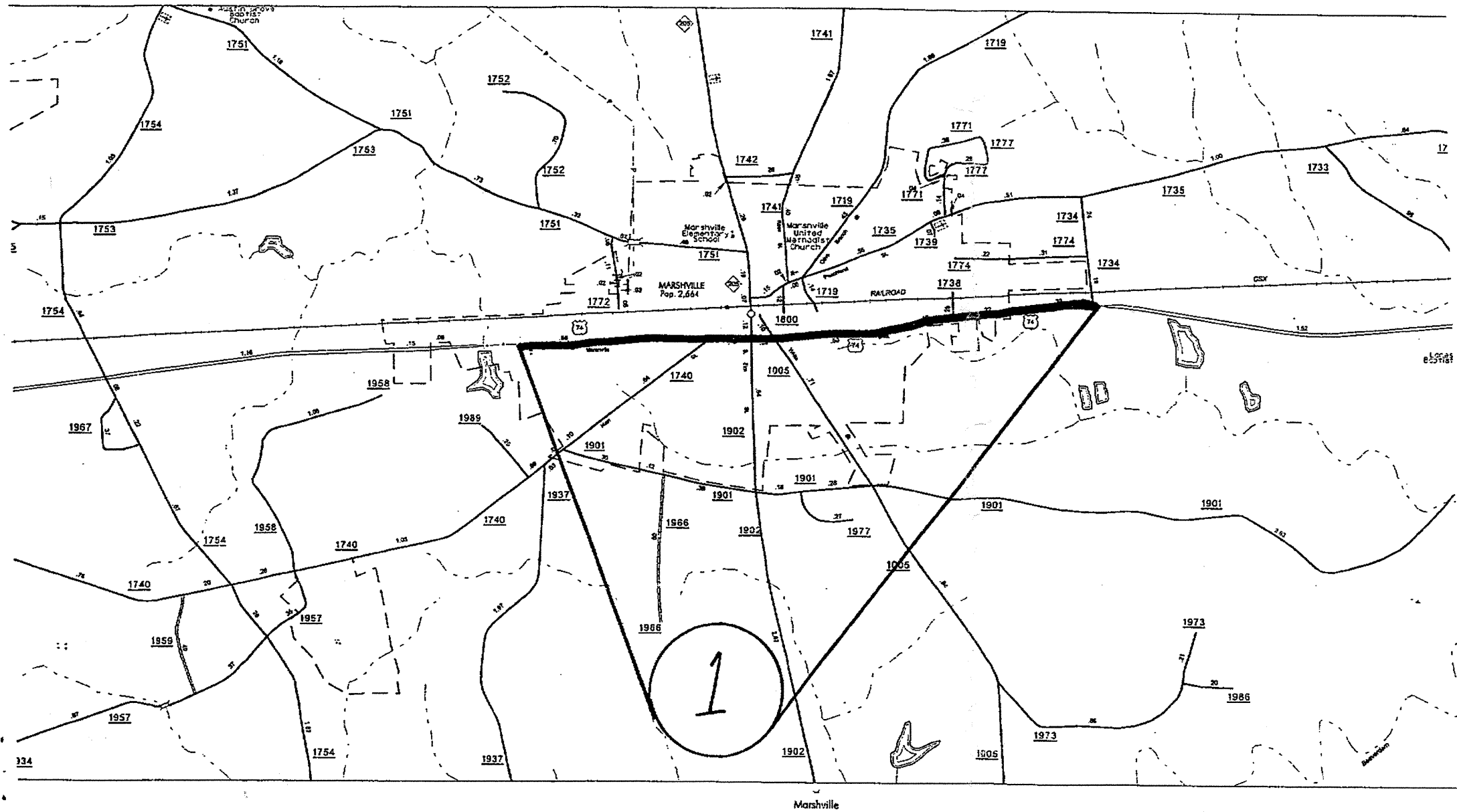


STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		1	9
F.A. PROJECT NO.			

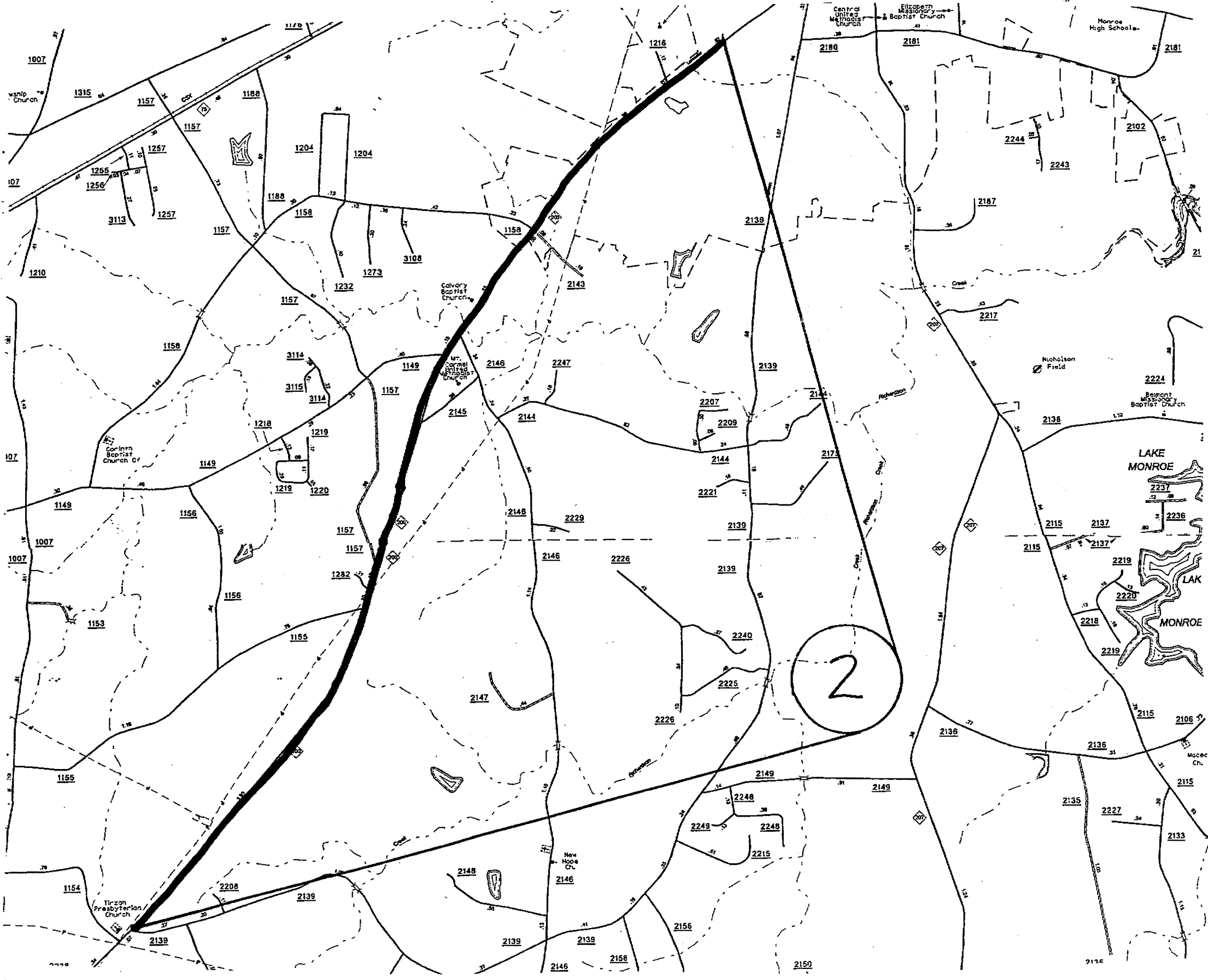


ENLARGED MUNICIPAL AND SUBURBAN AREAS  
**UNION COUNTY**  
 NORTH CAROLINA  
PREPARED BY THE  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS - GIS UNIT  
IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

