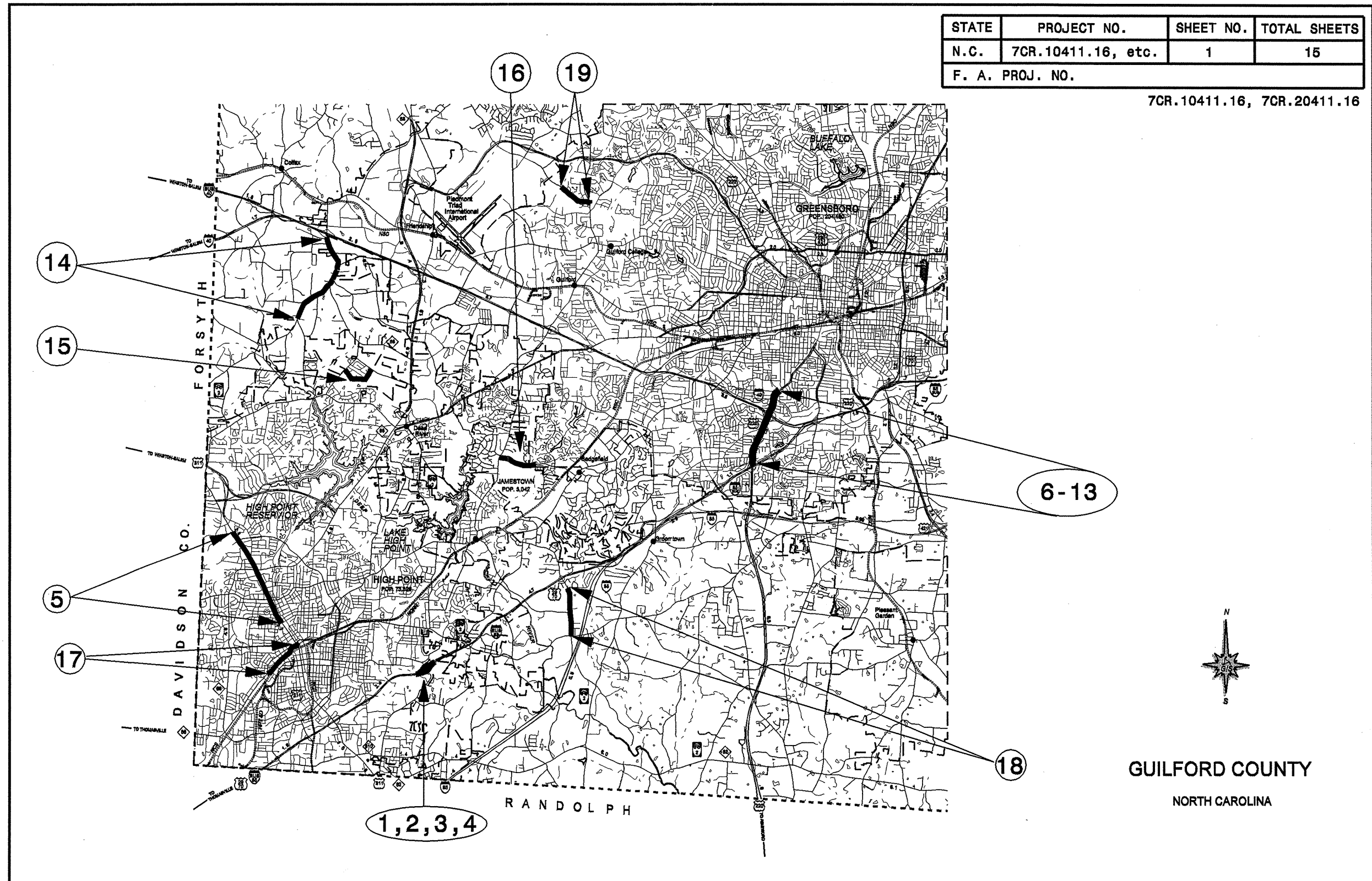


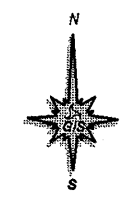
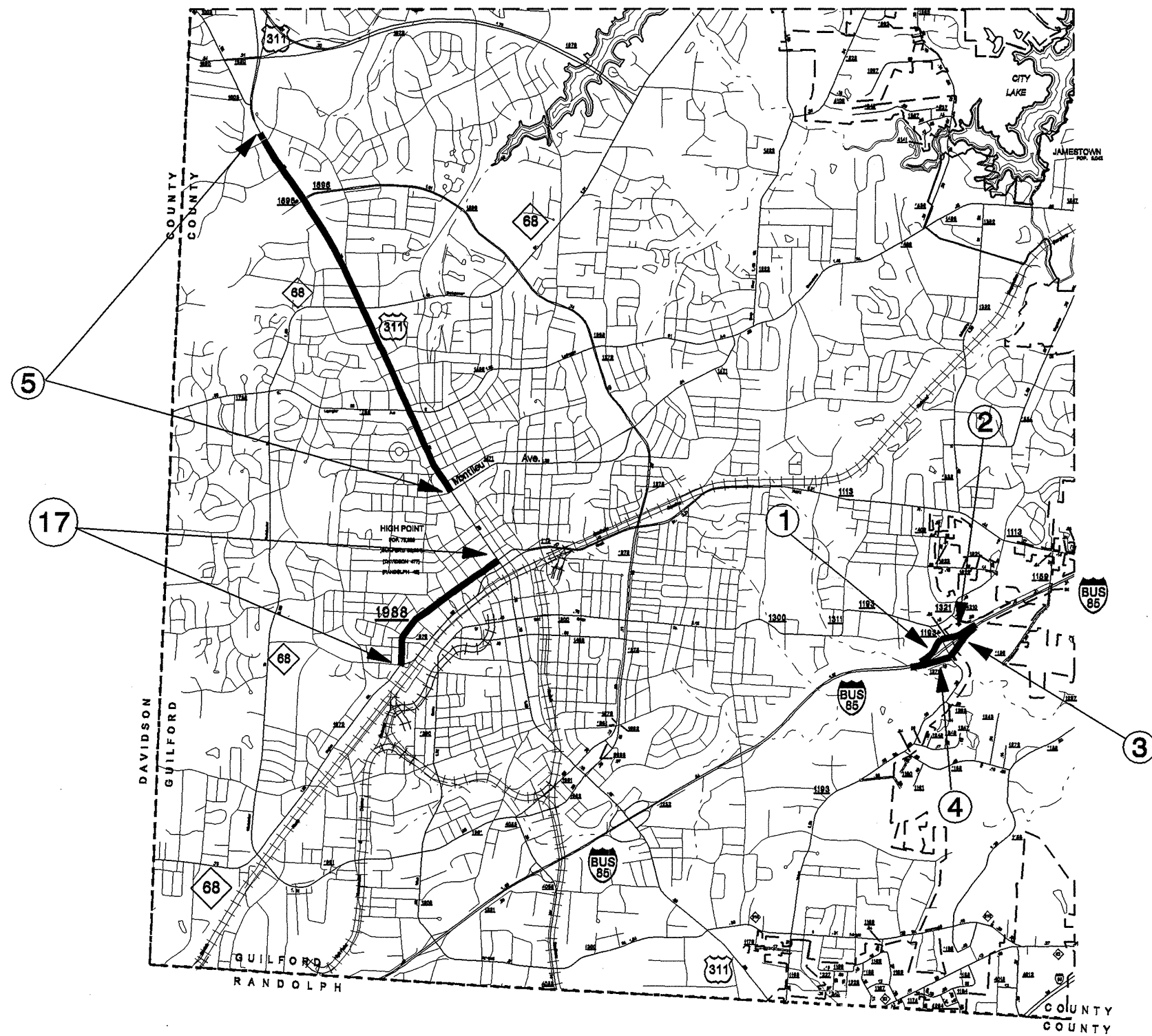
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, etc.	1	15
F. A. PROJ. NO.			

7CR.10411.16, 7CR.20411.16



STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, etc.	2	15
F. A. PROJ. NO.			

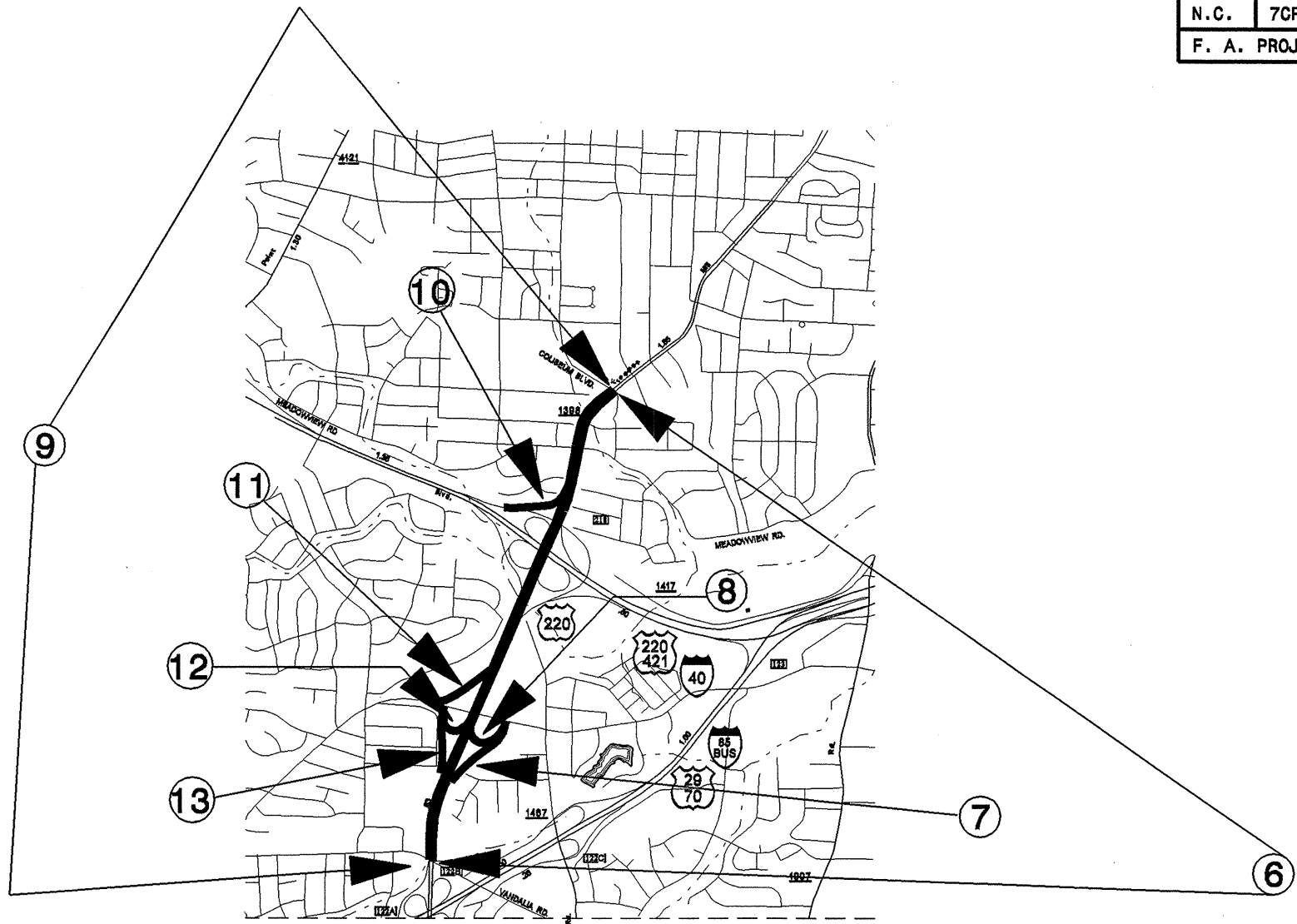
7CR.10411.16, 7CR.20411.16



GUILFORD COUNTY
NORTH CAROLINA

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, etc.	3	15
F. A. PROJ. NO.			

