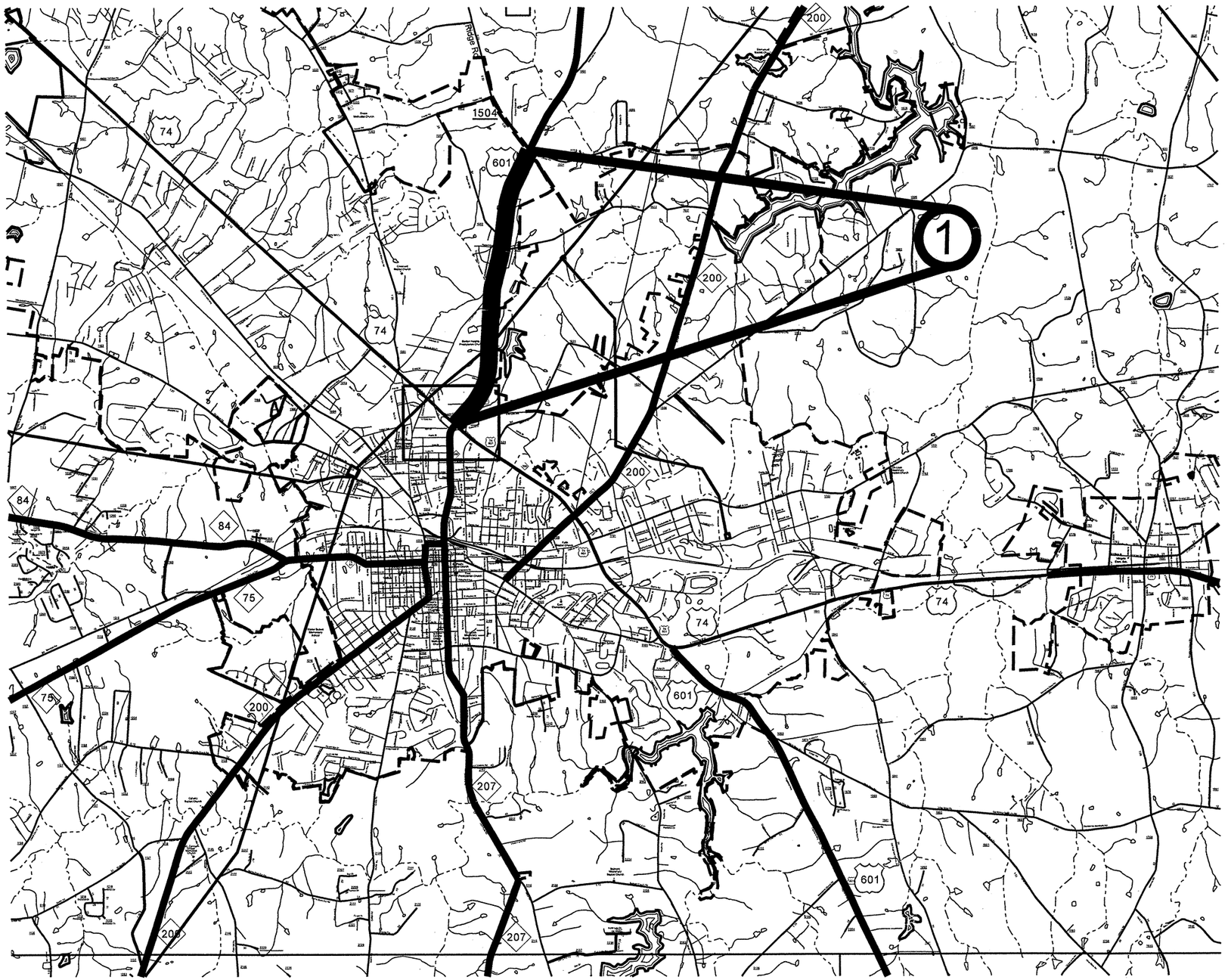
STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		1	
F.A. PROJECT NO.			

10C.090120, etc.



N

S

ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

NORTH CAROLINA

PREPARED BY THE

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DIVISION OF HIGHWAYS - GIS UNIT

IN COOPERATION WITH THE

U.S.DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

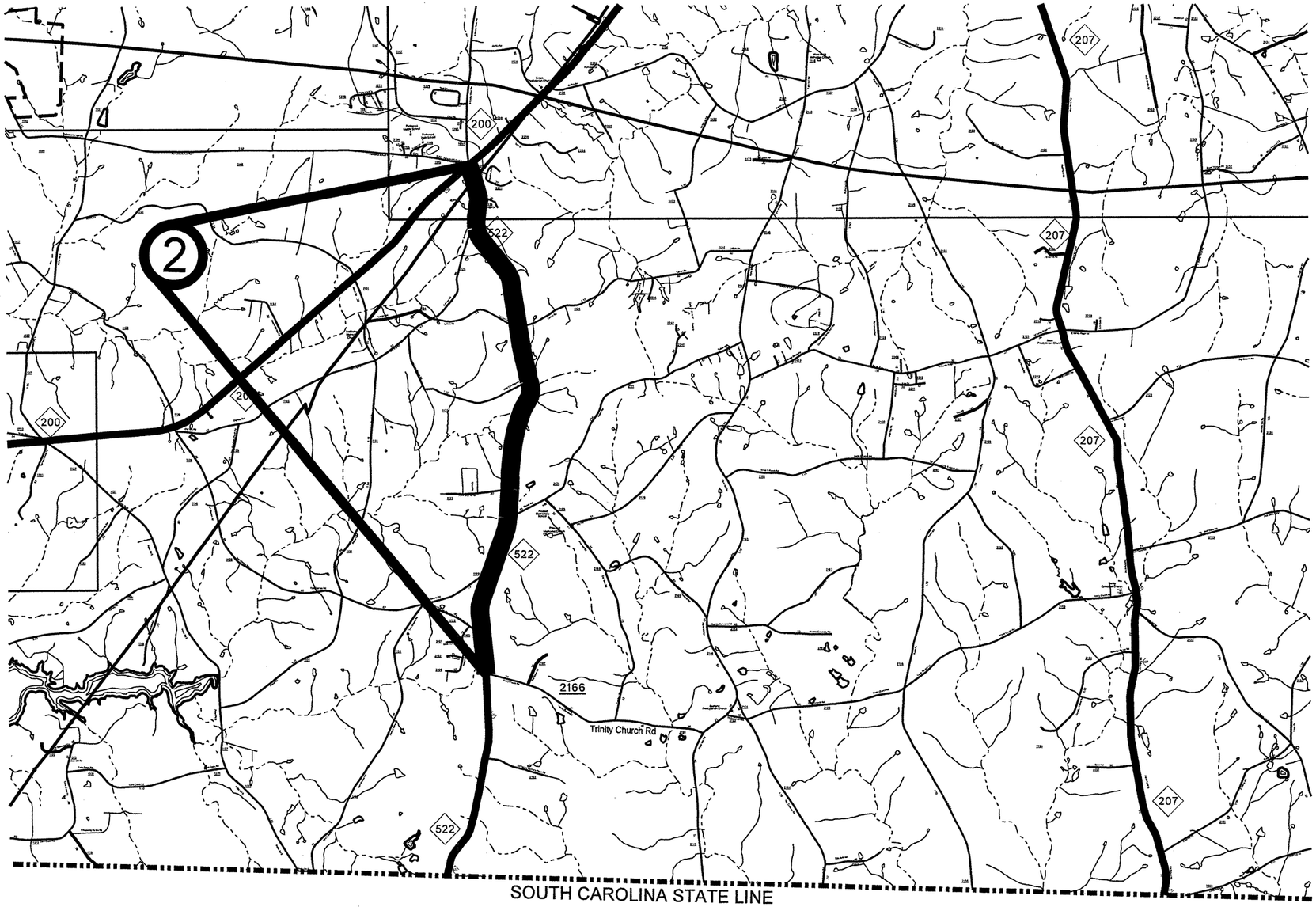
SCALE

1 0 1 MILES

MAP #1 US HWY 601 N
2.3 MILES

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

10C.090129 etc.



N

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ENLARGED MUNICIPAL AND SUBURBAN AREAS

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FEDERAL HIGHWAY ADMINISTRATION

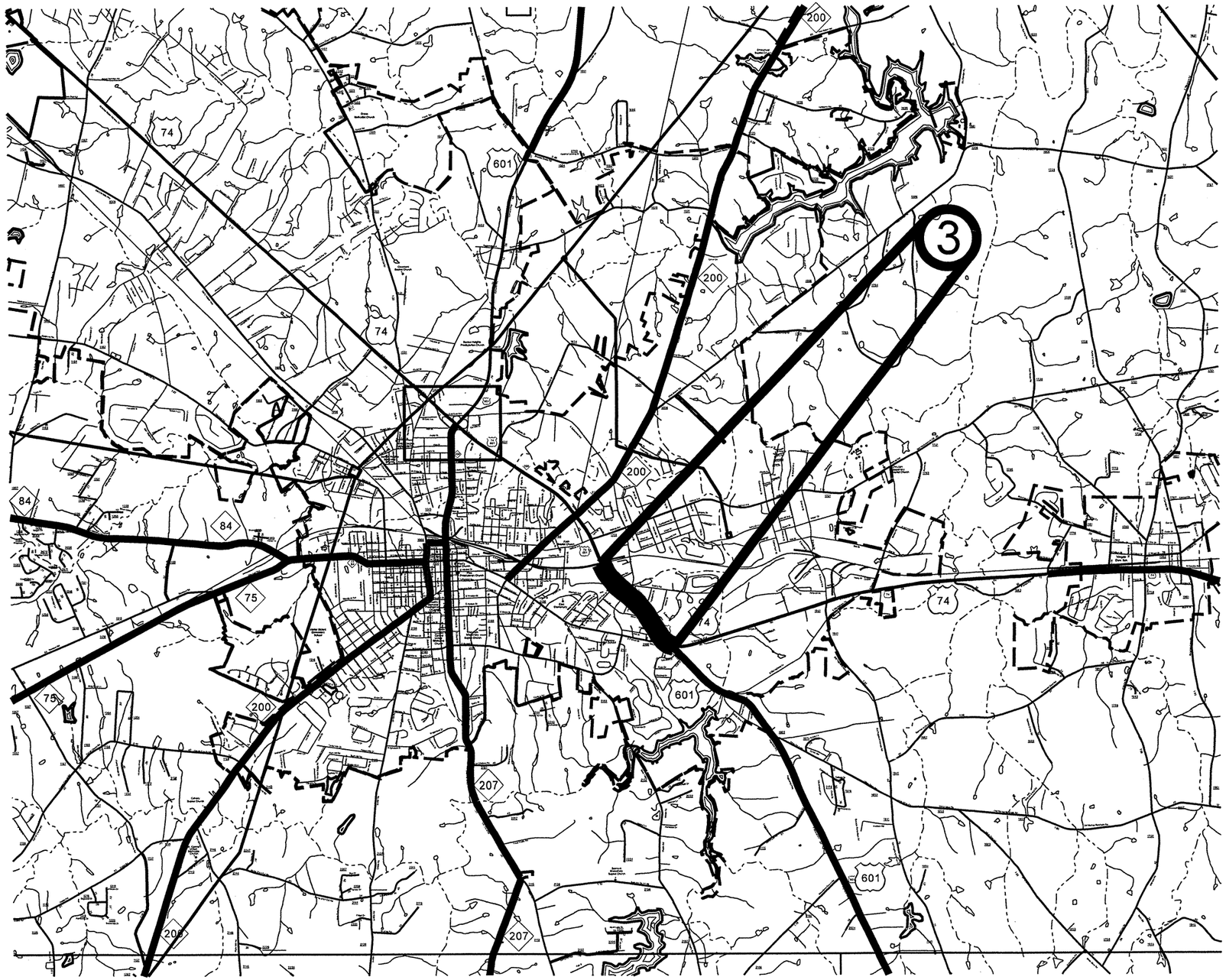
SCALE

1 0 1 MILES

MAP #2 NC HWY 522
4.13 MILES

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

10C.090120, etc.



N

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ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

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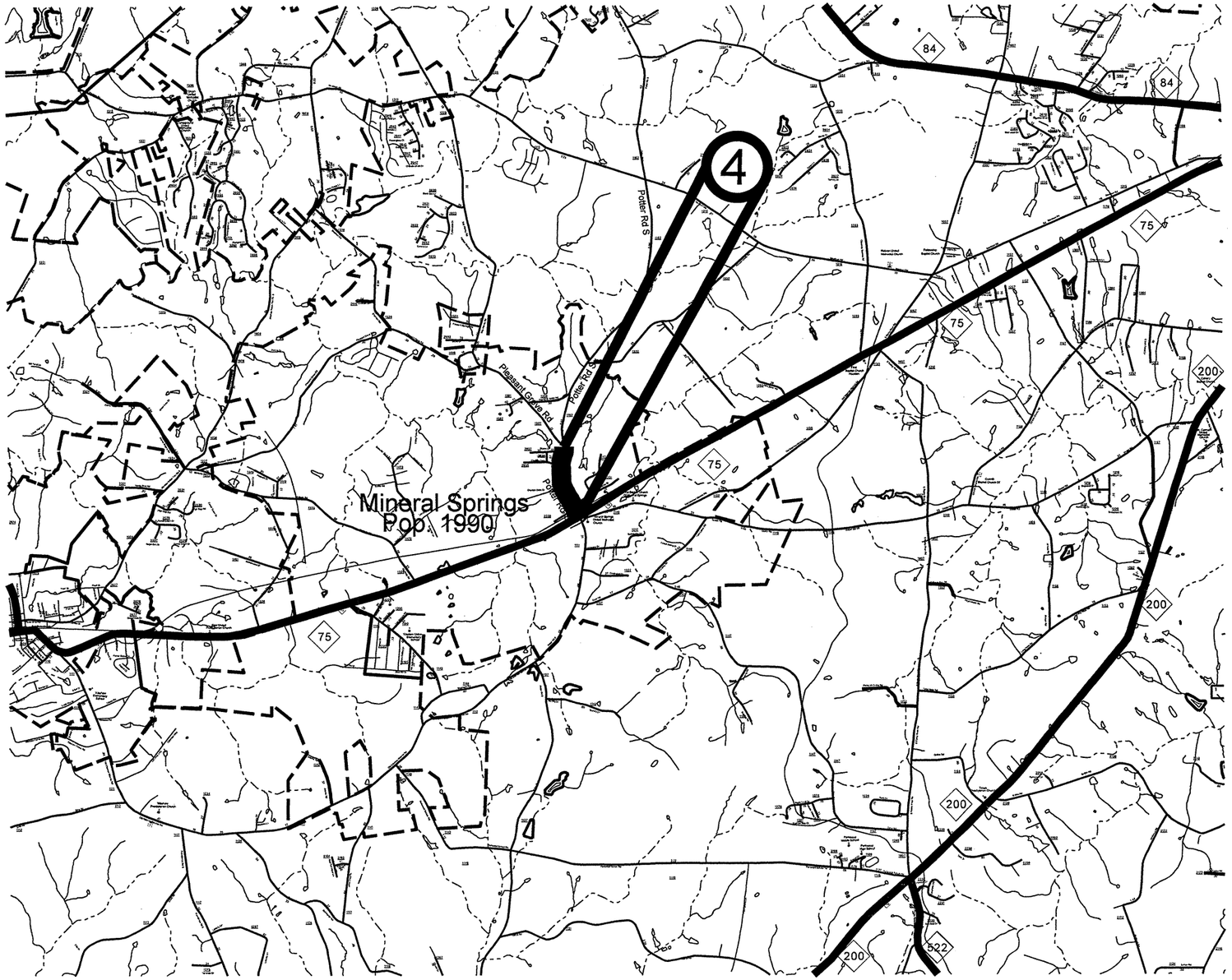
SCALE

1 0 1 MILES

MAP #3 US HWY 74
0.9 MILES

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

10C.090120, etc.