**MAP #1 US 74 EAST BOUND BOTH LANES  
 (2.5 MILES)**

**FROM THE BEGINNING OF THE C&G IN MARSHVILLE  
 TO THE END OF THE C&G.**

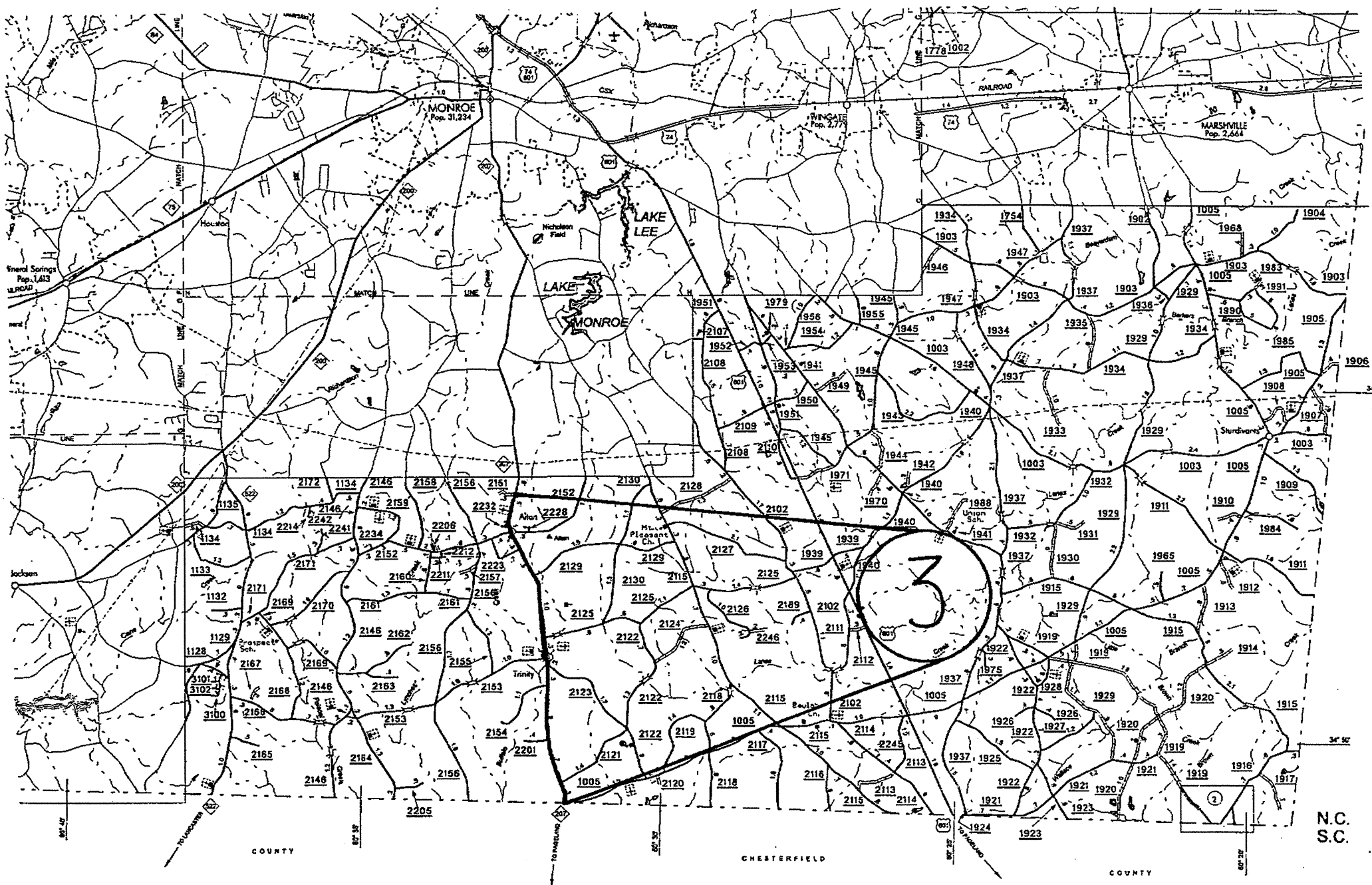
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		2	9
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS  
**UNION COUNTY**  
 NORTH CAROLINA  
PREPARED BY THE  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS - GIS UNIT  
IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

**MAP #2 NC 200 (5.3 MILES)**  
**FROM SOUTH WEST ST. TO SR-2139 (GRIFFITH RD.)**  
**NOTE: NO OVERLAY REQUIRED FROM DAVENPORT ST. TO APPROX. 750' NORTH OF BROOKS FARM LN.**

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		3	9
F.A. PROJECT NO.			

