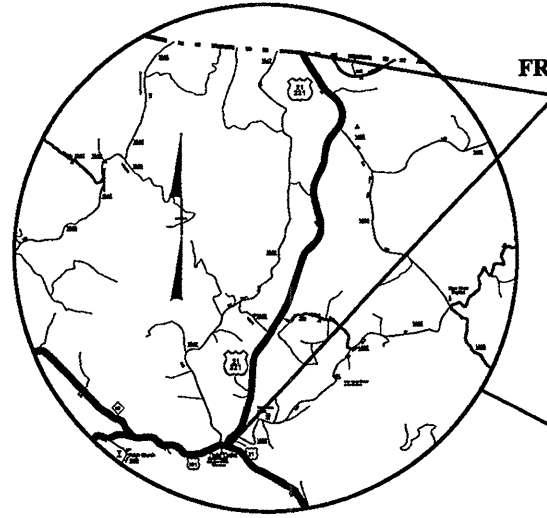


8/17/99  
07-OCT-2011 14:50  
C:\my Documents\2011\10\14\1011\1011.dwg  
Manager\Contracts\Resurfacing 2012\Allegheny\Ashe\Allegheny Resurfacing Maps 2012.dgn

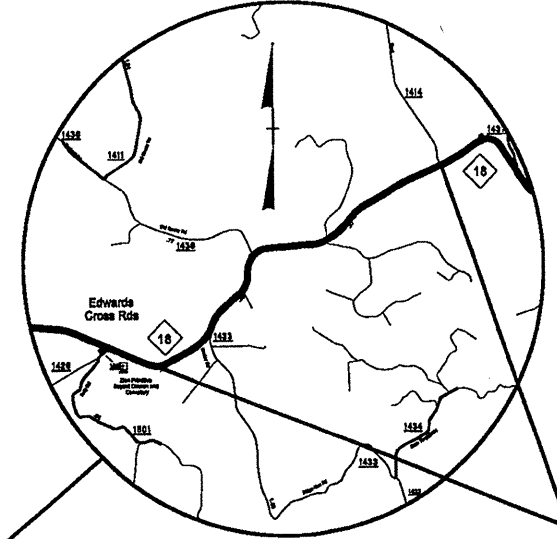
MAP #3 US 21  
FROM US 221 TO VIRGINIA  
STATE LINE



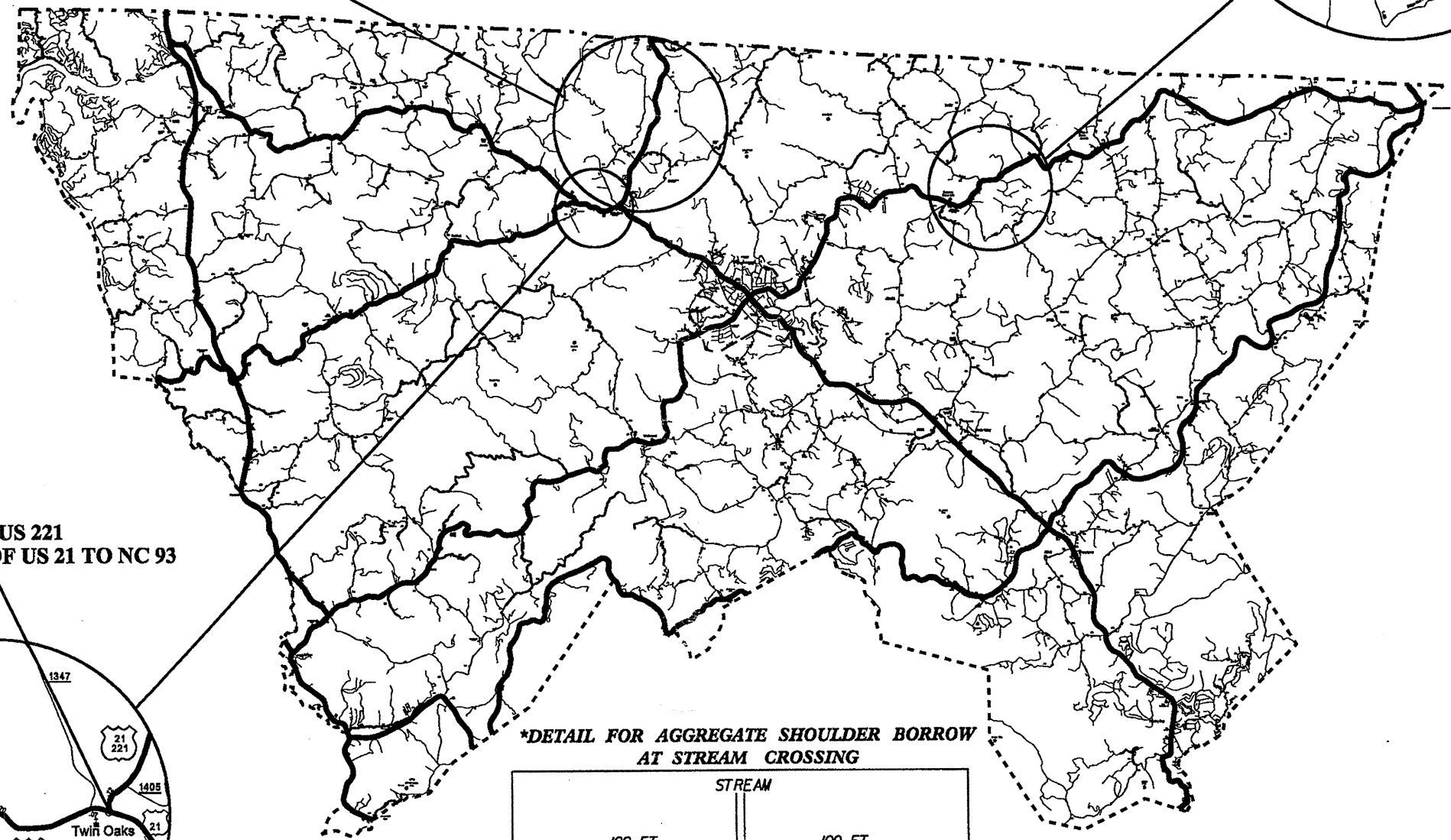
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# ALLEGHANY COUNTY

