													126																	
		"	"	FULL WIDTH				55	13													68																1	
		"	"	TAPER 28' TO 37'				164	59													223																2	
		"	"	TAPER 37' TO 55'				164	79													243																6	
		"	"	TAPER 55' TO 57'				55	33													88																3	
		"	"	FULL WIDTH				164	238							2						402								2								10	
		"	"	FULL WIDTH				438	667				50			3			2	4		1,105				50				3			2	4				48	
		"	"	FULL WIDTH				219	53													272																3	
		"	"	TAPER 28' TO 34'				110	26													136																1	
		"	"	FULL WIDTH				55	13													68																1	
		"	"	TAPER 34' TO 35'				658	158													816																8	
TOTAL FOR MAP NO. 3								2,192	1,825				90			5			4	8		4,015				90				5			4	8				104	
		4	US 117	0.085 MILES NORTH OF SR 1322 TO 0.319 SOUTH OF I-140																																			
		"	"	TAPER 75' TO 49'				1,096	396	1,320						3			5																			13	13
		"	"	TAPER 49' TO 33'				416	75	401																												3	3
		"	"	FULL WIDTH				2,258	272	2,175			50	8	6	4																						14	14
		"	"	FULL WIDTH				441	54	433																												3	3
		"	"	TAPER 31' TO 37'				559		1,077	105																											7	
		"	"	FULL WIDTH				844	51	813																												5	
		"	"	FULL WIDTH				384	185	370									2																			3	5
		"	"	TAPER 48' TO 30'				723	44	1,394	105																											9	
		"	"	FULL WIDTH				252		243																												2	
		"	"	TAPER 30' TO 43'				416	25	803	45																											5	
		"	"	TAPER 43' TO 49'				669	322	1,288	105	100	60																									8	8
		"	"	FULL WIDTH				1,480	713	2,851	105		50		6				2	3																		18	18
		"	"	TAPER 36' TO 46'				329	178	317									2	2																		2	4
		"	"	FULL WIDTH				570	343	549						3				3																		4	14
		"	"	FULL WIDTH				329	158	317			100			3			3	3																		2	8
		"	"	TAPER 48' TO 24'				690	42	1,331	45																											9	
		"	"	FULL WIDTH				2,400		2,313																												15	
		"	"	TAPER 24' TO 47'				526	32	1,014	45																											7	
		"	"	FULL WIDTH				351	169	676	105								2	2																		4	9
		"	"	FULL WIDTH				723	348	1,394	130					3			3	3																		9	9
		"	"	TAPER 37' TO 24'				712	43	1,373	105																											9	
		"	"	FULL WIDTH				438		422																												3	
		"	"	TAPER 24' TO 35'				482		929	45																											6	
		"	"	TAPER 35' TO 40'				252	15	486	45																											3	
		"	"	TAPER 40' TO 49'				406	49	781	90																											5	
		"	"	FULL WIDTH				427	257	412			100			3			3	3																		3	10
		"	"	FULL WIDTH				132	127	127						3			3	3																		1	3
		"	"	TAPER 52' TO 61'				296	53	285																												2	
TOTAL FOR MAP NO. 4								18,602	3,951	25,893	1,075	100	360	8	12	22			25	22																	170	119
		5	US 117 NBL-ALL	0.185 MILES SOUTH OF SR 1322 TO 0.085 MILES NORTH OF SR 1322	1	1	1																															
		"	"	TAPER 32' TO 46' (BEG. C & G WEST SIDE)				214	77																													3	
		"	"	TAPER 46' TO 50' (BEG. CONC. ISLAND WEST SIDE)				77	37										2																			1	
		"	"	FULL WIDTH				164	99																													6	
		"	"	TAPER 50' TO 63'				164	139										2																			6	
		"	"	FULL WIDTH				384	924			130	70	8		6			6	2																		32	
		"	"	FULL WIDTH (C & G WEST SIDE)				466	112																													6	
TOTAL FOR MAP NO. 5					1	1	1	1,469	1,388			130	70	8		6			10	2																		53	