N

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ENLARGED MUNICIPAL AND SUBURBAN AREAS

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FEDERAL HIGHWAY ADMINISTRATION

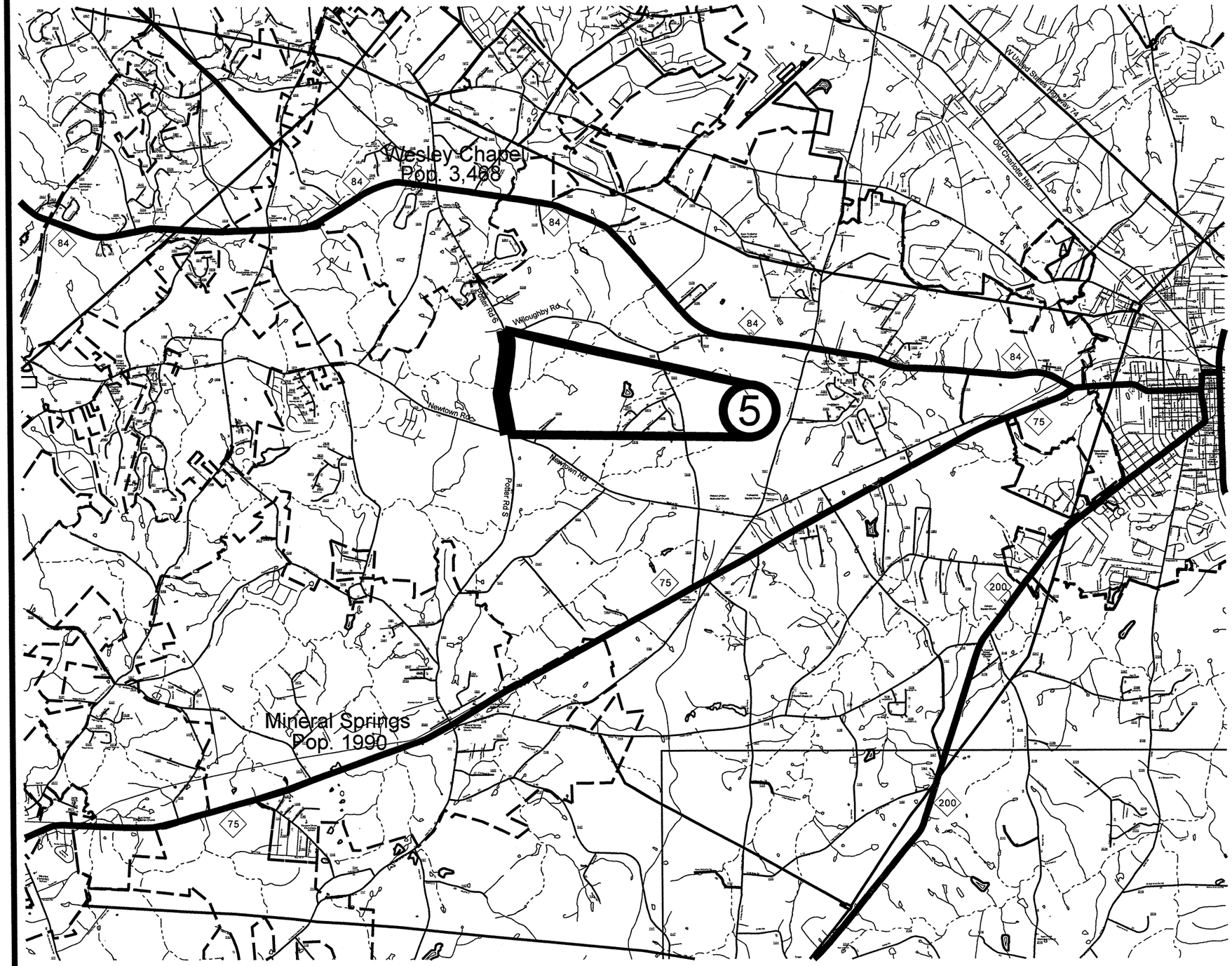
SCALE

1 0 1 MILES

MAP #4 SR-1162 (POTTER RD)
0.57 MILES

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

10C.090120, etc.



N

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ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

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FEDERAL HIGHWAY ADMINISTRATION

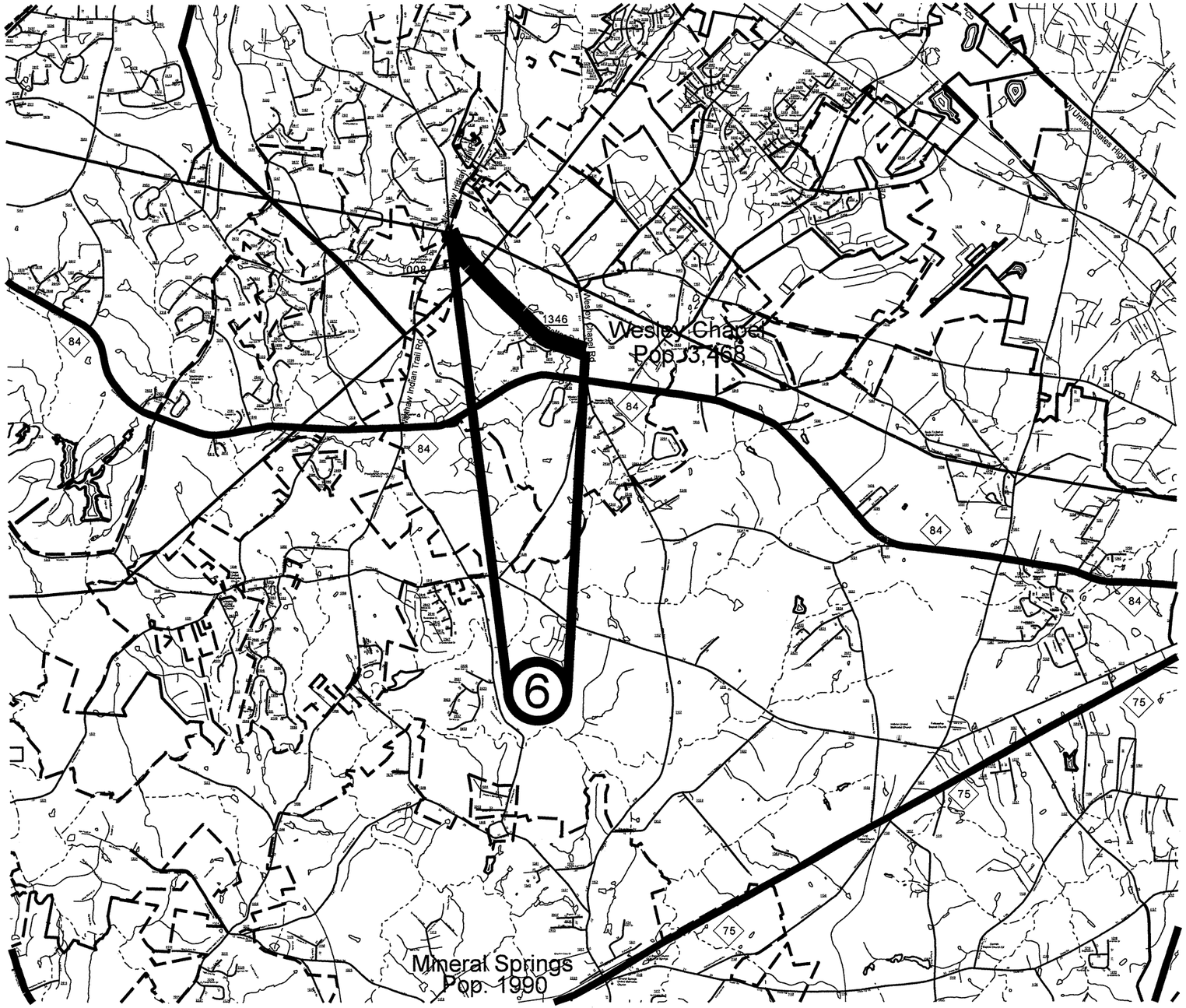
SCALE

1 0 1 MILES

MAP #5 SR-1162 (POTTER RD)
0.71 MILES

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

10C.090120, etc.



N

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FEDERAL HIGHWAY ADMINISTRATION

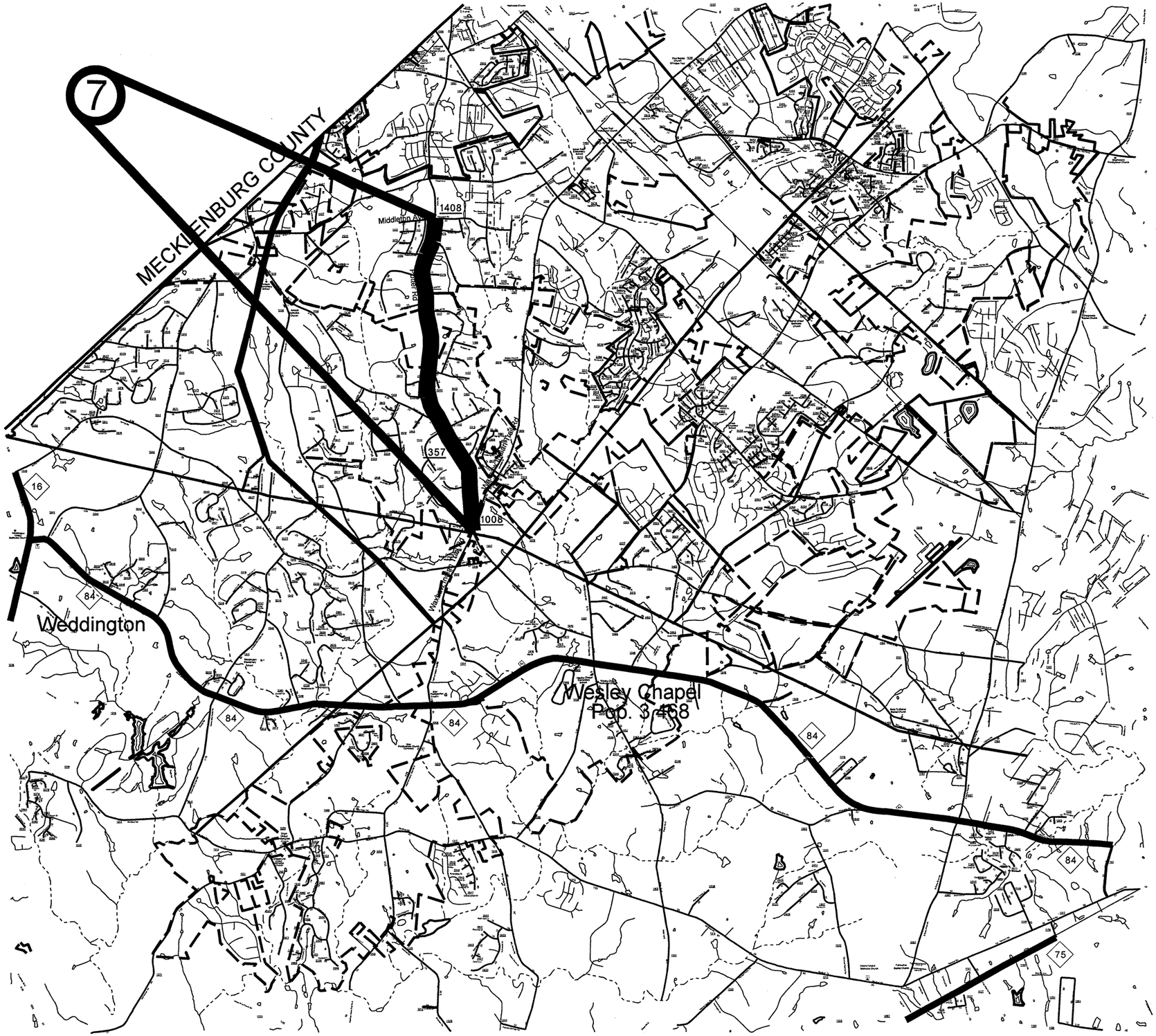
SCALE

1 0 1 MILES

MAP #6 SR-1346 (POTTER RD)
1.39 MILES

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

10C.090120, etc.



N

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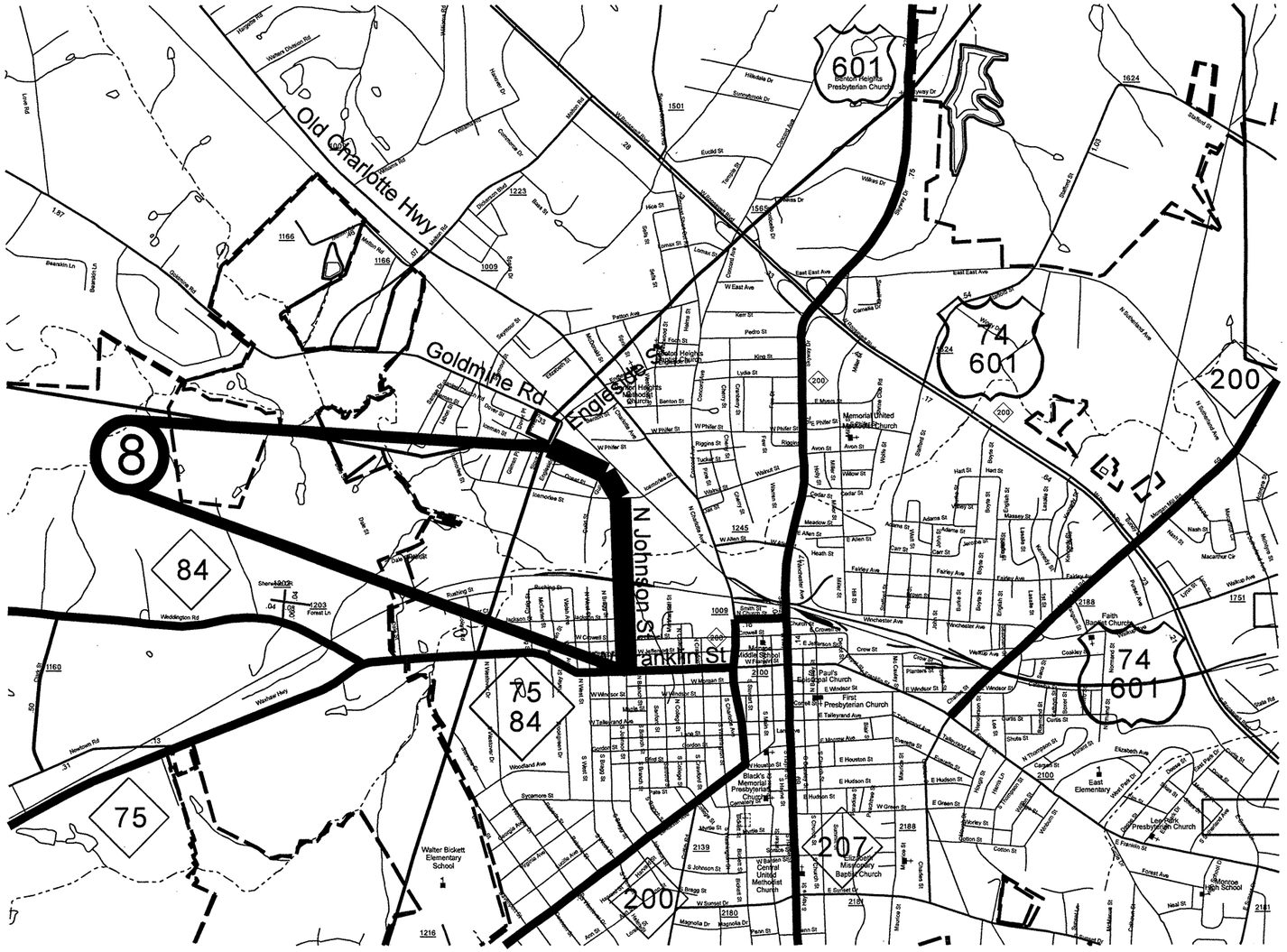
SCALE

1 0 1 MILES

MAP #7 SR-1357 (POTTER RD)
2.92 MILES

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		8	
F.A. PROJECT NO.			

10C.090120, etc.