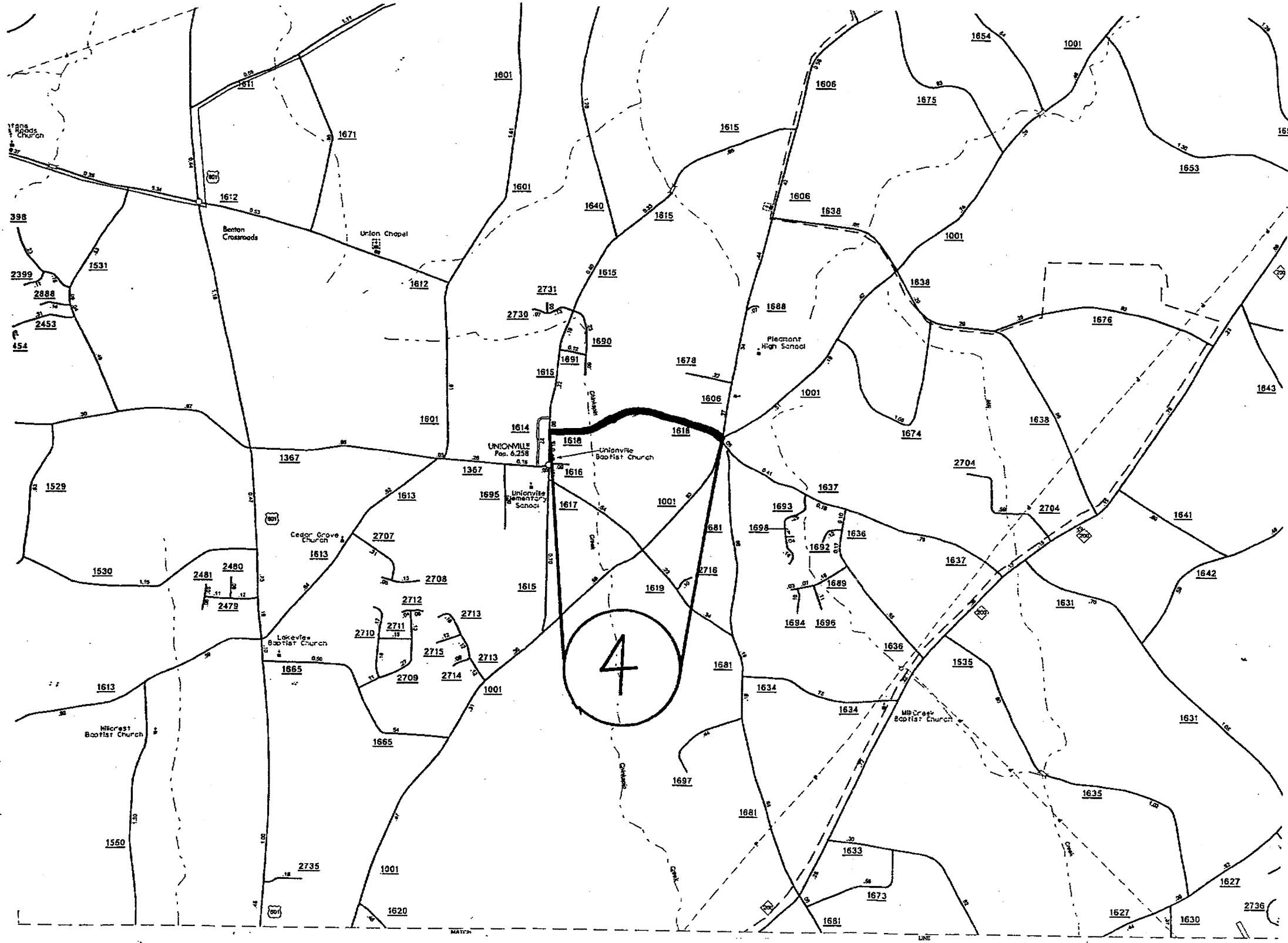


ENLARGED MUNICIPAL AND SUBURBAN AREAS  
**UNION COUNTY**  
 NORTH CAROLINA  
PREPARED BY THE  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS - GIS UNIT  
IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

**MAP #3 NC 207 (5.2 MILES)**  
**FROM SR-2151 (J.D. HELMS RD.) TO THE SOUTH CAROLINA LINE.**

C A R O L I N A

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		4	9
F.A. PROJECT NO.			



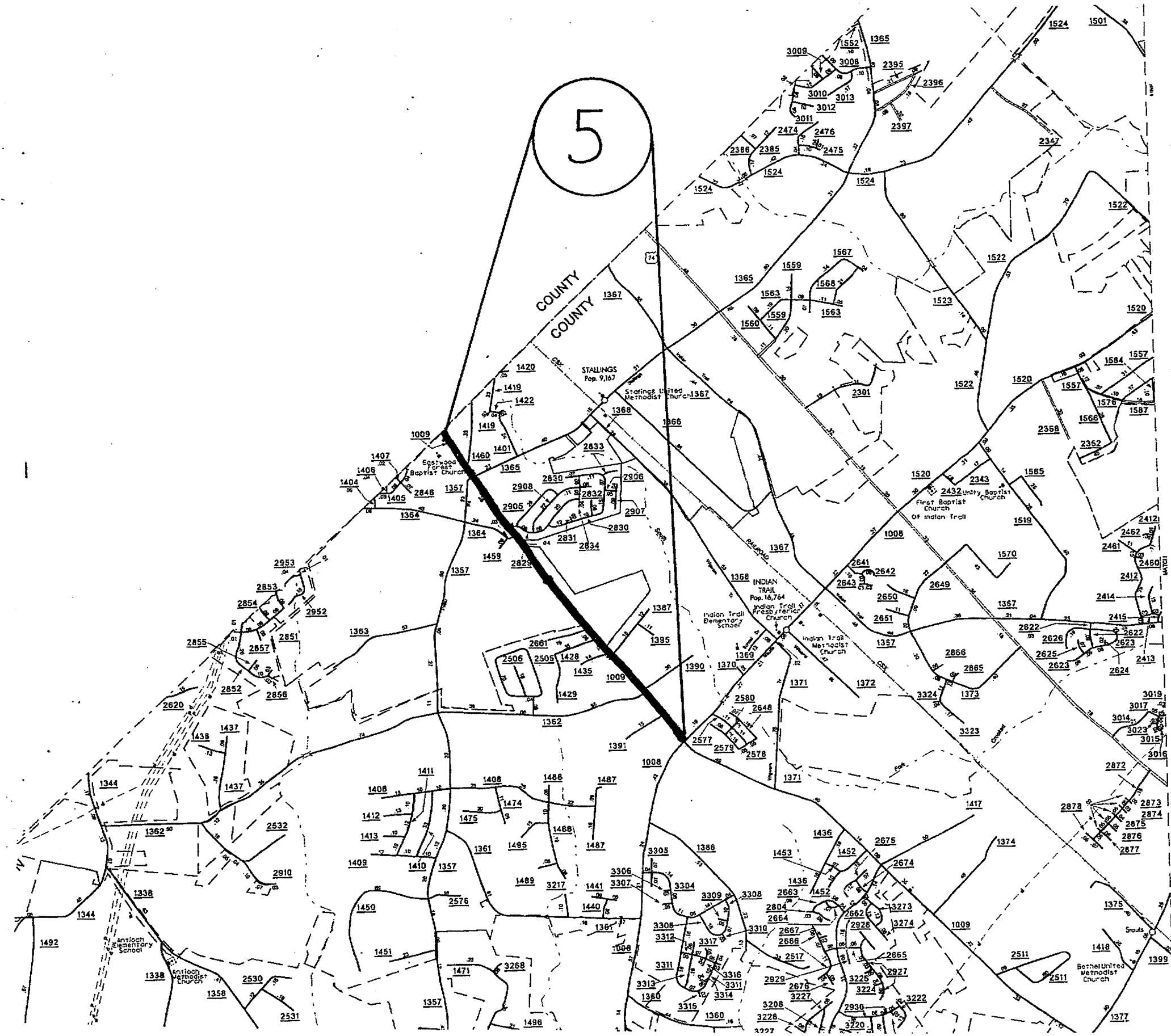
ENLARGED MUNICIPAL AND SUBURBAN AREAS  
**UNION COUNTY**  
 NORTH CAROLINA

PREPARED BY THE  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS - GIS UNIT  
 IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

**MAP #4 SR-1618 (TOM HELMS RD.)**  
**(0.82 MILES)**  
**FROM SR-1615 (UNIONVILLE RD.) TO SR-1606**  
**(SIKES MILL RD.)**

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		5	9
F.A. PROJECT NO.			