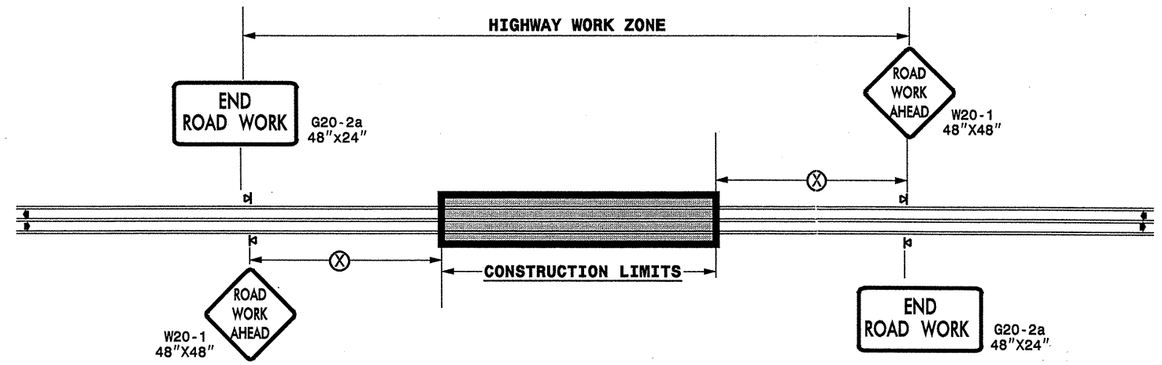
PROJECT NO.	SHEET NO.	TOTAL NO.
3CR.10651.67 and 3CR.20651.67	12	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4415000000-E FLASHING ARROW PANELS, TYPE C EA	4420000000-E CHANGEABLE MESSAGE SIGN EA	4480000000-E TMIA EA	4685000000-E 4" X 90 M WHITE THERMO LF	4686000000-E 4" X 120 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	4695000000-E 8" X 90 M YELLOW THERMO LF	4697000000-E 8" X 120 M WHITE THERMO LF	4710000000-E 24" X 120 M WHITE THERMO LF	4721000000-E THERMO MSG ONLY 120 M EA	THERMO MSG SCHOOL 120 M EA	4725000000-E THERMO RT ARROW 90 M EA	THERMO STR & LT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	THERMO LT ARROW 90 M EA	THERMO STR ARROW 90 M EA	4810000000-E 4" YELLOW PAINT LF	4" WHITE PAINT LF	4820000000-E 8" WHITE PAINT LF	8" YELLOW PAINT LF	4830000000-E 16" WHITE PAINT LF	4835000000-E 24" WHITE PAINT LF	4840000000-N PAINT MSG ONLY EA	PAINT MSG SCHOOL EA	PAINT MSG RXR EA	4845000000-N PAINT RT ARROW EA	PAINT STR & LT ARROW EA	PAINT STR & RT ARROW EA	PAINT LT ARROW EA	PAINT STR ARROW EA	PAINT LT & RT ARROW EA	4900000000-N YELLOW & YELLOW MARKERS EA	YELLOW & RED MARKERS EA	4905000000-N SNOW PLOWABLE MARKERS (Y/Y) EA	SNOW PLOWABLE MARKERS (C/R) EA
		6	US 117 SBL-ALL	0.085 MILES NORTH OF SR 1322 TO 0.185 MILES SOUTH OF SR 1322																																		
		"	"	TAPER 42' TO 44' (BEG. C & G EAST SIDE)				137	66							3				2																		
		"	"	TAPER 44' TO 52'				148	89																														3	
		"	"	FULL WIDTH				181	392				75			2			2	4																		4	
		"	"	FULL WIDTH (BEG. CONC. ISLAND EAST SIDE)				274	132							2				2																		22	
		"	"	FULL WIDTH				219	106							1				2																		7	
		"	"	TAPER 41' TO 32'				274	99																													5	
		"	"	TAPER 32' TO 29' (BEG. C & G EAST SIDE)				110	40																													3	
		"	"	FULL WIDTH				126	30																													1	
TOTAL FOR MAP NO. 6								1,469	954				75			8			2	10																2	
TOTAL FOR PROJ NO. 3CR.10651.67					2	2	2	26,527	20,098	43,517	1,150	2,230	1,395	36	12	58	15	17	49	60	17,624	18,792	2,000	75		890	20			22	15	17	12	26				47	
									63,615					48				199			36,416		2,075				20			92					284	613	
																																					898	
3CR.20651.67		7	SR 1574	0.15 MILES SOUTH OF SR 1573 (DOW RD) TO SR 1573 (TAPER 20' TO 17')						634											634																		
		"	"	TAPER 17' TO 19'						317											317																	4	
		"	"	TAPER 19' TO 18'						528			11								528					11											2	
TOTAL FOR MAP NO. 7										1,478			11								1,479					11										4	
		8	SR 1592	NC 132 TO SR 1516																	11,827	11,827															10	
		9	SR 1516	SR 1592 TO SR 1492																	28,301	28,301															37	
		10	SR 1492	0.12 MILES NORTH OF SR 1517 (TRAILS END RD.) (WHISKEY CREEK BRIDGE) TO 0.22 MILES SOUTH OF SR 1505 (BEASLEY RD. (NORTH))																	554	575																89	
		"	"	FULL WIDTH (MP 0.0-0.09, 0.25-0.31, 0.56-0.71, 0.90-1.0, 1.46-1.81)																	7,920	8,220															3	
		"	"	FULL WIDTH (MP 0.15-0.18, 0.37-0.5, 0.78-0.84, 1.06-1.29, 1.37-1.40)																	5,069	5,894															50	
		"	"	FULL WIDTH (MP 1.29-1.32, 1.40-1.43)									90								1,267	658		120		140		6			2	4				2	32	32	
		"	"	TAPER 48' TO 36' (MP 1.32-1.37)																	660	614							2				4				8	
		"	"	TAPER 48' TO 25' (MP 1.43-1.46)																	317	329											2				7	7
		"	"	PATCH ONLY (MP 1.81-2.29)																	500	500															2	