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ENLARGED MUNICIPAL AND SUBURBAN AREAS

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FEDERAL HIGHWAY ADMINISTRATION

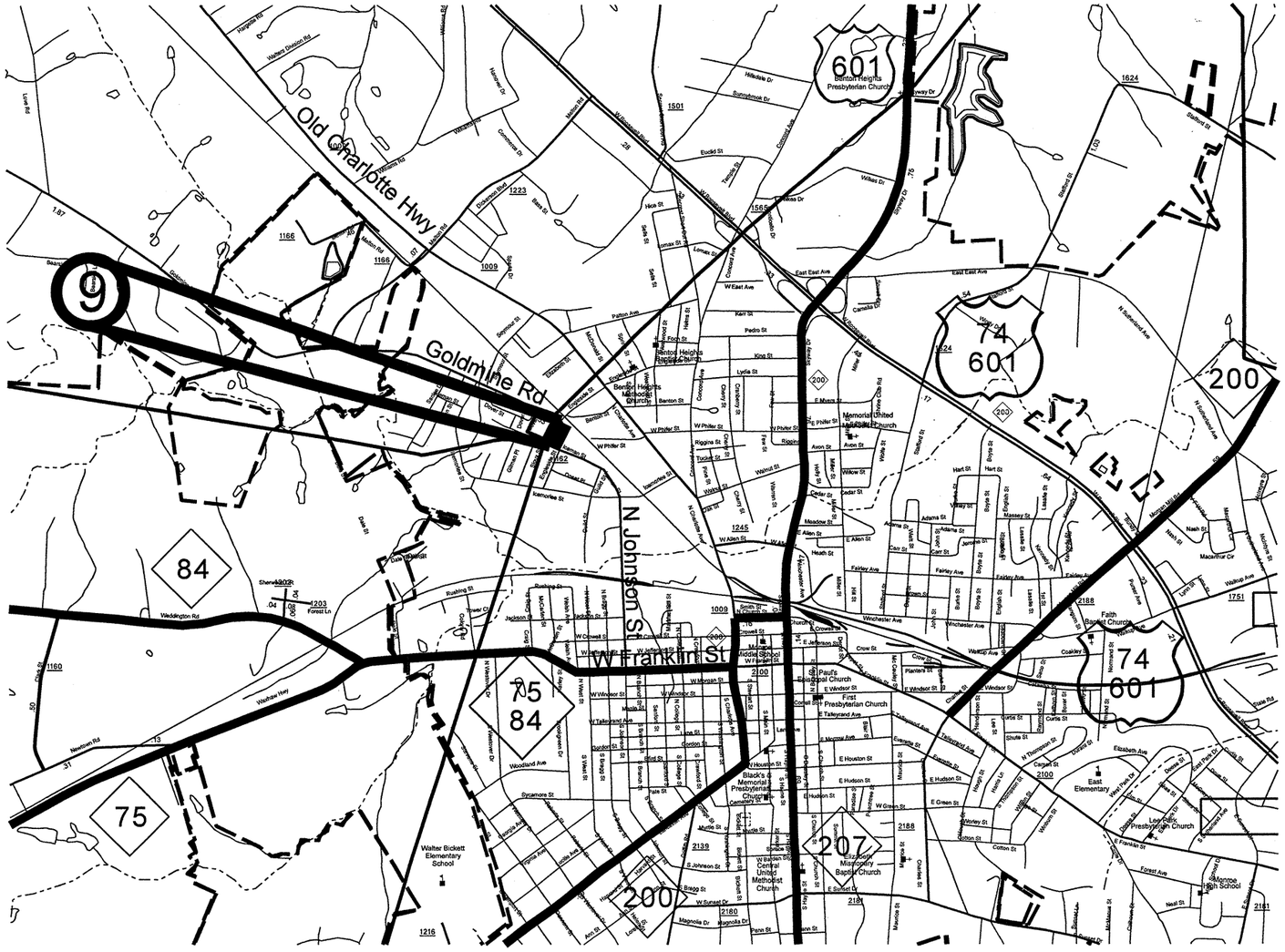
SCALE

1 0 1 MILES

MAP #8 SR-1162 (JOHNSON ST)
0.792 MILES

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

10C.090120, etc.



N

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ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

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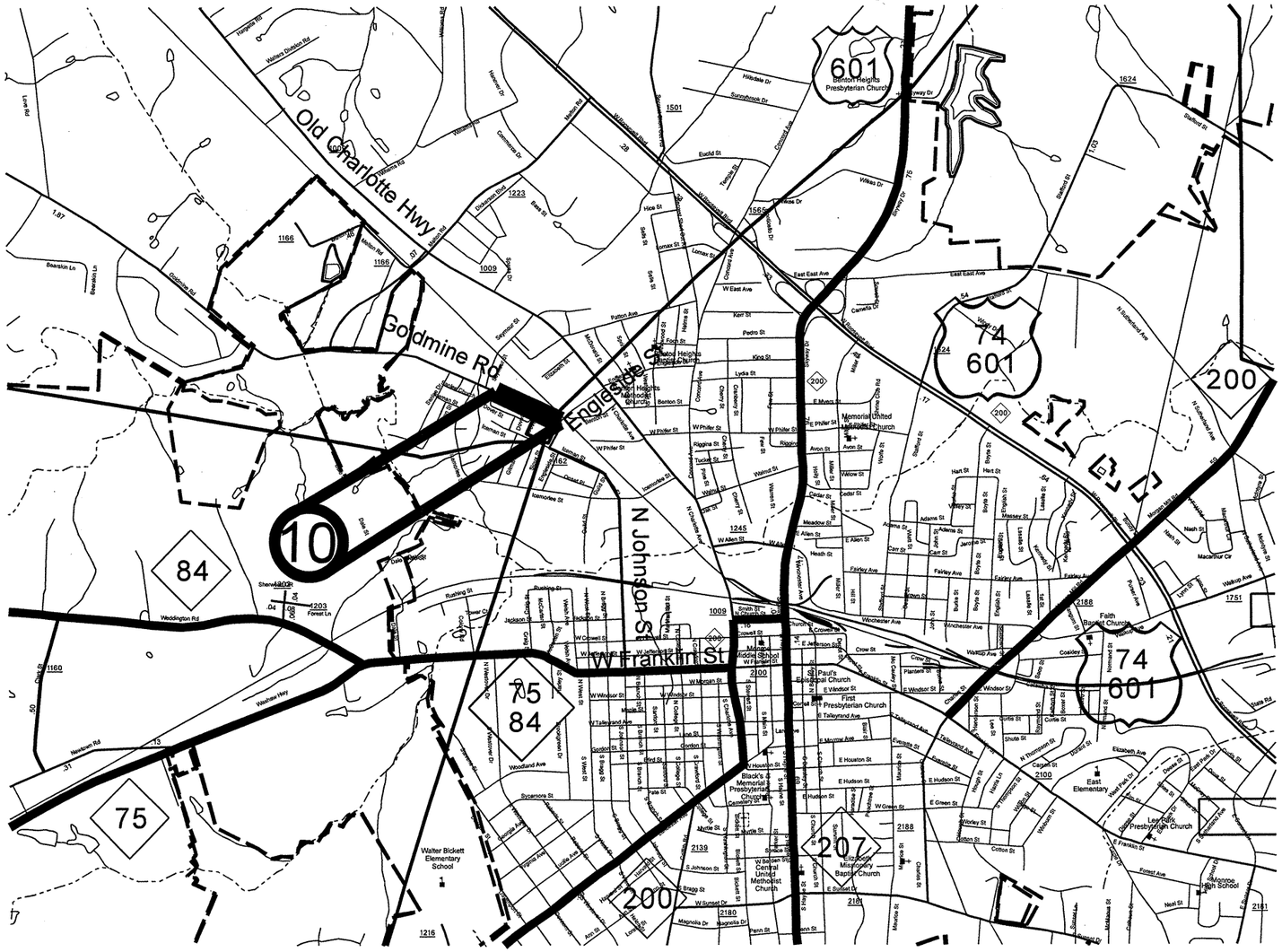
SCALE

1 0 1 MILES

MAP #9 SR-1162 (ENGLESIDE ST)
0.081 MILES

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		10	
F.A. PROJECT NO.			

10C.090120, etc.



N

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ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

NORTH CAROLINA

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FEDERAL HIGHWAY ADMINISTRATION

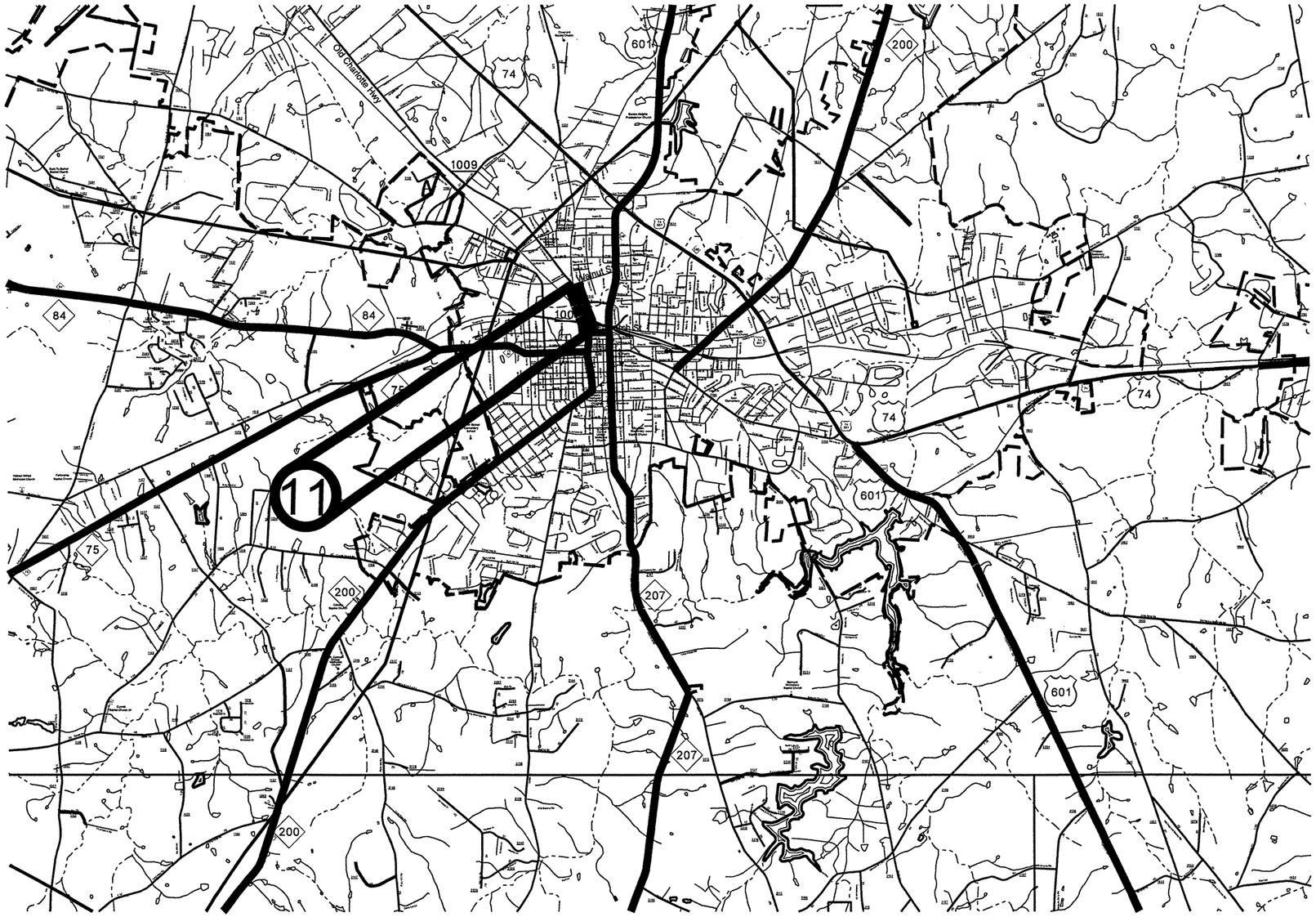
SCALE

1 0 1 MILES

MAP #10 SR-1162 (GOLDMINE RD)
0.21 MILES

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		11	
F.A. PROJECT NO.			

10C.090120, etc.



ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

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FEDERAL HIGHWAY ADMINISTRATION

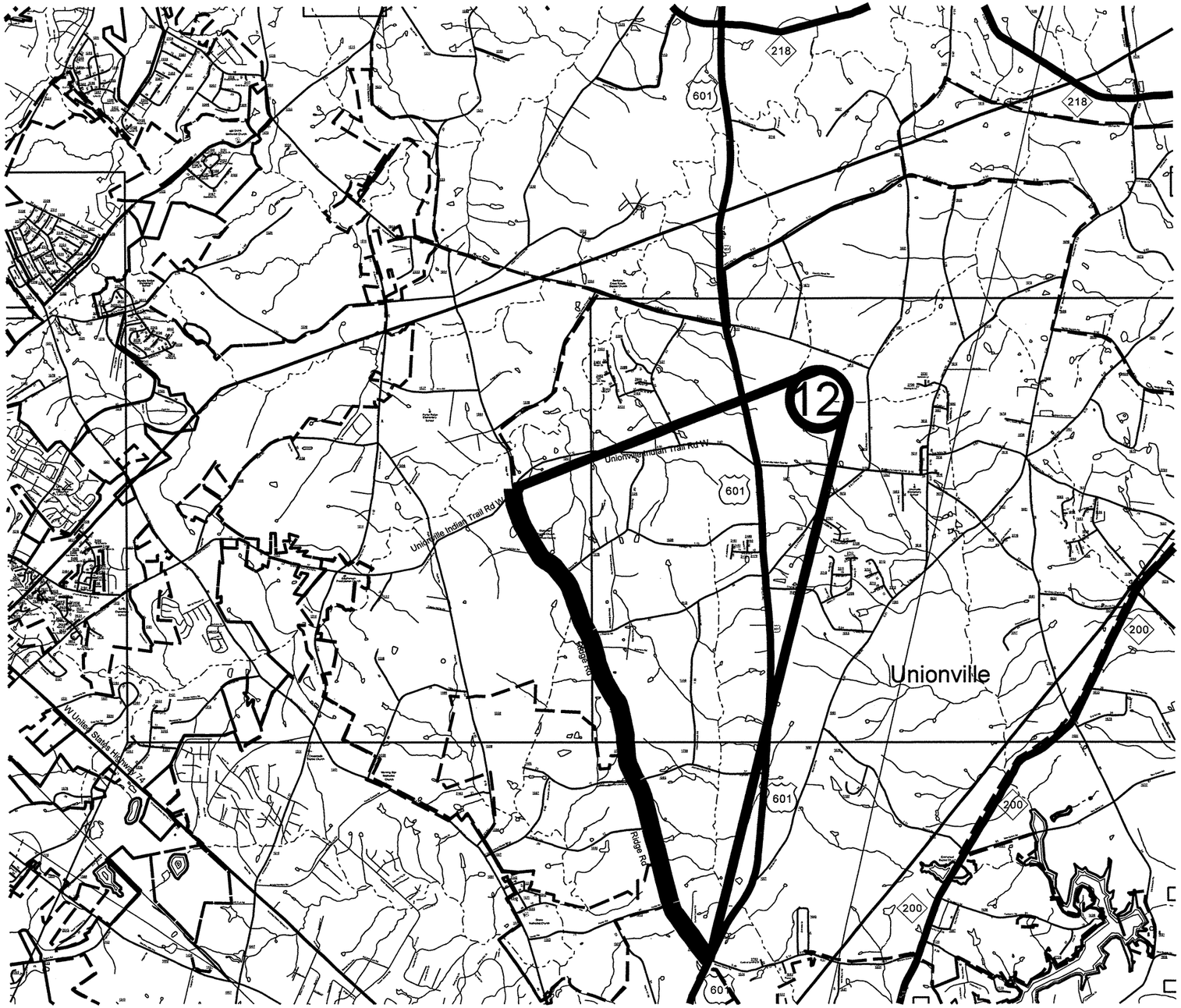
SCALE

1 0 1 MILES

MAP #11 SR-1009 (OLD CHARLOTTE HWY)
0.376 MILES

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		12	
F.A. PROJECT NO.			

10C.090120, etc.