5



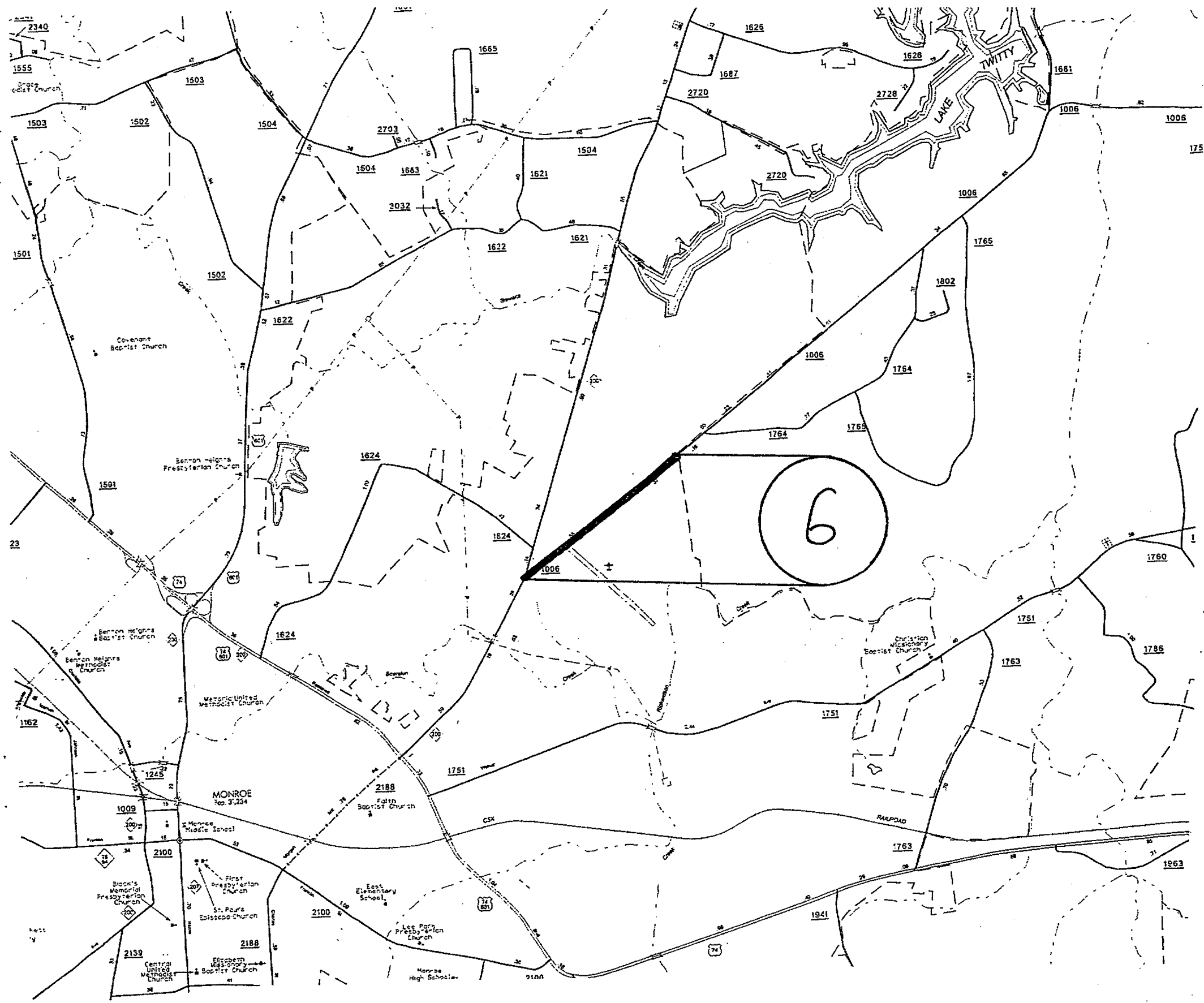
ENLARGED MUNICIPAL AND SUBURBAN AREAS  
**UNION COUNTY**  
 NORTH CAROLINA

PREPARED BY THE  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS - GIS UNIT  
 IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION

**MAP #5 SR-1009 (OLD CHARLOTTE HWY)**  
 (1.84 MILES)

FROM INTERSECTION AT SR-1008 (WAXHAW-INDIAN TRAIL RD.)  
 TO MECKLENBURG COUNTY LINE.

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		6	9
F.A. PROJECT NO.			



ENLARGED MUNICIPAL AND SUBURBAN AREAS

# UNION COUNTY

NORTH CAROLINA

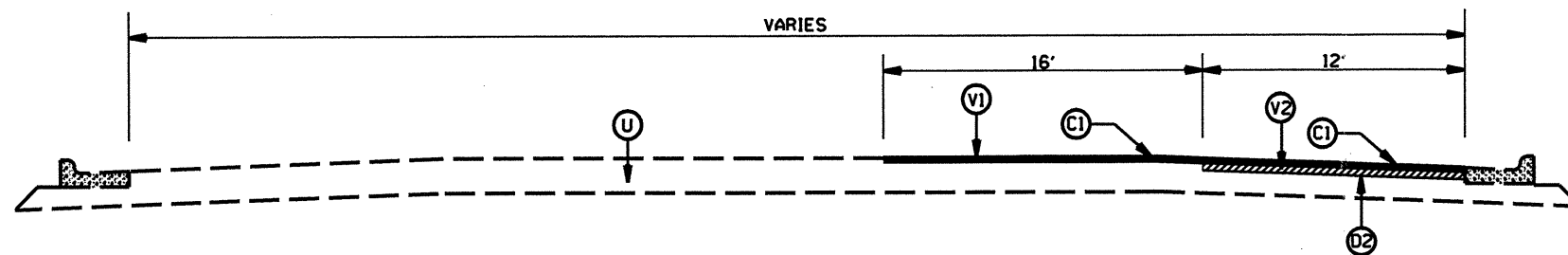
PREPARED BY THE  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS - GIS UNIT

IN COOPERATION WITH THE  
U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

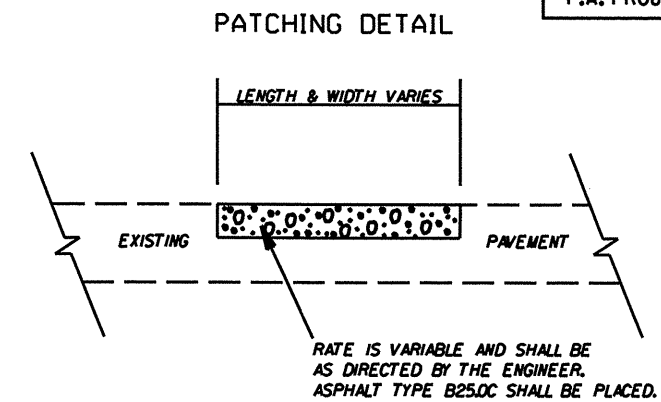
**MAP #6 SR-1006 (MONROE-OLIVE BRANCH RD.)  
(0.9 MILES)**

FROM NC 200 TO NORTH CITY LIMITS OF MONROE.

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	IOCR.10901.17	7	9
F.A. PROJECT NO.			