		"	"	TAPER 25' TO 36' (MP 0.09-0.15, 0.18-0.25, 0.31-0.37, 0.5-0.56, 0.71-0.78, 0.84-0.9, 1.0-1.06)																																	5	5
TOTAL FOR MAP NO. 10													90								9,293	4,822		60												58	
		11	SR 1411 (47' TO 37')	TAPER 47' TO 37'									90								25,580	21,612		180		140		6		2		2	12			164	43	
		"	"	TAPER 37' TO 44'																	422	106				25	4			2						3	5	
		"	"	FULL WIDTH																	634	158												3		4	8	
		"	"	SR1411 (DAWSON ST. EXT) TO 0.10 MILES WEST OF INDEPENDENCE BLVD.																	2,323	581												1		15	29	
		"	"	US 76 (OLEANDER DR.) TO 0.10 MILES WEST OF INDEPENDENCE BLVD																	800	200														6	10	
TOTAL FOR MAP NO. 11																			4,179	1,045				25	4			2			4			27	52	
		12	SR 1411	HUNTINGTON RD. (0.2 MILES EAST OF HAWTHORNE RD.) TO US 76 (OLEANDER DR.)																	3,000	2,500															16	
		13	SR 1411	0.135 MILES EAST OF US 76 (OLEANDER DR.) TO 0.151 MILES WEST OF US 74 (EASTWOOD RD.)																																		
		"	"	TAPER 50' TO 58'				148		356								2			356	148															4	
		"	"	TAPER 58' TO 66'				93	180	224								2			224	273															2	
		"	"	TAPER 50' TO 54'				197	24	475								2			475	221															5	
		"	"	TAPER 54' TO 51'				175	169	422						2		2			422	344															4	8
		"	"	TAPER 42' TO 45'				159	19	383								2			383	178															4	
		"	"	FULL WIDTH				164	158	396						3		2			396	322															4	8
		"	"	TAPER 45' TO 49'				214	206	515								2			515	420															5	10
		"	"	FULL WIDTH				367	354	884						3		2		1	884	721															9	18
		"	"	TAPER 43' TO 48'				1,118		1,346										1	1,346	1,118.															14	
		"	"	TAPER 48' TO 45'				564		1,360								2			1,360	564															2	
		"	"	TAPER 45' TO 46'				186		224											224	186															2	
		"	"	TAPER 46' TO 47'				60		145								2			145	60															2	
		"	"	TAPER 47' TO 39'						1,069											1,069																11	
TOTAL FOR MAP NO. 13								3,447	1,109	7,801						8			20	2	7,801	4,555								8			20	2			79	44
		14	SR 2313	SR 1411 (WRIGHTSVILLE AVE.) TO SR 1175 (KERR AVE.)																	1,000	1,000															10	
		15	SR 1302	US 17 BUS (MARKET ST.) TO 0.26 MILES NORTH OF RAIRLROAD TRACKS																																		
		"	"	FULL WIDTH																	6,568	6,817				320											21	
		"	"	TAPER 33' TO 29'																	1,225														2		4	
		"	"	FULL WIDTH																	169	50	140			40							4	4			1	5
		"	"	TAPER 165' TO 44'																	401	250	240			60				2				2	2		1	12
		"	"	FULL WIDTH																	655	100								4				6	6		2	5
		"	"	FULL WIDTH, NO C&G																	5,702	150			300	150		8			6	24					29	8
		"	"	FULL WIDTH, NO C&G																	6,442	5,348				100						8					32	
		"	"	FULL WIDTH C&G RT SIDE)																	449	373			150	75		4				4					3	
		"	"	TAPER 29' TO 165'																	1,874	1,556										4					10	
TOTAL FOR MAP NO. 15																					23,485	14,645	580	200	450	745		12	6	10	52	8	2	102	30		
TOTAL FOR PROJ NO. 3CR.20651.67								3,447	1,109	9,280			101			8			20	2	106,652	85,485	580	180	450	921	4	6	12	18	12	84	14	2	445	125	89	44
									10,389								30				192,137		760				22			130					570		133	
GRAND TOTAL					2	2	2	29,974	21,207	52,797	1,150	2,230	1,496	36	12	66	15	17	69	62	124,276	104,277	2,580	255	450	1,811	24	6	12	40	15	29	96	40	2	445	125	373	658
									74,004					48			229				228,553		2,835				42			222					570		1,031	