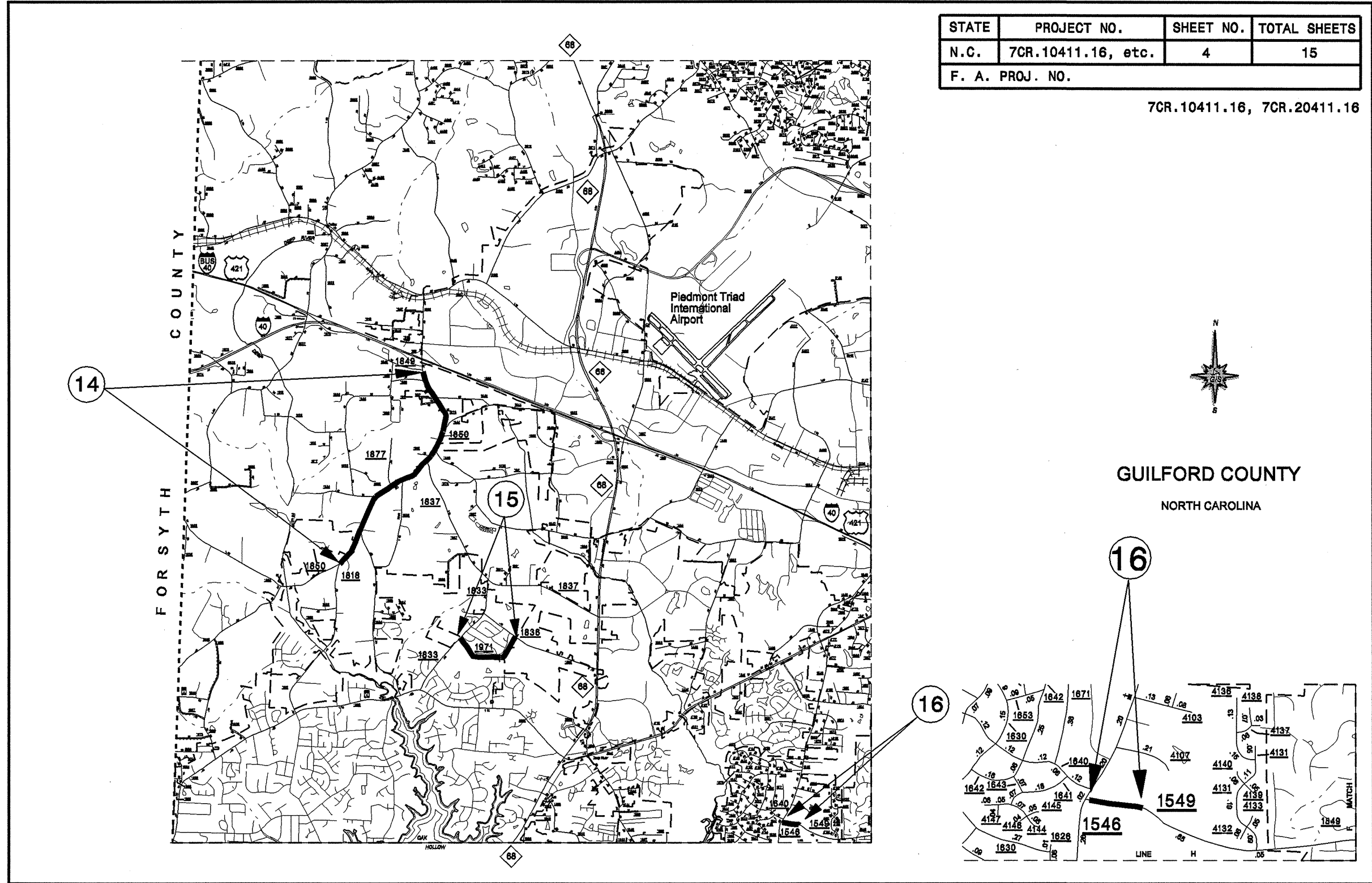
7CR.10411.16, 7CR.20411.16



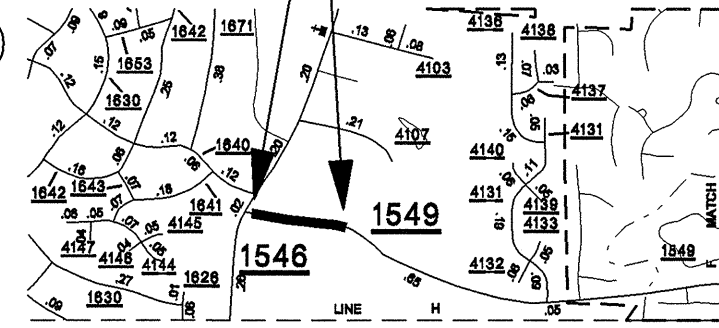
GUILFORD COUNTY
NORTH CAROLINA

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, etc.	4	15
F. A. PROJ. NO.			

7CR.10411.16, 7CR.20411.16

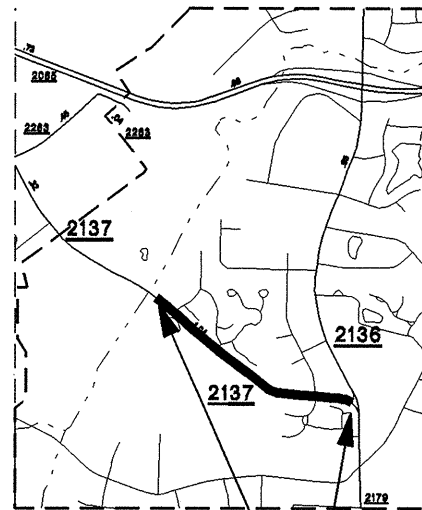


GUILFORD COUNTY
NORTH CAROLINA

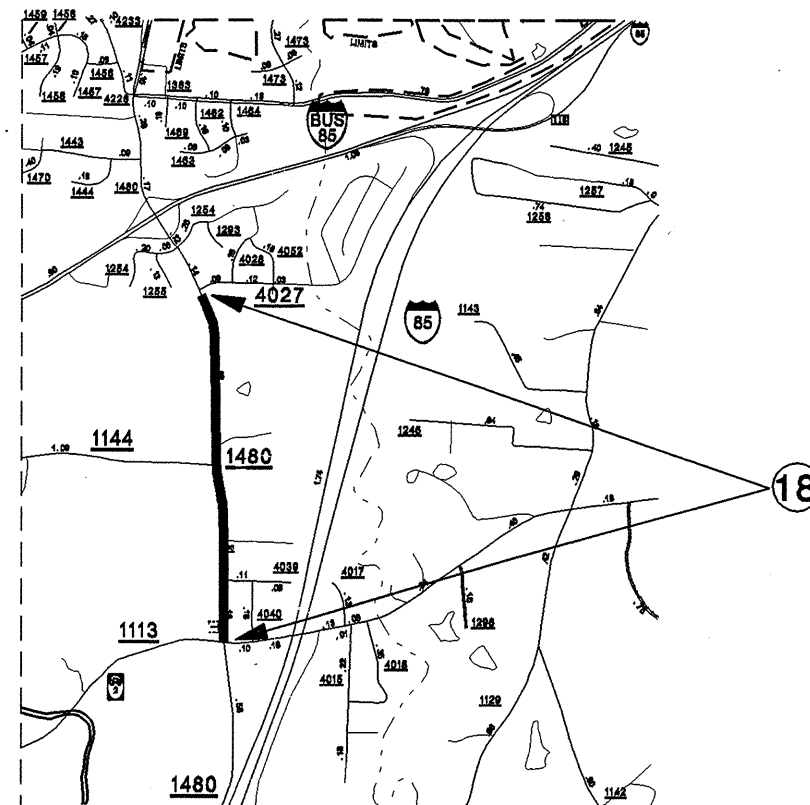


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, etc.	5	15
F. A. PROJ. NO.			