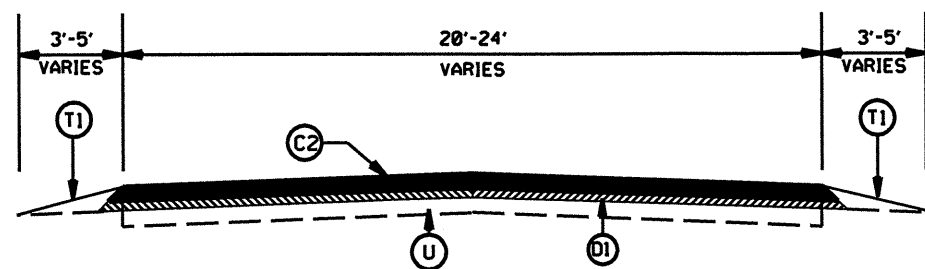


TYPICAL SECTION NO. 3

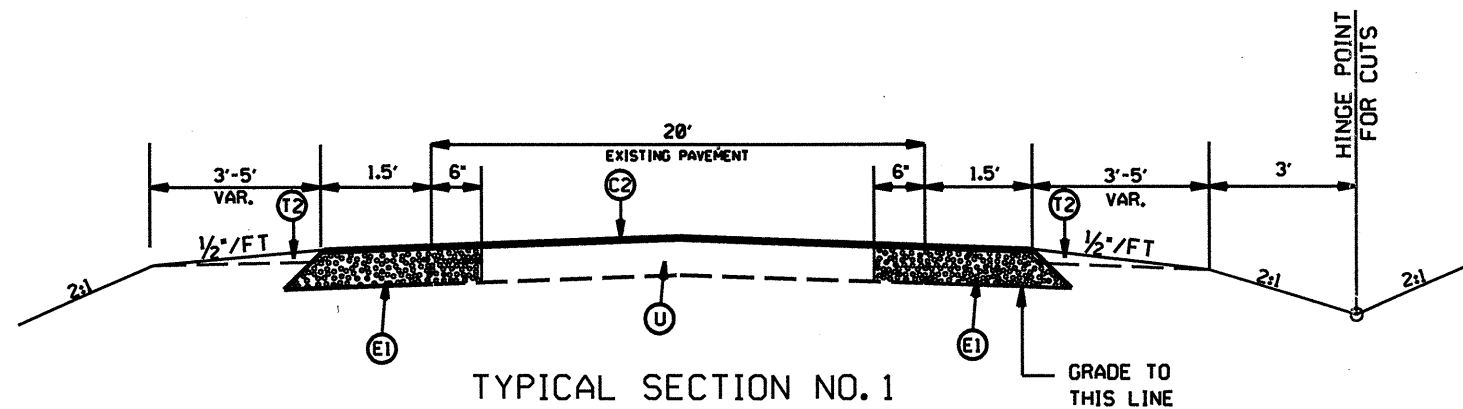


PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(D1)	PROP. APPROX. 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
(D2)	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
(E1)	PROP. APPROX. 5.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
(T1)	SHOULDER RECONSTRUCTION
(T2)	SHOULDER CONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING EXISTING PAVEMENT, 1.5" IN DEPTH
(V2)	MILLING EXISTING PAVEMENT, 5.5" IN DEPTH



TYPICAL SECTION NO. 2



TYPICAL SECTION NO. 1

NOTES: 1: NO OVERLAY REQUIRED ON MAP #2 FROM DAVENPORT ST. TO APPROX. 750' NORTH OF BROOKS FARM LN.

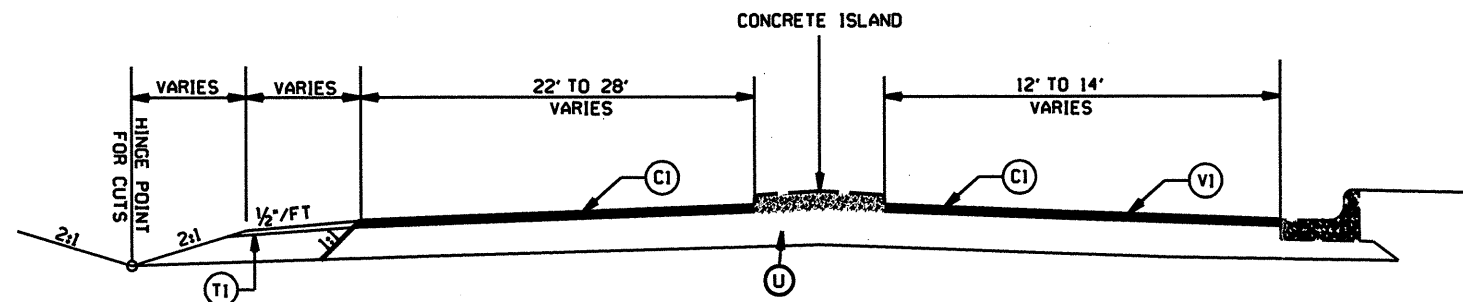
2: ON TYPICAL SECTION #2 THE CONTRACTOR SHALL REMOVE APPROX. 6" OF THE EXISTING PAVEMENT ON EACH SIDE PRIOR TO WIDENING 2'.

3: ON MAP #5 (SR-1009 OLD CHARLOTTE HWY.), CONTRACTOR SHALL USE FABRIC FOR JOINT REPAIR ON ALL TRANSVERSE CONCRETE JOINTS TO SUPPRESS REFLECTIVE CRACKING.

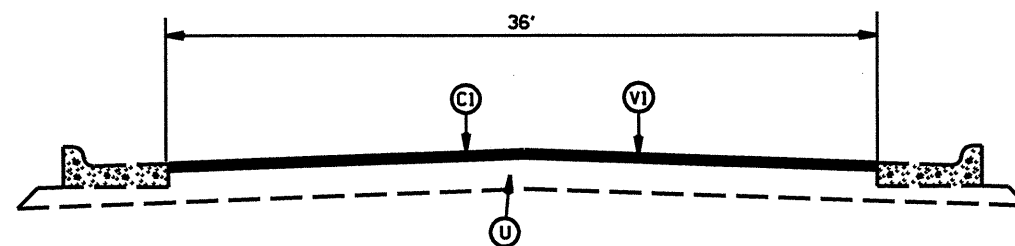
2009 UNION COUNTY  
RESURFACING

SCALE	-NA-		REVISIONS
DATE	04/09		
DWG. BY	TWB		
DESIGN BY	JAB		
APPROVED	JWU		

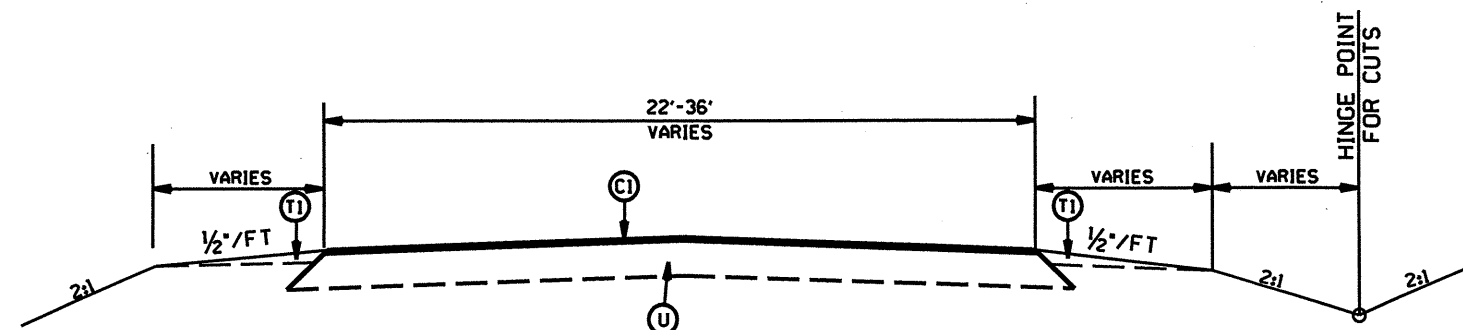
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.	IOCR.10901.17	8	9