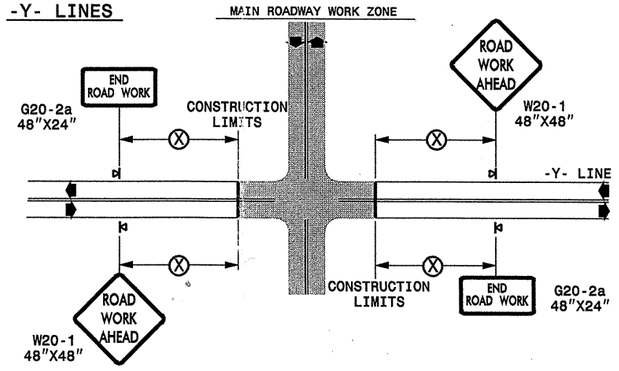
PROJ. REFERENCE NO.	SHEET NO.
3CR.10651.67 & 3CR.20651.67	TCP-1

TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING Ⓧ
≤ 50	500′
≥ 55	1000′

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

PORTABLE SIGN

DIRECTION OF TRAFFIC FLOW

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

DETAIL DRAWING FOR TWO-WAY UNDIVIDED WORK ZONE WARNING SIGNS

SHEET 1 OF 1

APPROVED:_____ DATE:_____

SEAL

DETAIL DRAWING
FOR TWO-WAY UNDIVIDED
ADVANCED WORK ZONE WARNING SIGNS

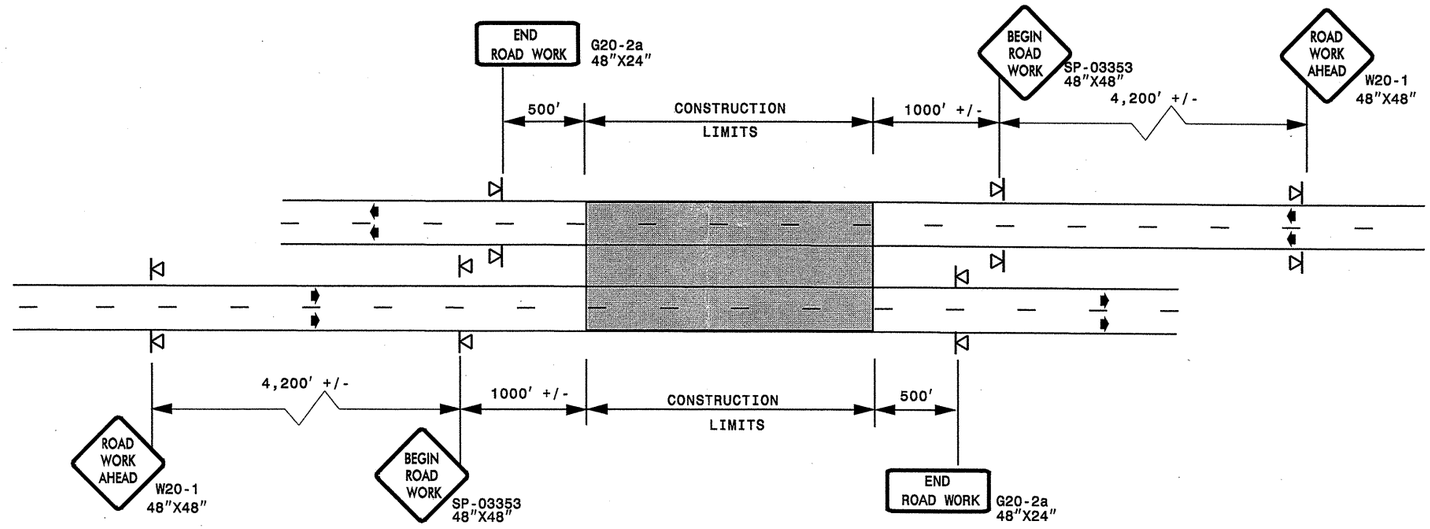
SCALE: NONE	REVISIONS	
DATE:	7-98	10/01
DWG. BY:	10-98	03/04
DESIGN BY:	01/01	11/04
REVIEWED BY:	CADD FILE	

22-OCT-2008 15:29
\\DOT\DFSROOT01\GROUPS-WZTCCC\designgroup4\resurfacing\resurfacing2008\div03\c202188_3cr10651&7etc_2wayundivurbfrwysJuly2006.dgn
pseymore AT WZTC237502

PROJ. REFERENCE NO.	SHEET NO.
3CR.10651.67 & 3CR.20651.67	TCP-2

ADVANCE WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

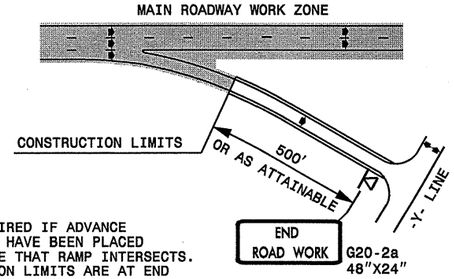
DETAIL A



ROADWAYS INTERSECTING ALONG FREEWAY WORK ZONE (Y-LINES)

DETAIL B

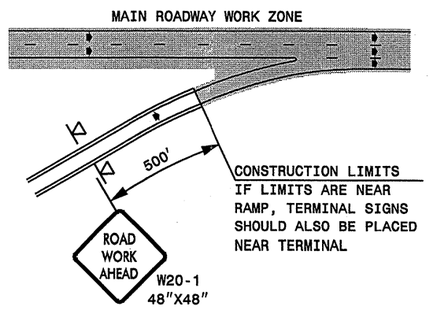
EXIT RAMPS



NOTE:
SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

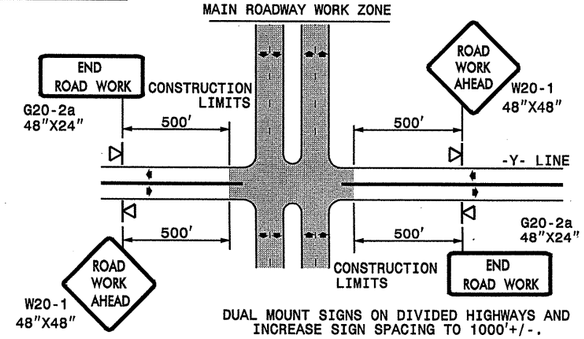
DETAIL C

ENTRANCE RAMPS



DETAIL D

-Y- LINES



DUAL MOUNT SIGNS ON DIVIDED HIGHWAYS AND INCREASE SIGN SPACING TO 1000'+/-.