N

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ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

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U.S.DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

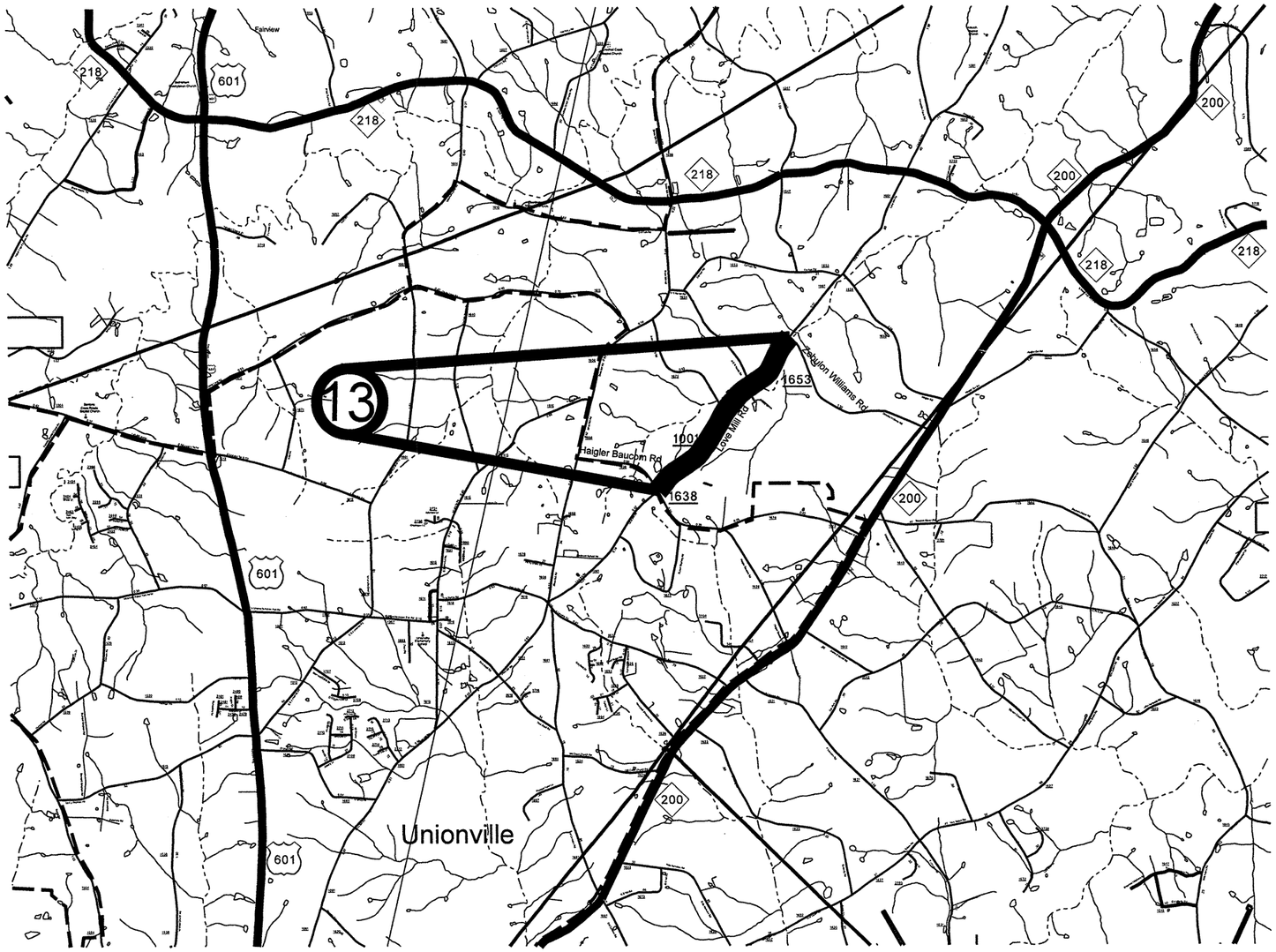
SCALE

1 0 1 MILES

MAP #12 SR-1504 (RIDGE RD)
4.074 MILES

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		13	
F.A. PROJECT NO.			

10.C. 090120, etc.



N

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ENLARGED MUNICIPAL AND SUBURBAN AREAS

UNION COUNTY

NORTH CAROLINA

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FEDERAL HIGHWAY ADMINISTRATION

SCALE

1 0 1 MILES

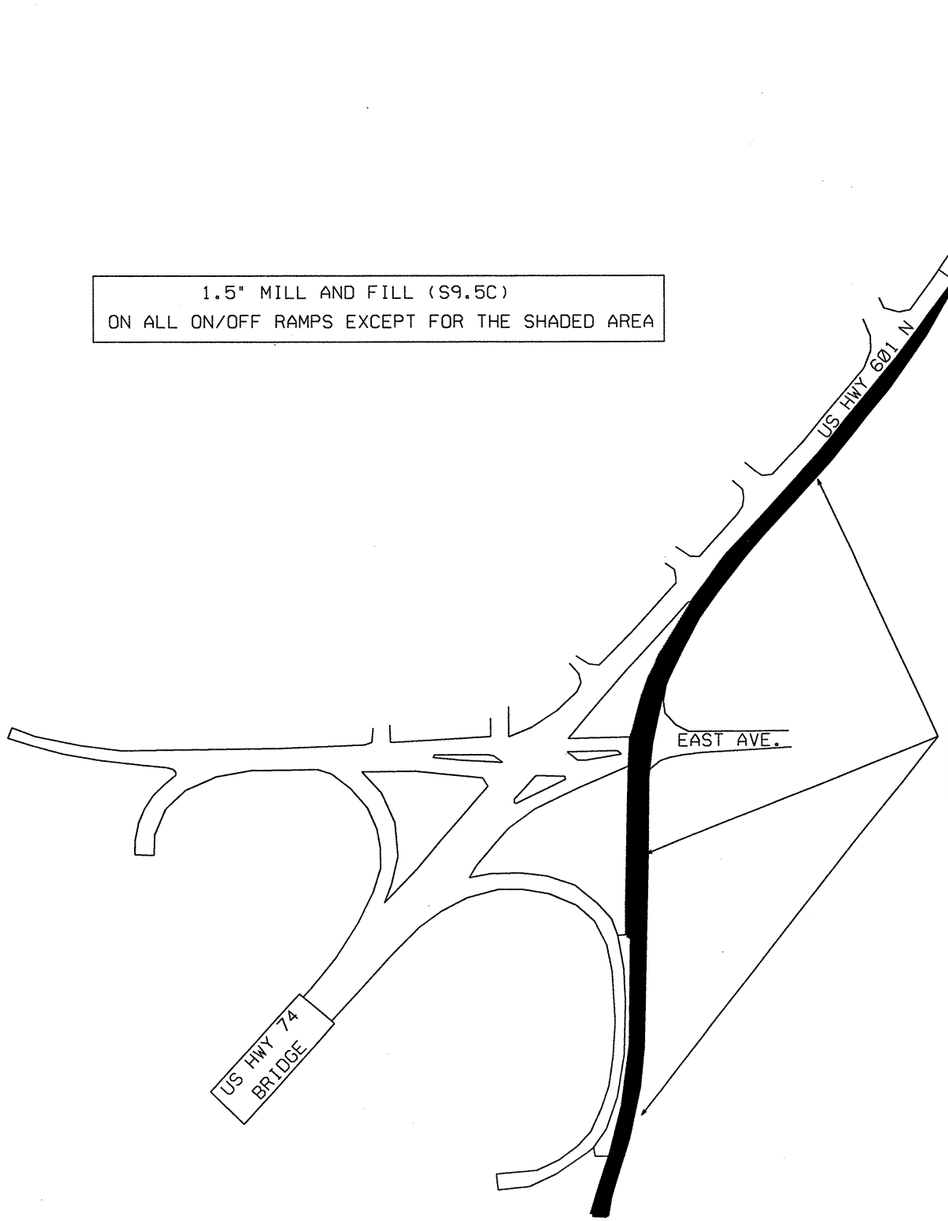
MAP #13 SR-1001 (LOVE MILL RD)
1.47 MILES

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		14	
F.A. PROJECT NO.			

10C.090120, etc.

1.5" MILL AND FILL (S9.5C)
ON ALL ON/OFF RAMPS EXCEPT FOR THE SHADED AREA

FROM THE END OF THE TURN LANE TO
THE PAVEMENT JOINT AT SR-1504 RIDGE RD
(2.5" I 19.0C + 1.5" S9.5C)
OVERLAY



4" MILL AND FILL
(2.5" I 19.0C + 1.5" S9.5C)

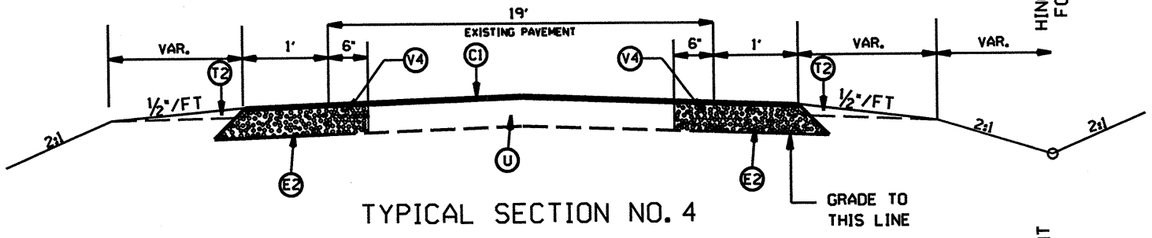
ON/OFF RAMPS FOR
US HWY 601 N

SCALE	-NA-
DATE	12/10
DWG. BY	JAB
DESIGN BY	JAB
APPROVED	JWU

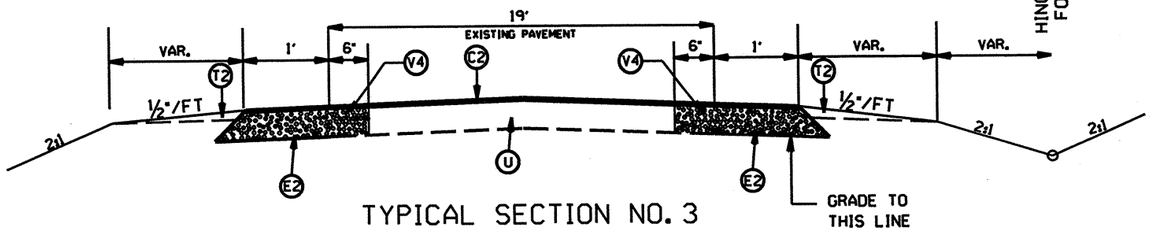
REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		15	
F.A. PROJECT NO.			

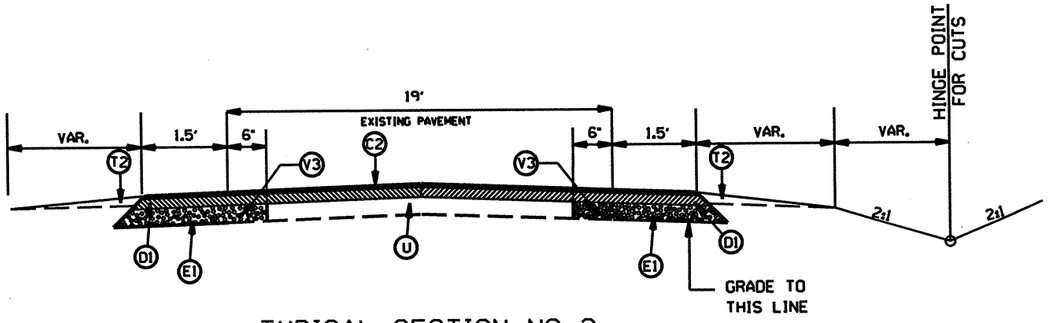
10C.090120, etc.



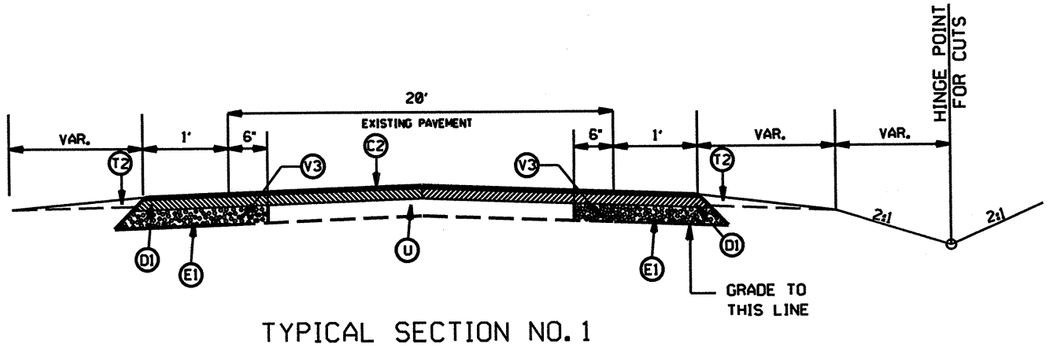
TYPICAL SECTION NO. 4



TYPICAL SECTION NO. 3

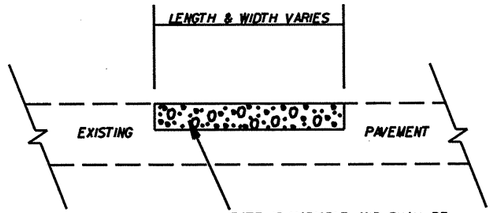


TYPICAL SECTION NO. 2



TYPICAL SECTION NO. 1

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 119.0C, AT AN AVERAGE RATE OF 285 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.
E2	PROP. APPROX. 8.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 912 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION
T2	SHOULDER CONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 1.5" IN DEPTH
V2	MILLING OF EXISTING PAVEMENT, 4" IN DEPTH
V3	MILLING 6" OF EXISTING PAVEMENT, 5" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")
V4	MILLING 6" OF EXISTING PAVEMENT, 8" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")

NOTES: 1: DO NOT OVERLAY OVER BRIDGE ON MAP #6 and #13.
2: LEVELING COURSE TO BE PLACED AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3: DO NOT RESURFACE OVER RAILROAD CROSSING ON MAP #4 AND #8.
4: MILL 1.5" ONLY IN C&G AND PAVED SHOULDER SECTIONS ON MAPS #8 AND #10.

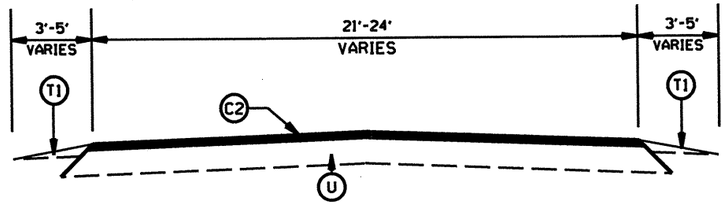
2011 UNION COUNTY RESURFACING

SCALE	-NA-
DATE	12/10
DWG. BY	JAB
DESIGN BY	JAB
APPROVED	JWJ

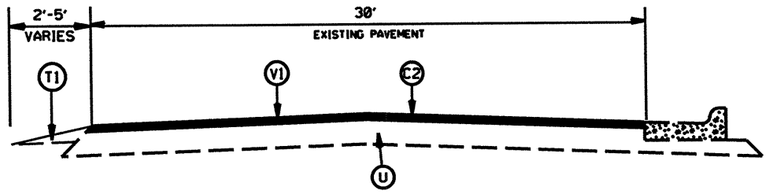
REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		16	
F.A. PROJECT NO.			

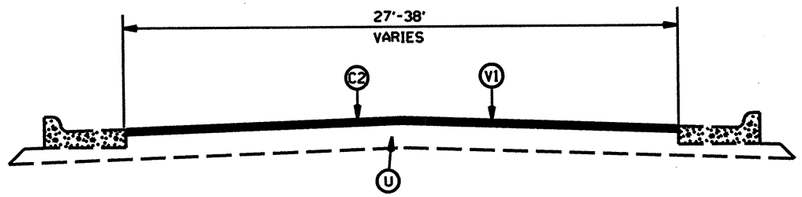
10C, 090120, etc.