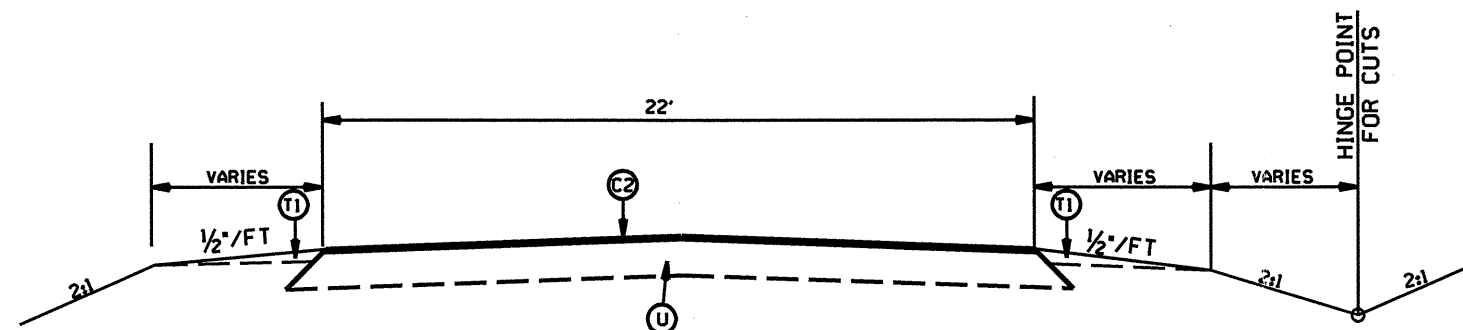
TYPICAL SECTION NO. 7



TYPICAL SECTION NO. 6

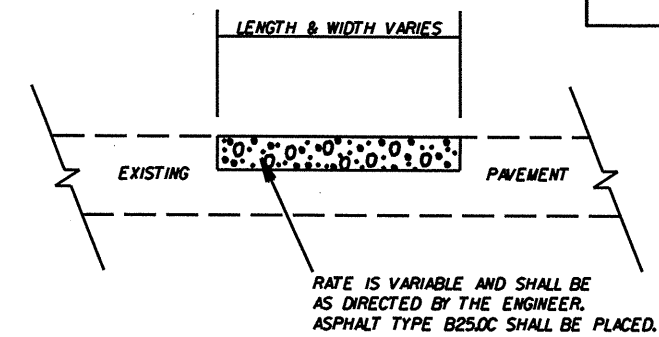


TYPICAL SECTION NO. 5



TYPICAL SECTION NO. 4

PATCHING DETAIL



PAVEMENT SCHEDULE

(C1)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(C2)	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
(D1)	PROP. APPROX. 2.5" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
(D2)	PROP. APPROX. 4" ASPHALT CONC. INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
(E1)	PROP. APPROX. 5.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
(T1)	SHOULDER RECONSTRUCTION
(T2)	SHOULDER CONSTRUCTION
(U)	EXISTING PAVEMENT
(V1)	MILLING EXISTING PAVEMENT, 1.5" IN DEPTH
(V2)	MILLING EXISTING PAVEMENT, 5.5" IN DEPTH

NOTES: 1: NO OVERLAY REQUIRED ON MAP \*2 FROM DAVENPORT ST. TO APPROX. 750' NORTH OF BROOKS FARM LN.

2: ON TYPICAL SECTION \*2 THE CONTRACTOR SHALL REMOVE APPROX. 6" OF THE EXISTING PAVEMENT ON EACH SIDE PRIOR TO WIDENING 2'.

3: ON MAP \*5 (SR-1009 OLD CHARLOTTE HWY.), CONTRACTOR SHALL USE FABRIC FOR JOINT REPAIR ON ALL TRANSVERSE CONCRETE JOINTS TO SUPPRESS REFLECTIVE CRACKING.