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCE WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE PORTABLE WORK ZONE SIGNS ONLY WITH PORTABLE WORK ZONE SIGN STANDS SPECIFICALLY DESIGNED FOR ONE ANOTHER. PORTABLE WORK ZONE SIGNS MAY BE ROLL UP OR APPROVED COMPOSITE.
- PROVIDE PORTABLE WORK ZONE SIGN STANDS, PORTABLE SIGNS AND SIGN SHEETING WHICH ARE LISTED ON THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION'S APPROVED PRODUCT LIST OR ACCEPTED AS TRAFFIC QUALIFIED BY THE TRAFFIC CONTROL UNIT.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

DETAIL DRAWING
FOR FREEWAYS
WORK ZONE WARNING SIGNS
(SHORT-DURATION LANE CLOSURES)

SHEET 1 OF 1

APPROVED:_____ DATE:_____

SEAL

DETAIL DRAWING
FOR FREEWAYS
WORK ZONE WARNING SIGNS

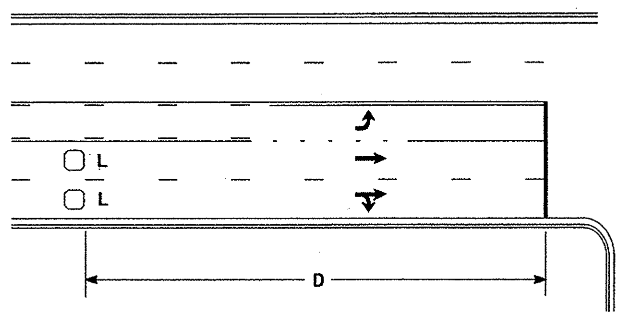
SCALE:	NONE
DATE:	
DWG. BY:	
DESIGN BY:	
REVIEWED BY:	

REVISIONS	
7-98	10/01
10-98	03/04
01/01	11/04
CADD FILE	

PROJECT REFERENCE NO.	SHEET NO.
	SIG 1

3CR.10651.67 & 3CR.20651.67

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



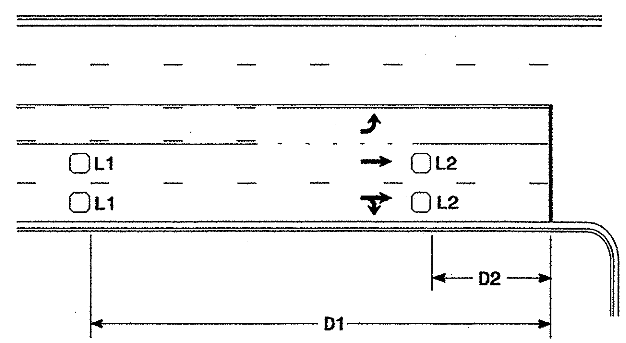
Speed Limit

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



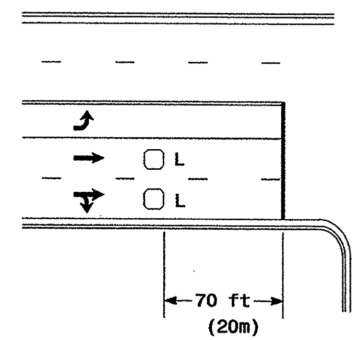
Speed Limit mph (km/hr)		D1 ft	(m)	D2 ft	(m)
40	(64)	250	(75)	80	(25)
45	(72)	300	(90)	90	(27)
50	(80)	355	(110)	100	(30)
55	(88)	420	(130)	110	(35)

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

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

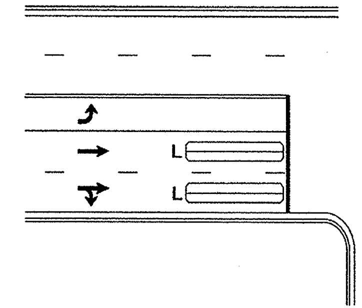
"Stretch" Operation

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



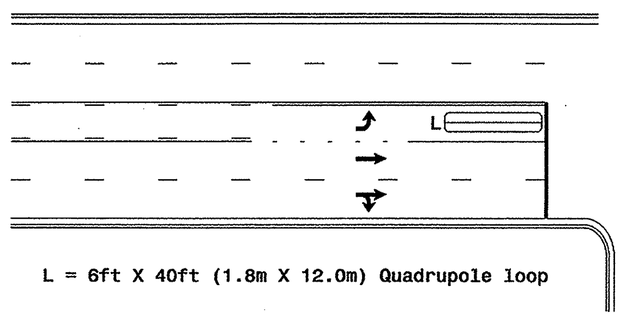
L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