7CR.10411.16, 7CR.20411.16



19



18



GUILFORD COUNTY
NORTH CAROLINA

SUMMARY OF QUANTITIES

PROJECT NO. 7CR.10411.16, 7CR.20411.16	SHEET NO. 6	TOTAL NO. 15
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PROJECT NO.	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LENGTH	WIDTH	INCIDENTAL STONE BASE	SHOULDER RECONSTRUCTION	1 1/2" MILLING	3" MILLING	0" TO 1.5" MILLING	0" TO 3" MILLING	MILLED RUMBLE STRIPS	INCIDENTAL MILLING	INTERMEDIATE COURSE, 19.0B	INTERMEDIATE COURSE, 19.0C	SURFACE COURSE, S9.5B	SURFACE COURSE, S9.5C	PG 64-22 PLANT MIX	PG 70-22 PLANT MIX	PATCHING EXISTING PAVEMENT	WHEELCHAIR RAMPS	RETROFITTING EXISTING WHEELCHAIR RAMP	MANHOLES	METER OR VALVE BOX	PORTABLE LIGHTING	SEED & MULCHING	RESIDENTIAL SEEDING	TRENCHING UNPAVED (1)(2')	TRENCHING PAVED (1)(2')	PULL BOX (STANDARD SIZE)	INDUCTIVE LOOP SAW CUT	LEAD-IN CABLE (18-2)	LEAD-IN CABLE (18-4)							
																																				NO	MI	FT	TONS	SMI	SY	SY
7CR.10411.16	Guilford	1	I-85B/US 29/70 SB ON RAMP	FROM SR 1193 (BAKER ROAD) TO SB I-85B/US 29/70	1	0.036	24-25		0.15				132							43.69	2.62																					
					1	0.1	24-25															121.35	7.28																			
					2	0.012	19-25																13.08	0.79																		
					2	0.02	19																18.85	1.13																		
					TOTAL FOR MAP NO. 1						0.168		0.15				132						196.97	11.82							0.07											
"	"	2	I-85B/US 29/70 SB OFF RAMP	I-85B/US 29/70 SB OFF RAMP TO SR 1193 (BAKER ROAD)	1	0.054	24-25		0.15											65.53	3.93																					
					1	0.043	24															51.12	3.07																			
					1	0.033	24-33																46.55	2.79																		
					1	0.018	33																29.38	1.76																		
					1	0.013	33-54																27.95	1.68																		
TOTAL FOR MAP NO. 2						0.161		0.15										220.53	13.23							0.07																
"	"	3	I-85B/US 29/70 NB ON RAMP	FROM SR 1193 (BAKER ROAD) TO NB I-85/US 29/70	1	0.069	24-25		0.15				132							84.95	5.10																					
					1	0.057	24-25															72.81	4.37																			
					2	0.001	20-25																11.15	0.67																		
					2	0.026	18-20																28.27	1.70																		
					TOTAL FOR MAP NO. 3						0.153		0.15				132						197.18	11.84							0.07											
"	"	4	I-85B/US 29/70 NB OFF RAMP	FROM I-85B/US 29/70 NB TO SR 1193 (BAKER ROAD)	1	0.095	25		0.19											117.63	7.06																					
					1	0.06	24-25															72.81	4.37																			
					1	0.033	24-33																46.55	2.79																		
					1	0.015	33																24.49	1.47																		
					1	0.008	33-52																16.80	1.01																		
TOTAL FOR MAP NO. 4						0.211		0.19										278.28	16.70							0.09																
"	"	5	US 311 - N. MAIN ST	FROM SR 1471 (MONTLIEU AVENUE) TO JOINT NORTH OF OLD WINSTON ROAD (NON SYSTEM)	3	0.019	56				1500	13,500				114		553		38.55			6	24	133.00	81.00	1.00					300	50	5	7,100	500	500					
					4	0.004	54															11	0.64																			
					4	0.001	54-63																29	1.73																		
					4	0.012	63																37	2.24																		
					21	0.007	57.6-63																21	1.25																		
					5	0.426	57.6																1,332	79.91																		
					5	0.099	55																194	11.66																		
					3	0.037	55.5-56																107	6.42																		
					5	0.068	54-58																188	11.28																		
					5	0.359	54																1,013	60.75																		
					5	0.148	55																412	24.72																		
					21-6	0.016	53.5-58.8																54	3.26																		
					6	0.030	58.8-74.6																99	5.94																		
					5	0.001	74.6-76.7																37	2.24																		
					7	0.001	76.7-88.6																41	2.45																		
					7	0.012	88.6-90																53	3.17																		
					7	0.017	77.5-90																70	4.22																		
					5	0.031	81.3																264	15.86																		
					7	0.004	76.8																15	0.91																		
					7	0.014	76.8-83																55	3.32																		
					7	0.011	93-94.8																51	3.06																		
					7	0.008	91.6-94.8																37	2.21																		
					7	0.013	91.6																59	3.53																		
					6	0.018	81.6																72	4.35																		
					3	0.001	74																37	2.19																		
					3	0.014	71.2-74																50	3.01																		
					3	0.038	71.2																134	8.01																		
					5	0.027	70																153	9.20																		

THERMOPLASTIC AND PAINT QUANTITIES

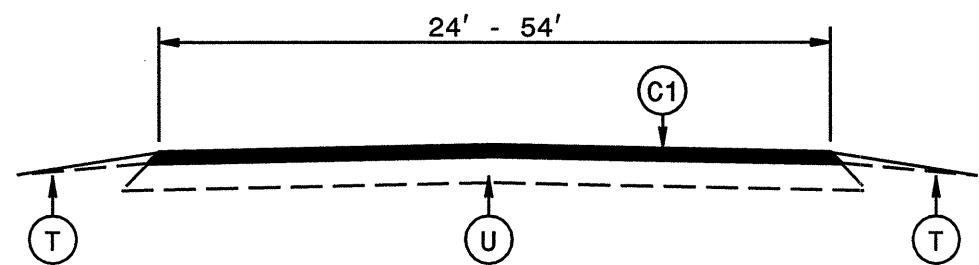
PROJECT NO.	SHEET NO.	TOTAL NO.
7CR.10411.16, 7CR.20411.16	9	15

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	4" X 120 M WHITE THERMO	4" X 120 M YELLOW THERMO	6" X 120 M WHITE THERMO	8" X 90 M WHITE THERMO	8" X 90 M YELLOW THERMO	8" X 120 M YELLOW THERMO	8" X 120 M WHITE THERMO	12" X 90 M WHITE THERMO	12" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG ONLY 120 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & RT ARROW 90 M	THERMO MERGE LEFT ARROW 90 MIL	THERMO STR & LT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	PAINT LT ARROW	PAINT STR & LT ARROW
					LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
7CR.10411.16	Guilford	1	I-85B/US 29/70 SB ON RAMP	FROM SR 1193 (BAKER ROAD) TO SB I-85B/US 29/70	890	890																					
"	"	2	I-85B/US 29/70 SB OFF RAMP	I-85B/US 29/70 SB OFF RAMP TO SR 1193 (BAKER ROAD)	855	855	30		108									2	2								
"	"	3	I-85B/US 29/70 NB ON RAMP	FROM SR 1193 (BAKER ROAD) TO NB I-85B/US 29/70	835	835																					
"	"	4	I-85B/US 29/70 NB OFF RAMP	FROM I-85B/US 29/70 NB TO SR 1193 (BAKER ROAD)	1,115	1,115	28		120									2	2								
"	"	5	US 311 - N. MAIN ST	FROM SR 1471 (MONTLIEU AVENUE) TO JOINT NORTH OF OLD WINSTON ROAD (NON SYSTEM)	191		8,108	14,140						2,156	834			54	8	40	23						
"	"	6	US 220 NORTH BOUND	FROM NORTH EDGE OF BRIDGE LOCATED JUST NORTH OF I-85B/US 29/70 TO COLISEUM BLVD. (NON SYSTEM)	8,169	8,169	4,497							170		63	20	4	4	6		3					
"	"	7	US 220 NB OFF RAMP	FROM US 220 NB TO CREEK RIDGE ROAD (NON SYSTEM)	1,570	1,570																					
"	"	8	US 220 NB ON RAMP	FROM CREEK RIDGE ROAD (NON SYSTEM) TO US 220 NB		895																					
"	"	9	US 220 SOUTH BOUND	FROM COLISEUM BLVD. (NON SYSTEM) TO BRIDGE JUST NORTH OF I-85B/US 29/70	8,203	8,203	4,493			4,114							16		4								
"	"	10	US 220 SOUTH BOUND OFF RAMP	FROM US 220 SOUTH BOUND TO US 220 NORTH BOUND OFF RAMP TO I-40 WEST	642	642																					
"	"	11	US 220 SOUTH BOUND OFF RAMP	FROM US 220 SOUTH BOUND TO CREEK RIDGE ROAD (WEST) (NON SYSTEM)	1,000	1,000																					
"	"	12	US 220 SOUTH BOUND OFF RAMP	US 220 SOUTH BOUND OFF RAMP TO CREEK RIDGE ROAD (EAST) (NON SYSTEM)			376																				
"	"	13	US 220 SOUTH BOUND ON RAMP	FROM CREEK RIDGE ROAD (NON SYSTEM) TO US 220 SOUTH BOUND	1,130	965																					
TOTAL FOR PROJ NO. 7CR.10411.16					24,600	25,515	17,156	14,140	228	4,114			170	2,156	897	36	62	20	46	23	3						
					50,115		31,296			4,114										154							
7CR.20411.16	Guilford	14	SR 1850 (SANDY RIDGE ROAD)	FROM SR 1818 (JOHNSON STREET) TO JOINT SOUTH OF SR 1849 (NORCROSS ROAD)	1,500				369	531														58,824	54,100	14	1
"	"	15	SR 1971 (SOUTHWEST SCHOOL ROAD)	FROM BARROW ROAD (NON-SYSTEM) TO SR 1836 (WILLARD DAIRY ROAD)					130					70	50			2	2	2				19,180			
"	"	16	SR 1549 (MACKAY ROAD)	FROM NEW JOINT SR 1546 (GUILFORD COLLEGE ROAD) TO JOINT AT WILLIAMSBURG LANE (NON SYSTEM)	8,060		139	8,420	24			28							3								
"	"	17	SR 1988 (KIVETT DRIVE)	FROM PHILLIPS AVENUE (NON SYSTEM) TO US 311 (MAIN STREET)	1,379		1,900		16				480			260		3	1	14	4		6				
"	"	18	SR 1480 (VICKERY CHAPEL ROAD)	FROM SR 1113 (KIVETT DRIVE) TO JOINT SOUTH OF SR 4027 (BISBEE ROAD)	300				30															21,400	20,768		
"	"	19	SR 2137 (OLD OAK RIDGE ROAD)	FROM NEW PAVEMENT JOINT TO END NEAR STOP BAR @ SR 2136 (FLEMING ROAD)			185	12,770																			
TOTAL FOR PROJ NO. 7CR.20411.16					11,239		2,224	21,190	569	531	28	480	70	310				40	3	20	4	6		99,404	74,868	14	1
					11,239		23,414			531	508									73				174,272			
GRAND TOTAL					35,839	25,515	19,380	35,330	797	4,114	531	28	480	170	2,226	1,207	36	102	23	66	27	3	6	99,404	74,868	14	1
					61,354		54,710			4,645	508									227				174,272			15