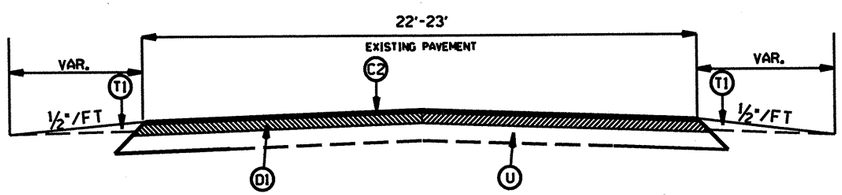
TYPICAL SECTION NO. 8



TYPICAL SECTION NO. 7

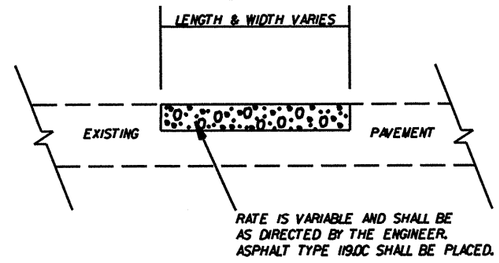


TYPICAL SECTION NO. 6



TYPICAL SECTION NO. 5

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 119.0C, AT AN AVERAGE RATE OF 285 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.
E2	PROP. APPROX. 8.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 912 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION
T2	SHOULDER CONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 1.5" IN DEPTH
V2	MILLING OF EXISTING PAVEMENT, 4" IN DEPTH
V3	MILLING 6" OF EXISTING PAVEMENT, 5" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")
V4	MILLING 6" OF EXISTING PAVEMENT, 8" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")

NOTES: 1: DO NOT OVERLAY OVER BRIDGE ON MAP #6 and #13.
2: LEVELING COURSE TO BE PLACED AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3: DO NOT RESURFACE OVER RAILROAD CROSSING ON MAP #4 AND #8.
4: MILL 1.5" ONLY IN C&G AND PAVED SHOULDER SECTIONS ON MAPS #8 AND #10.

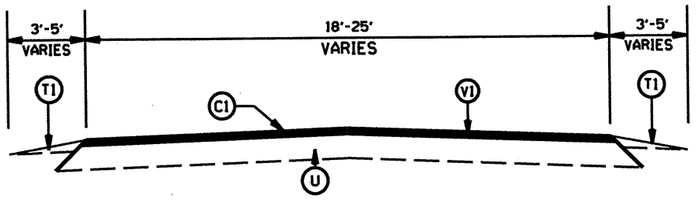
2011 UNION COUNTY RESURFACING

SCALE	-NA-
DATE	12/10
DWG. BY	JAB
DESIGN BY	JAB
APPROVED	JRU

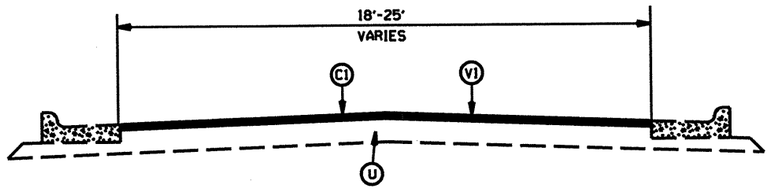
REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		17	
F.A. PROJECT NO.			

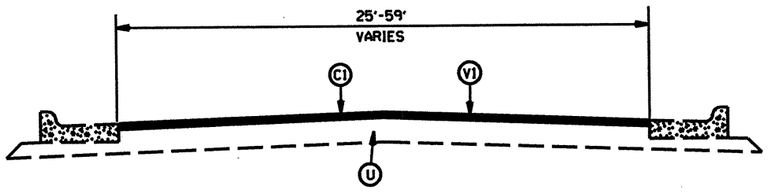
10C.090120, etc



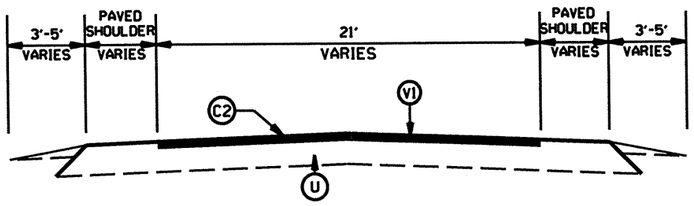
TYPICAL SECTION NO. 12
(ON/OFF RAMPS AT US HWY 74)



TYPICAL SECTION NO. 11
(ON/OFF RAMPS AT US HWY 74)

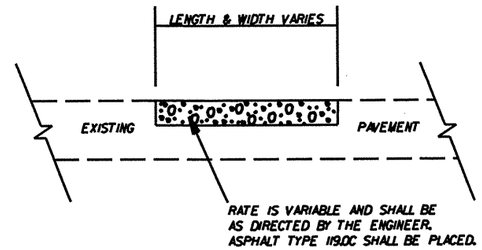


TYPICAL SECTION NO. 10



TYPICAL SECTION NO. 9

PATCHING DETAIL



PAVEMENT SCHEDULE

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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 119.0C, AT AN AVERAGE RATE OF 285 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.
E2	PROP. APPROX. 8.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 912 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION
T2	SHOULDER CONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 1.5" IN DEPTH
V2	MILLING OF EXISTING PAVEMENT, 4" IN DEPTH
V3	MILLING 6" OF EXISTING PAVEMENT, 5" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")
V4	MILLING 6" OF EXISTING PAVEMENT, 8" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")

NOTES: 1: DO NOT OVERLAY OVER BRIDGE ON MAP #6 and #13.
2: LEVELING COURSE TO BE PLACED AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3: DO NOT RESURFACE OVER RAILROAD CROSSING ON MAP #4 AND #8.
4: MILL 1.5" ONLY IN C&G AND PAVED SHOULDER SECTIONS ON MAPS #8 AND #10.

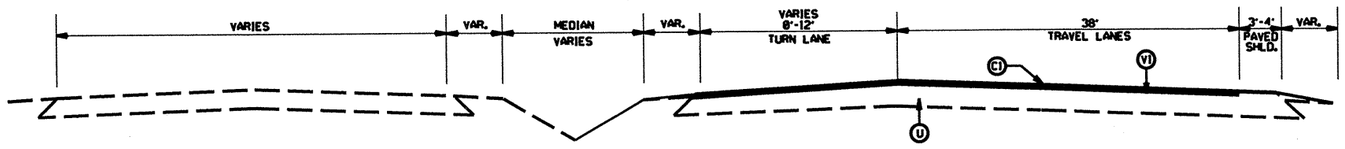
2011 UNION COUNTY
RESURFACING

SCALE	-NA-
DATE	12/10
DWG. BY	JAB
DESIGN BY	JAB
APPROVED	JRU

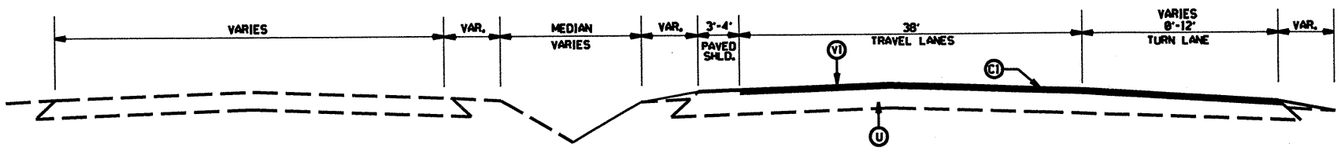
REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		13	
F.A. PROJECT NO.			

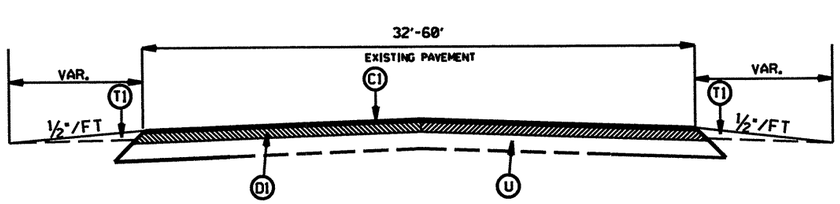
10C.096120, etc.



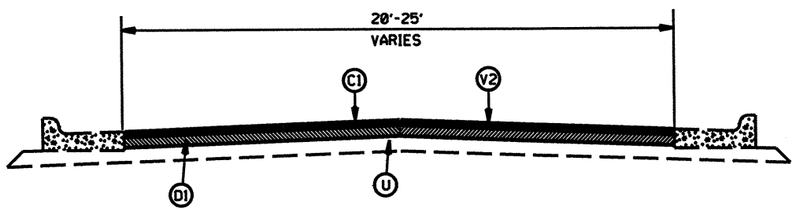
TYPICAL SECTION NO. 16
FOR LEFT TURNLANES



TYPICAL SECTION NO. 15
FOR RIGHT TURNLANES

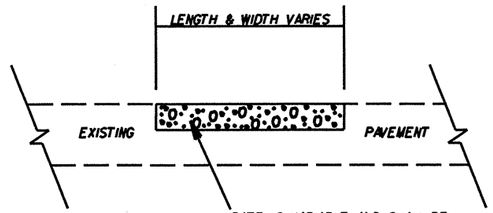


TYPICAL SECTION NO. 14



TYPICAL SECTION NO. 13
(OFF RAMP FROM US HWY 74W TO 601N)

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 119.0C, AT AN AVERAGE RATE OF 285 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.
E2	PROP. APPROX. 8.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 912 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION
T2	SHOULDER CONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 1.5" IN DEPTH
V2	MILLING OF EXISTING PAVEMENT, 4" IN DEPTH
V3	MILLING 6" OF EXISTING PAVEMENT, 5" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")
V4	MILLING 6" OF EXISTING PAVEMENT, 8" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")

NOTES: 1: DO NOT OVERLAY OVER BRIDGE ON MAP #6 and #13.
2: LEVELING COURSE TO BE PLACED AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3: DO NOT RESURFACE OVER RAILROAD CROSSING ON MAP #4 AND #8.
4: MILL 1.5" ONLY IN C&G AND PAVED SHOULDER SECTIONS ON MAPS #8 AND #10.

2011 UNION COUNTY
RESURFACING

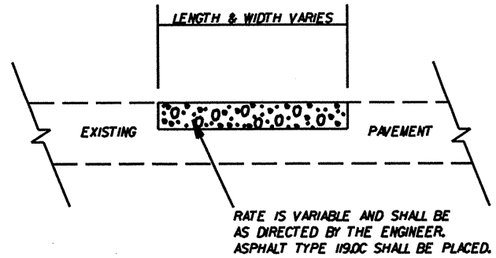
SCALE	-NA-
DATE	12/10
DWG. BY	JAB
DESIGN BY	JAB
APPROVED	JMU

REVISIONS	

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		19	
F.A. PROJECT NO.			

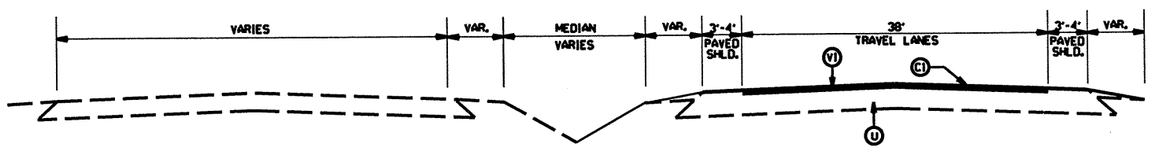
10C.090120, etc.

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 119.0C, AT AN AVERAGE RATE OF 285 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.
E2	PROP. APPROX. 8.0" ASPHALT CONC. BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 912 LBS. PER SQ. YD.
T1	SHOULDER RECONSTRUCTION
T2	SHOULDER CONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING PAVEMENT, 1.5" IN DEPTH
V2	MILLING OF EXISTING PAVEMENT, 4" IN DEPTH
V3	MILLING 6" OF EXISTING PAVEMENT, 5" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")
V4	MILLING 6" OF EXISTING PAVEMENT, 8" IN DEPTH. (SEE S.P. FOR "TRENCHING FOR BASE COURSE BY MILLING.")



TYPICAL SECTION NO. 17
TRAVEL LANES ONLY

NOTES:
1: DO NOT OVERLAY OVER BRIDGE ON MAP #6 and #13.
2: LEVELING COURSE TO BE PLACED AT LOCATIONS AS DIRECTED BY THE ENGINEER.
3: DO NOT RESURFACE OVER RAILROAD CROSSING ON MAP #4 AND #8.
4: MILL 1.5" ONLY IN C&G AND PAVED SHOULDER SECTIONS ON MAPS #8 AND #10.

2011 UNION COUNTY RESURFACING

SCALE	-NA-
DATE	12/10
DWG. BY	JAB
DESIGN BY	JAB
APPROVED	JMU

REVISIONS	

PROJECT NO.	SHEET NO.	TOTAL NO.
10C.090120, ETC.	20	

SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	BORROW CY	STABILIZER AGGREGATE TONS	INCIDENTAL STONE BASE TONS	SHOULDER CONSTRUCTION SMI	SHOULDER RECONSTRUCTION SMI	DITCHING LF	1½" MILLING SY	4" MILLING SY	INCIDENTAL MILLING SY	BASE COURSE, B25.0C TONS	INTERMEDIATE COURSE, I19.0C TONS	SURFACE COURSE, S9.5B TONS	LEVELING COURSE, S9.5B TONS	SURFACE COURSE, S9.5C TONS	PG 64-22 PLANT MIX TONS	PG 70-22 PLANT MIX TONS
10CR.10901.23	Union	1	US HWY 601 N	FROM THE US HWY 74 BRIDGE TO THE PAVEMENT JOINT BEFORE SR-1504 RIDGE RD	11, 12, 13, 14	NO	2.3	32	1,700	95	160		5.50		6,900	3,700			7,500			5,500	360	330
10CR.10901.24	Union	2	NC HWY 522	FROM THE PAVEMENT JOINT AT NC HWY 200 S TO THE PAVEMENT JOINT AT SR-2166 TRINITY CHURCH RD.	4	NO	4.13	21		350	269	8.30		1,239			60	4,150				5,250	183	315
10CR.10901.25	Union	3	US HWY 74	FROM US HWY 601 S TO THE RAILROAD OVERPASS.	14, 15, 16, 17	NO	0.9	38	5	85	45		0.20		50,000							4,750		285
10CR.20901.58	Union	4	SR-1162 POTTER RD	FROM PAVEMENT JOINT AT NC 75 TO SR-1162 POTTERS RD.	1	NO	0.57	22		42	40	1.10		171			60	490	1,200	760			125	
10CR.20901.59	Union	5	SR-1162 POTTER RD	FROM SR-1315 NEW TOWN RD. TO SR-1334 WILLOUGHBY RD.	2	NO	0.71	22		56	48	1.40		213			60	730	1,437	870			153	
10CR.20901.60	Union	6	SR-1346 POTTER RD	FROM SR-1162 WESLEY CHAPEL RD TO PAVEMENT JOINT AT SR-1008 WAXHAW-INDIAN TRAIL RD.	5	NO	1.39	22	850	60	91		2.80	209			60		2,850	1,725			240	
10CR.20901.61	Union	7	SR-1357 POTTER RD	FROM PAVEMENT JOINT AT SR-1346 POTTER RD TO SR-1408 MIDDLETON AVE.	5	NO	2.92	22.5	1,800	120	220		5.80	438			40		6,050	3,975			529	
10CR.20901.62	Union	8	SR-1162 JOHNSON ST	FROM PAVEMENT JOINT AT FRANKLIN ST TO SR-1162 ENGLESIDE ST.	6, 7, 8, 9	NO	0.792	21-32	20	45	27		0.80	60	6,630					1,100	110		73	
10CR.20901.63	Union	9	SR-1162 ENGLESIDE ST	FROM SR-1162 ICEMAN ST TO END OF CURB AND GUTTER AT SR-1162 GOLDMINE RD.	6	NO	0.081	38		7					1,825					175			11	
10CR.20901.64	Union	10	SR-1162 GOLDMINE RD	FROM SR-1162 ENGLESIDE ST TO PAVEMENT JOINT BEFORE DOVER ST.	6, 8	NO	0.21	31	10	16	5		0.17		2,250					340			20	
10CR.20901.65	Union	11	SR-1009 OLD CHARLOTTE HWY	FROM PAVEMENT JOINT AT CHURCH ST TO PAVEMENT JOINT AT WALNUT ST	10	NO	0.376	28		28	25				6,700							700		42
10CR.20901.66	Union	12	SR-1504 RIDGE RD	FROM SR-1367 UNIONVILLE/INDIANTRAIL RD TO PAVEMENT JOINT AT US HWY 601 N.	5	NO	4.074	22	3,000	250	265		8.10	800			60		8,250	4,700			678	
10C.090120	Union	13	SR-1001 LOVE MILL RD	FROM PAVEMENT JOINT AT SR-1638 (HAIGLER BAUCOM RD.) TO PAVEMENT JOINT AT SR-1653 (ZEBULON WILLIAMS RD.)	3	NO	1.47	21		145	100	2.90		441			60	1,750		1,850	520		219	
GRAND TOTAL							19.923		7,385	1,299	1,295	13.70	23.37	3,571	74,305	3,700	400	7,120	27,287	15,495	630	16,200	2,591	972