OR



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

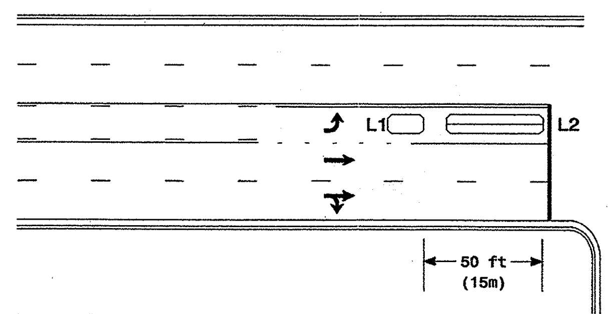
Left Turn Lane Detection



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

Presence Loop Detection

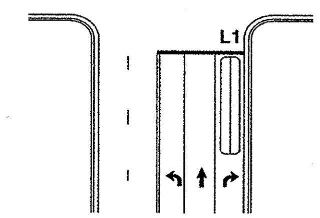
OR



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

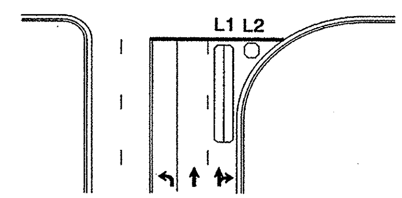
Queue Loop Detection

Right Turn Lane Detection

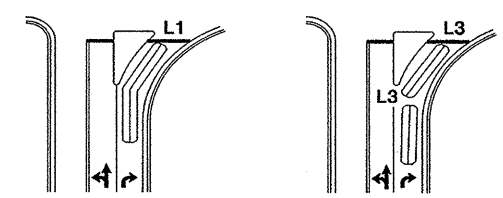


Standard Turn

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

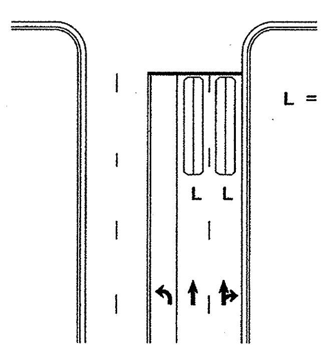


Wide Radius Turn



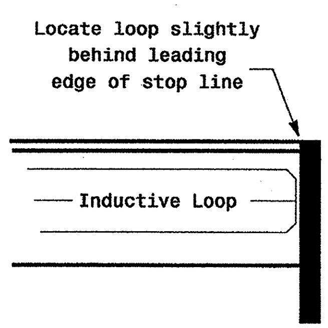
Channelized Turn

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



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

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
State of North Carolina Department of Transportation
Signals and Geometrics Section
122 N. McDowell St., Raleigh, NC 27603

Typical Loop Locations

PLAN DATE: June 2006	REVIEWED BY:
PREPARED BY: P L Alexander	REVIEWED BY:

SCALE
N/A

REVISIONS	INIT.	DATE
Revise pavement markings	aa	12/19/06

SEAL
North Carolina Professional Engineer Seal 23488 Pamela L. Alexander

SIGNATURE
DATE 6/6/06

SIG. INVENTORY NO.

19-DEC-2006 14:29
s:*its signals*lib turn in*misc*looptypical2006.dgn
palexander

PROJECT REFERENCE NO.	SHEET NO.
	Sig. 2

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

5-07

ENGLISH DETAIL DRAWING FOR

INDUCTIVE DETECTION LOOPS

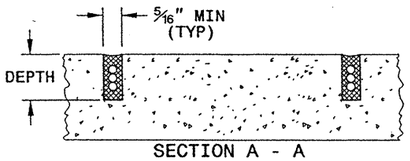
SHEET 1 OF 3

1725D01

CONVENTIONAL 4-SIDED LOOP

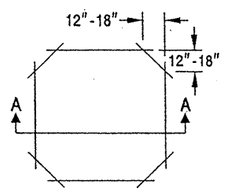
SAW SLOT DEPTH CHART

DEPTH (IN)	NO. OF WIRE TURNS				
	2	3	4	5	6
CONCRETE	2.0	2.0	2.5	2.5	3.0
ASPHALT	2.0	2.5	3.0	3.0	3.0

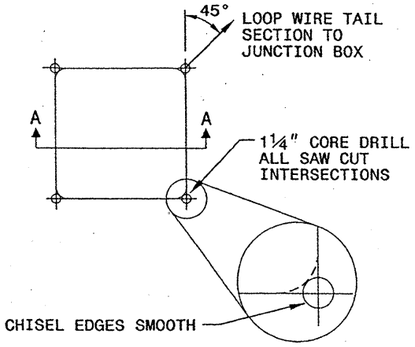


SAW CUT OPTIONS

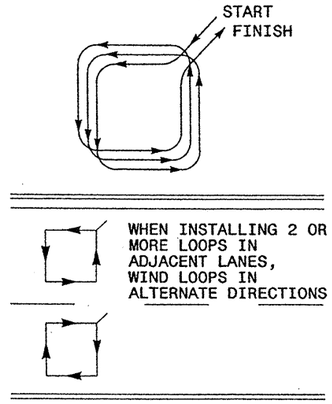
OPTION 1



OPTION 2
(POOR PAVEMENT)



LOOP WINDING METHOD



LOOP WIRE TWISTING METHOD

INCORRECT WAY TO TWIST WIRE

CORRECT WAY TO TWIST WIRE

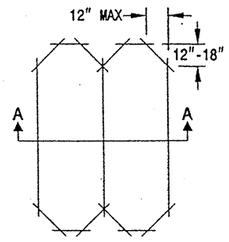
NOTES

1. OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
2. MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
3. WIRE LOOPS CONNECTED TO THE SAME DETECTOR CHANNEL IN SERIES.
4. LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS OR APPROVED BY ENGINEER.