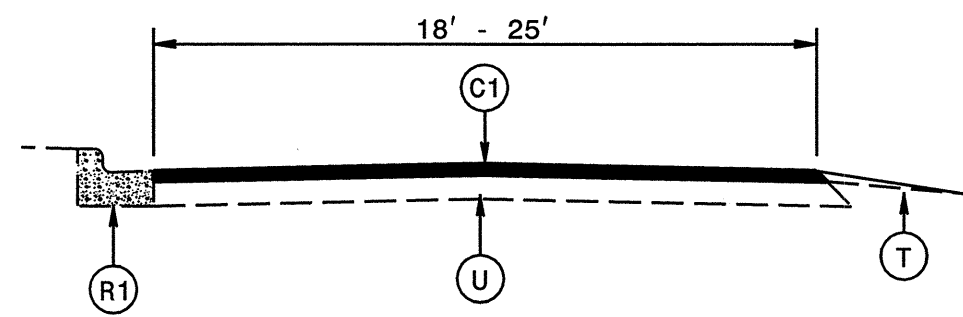
5/28/99

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, ETC	10	15

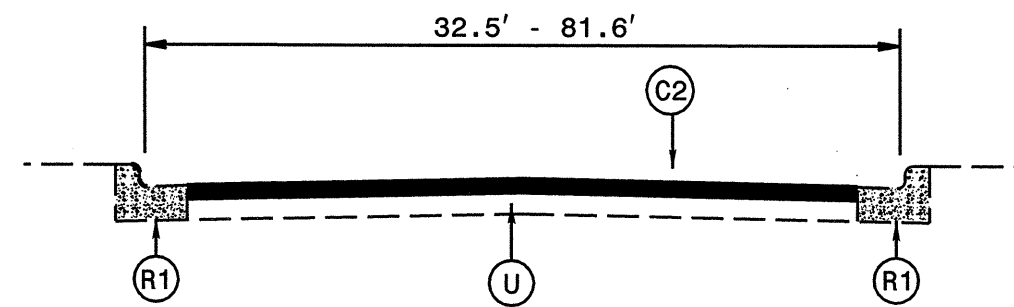
7CR.10411.16, 7CR.20411.16



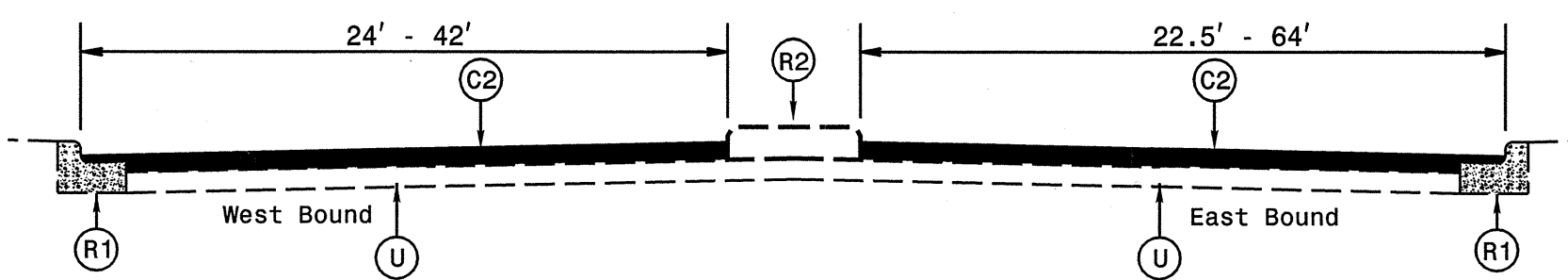
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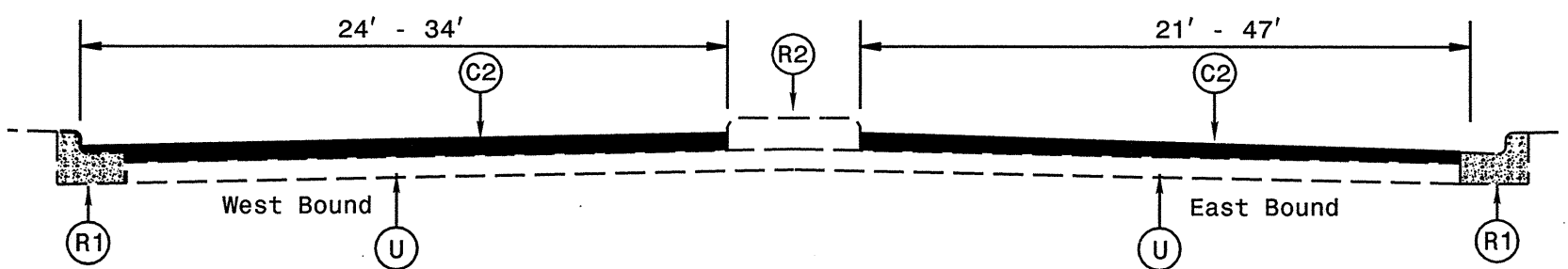
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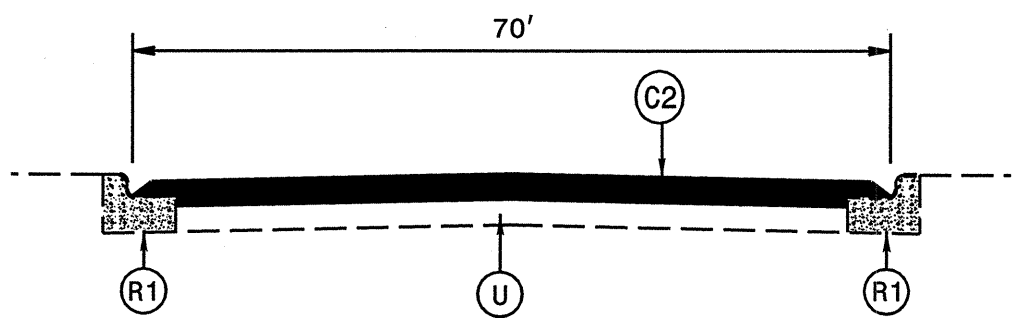
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TYPICAL SECTION NO. 3



TYPICAL SECTION NO. 4



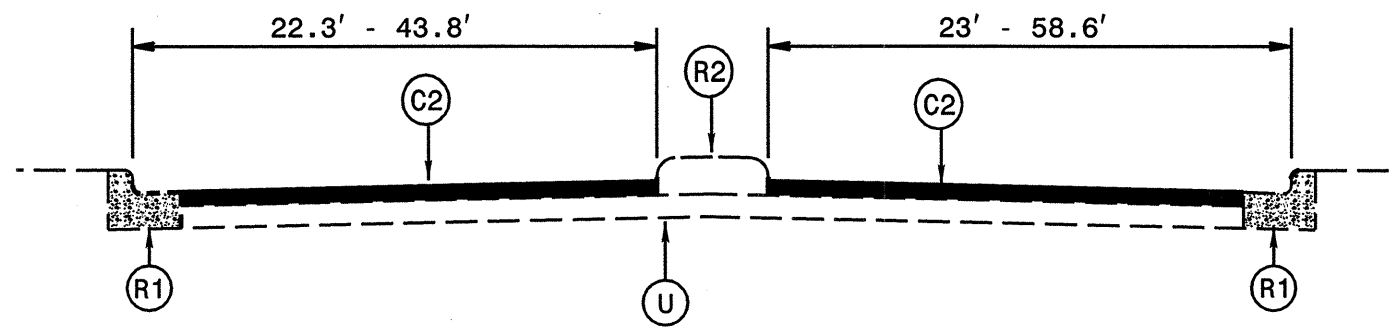
TYPICAL SECTION NO. 5

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
R1	EXISTING 2'-6" CURB AND GUTTER OR EXPRESSWAY GUTTER OR VALLEY GUTTER
R2	EXISTING MONOLITHIC CONCRETE ISLAND
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT.

5/28/99

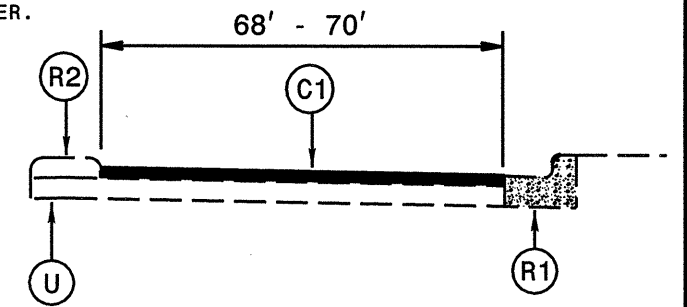
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, ETC	11	15

7CR.10411.16, 7CR.20411.16

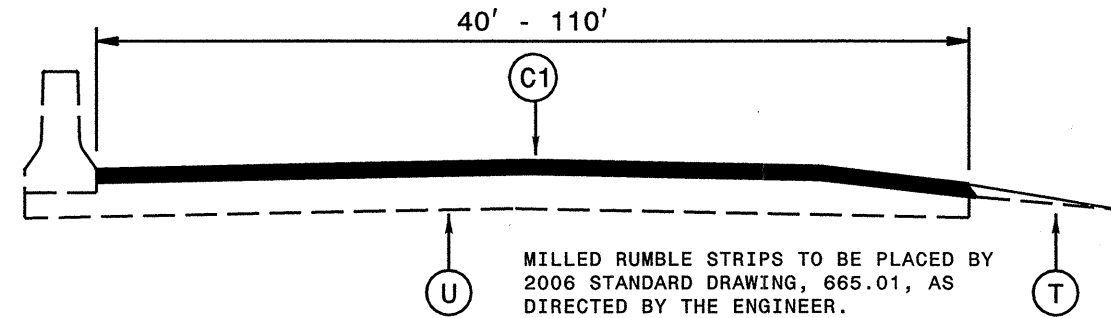


TYPICAL SECTION NO. 7

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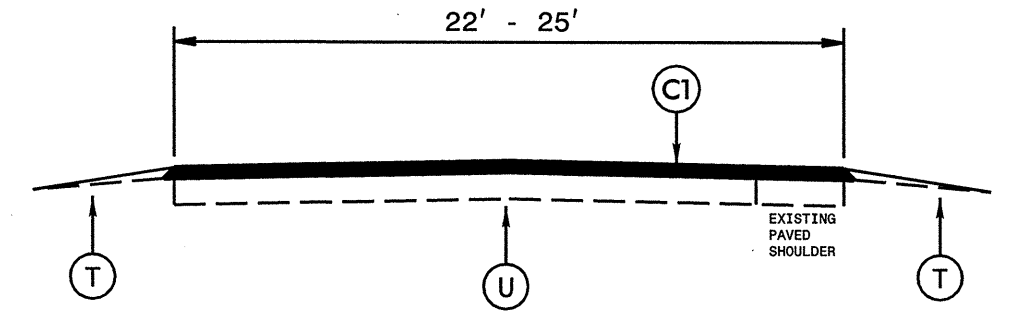


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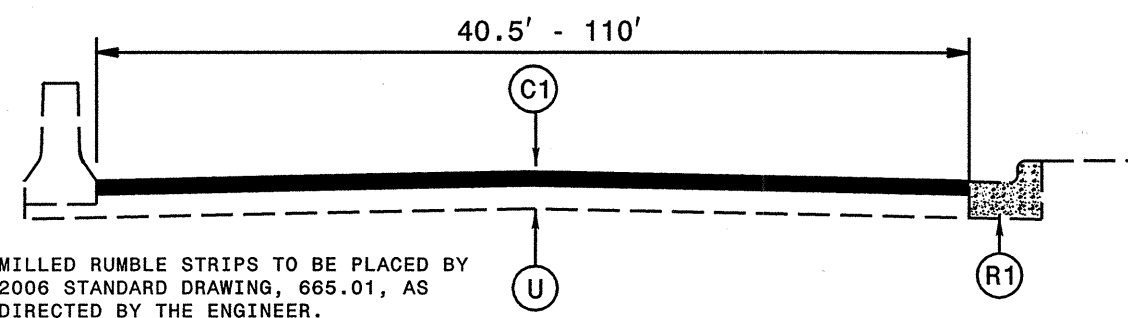


TYPICAL SECTION NO. 8

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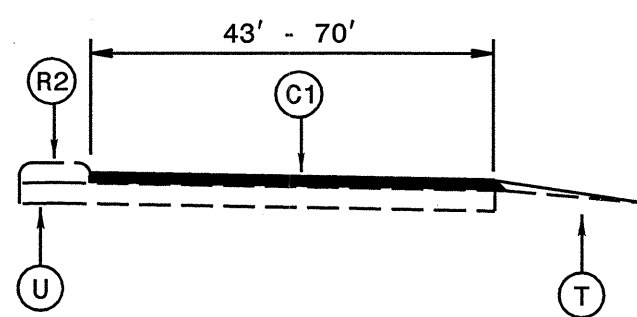


TYPICAL SECTION NO. 12



TYPICAL SECTION NO. 9

MILLED RUMBLE STRIPS TO BE PLACED BY 2006 STANDARD DRAWING, 665.01, AS DIRECTED BY THE ENGINEER.