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	PATCHING EXISTING PAVEMENT TONS	6" DRIVEWAYS SY	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	PORTABLE LIGHTING LS	TEMPORARY SILT FENCE LF	STONE FOR EROSION CONTROL, CLASS B TN	SEDIMENT CONTROL STONE TN	WATTLE LF	POLYACRYLAMIDE (PAM) LB	SEED & MULCHING AC
10CR.10901.23	Union	1	US HWY 601 N	FROM THE US HWY 74 BRIDGE TO THE PAVEMENT JOINT BEFORE SR-1504 RIDGE RD	11, 12, 13	500	90	2	7	0.33	500	56	28	500	1.00	
10CR.10901.24	Union	2	NC HWY 522	FROM THE PAVEMENT JOINT AT NC HWY 200 S TO THE PAVEMENT JOINT AT SR-2166 TRINITY CHURCH RD.	4	1,725	216				1,239	124	62	620	2.00	4.0
10CR.10901.25	Union	3	US HWY 74	FROM US HWY 601 S TO THE RAILROAD OVERPASS.	14, 15, 16	405		2	2	0.34						
10CR.20901.58	Union	4	SR-1162 POTTER RD	FROM PAVEMENT JOINT AT NC 75 TO SR-1162 POTTERS RD.	1	220	72				171	18	9	86	0.20	0.6
10CR.20901.59	Union	5	SR-1162 POTTER RD	FROM SR-1315 NEW TOWN RD. TO SR-1334 WILLOUGHBY RD.	2	294	18				213	28	14	107	0.30	0.7
10CR.20901.60	Union	6	SR-1346 POTTER RD	FROM SR-1162 WESLEY CHAPEL RD TO PAVEMENT JOINT AT SR-1008 WAXHAW-INDIAN TRAIL RD.	5	300	144				210	28	14	210	0.50	
10CR.20901.61	Union	7	SR-1357 POTTER RD	FROM PAVEMENT JOINT AT SR-1346 POTTER RD TO SR-1408 MIDDLETON AVE.	5	590	594		1		438	60	30	438	1.00	
10CR.20901.62	Union	8	SR-1162 JOHNSON ST	FROM PAVEMENT JOINT AT FRANKLIN ST TO SR-1162 ENGLESIDE ST.	6, 7, 8, 9	250		9	11		60	8	4	60	0.20	
10CR.20901.63	Union	9	SR-1162 ENGLESIDE ST	FROM SR-1162 ICEMAN ST TO END OF CURB AND GUTTER AT SR-1162 GOLDMINE RD.	6	35										
10CR.20901.64	Union	10	SR-1162 GOLDMINE RD	FROM SR-1162 ENGLESIDE ST TO PAVEMENT JOINT BEFORE DOVER ST.	6, 8	80			2		14	2	1	14	0.03	
10CR.20901.65	Union	11	SR-1009 OLD CHARLOTTE HWY	FROM PAVEMENT JOINT AT CHURCH ST TO PAVEMENT JOINT AT WALNUT ST	10	150				0.33						
10CR.20901.66	Union	12	SR-1504 RIDGE RD	FROM SR-1367 UNIONVILLE/INDIANTRAIL RD TO PAVEMENT JOINT AT US HWY 601 N.	5	850	200		1		612	84	42	612	2.00	
10C.090120	Union	13	SR-1001 LOVE MILL RD	FROM PAVEMENT JOINT AT SR-1638 (HAIGLER BAUCOM RD.) TO PAVEMENT JOINT AT SR-1653 (ZEBULON WILLIAMS RD.)	3	675	54				441	46	23	221	0.60	1.4
GRAND TOTAL						6,074	1,388	13	24	1	3,898	454	227	2,868	7.83	6.70

PROJECT NO.	SHEET NO.	TOTAL NO.
10C.090120, ETC.	21	

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4589000000-N	4685000000-E		4686000000-E		4697000000-E		4705000000-E	4710000000-E	4721000000-E		4725000000-E				4810000000-E	4900000000-N	
					TRAFFIC CONTROL LS	4" X 90 M WHITE THERMO LF	4" X 90 M YELLOW 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	16" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	THERMO MSG ONLY 120 M EA	THERMO RXR 120 M EA	THERMO LT ARROW 90 M EA	THERMO STR ARROW 90 M EA	THERMO RT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	4" YELLOW PAINT LF	YELLOW & YELLOW MARKERS EA	CRYSTAL & RED MARKERS EA
10CR.10901.23	Union	1	US HWY 601 N	FROM THE US HWY 74 BRIDGE TO THE PAVEMENT JOINT BEFORE SR-1504 RIDGE RD	1.000	30,000	4,263	60	21,500	200			60	4		2	3	1		55,000	200	50
10CR.10901.24	Union	2	NC HWY 522	FROM THE PAVEMENT JOINT AT NC HWY 200 S TO THE PAVEMENT JOINT AT SR-2166 TRINITY CHURCH RD.	*	43,815			40,070												273	
10CR.10901.25	Union	3	US HWY 74	FROM US HWY 601 S TO THE RAILROAD OVERPASS.	*	1,000	9,504	6,680					436	16		17		13				900
10CR.20901.58	Union	4	SR-1162 POTTER RD	FROM PAVEMENT JOINT AT NC 75 TO SR-1162 POTTERS RD.	*	6,096			6,096			100	72		4					6,150	77	
10CR.20901.59	Union	5	SR-1162 POTTER RD	FROM SR-1315 NEW TOWN RD. TO SR-1334 WILLOUGHBY RD.	*	7,498			7,498				11							7,750	94	
10CR.20901.60	Union	6	SR-1346 POTTER RD	FROM SR-1162 WESLEY CHAPEL RD TO PAVEMENT JOINT AT SR-1008 WAXHAW-INDIAN TRAIL RD.	*	14,679			11,111				11							28,256	184	
10CR.20901.61	Union	7	SR-1357 POTTER RD	FROM PAVEMENT JOINT AT SR-1346 POTTER RD TO SR-1408 MIDDLETON AVE.	*	30,836			29,299											30,836	386	
10CR.20901.62	Union	8	SR-1162 JOHNSON ST	FROM PAVEMENT JOINT AT FRANKLIN ST TO SR-1162 ENGLESIDE ST.	*				5,500	76		100	162		4							
10CR.20901.63	Union	9	SR-1162 ENGLESIDE ST	FROM SR-1162 ICEMAN ST TO END OF CURB AND GUTTER AT SR-1162 GOLDMINE RD.	*				856			50	25		2							
10CR.20901.64	Union	10	SR-1162 GOLDMINE RD	FROM SR-1162 ENGLESIDE ST TO PAVEMENT JOINT BEFORE DOVER ST.	*																	
10CR.20901.65	Union	11	SR-1009 OLD CHARLOTTE HWY	FROM PAVEMENT JOINT AT CHURCH ST TO PAVEMENT JOINT AT WALNUT ST	*	3,970		375	4,370	160	40		75	4		1	7	2	1		50	20
10CR.20901.66	Union	12	SR-1504 RIDGE RD	FROM SR-1367 UNIONVILLE/INDIANTRAIL RD TO PAVEMENT JOINT AT US HWY 601 N.	*	43,250			40,000											43,022	269	
10C.090120	Union	13	SR-1001 LOVE MILL RD	FROM PAVEMENT JOINT AT SR-1638 (HAIGLER BAUCOM RD.) TO PAVEMENT JOINT AT SR-1653 (ZEBULON WILLIAMS RD.)	*	15,524			14,910												98	
GRAND TOTAL					**1**	**196,668**	**13,767**	**7,115**	**181,210**	**436**	**40**	**250**	**852**	**24**	**10**	**20**	**10**	**16**	**1**	**171,014**	**1,631**	**970**
						210,435		**188,325**		**476**				**34**		**47**					**2601**	

10C.090120, etc

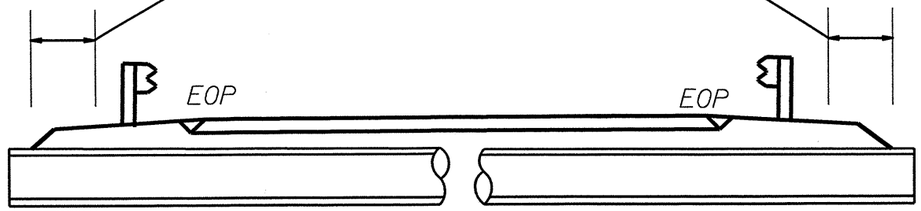
PROJECT REFERENCE NO.	SHEET NO.
	21-A
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

EROSION CONTROL DETAIL

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

BMP Options: Wattle or Silt Fence

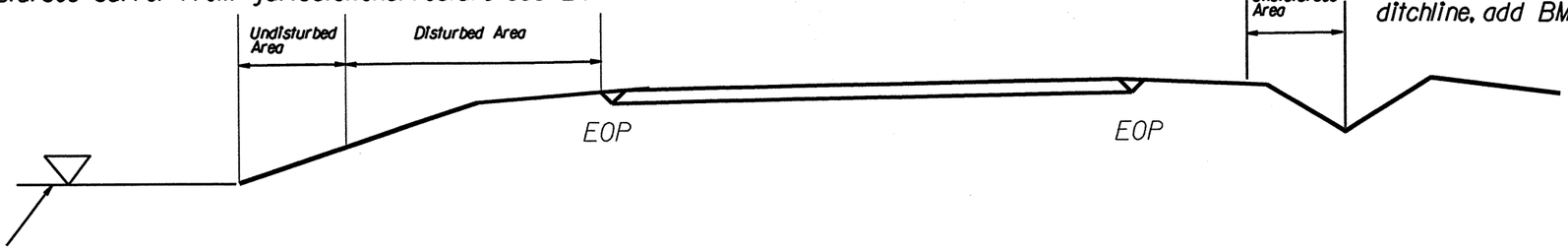
< 5' - 10' Undisturbed buffer add BMP



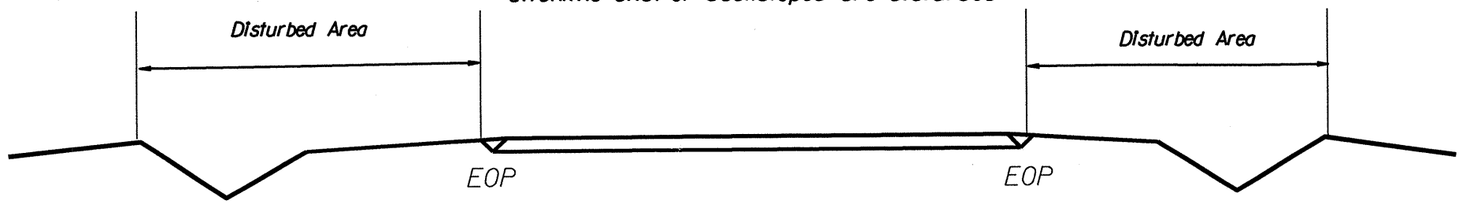
Pipe/Culvert

< 5' - 10' Undisturbed buffer from jurisdictional feature add BMP

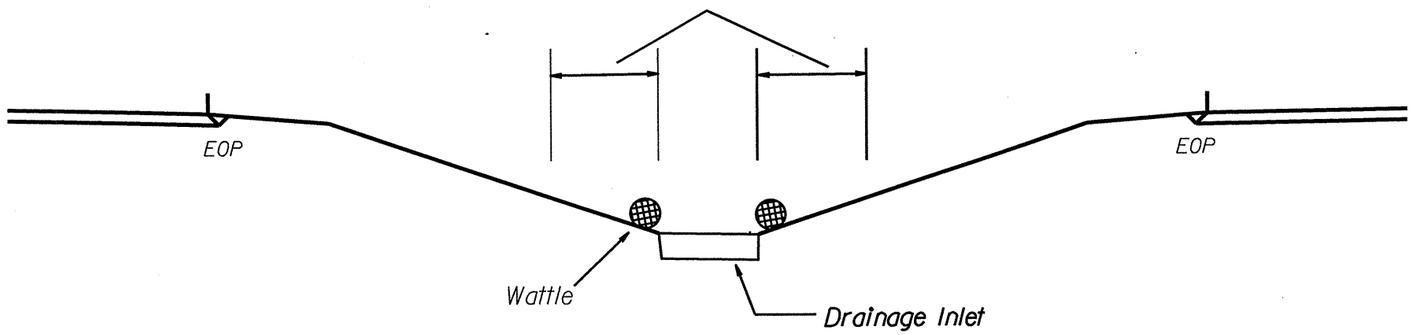
< 5' - 10' Undisturbed buffer from ditchline, add BMP



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



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



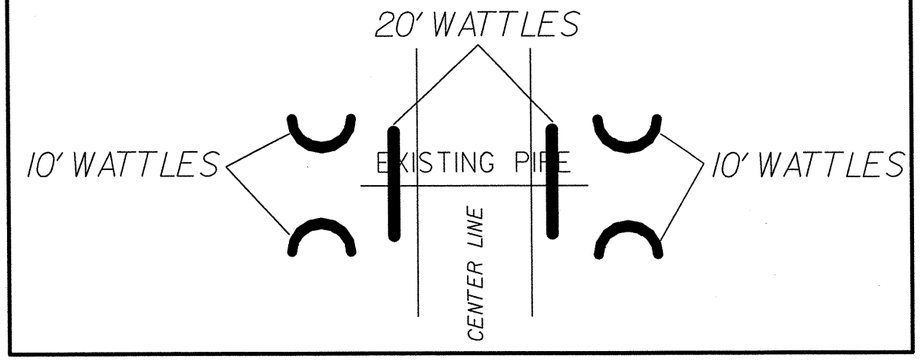
NOT TO SCALE

STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS
N.C.		22	
F.A. PROJECT NO.			

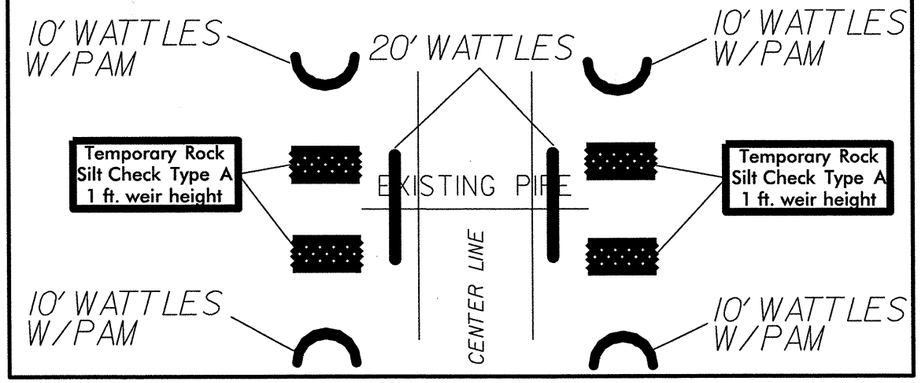
10C.090120, etc.

GENERAL EROSION DETAILS

TYPICAL EROSION DETAIL FOR PIPE CROSSINGS WITHOUT DEFINED DITCHLINES



TYPICAL EROSION DETAIL FOR PIPE CROSSINGS WITH A DEFINED DITCHLINES



NOTES: FIELD MODIFICATIONS MAY BE NECESSARY AS DIRECTED BY THE ENGINEER.

WATTLE LENGTHS MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.

EROSION CONTROL MATTING SHALL BE USED IN THE CONSTRUCTION OF DITCHLINE WATTLES. SEE SHEET EC-2

POLYACRYLAMIDE (PAM) SHOULD NOT BE USED ON WATTLES THAT WILL OUTLET DIRECTLY TO JURISDICTIONAL STREAMS.