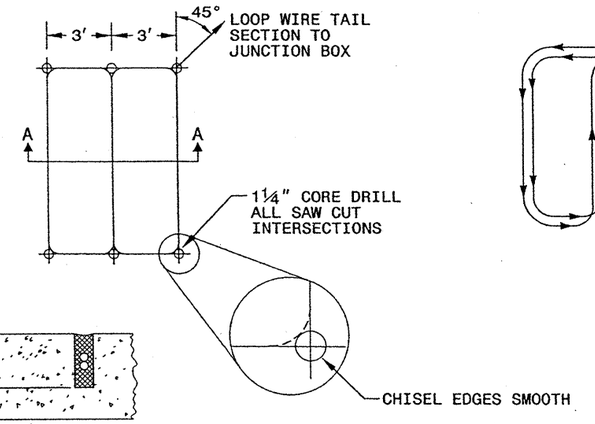
QUADRUPOLE LOOP

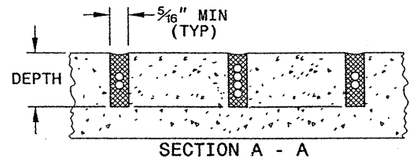
SAW CUT OPTIONS

OPTION 1



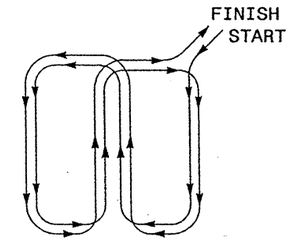
OPTION 2
(POOR PAVEMENT)





DEPTH IS 2.5" FOR CONCRETE AND 3.0" FOR ASPHALT

LOOP WINDING METHOD



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RALEIGH, N.C.

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ENGLISH DETAIL DRAWING FOR

INDUCTIVE DETECTION LOOPS

SHEET 1 OF 3

1725D01

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zmlittle

See Plate for Title

Prepared in the Offices of:

Intelligent Transportation Systems & Signals Unit
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

750 N. Greenfield Parkway
Garner, NC 27529

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 016286 ENGINEER MILTON I. DEAN

Milton I. Dean 9/5/07
SIGNATURE DATE

PROJECT REFERENCE NO.	SHEET NO.
	Sig. 3

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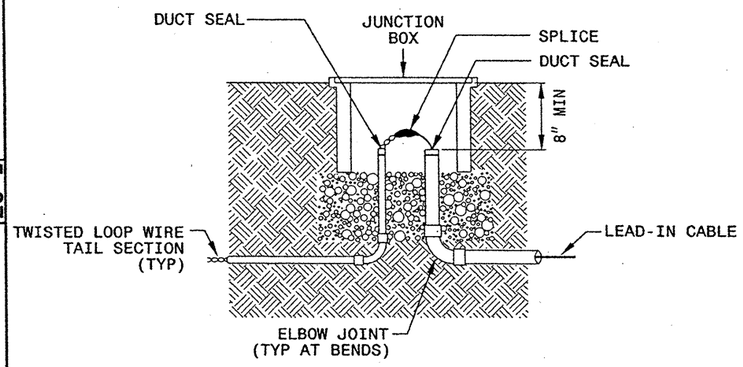
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

5-07

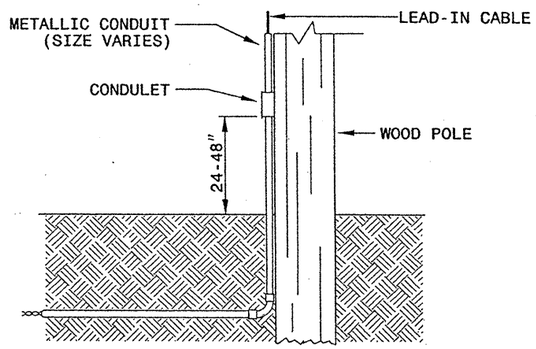
ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS
LOOP WIRE DETAILS

LOOP WIRE SPLICE POINT DETAILS

LOOP WIRE AT JUNCTION BOX



LOOP WIRE AT POLE

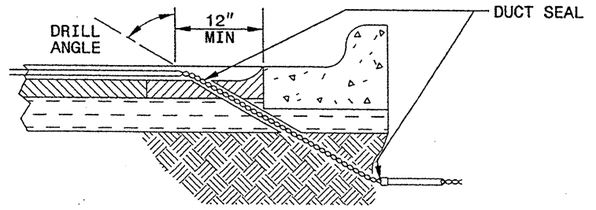


NOTE

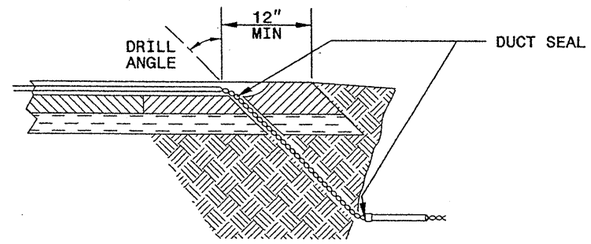
SPLICE ALL LOOP WIRE TAIL SECTIONS/LEAD-IN CABLE IN JUNCTION BOXES OR APPROVED CONDULETS.