TYPICAL SECTION NO. 10

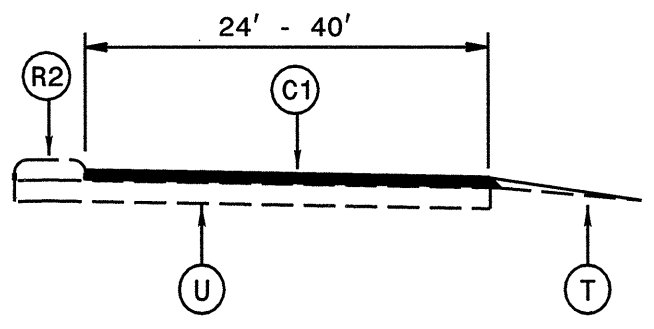
MILLED RUMBLE STRIPS TO BE PLACED BY 2006 STANDARD DRAWING, 665.01, AS DIRECTED BY THE ENGINEER.

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
R1	EXISTING 2'-6" CURB AND GUTTER OR EXPRESSWAY GUTTER OR VALLEY GUTTER
R2	EXISTING MONOLITHIC CONCRETE ISLAND
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT.

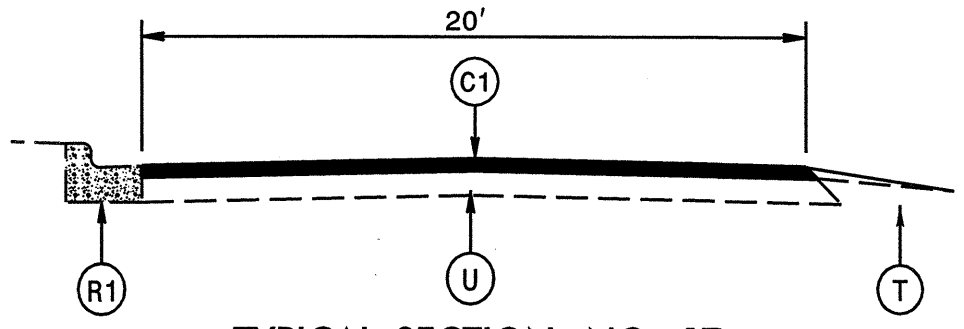
5/28/99

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, ETC	12	15

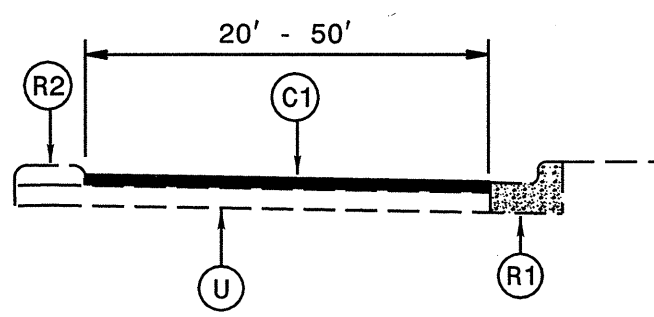
7CR.10411.16, 7CR.20411.16



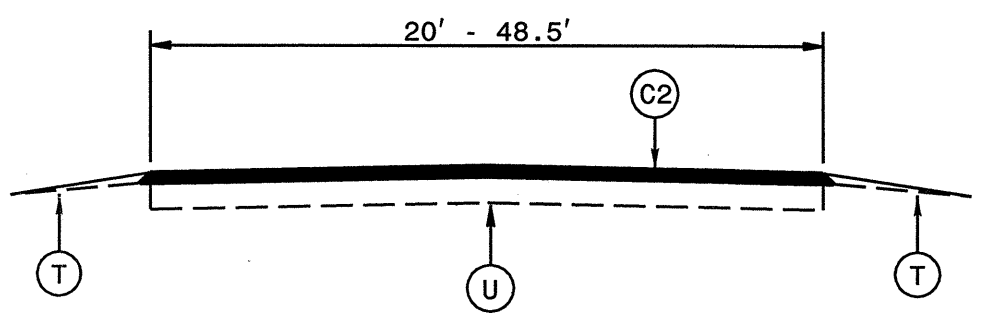
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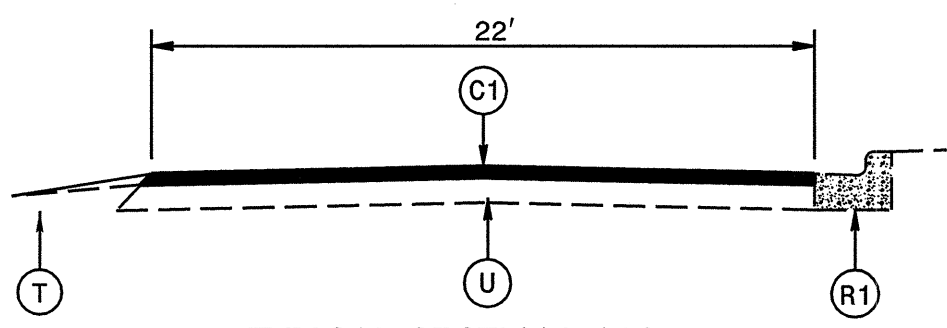
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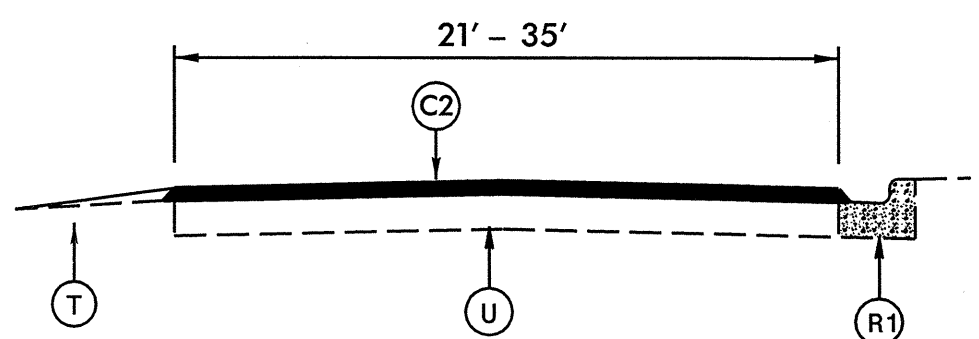
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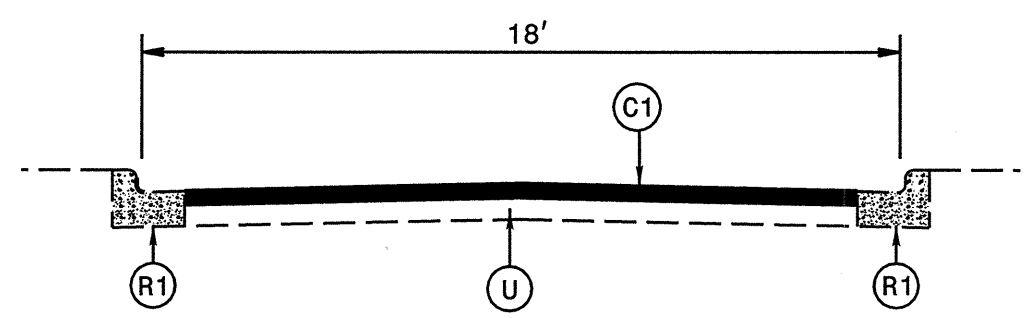
TYPICAL SECTION NO. 18



TYPICAL SECTION NO. 15



TYPICAL SECTION NO. 19



TYPICAL SECTION NO. 16

PAVEMENT SCHEDULE

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R1	EXISTING 2'-6" CURB AND GUTTER OR EXPRESSWAY GUTTER OR VALLEY GUTTER
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R2	EXISTING MONOLITHIC CONCRETE ISLAND
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	T	SHOULDER RECONSTRUCTION
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.

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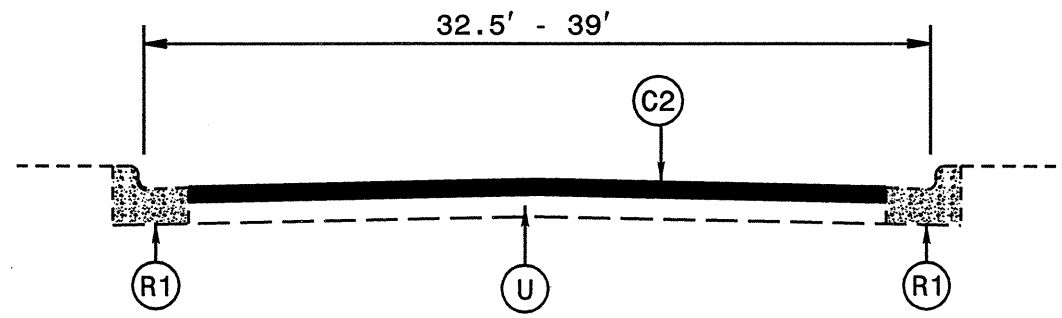
5/28/99

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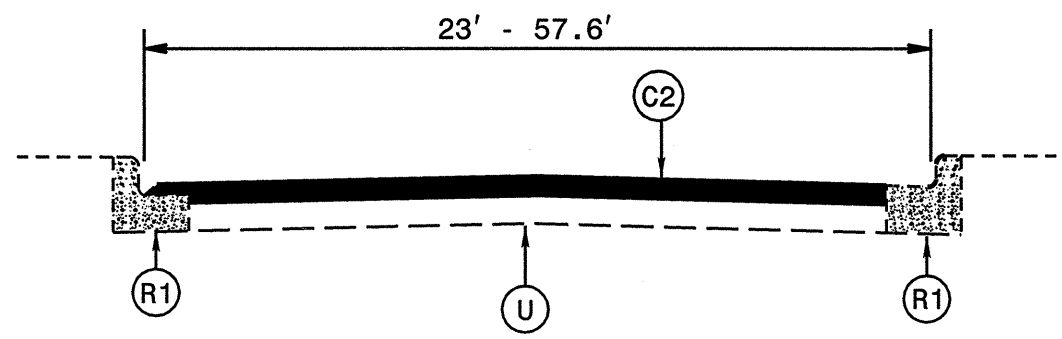
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STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, ETC	13	15