GENERAL EROSION DETAILS

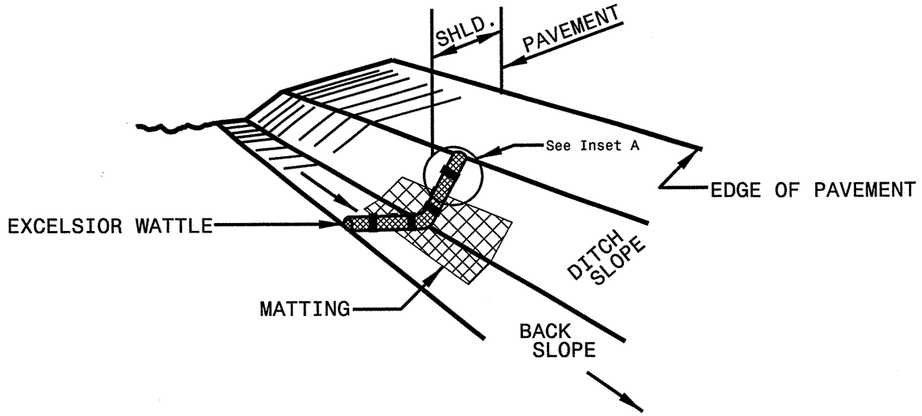
SCALE	-NA-
DATE	12/10
DWG. BY	JAB
DESIGN BY	JAB
APPROVED	JMU

REVISIONS	

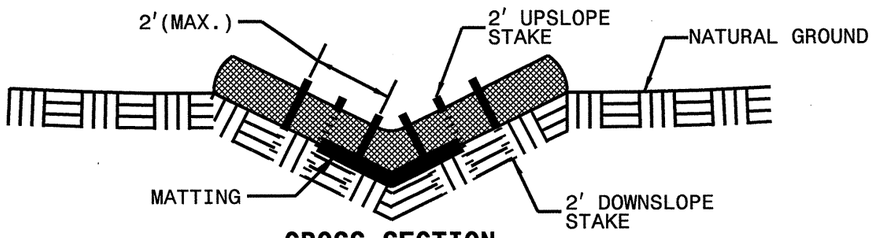
PROJECT REFERENCE NO.	SHEET NO.
	23
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

10C.090129 etc.

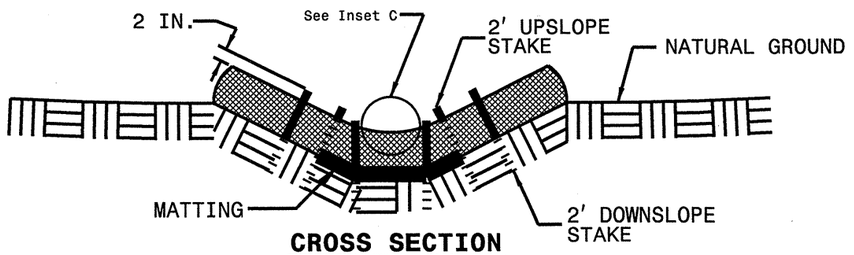
WATTLE WITH POLYACRYLAMIDE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. CROSS SECTION.

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

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

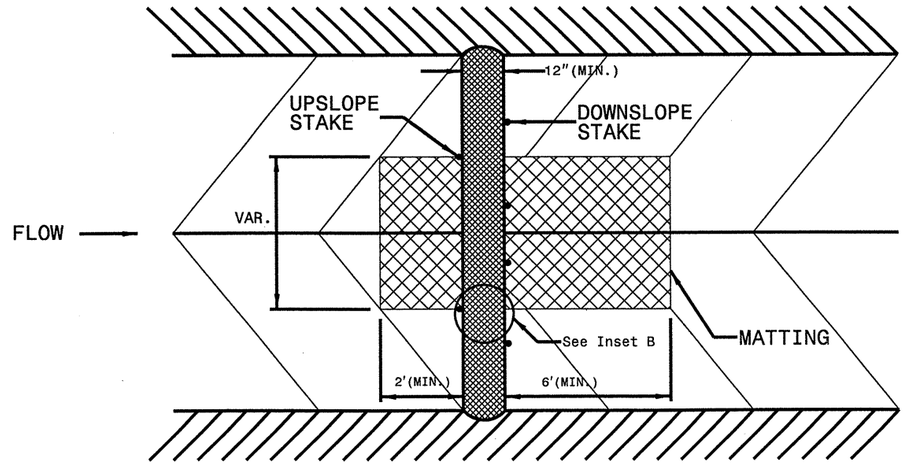
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 3.5 OUNCES OF ANIONIC OR NEUTRALLY CHARGED POLYACRYLAMIDE (PAM) OVER WATTLE WHERE WATER WILL FLOW AND AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.

INSET A INSET B INSET C

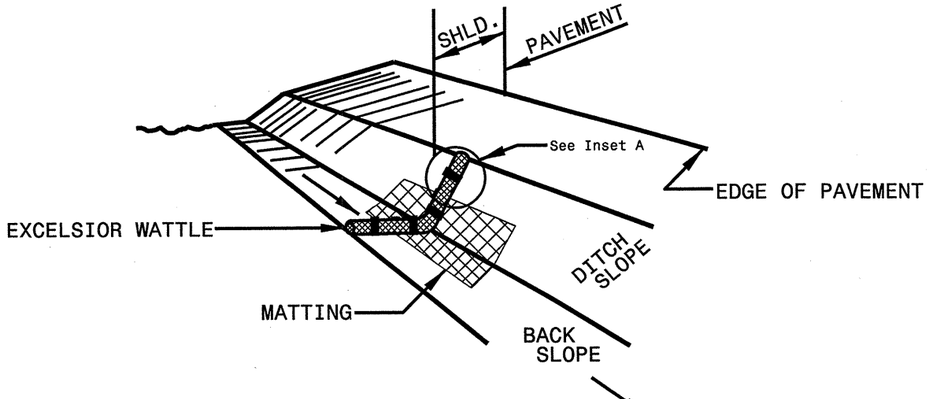


TOP VIEW

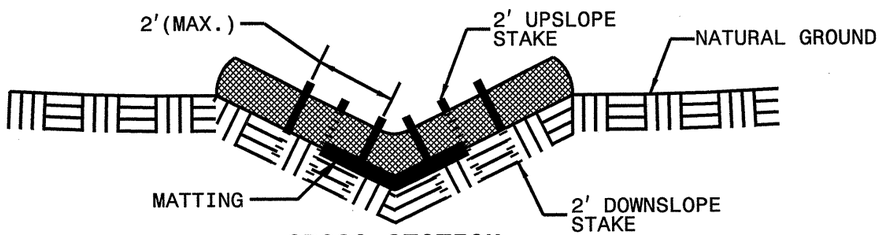
10C.090129etc.

PROJECT REFERENCE NO.	SHEET NO. 24
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

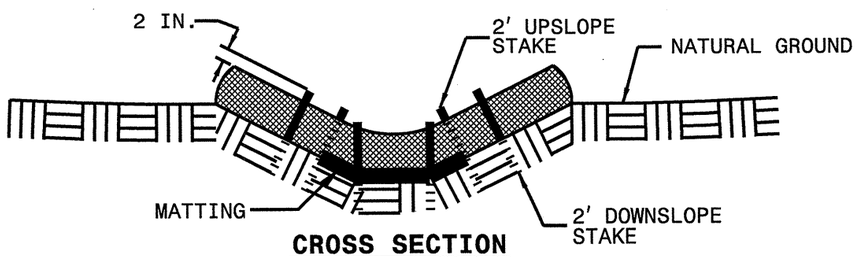
WATTLE DETAIL



ISOMETRIC VIEW



CROSS SECTION VEE DITCH



CROSS SECTION TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. CROSS SECTION.

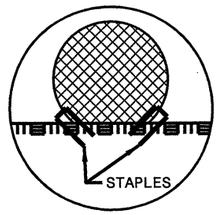
INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

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

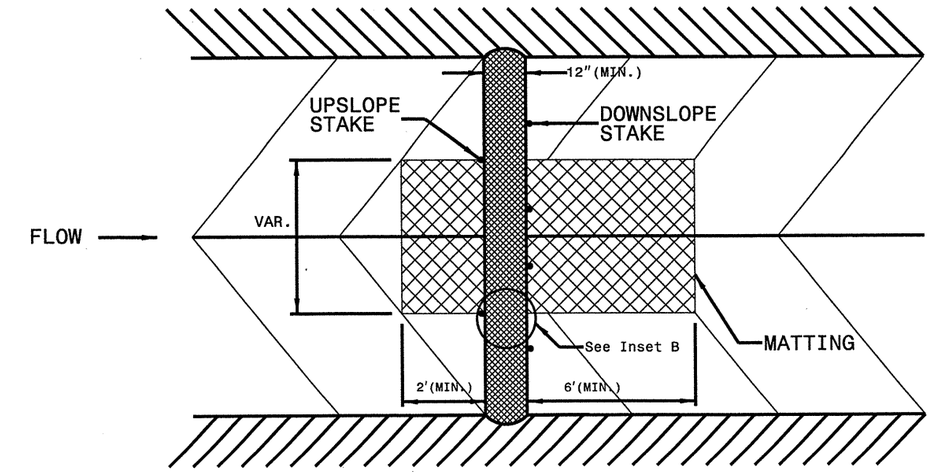
INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

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

INSET A



INSET B



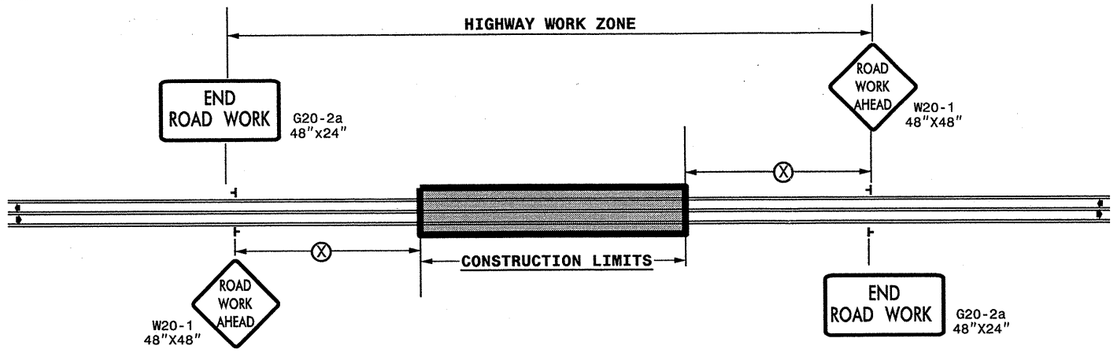
TOP VIEW

14-JAN-2011 16:00
\\DOT\DFS\DIVISION GROUPS-WZTCCC\TMU\WZTC\Resurfacing\2011Resurfacing\2011Western\2011Div10\C202718A-M_10CR10901.23x13_Union\C202718A-M_10CR10901.23x13_2way_Undiv_&_Urban_Frwys_stationary.dgn
msistok AT TE244732

10CR.10901.23, 10CR.10901.24, 10CR.10901.25, 10CR.20901.58, 10CR.20901.59, 10CR.20901.60, 10CR.20901.61, 10CR.20901.62, 10CR.20901.63, 10CR.20901.64, 10CR.20901.65, 10CR.20901.66, and 10C.090120

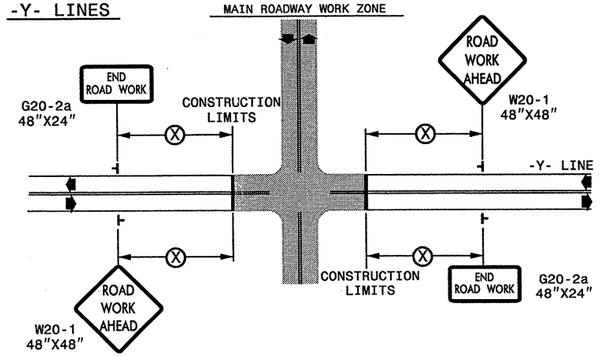
PROJ. REFERENCE NO.	SHEET NO.
SEE TO THE SIDE	TCP-1

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 ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.
- ** 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

⊢ STATIONARY 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 AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS

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

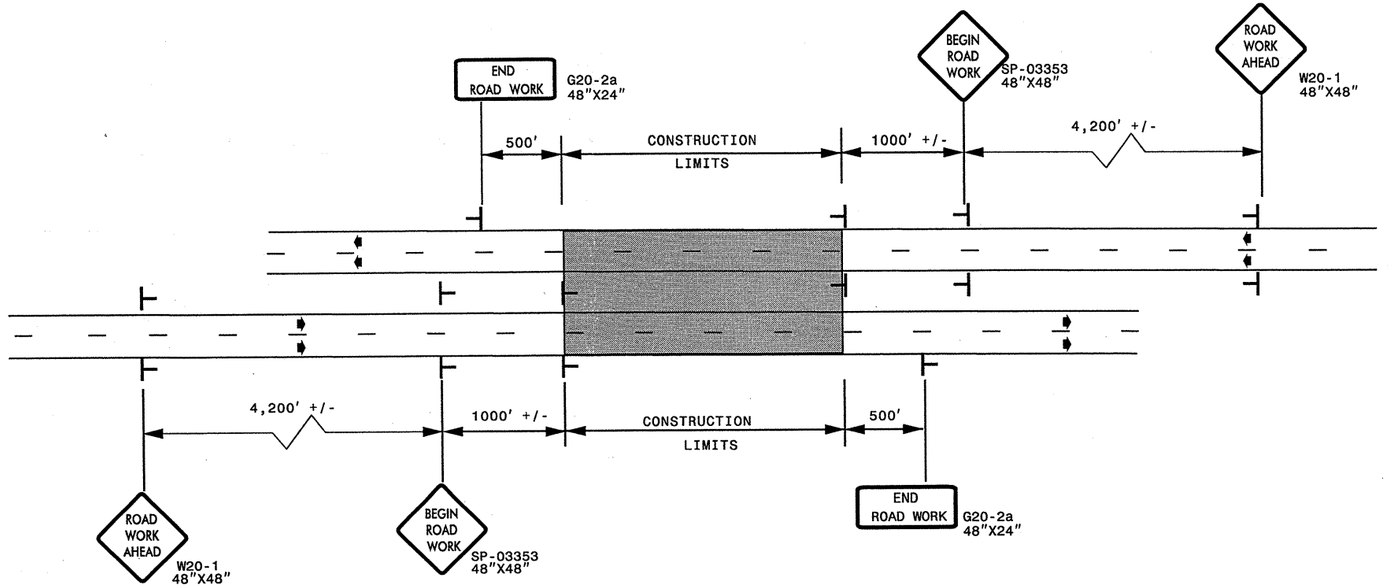
REVISIONS	
7-98	10/01
10-98	03/04
01/01	11/04
CADD FILE	

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

PROJ. REFERENCE NO.	SHEET NO.
See Below	TCP-2

10CR.10901.23, 10CR.10901.24, 10CR.10901.25, 10CR.20901.58, 10CR.20901.59, 10CR.20901.60, 10CR.20901.61, 10CR.20901.62, 10CR.20901.63, 10CR.20901.64, 10CR.20901.65, 10CR.20901.66, and 10C.690120

DETAIL A

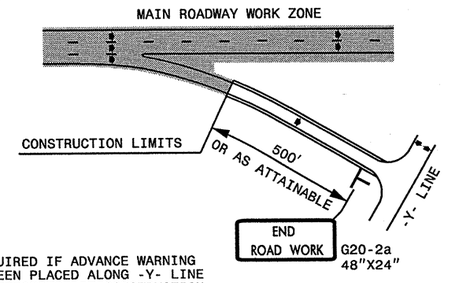


LEGEND
- ├ STATIONARY SIGN
- ➧ DIRECTION OF TRAFFIC FLOW

* USE THE "$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

DETAIL B

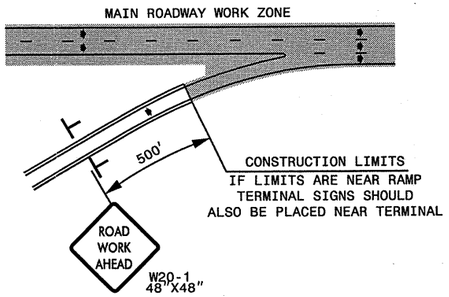
EXIT RAMPS



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.