2009 UNION COUNTY RESURFACING

SCALE	-NA-		REVISIONS
DATE	04/09		
DWG. BY	TWB		
DESIGN BY	JAB		
APPROVED	JWU		



PROJECT NO.	SHEET NO.	TOTAL NO.
10CR.10901.17	9	9
10CR.20901.50, ETC		

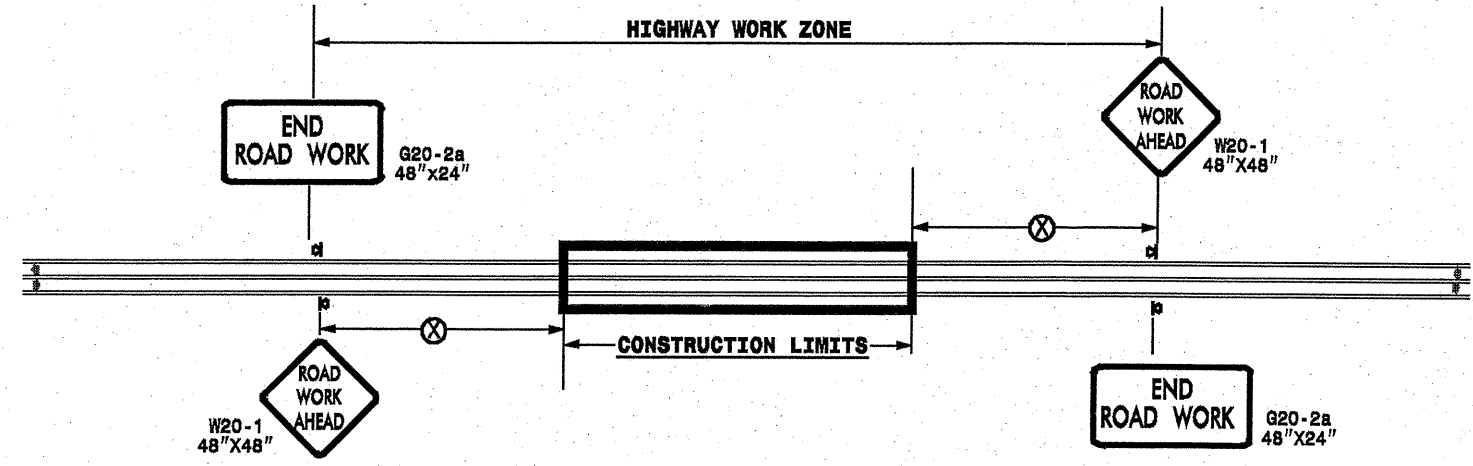
### SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	LENGTH MI	WIDTH FT	STABILIZER AGGREGATE TONS	INCIDENTAL STONE BASE TONS	SHOULDER CONSTRUCTION SMI	SHOULDER RECONSTRUCTION SMI	DITCHING LF	1 1/2" MILLING SY	5.5" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0C TONS	INTERMEDIATE COURSE, H19.0C TONS	SURFACE COURSE, S9.5B TONS	LEVELING COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	LEVELING COURSE, S9.5C TONS	PG 64-22 PLANT MIX TONS	PG 70-22 PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	FABRIC FOR JOINT REPAIR LF	6" DRIVEWAYS SY	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	TEMPORARY SILT FENCE LF	STONE FOR EROSION CONTROL, CLASS B TN	SEDIMENT CONTROL STONE TN	SEED & MULCHING AC	FINAL SURFACE TESTING REQUIRED	PORTABLE LIGHTING LS	
10CR.10901.17	Union	1	US 74 EAST BOUND BOTH LANES	FROM THE BEGINNING OF THE C&G IN MARSHVILLE TO THE END OF THE C&G.	3	2.5	28	175	325				23,200	17,400			4,124			3,465		194	208	875			1	1						NO	
10CR.10901.18	Union	2	NC 200	FROM SOUTH WEST ST. TO SR-2139 (GRIFFITH RD.)	5 & 6	5.3	22 - 36	425			10.4	795	2,100							6,500	1,855		511	2,121			8	12	795	105	53	5.1	NO		
10CR.10901.19	Union	3	NC 207	FROM SR-2151 (J.D. HELMS RD.) TO SOUTH CAROLINA LINE	4	5.2	22	420	135		10.4	781			50			5,820	1,823		468		2,084						780	105	53	5.1	NO		
10CR.20901.50	Union	4	SR-1618 (TOMS HELMS RD)	FROM SR-1615 (UNIONVILLE RD.) TO SR-1606 (SIKES MILL RD.)	1	0.82	23	70	55	1.7		246			50	590		980	300		120		330		90				250	25	13	0.8	NO		
10CR.20901.53	Union	5	SR-1009 (OLD CHARLOTTE HWY)	FROM INTERSECTION AT SR-1008 (WAXHAW-INDIAN TRAIL RD.) TO MECKLENBURG COUNTY LINE.	5 & 7	1.84	22 - 42	147	92		3.6	275			400					3,120	735		235	735	4,000		4	11	275	40	20	1.8	NO	*	
10CR.20901.51	Union	6	SR-1006 (MONROE-OLIVE BRANCH RD)	FROM NC 200 TO NORTH CITY LIMITS OF MONROE	2	0.9	22	65	60		1.8				50		1,680	1,000				139		320					140	20	10	0.9	NO		
<b>GRAND TOTAL</b>						<b>16.56</b>		<b>1,302</b>	<b>667</b>	<b>1.7</b>	<b>26.2</b>	<b>2,097</b>	<b>25,300</b>	<b>17,400</b>	<b>550</b>	<b>590</b>	<b>5,804</b>	<b>7,800</b>	<b>2,123</b>	<b>13,085</b>	<b>2,590</b>	<b>921</b>	<b>954</b>	<b>6,465</b>	<b>4,000</b>	<b>90</b>	<b>13</b>	<b>24</b>	<b>2,240</b>	<b>295</b>	<b>149</b>	<b>13.7</b>		<b>1</b>	

### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	468500000-E		468600000-E		468700000-E		471000000-E		472500000-E		481000000-E		490000000-N		
					4" X 90 M WHITE THERMO LF	4" X 120 M WHITE THERMO LF	4" X 120 M YELLOW THERMO LF	8" X 120 M WHITE THERMO LF	8" X 120 M YELLOW THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG SCHOOL 120 M EA	THERMO MSG AHEAD 120 M EA	THERMO MSG STOP 120 M EA	THERMO LT ARROW 90 M EA	THERMO RT ARROW 90 M EA	4" WHITE PAINT LF	4" YELLOW PAINT LF	CRYSTAL & RED MARKERS EA	YELLOW & YELLOW MARKERS EA
10CR.10901.17	Union	1	US 74 EAST BOUND BOTH LANES	FROM THE BEGINNING OF THE C&G IN MARSHVILLE TO THE END OF THE C&G.		5,000	15,000	56		270	12							400	340
10CR.10901.18	Union	2	NC 200	FROM SOUTH WEST ST. TO SR-2139 (GRIFFITH RD.)	57,028		53,300		120	14			4	4				580	120
10CR.10901.19	Union	3	NC 207	FROM SR-2151 (J.D. HELMS RD.) TO SOUTH CAROLINA LINE	55,952		50,875												350
10CR.20901.50	Union	4	SR-1618 (TOMS HELMS RD)	FROM SR-1615 (UNIONVILLE RD.) TO SR-1606 (SIKES MILL RD.)	8,823		8,050			14	5	4							110
10CR.20901.53	Union	5	SR-1009 (OLD CHARLOTTE HWY)	FROM INTERSECTION AT SR-1008 (WAXHAW-INDIAN TRAIL RD.) TO MECKLENBURG COUNTY LINE.	19,445	1,584	21,537		890	126								157	87
10CR.20901.51	Union	6	SR-1006 (MONROE-OLIVE BRANCH RD)	FROM NC 200 TO NORTH CITY LIMITS OF MONROE	9,684		7,992									10,000	10,000		60
<b>GRAND TOTAL</b>					<b>150,932</b>	<b>6,584</b>	<b>156,754</b>	<b>56</b>	<b>1,010</b>	<b>424</b>	<b>12</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>10,000</b>	<b>10,000</b>	<b>1,137</b>	<b>1,087</b>
						<b>163,338</b>		<b>1,066</b>			<b>21</b>		<b>8</b>		<b>20,000</b>		<b>2,204</b>		

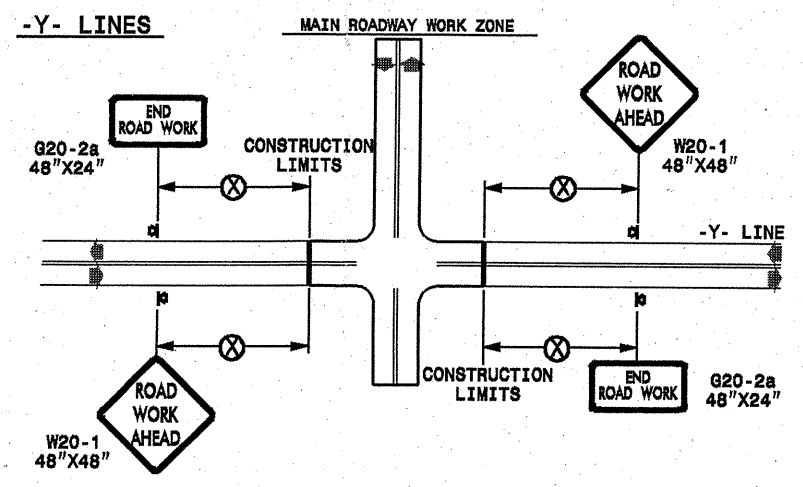
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