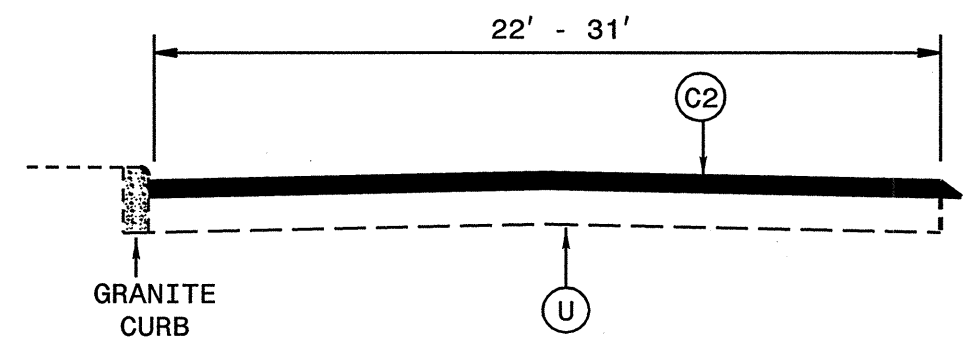
7CR.10411.16, 7CR.20411.16



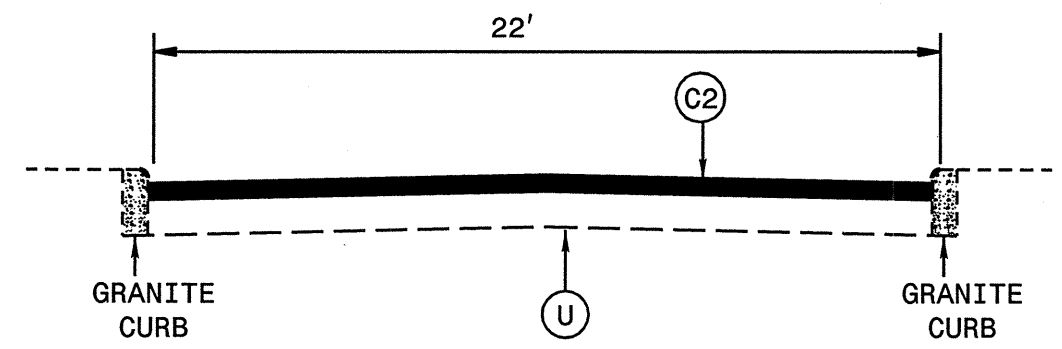
TYPICAL SECTION NO. 20



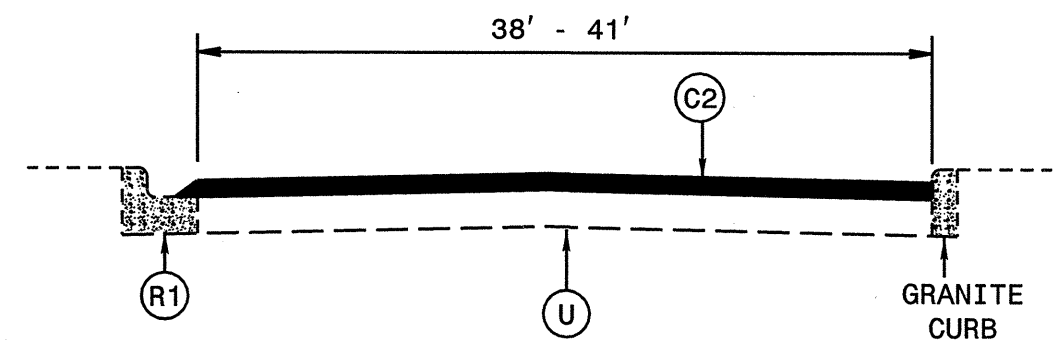
TYPICAL SECTION NO. 21



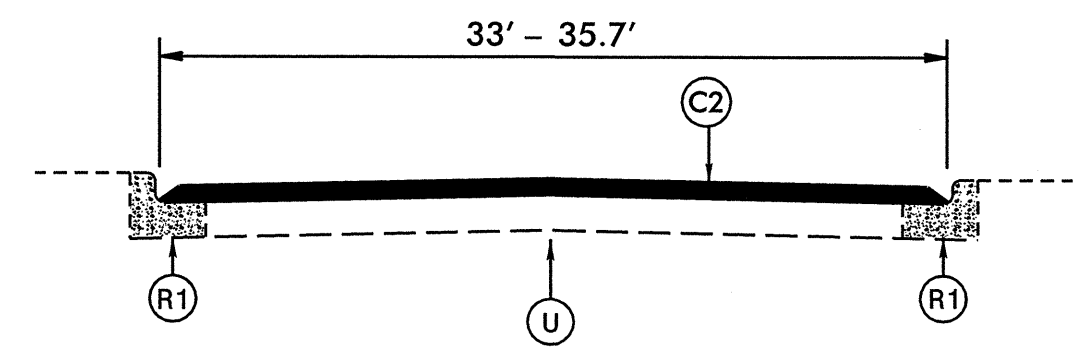
TYPICAL SECTION NO. 22



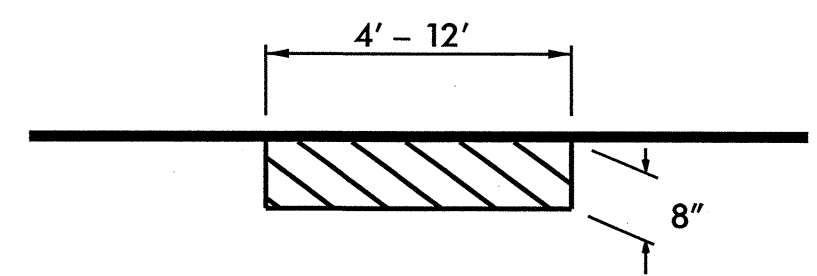
TYPICAL SECTION NO. 23



TYPICAL SECTION NO. 24



TYPICAL SECTION NO. 25



DIG OUT ASPHALT PAVEMENT 8" IN DEPTH, REPLACE WITH ASPHALT CONCRETE BASE COURSE B25.0B, AT LOCATIONS AS DIRECTED BY THE ENGINEER.

PATCHING DETAIL 1

NOTE:
TO BE USED ON MAPS 17 & 19

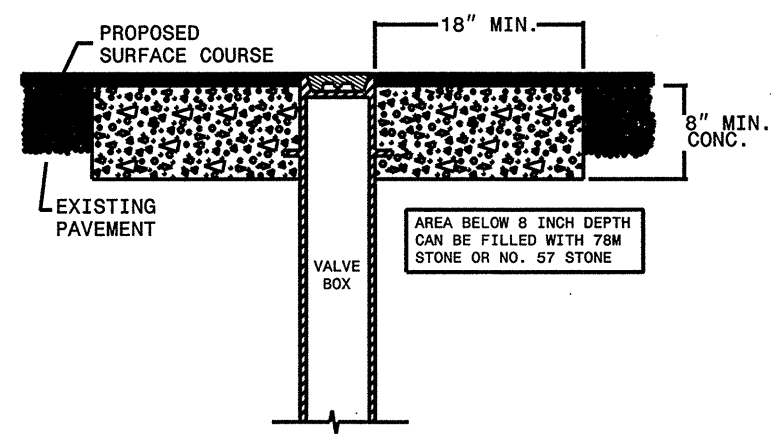
PAVEMENT SCHEDULE			
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R1	EXISTING 2'-6" CURB AND GUTTER OR EXPRESSWAY GUTTER OR VALLEY GUTTER
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.	R2	EXISTING MONOLITHIC CONCRETE ISLAND
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	T	EARTH MATERIAL.
D2	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.	U	EXISTING PAVEMENT.

5/28/99

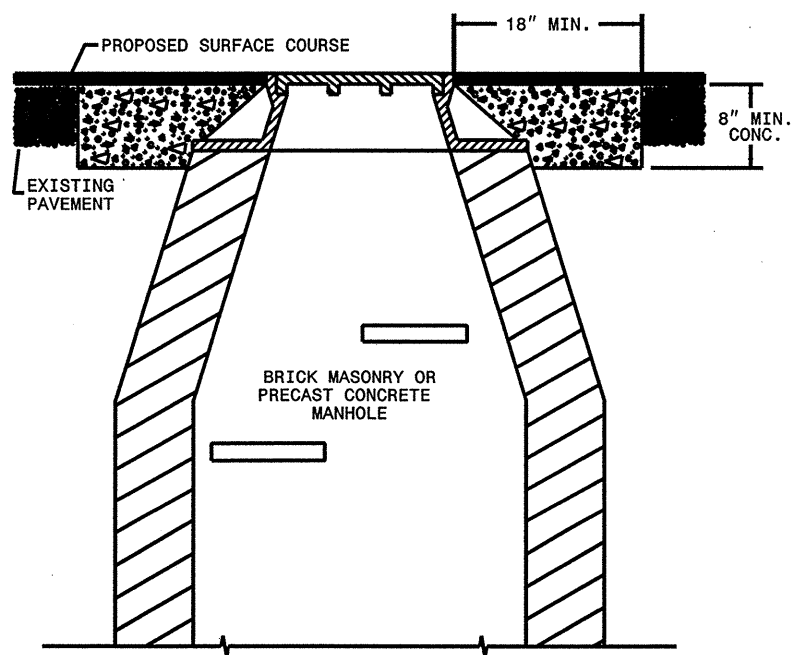
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	7CR.10411.16, ETC	15	15

7CR.10411.16, 7CR.20411.16

STANDARD CONCRETE ENCASEMENT FOR MANHOLE & VALVE CASTINGS IN PAVEMENT
DETAIL DRAWING NO. 858.01

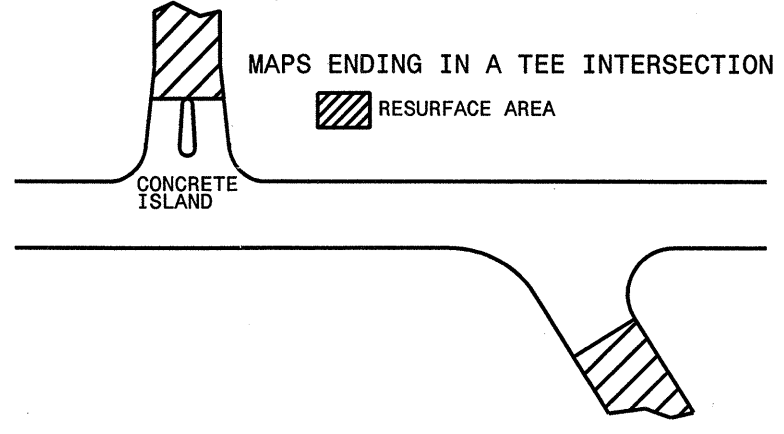


USE RAPID SET GROUT, MORTAR, OR CONCRETE CLASS B CONCRETE MAY BE USED WHEN ADJUSTMENTS ARE NOT IN THE TRAVEL LANE.