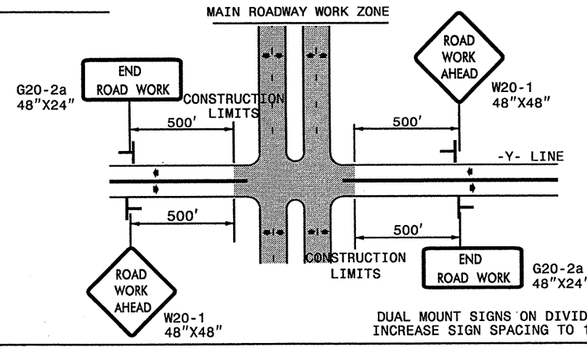
DETAIL C

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 ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- USE 3LB STEEL U-CHANNEL POST OR 4" X 4" WOOD POST FOR ALL WORK ZONE SIGNS. 3LB STEEL U-CHANNEL POSTS MUST MEET THE REQUIREMENTS OF STANDARD SPECIFICATION SECTION 1094-1(B), MAY BE GALVANIZED STEEL, OR MAY BE PAINTED GREEN BY THE POST MANUFACTURER. SQUARE STEEL TUBING POSTS HAVING EQUIVALENT STRENGTH OF THE 3 LB STEEL U-CHANNEL POST ARE ALSO ACCEPTABLE FOR USE. ERECT SIGNS PER ROADWAY STANDARD DRAWING 1110.01. PAYMENT FOR WOOD POSTS, 3LB STEEL U-CHANNEL AND SQUARE STEEL TUBING POSTS WITH SIGNS WILL BE MADE ACCORDING TO STANDARD SPECIFICATION "WORK ZONE SIGNS" SECTION 1110.
- WHEN NECESSARY, USE SPLICING IN ACCORDANCE WITH ROADWAY STANDARD DRAWING NO. 1110.01. REMOVE ENTIRE POST WHEN REMOVING SIGNS WITH SPLICED POSTS.
- DO NOT BACK BRACE SIGN SUPPORTS.

APPROVED:_____ DATE:_____

SEAL

ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)

SCALE:	NONE
DATE:	8/03
DWG. BY:	JI
DESIGN BY:	JI
REVIEWED BY:	

REVISIONS	
03/04	
CADD FILE	

GENERAL NOTES

(1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
- A. TRUCK MOUNTED SIGNS
- B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
- C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
- D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE CIRCLE TO PICK UP SIGNS)

(2) ALL ADVANCE WARNING SIGNS MUST BE 48" X 48" WITH FLUORESCENT ORANGE TYPE VII, VIII OR IX SHEETING. IF SPACE LIMITATIONS ON SHOULDER PROHIBIT A 48" X 48" SIGN, A SMALLER SIGN CAN BE USED WITH APPROVAL FROM ENGINEER.

(3) SIGNS ON VEHICLES SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND AND SHOULD NOT BLOCK THE MOTORIST'S SIGHT OF THE FLASHING ARROW PANEL AND/OR LIGHTBAR.

(4) GROUND MOUNTED ADVANCED WARNING SIGNS SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND TO BOTTOM OF SIGN.

(5) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.

(6) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL (TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES). HOWEVER, THE FIRST VEHICLE MOTORISTS SEE IN THE TRAVEL LANE SHALL HAVE A TMIA.

(7) ADJUST DISTANCE AS NEEDED TO PREVENT MOTORISTS FROM ENTERING SPACE BETWEEN THE APPLICATION AND PROTECTION VEHICLE. DISTANCE CAN BE LENGTHENED TO ACCOMODATE SIGHT DISTANCE NEEDS.

(8) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED FIVE (5) MILES IN LENGTH.

(9) RADIO COMMUNICATION BETWEEN VEHICLES IS REQUIRED.

(10) USE OF A LIGHT BAR ON ALL VEHICLES IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.

(11) IF WORK IS PERFORMED AT NIGHT, THE WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER.

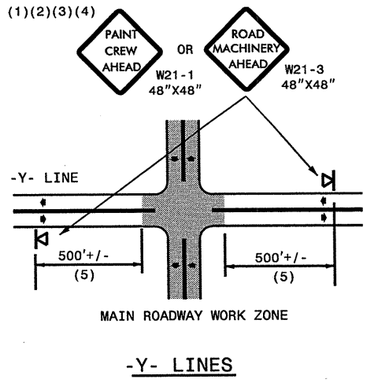
(12) ALL TRAFFIC CONTROL DEVICES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEMS FOR PAVEMENT MARKING AND MARKERS.

(13) INFORMATIONAL SIGNS SHOULD BE ACTIVITY SPECIFIC, i.e. "PAINT CREW IN ROAD". SIGNS MAY BE RECTANGULAR OR DIAMOND SHAPE. SIGN SIZE SHOULD BE BASED ON THE MOTORIST ABILITY TO RECOGNIZE SIGN WHEN TRAVELING FIVE (5) MILES ABOVE POSTED SPEED LIMIT.

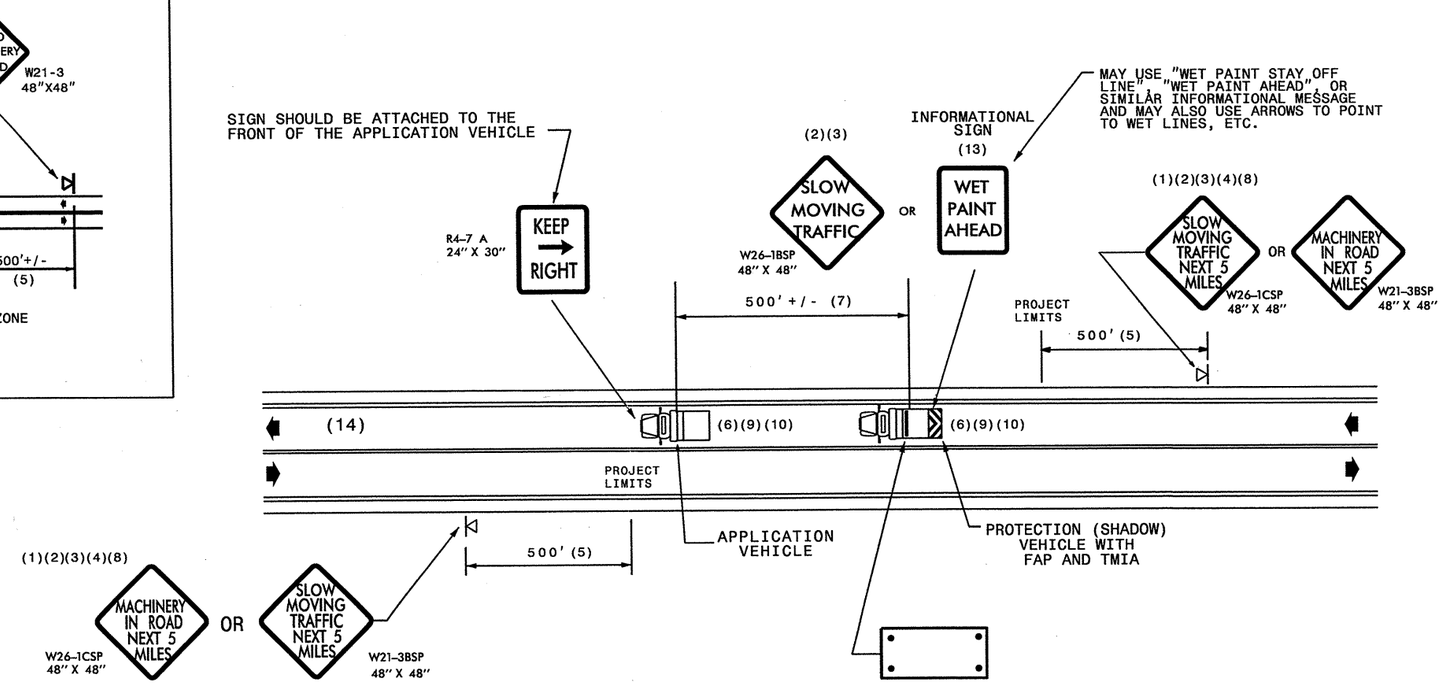
(14) IF A LEAD VEHICLE IS ADDED TO OPERATION, IT SHOULD HAVE THE SAME ADVANCE WARNING SIGNS AS THE APPLICATION VEHICLE SHOWN BELOW.

LEGEND

- PORTABLE SIGN. SIGNS MUST BE NCHRP-350 AND NCDOT APPROVED.
- DIRECTION OF TRAFFIC FLOW
- APPLICATION VEHICLE WITH LIGHT BAR
- PROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND LIGHT BAR (SEE ROADWAY STANDARD NO. 1165.01). TMIA MUST BE NCHRP-350 TEST LEVEL 3 (60+MPH) APPROVED.
- FLASHING ARROW PANEL, TYPE "B" (60"X30" MIN.), "CAUTION MODE"



-Y- LINES



MOVING OPERATION CARAVAN

(OPERATIONS TRAVELING 3 MPH OR FASTER)
PLACING PAVEMENT MARKING OR MARKERS
ON TWO-LANE TWO-WAY ROADWAYS

DRAWING NUMBER 6
IMPLEMENTATION DATE: 07/01/97
REVISED: 11/03/04

GENERAL NOTES

(1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
- A. TRUCK MOUNTED SIGNS
- B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
- C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
- D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE CIRCLE TO PICK UP SIGNS)

(2) ALL ADVANCE WARNING SIGNS MUST BE 48" X 48" WITH FLUORESCENT ORANGE TYPE VII, VIII OR IX SHEETING. IF SPACE LIMITATIONS ON SHOULDER PROHIBIT A 48" X 48" SIGN, A SMALLER SIGN CAN BE USED WITH APPROVAL FROM ENGINEER.

(3) SIGNS ON VEHICLES SHOULD BE MOUNTED A MINIMUM OF ONE (1) FOOT FROM THE GROUND AND SHOULD NOT BLOCK THE MOTORIST'S SIGHT OF THE FLASHING ARROW PANEL AND/OR LIGHTBAR.

(4) GROUND MOUNTED ADVANCED WARNING SIGNS SHOULD BE MOUNTED A MINIMUM OF FIVE (5) FEET FROM THE GROUND TO BOTTOM OF SIGN.

(5) SIGN SPACING SHOULD BE ADJUSTED FOR HORIZONTAL AND VERTICAL CURVES, ETC. TO IMPROVE SIGHT DISTANCES.

(6) ADDITIONAL VEHICLES SHOULD BE USED IN WORK CARAVAN TO FACILITATE DRYING OF PAVEMENT MARKING MATERIAL (TMIA'S ARE OPTIONAL ON THESE ADDITIONAL VEHICLES). HOWEVER, THE FIRST VEHICLE MOTORISTS SEE IN THE TRAVEL LANE SHALL HAVE A TMIA.

(7) ADJUST DISTANCE AS NEEDED TO PREVENT MOTORISTS FROM ENTERING SPACE BETWEEN THE APPLICATION AND PROTECTION VEHICLE. DISTANCE CAN BE LENGTHENED TO ACCOMODATE SIGHT DISTANCE NEEDS.

(8) ROUND UP MILEAGE TO NEXT WHOLE MILE. WORK ZONE SHOULD NOT EXCEED FIVE (5) MILES IN LENGTH.

(9) RADIO COMMUNICATION BETWEEN VEHICLES IS REQUIRED.

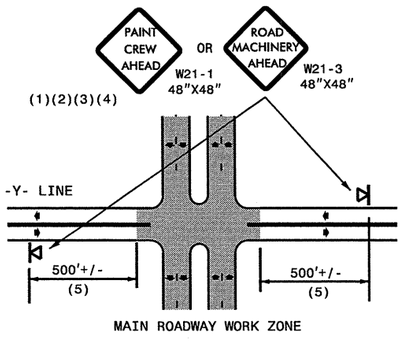
(10) USE OF A LIGHT BAR ON ALL VEHICLES IS PREFERRED, BUT A ROTATING BEACON MAY BE USED INSTEAD.

(11) IF WORK IS PERFORMED AT NIGHT, THE WORK AREA MUST BE ILLUMINATED WITH MACHINE AND/OR TOWER LIGHTS AS APPROVED BY THE ENGINEER.

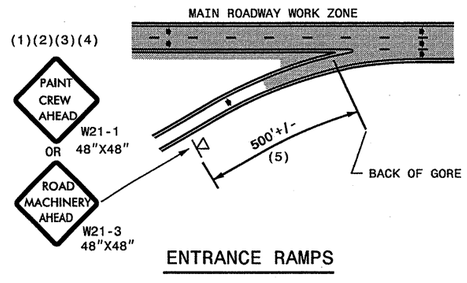
(12) ALL TRAFFIC CONTROL DEVICES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEMS FOR PAVEMENT MARKING AND MARKERS.

LEGEND

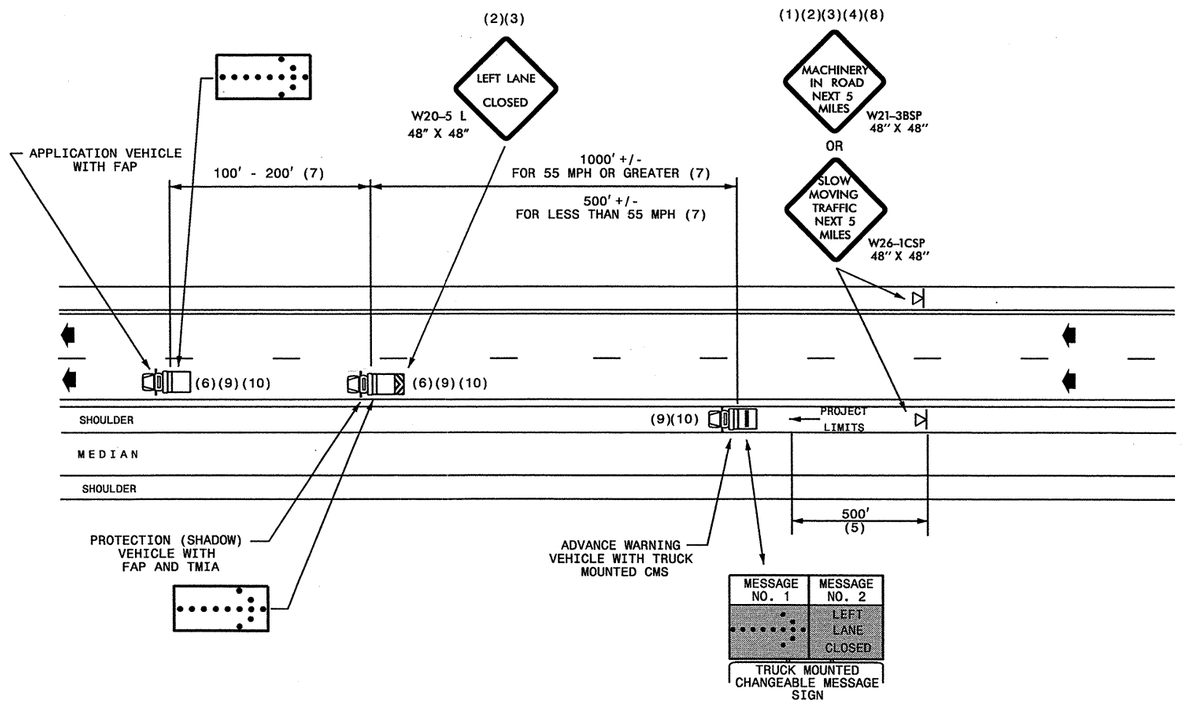
- PORTABLE SIGN. SIGNS MUST BE NCHRP-350 AND NCDOT APPROVED.
- DIRECTION OF TRAFFIC FLOW
- APPLICATION VEHICLE WITH LIGHT BAR
- PROTECTION VEHICLE WITH TRUCK MOUNTED IMPACT ATTENUATOR (TMIA) AND LIGHT BAR (SEE ROADWAY STANDARD NO. 1165.01). TMIA MUST BE NCHRP-350 TEST LEVEL 3 (60+MPH) APPROVED.
- ADVANCE WARNING VEHICLE WITH TRUCK MOUNTED CHANGEBLE MESSAGE SIGN (CMS) AND LIGHT BAR. MESSAGE SIGN LETTER HEIGHT SHOULD BE A MINIMUM OF 10 INCHES.
- FLASHING ARROW PANEL, TYPE "B" (60"X30" MIN.), APPROPRIATE DIRECTION INDICATED
- CHANGEABLE MESSAGE SIGN



-Y- LINES



ENTRANCE RAMPS



MOVING OPERATION CARAVAN

(OPERATIONS TRAVELING 3 MPH OR FASTER)
PLACING PAVEMENT MARKING OR MARKERS
ON NON-INTERSTATE MULTILANE DIVIDED ROADWAYS

DRAWING NUMBER 7
IMPLEMENTATION DATE: 07/01/97
REVISED: 11/03/04