LOOP WIRE PAVEMENT EDGE DETAILS

LOOP WIRE AT CURB & GUTTER SECTION



LOOP WIRE AT PAVEMENT SECTION



NOTES

1. DO NOT EXCAVATE UNDER CURB AND GUTTER SECTIONS FOR CONDUIT INSTALLATION.
2. TWIST LOOP WIRE TAIL SECTIONS FROM WHERE LOOP WIRE TAIL LEAVES SAW CUT TO JUNCTION BOX, INCLUDING THROUGH CONDUIT.
3. BEFORE SEALING LOOPS, INSTALL DUCT SEAL WHERE LOOP WIRE TAIL SECTION LEAVES SAW CUT IN PAVEMENT AND AT ENTRANCE OF CONDUIT TO JUNCTION BOX.

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ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS
LOOP WIRE DETAILS

SHEET 2 OF 3
1725D01

SHEET 2 OF 3
1725D01

See Plate for Title

Prepared in the Offices of:
Intelligent Transportation Systems & Signals Unit
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Parkway
Garner, NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 016286 ENGINEER MILTON I. DEAN

Milton I. Dean 9/5/07
SIGNATURE DATE

05-SEP-2007 14:00
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mzmiller

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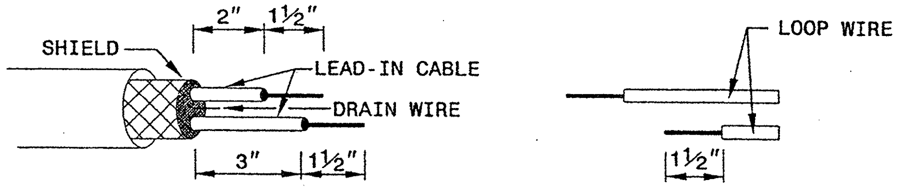
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

5-07

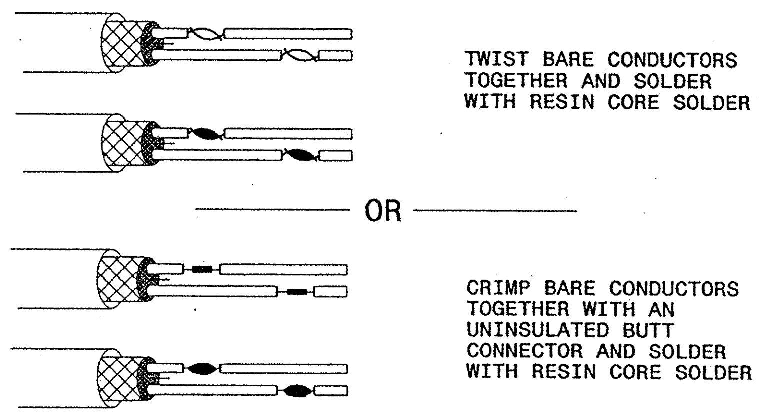
ENGLISH DETAIL DRAWING FOR
INDUCTION DETECTION LOOPS
SPLICING FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3
1725D01

STEP 1. STRIP LOOP WIRE AND LEAD-IN CABLE



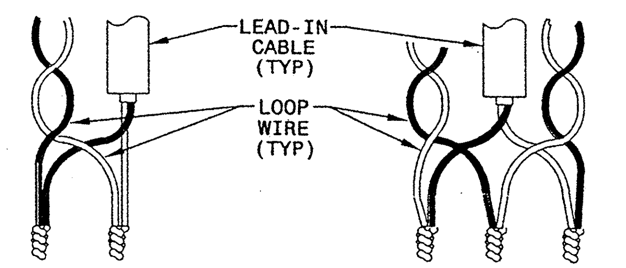
STEP 2. CONNECT AND SOLDER



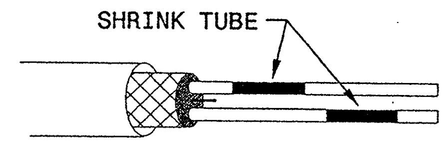
BOND SHIELD DRAIN WIRE AT SPLICE SECTIONS (DO NOT GROUND)

LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS

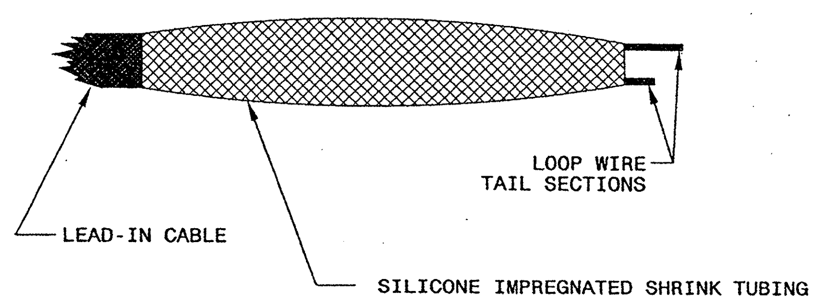
SINGLE CONNECTION | SERIES CONNECTION



STEP 3. INSULATE EACH SOLDER JOINT SEPARATELY



STEP 4. ENVIRONMENTALLY PROTECT SPLICE



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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

5-07

ENGLISH DETAIL DRAWING FOR
INDUCTIVE DETECTION LOOPS
SPLICING FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3
1725D01

See Plate for Title

Prepared in the Offices of:
Intelligent Transportation Systems & Signals Unit
750 N. Greenfield Parkway
Garner, NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 016286 ENGINEER MILTON I. DEAN

SIGNATURE | DATE 9/5/07