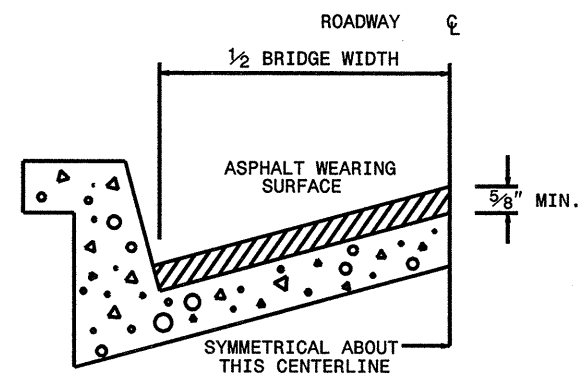
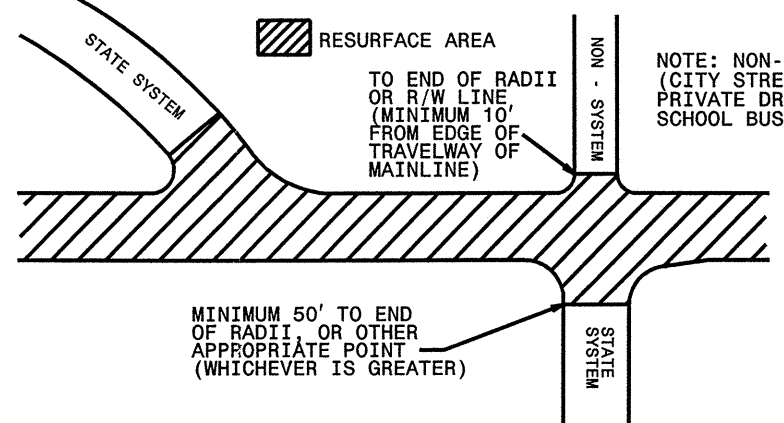


- NOTES:
1. MORTAR SHALL BE MIXED TO NCDOT SPECIFICATIONS.
 2. ALL FAULTY EXISTING BRICKWORK TO BE REMOVED AND REPLACED WITH NEW BRICK MASONRY.
 3. EXCAVATION FOR THE ADJUSTMENT SHALL BE SHEER CUT ON ALL SIDES.
 4. RAPID SET GROUT, MORTAR, OR CONCRETE SHALL BE USED

PAVING DETAIL 1
MAIN LINE IS NOT BEING RESURFACED



PAVING DETAIL 2
MAIN LINE IS BEING RESURFACED



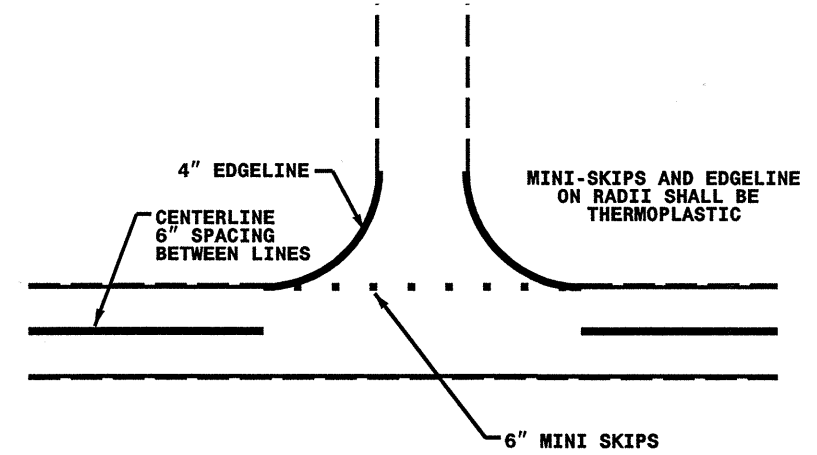
BRIDGE HALF TYPICAL SECTION

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.

NOTES

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

TO BE USED AT ALL NON-SIGNALIZED INTERSECTIONS (NOT TO SCALE)



NOTE: MINI SKIPS SHALL BE PLACED ON A 10' CYCLE, CONTAINING AN 8' AND 2' SKIP, THE WIDTH OF THE SKIP SHALL BE 6".

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S:\Projects\Special Details\ericward\stds\02\Std to Special Details\english\84806\0848d06.dgn
ericward AT P5222293

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

ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP AND EXISTING SIDEWALK
CURB CUT

SHEET 5 OF 5
848D06

NOTES:

1. CONSTRUCT THE WALKING SURFACE WITH SLIP RESISTANCE AND A 70% CONTRASTING COLOR TO THE SIDEWALK.
2. CROSSWALK WIDTHS AND CONFIGURATION VARY, BUT MUST CONFORM TO TRAFFIC DESIGN STANDARDS.
3. NORTH CAROLINA GENERAL STATUTE 136-44.14 REQUIRES THAT ALL STREET CURBS BEING CONSTRUCTED OR RECONSTRUCTED FOR MAINTENANCE PROCEDURES, TRAFFIC OPERATIONS, REPAIRS, CORRECTION OF UTILITIES OR ALTERED FOR ANY REASON AFTER SEPTEMBER 1, 1973 SHALL PROVIDE WHEELCHAIR RAMPS FOR THE PHYSICALLY DISABLED AT ALL INTERSECTIONS WHERE BOTH CURB AND GUTTER AND SIDEWALKS ARE PROVIDED AND AT OTHER POINTS OF PEDESTRIAN FLOW.
IN ADDITION, SECTION 228 OF THE 1973 FEDERAL AID HIGHWAY SAFETY ACT REQUIRES PROVISION OF CURB RAMPS ON ANY CURB CONSTRUCTION AFTER JULY 1, 1976 WHETHER A SIDEWALK IS PROPOSED INITIALLY OR IS PLANNED FOR A FUTURE DATE.
THE AMERICANS WITH DISABILITIES ACT (ADA) OF 1990 EXTENDS TO INDIVIDUALS WITH DISABILITIES, COMPREHENSIVE CIVIL RIGHTS PROTECTIONS SIMILAR TO THOSE PROVIDED TO PERSONS ON THE BASIS OF RACE, SEX, NATIONAL ORIGIN AND RELIGION UNDER THE CIVIL RIGHTS ACT OF 1964. THESE CURB RAMPS HAVE BEEN DESIGNED TO COMPLY WITH THE CURRENT ADA STANDARDS.
4. PROVIDE WHEELCHAIR RAMPS AT LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. LOCATE WHEELCHAIR RAMPS AS DIRECTED BY THE ENGINEER WHERE EXISTING LIGHT POLES, FIRE HYDRANTS, DROP INLETS, ETC. AFFECT PLACEMENT. WHERE TWO RAMPS ARE INSTALLED PLACE NOT LESS THAN 2 FEET OF FULL HEIGHT CURB BETWEEN THE RAMPS. PLACE DUAL RAMPS AS NEAR PERPENDICULAR TO THE TRAVEL LANE BEING CROSSED AS POSSIBLE.
5. DO NOT EXCEED 0.08 (12:1) SLOPE ON THE WHEELCHAIR RAMP IN RELATIONSHIP TO THE GRADE OF THE STREET.
6. CONSTRUCT WHEELCHAIR RAMPS 40" (3'-4") OR GREATER FOR DUAL RAMPS AND 60" (5'-0") OR GREATER FOR DIAGONAL RAMPS.
7. USE CLASS "B" CONCRETE WITH A SIDEWALK FINISH IN ORDER TO OBTAIN A ROUGH NON-SKID TYPE SURFACE.
8. PLACE A 1/2" EXPANSION JOINT WHERE THE CONCRETE WHEELCHAIR RAMP JOINS THE CURB AND AS SHOWN ON STD. DWG. 848.01.
9. PLACE THE INSIDE PEDESTRIAN CROSSWALK LINES NO CLOSER IN THE INTERSECTION BY BISECTING THE INTERSECTION RADIUS, WITH ALLOWANCE OF A 4' CLEAR ZONE IN THE VEHICULAR TRAVELWAY WHEN ONE RAMP IS INSTALLED. (SEE NOTE 14)
10. COORDINATE THE CURB CUT AND THE PEDESTRIAN CROSSWALK LINES SO THE FLOOR OF THE WHEELCHAIR RAMP WILL FALL WITHIN THE PEDESTRIAN CROSSWALK LINES. PLACE DIAGONAL RAMPS WITH FLARED SIDES SO 24" OF FULL HEIGHT CURB FALLS WITHIN THE CROSSWALK MARKINGS ON EACH SIDE OF THE FLARES.
11. CONSTRUCT THE PEDESTRIAN CROSSWALK A MINIMUM OF 6 FEET. A CROSSWALK WIDTH OF 10 FEET OR GREATER IS DESIRABLE.
12. USE STOP LINES, NORMALLY PERPENDICULAR TO THE LANE LINES, WHERE IT IS IMPORTANT TO INDICATE THE POINT BEHIND WHICH VEHICLES ARE REQUIRED TO STOP IN COMPLIANCE WITH A TRAFFIC SIGNAL, STOP SIGN OR OTHER LEGAL REQUIREMENT. AN UNUSUAL APPROACH SKEW MAY REQUIRE THE PLACEMENT OF THE STOP LINE TO BE PARALLEL TO THE INTERSECTING ROADWAY.
13. TERMINATE PARKING A MINIMUM OF 20 FEET BACK OF PEDESTRIAN CROSSWALK.
14. PLACE ALL PAVEMENT MARKINGS IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION AND THE NORTH CAROLINA SUPPLEMENT TO THE MUTCD.

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

ENGLISH DETAIL DRAWING FOR
WHEELCHAIR RAMP AND EXISTING SIDEWALK
CURB CUT

SHEET 5 OF 5
848D06

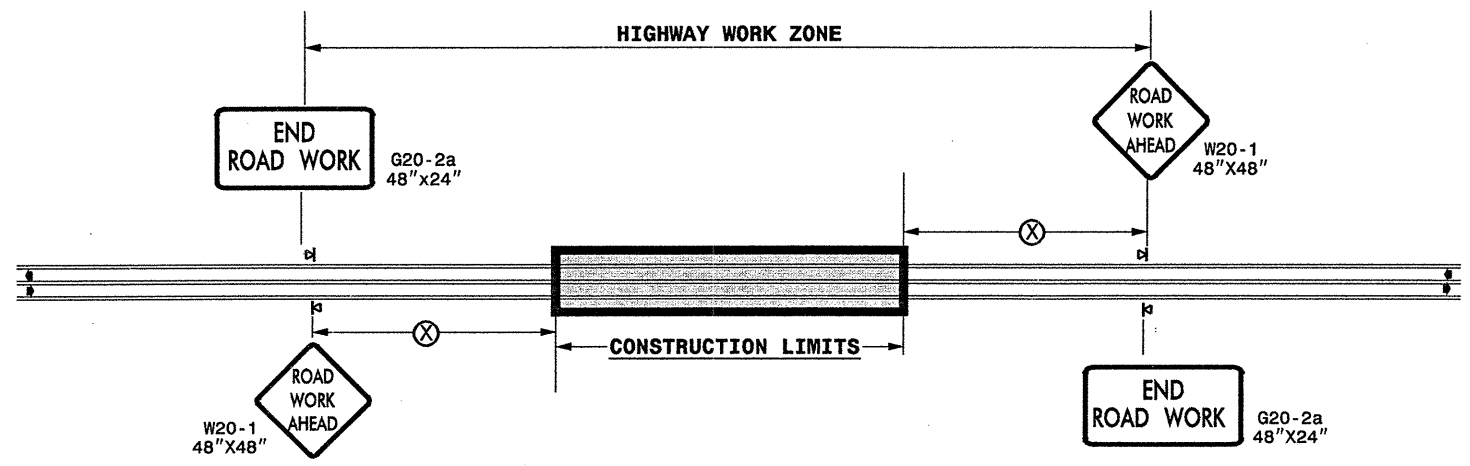
PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: DETAIL 848D05 DATE: _____
MODIFIED BY: E.E. WARD DATE: 09-06-05
CHECKED BY: _____ DATE: _____
FILE SPEC.: /usr/stds/02todetail/english/84806/848d06.dgn