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 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

DETAIL DRAWING  
FOR TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

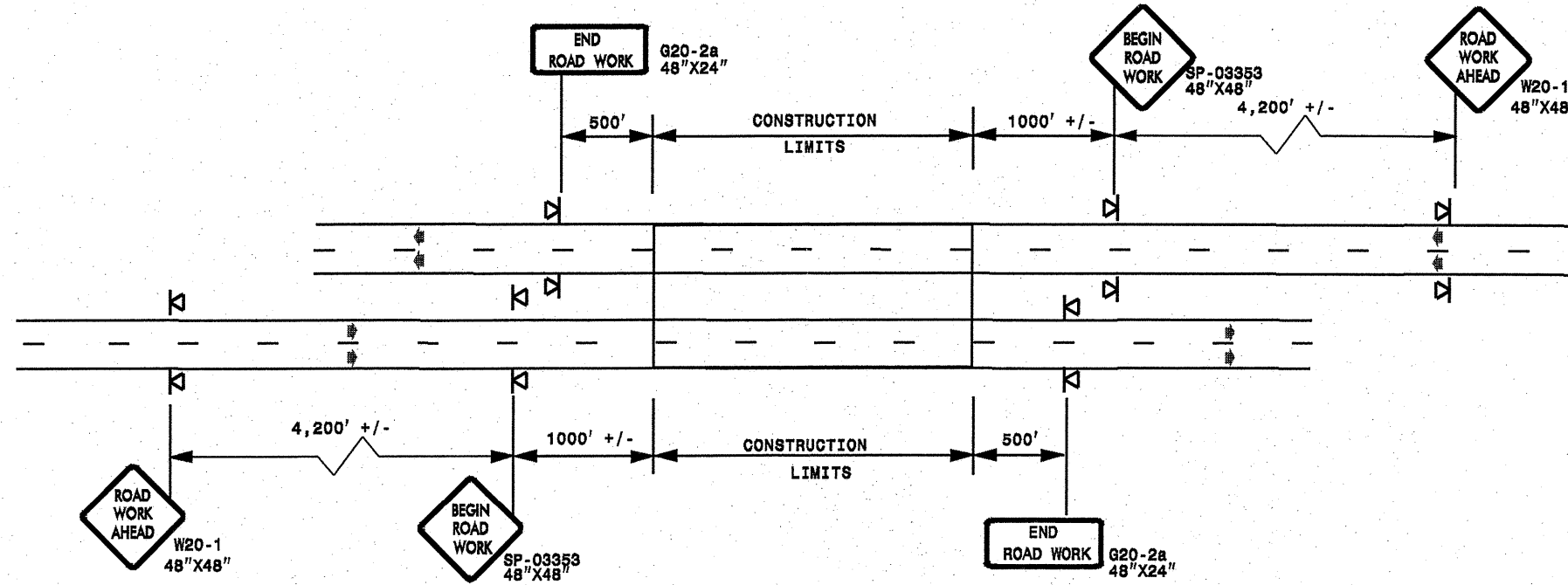
SHEET 1 OF 1

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

30-JUN-2009 12:16  
 s:\signing\resur\facting2009\div0\c202413a-f\_10cr109017x6-unlon.us74etc\c202413a-f\_10cr109017x6-2wayundivurbfr.wys\july2006\_portable.dgn  
 P:\symor6

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

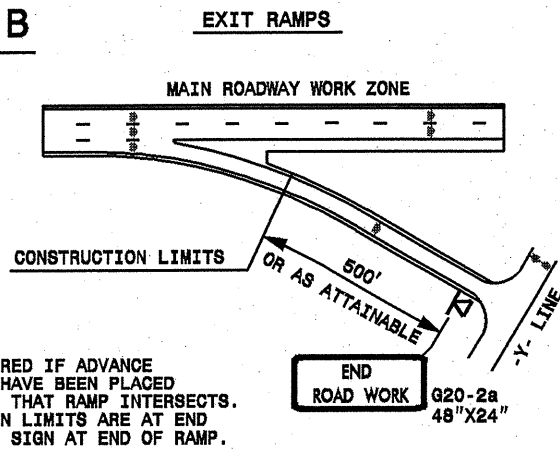
**DETAIL A**



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

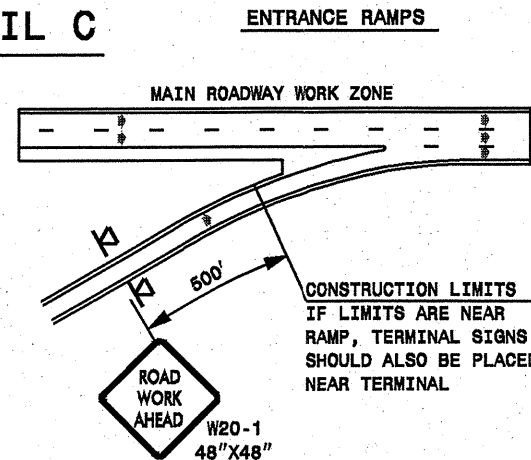
**ROADWAYS INTERSECTING ALONG FREEWAY WORK ZONE (Y-LINES)**

**DETAIL B**



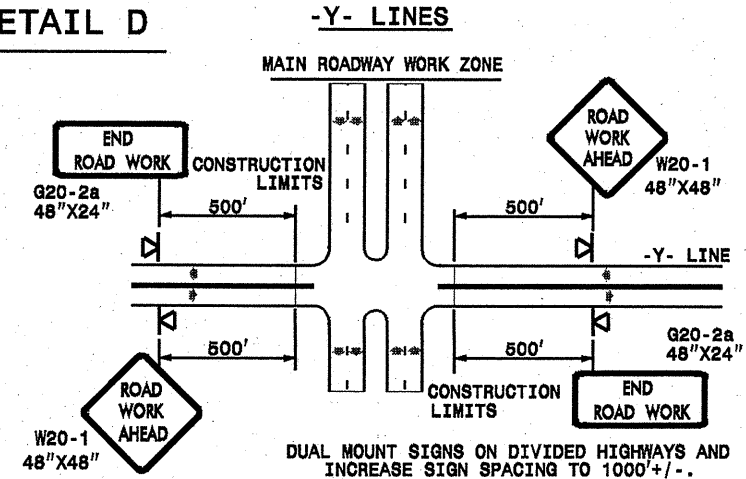
NOTE:  
SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

**DETAIL C**



CONSTRUCTION LIMITS IF LIMITS ARE NEAR RAMP, TERMINAL SIGNS SHOULD ALSO BE PLACED NEAR TERMINAL

**DETAIL D**



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

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

**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

SHEET 1 OF 1

APPROVED:	DATE:	DETAIL DRAWING FOR FREEWAYS WORK ZONE WARNING SIGNS	
SCALE:	NONE	REVISIONS	
DATE:		7-98	10/01
DWG. BY:		10-98	09/04
DESIGN BY:		01/01	11/04
REVIEWED BY:			

30-JUN-2009 12:19  
 sta\signing\resur\resurfacing\2009\div10\c202413a-f\_10cr1090117x6-freelanesgreat\July2006.por table.dgn  
 AT WZ1237502