PROJECT REFERENCE NO. SHEET NO.
7CR.10411.16 15-C
7CR.20411.16

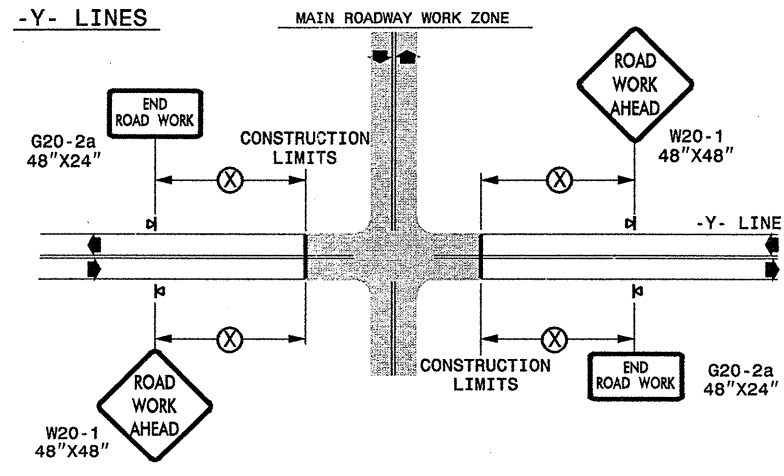
TWO-WAY UNDIVIDED ** (L-LINES)



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

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

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



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED 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

DETAIL DRAWING
FOR TWO-WAY UNDIVIDED
WORK ZONE WARNING SIGNS

SHEET 1 OF 1

APPROVED: _____ DATE: _____	DETAIL DRAWING FOR TWO-WAY UNDIVIDED ADVANCED WORK ZONE WARNING SIGNS		REVISIONS	
SEAL			SCALE: NONE	7-98
	DATE:	10-98	03/04	
	DESIGN BY:	01/01	11/04	
	REVIEWED BY:			

29-AUG-2006 16:52
 \\D01\DP\SR001\DW\GROUPS-WZ\TCCC\des\gn\group4\common4\resurfacing\resurfacing2006\div07\7cr10411set\cgulf\for\div07\7cr10411set\2wayundivurbfr\wys\july2006.dgn
 pseymer AT MZLCC06427

SP 03353

SIGN NUMBER: SP-03353	BACK COLOR: Fluorescent Orange	DESIGN BY: CL DOWNEY	CHECKED BY: CHECKED	STD #: W20-1
TYPE: A	COPY COLOR: Black	PROJECT ID: ALL PROJECTS	DIV: DIV	DATE: Aug 20, 2003
QUANTITY: 1				
SIGN WIDTH: 4'-0"				
HEIGHT: 4'-0"				
TOTAL AREA: 16.0 Sq.Ft.				
BORDER TYPE: FLUSH				
RECESS: 0.59"				
WIDTH: 0.75"				
RADII: 1.38"				
NO. Z BARS: N/A	MAT'L:			
LENGTH: N/A				

USE NOTES: 2, 4

- Legend and border shall be direct applied Type VII reflective sheeting.
- Legend and border shall be direct applied non-reflective sheeting.
- Shields shall be Type VII reflective sheeting on 0.032" (0.8mm) aluminum and demountable.
- Background shall be Type VII reflective sheeting.
- Background shall be Type I reflective sheeting.
- Center arrow(s) vertically on sign.
- Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

LETTER POSITIONS

Letter spacings are to start of next letter

	B	E	G	I	N	W	O	R	K		Series/Size
	22.4	5.3	4.6	5.4	2.5	3.8	22.4				C7
											21.6
											C7
	23.4	5	5.2	5.6	3.8	23.4					19.6
											C7
	22.6	6.4	5.6	5.2	4	22.6					21.2

Spacing Factor is 1 unless specified otherwise

FILENAME: SPECISHAK

NORTH CAROLINA D.O.T. SIGN DETAIL

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

DETAIL DRAWING FOR
 WORK ZONE SIGNS
 BEGIN ROAD WORK

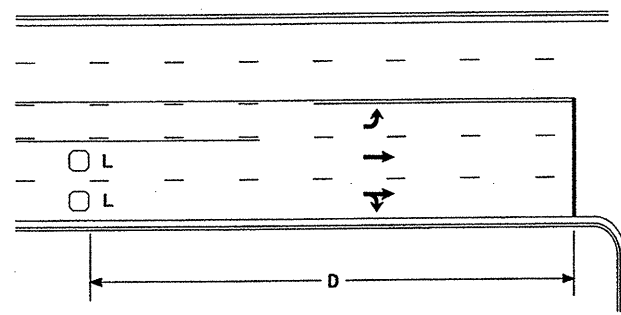
GENERAL NOTES FOR SIGN SP-03353 "BEGIN ROAD WORK"

- SIGN SP-03353 "BEGIN ROAD WORK" ONLY APPLIES TO FULL CONTROL AND PARTIAL CONTROL OF ACCESS ROADWAYS
- WHEN USED, INSTALL SIGN SP-03353 "BEGIN ROAD WORK" ACCORDING TO DETAIL FOR FREEWAY WORK ZONE SIGNS

APPROVED: _____	DATE: _____	DETAIL DRAWING FOR ADVANCED WORK ZONE WARNING SIGN DESIGNS	
	SCALE: NONE	REVISIONS	
	DATE: 08/03	04/04	
	DWG. BY:	11/04	
	DESIGN BY:		
REVIEWED BY:			

29-AUG-2006 16:55
 \DOT\DF\SR00101\GROUPS\W7TCCC\design\group\common4\resurfacing\resurfacing2006\div07\7cr10411set\cguilfor\7CR104116SignDesignsJuly2006.dgn
 pseymore AT WZ12064Z1

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

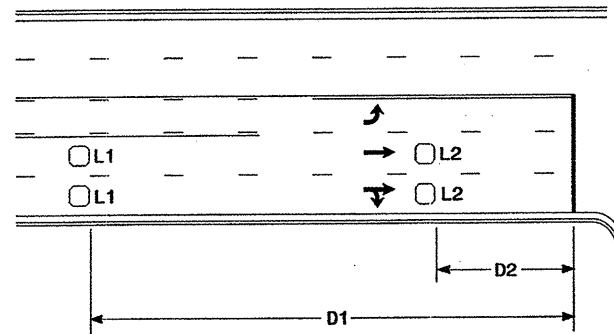


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

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



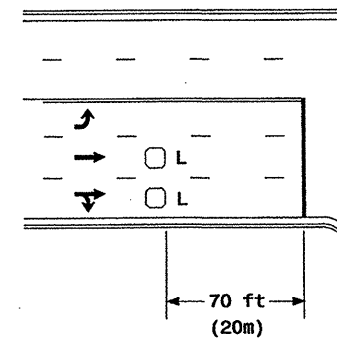
Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

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

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

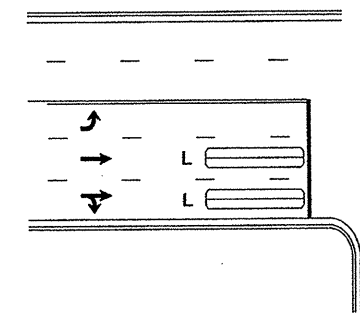
"Stretch" Operation

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



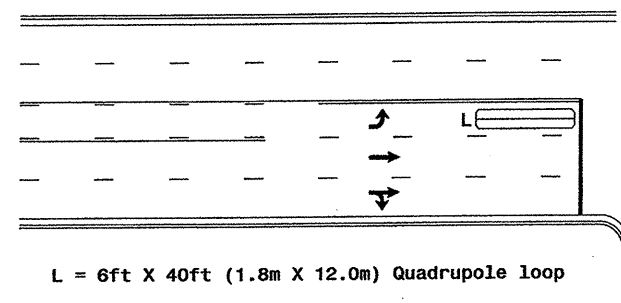
L = 6ft X 6ft (1.8m X 1.8m)
Wired in series

OR



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

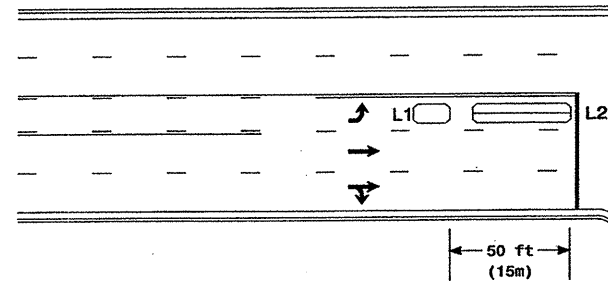
Left Turn Lane Detection



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

Presence Loop Detection

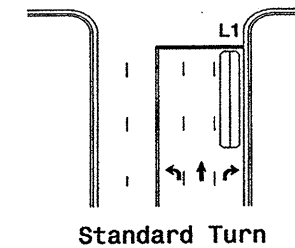
OR



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

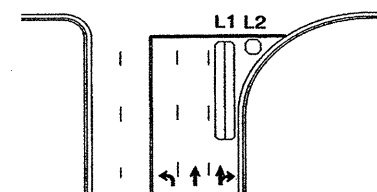
Queue Loop Detection

Right Turn Lane Detection

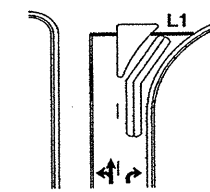


Standard Turn

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

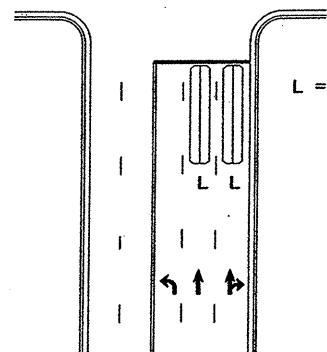


Wide Radius Turn



Channelized Turn

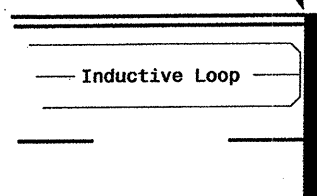
Side Street Detection



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

Presence Loop Placement at Stop Lines

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		
	PLAN DATE: June 2006 PREPARED BY: P. L. Alexander	REVIEWED BY: REVIEWED BY:	
REVISIONS			INIT. DATE DATE
SIGNATURE			DATE
SIG. INVENTORY NO.			