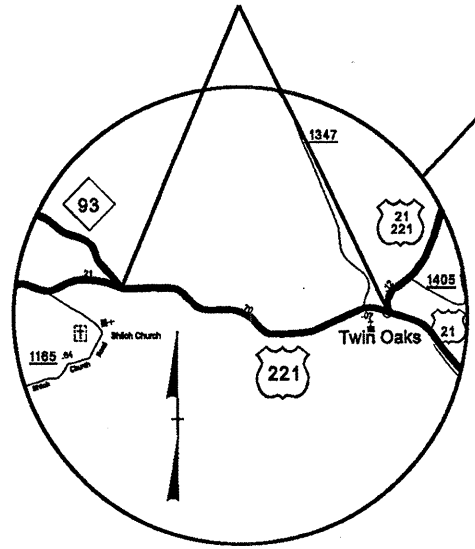
PRIMARY ASPHALT RESURFACING



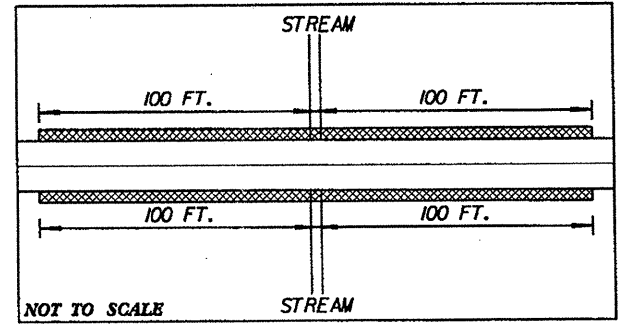
MAP #1 NC 18  
FROM SR 1426 TO SR 1414  
RESURFACE STATIONS  
0+00 - 95+04



MAP #2 US 221  
FROM 100' EAST OF US 21 TO NC 93



\*DETAIL FOR AGGREGATE SHOULDER BORROW  
AT STREAM CROSSING



NOT TO SCALE  
HATCHED AREA SHOWS PLACEMENT  
OF AGGREGATE SHOULDER BORROW

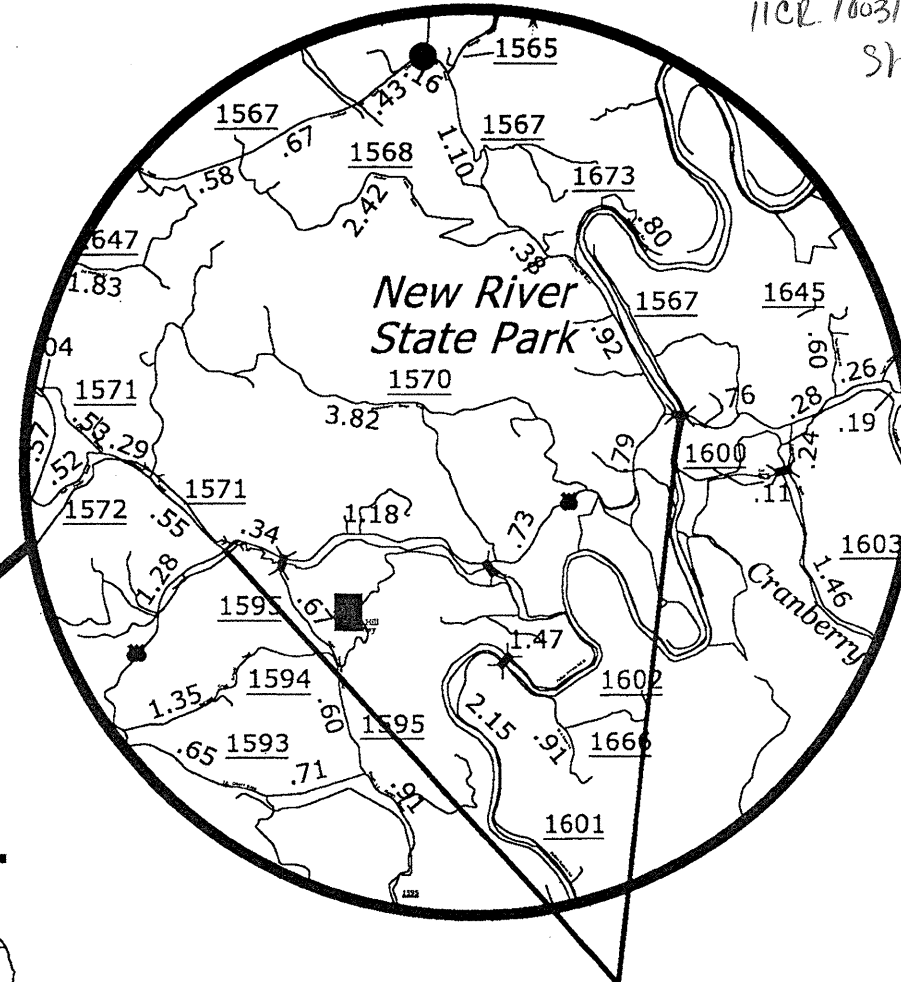
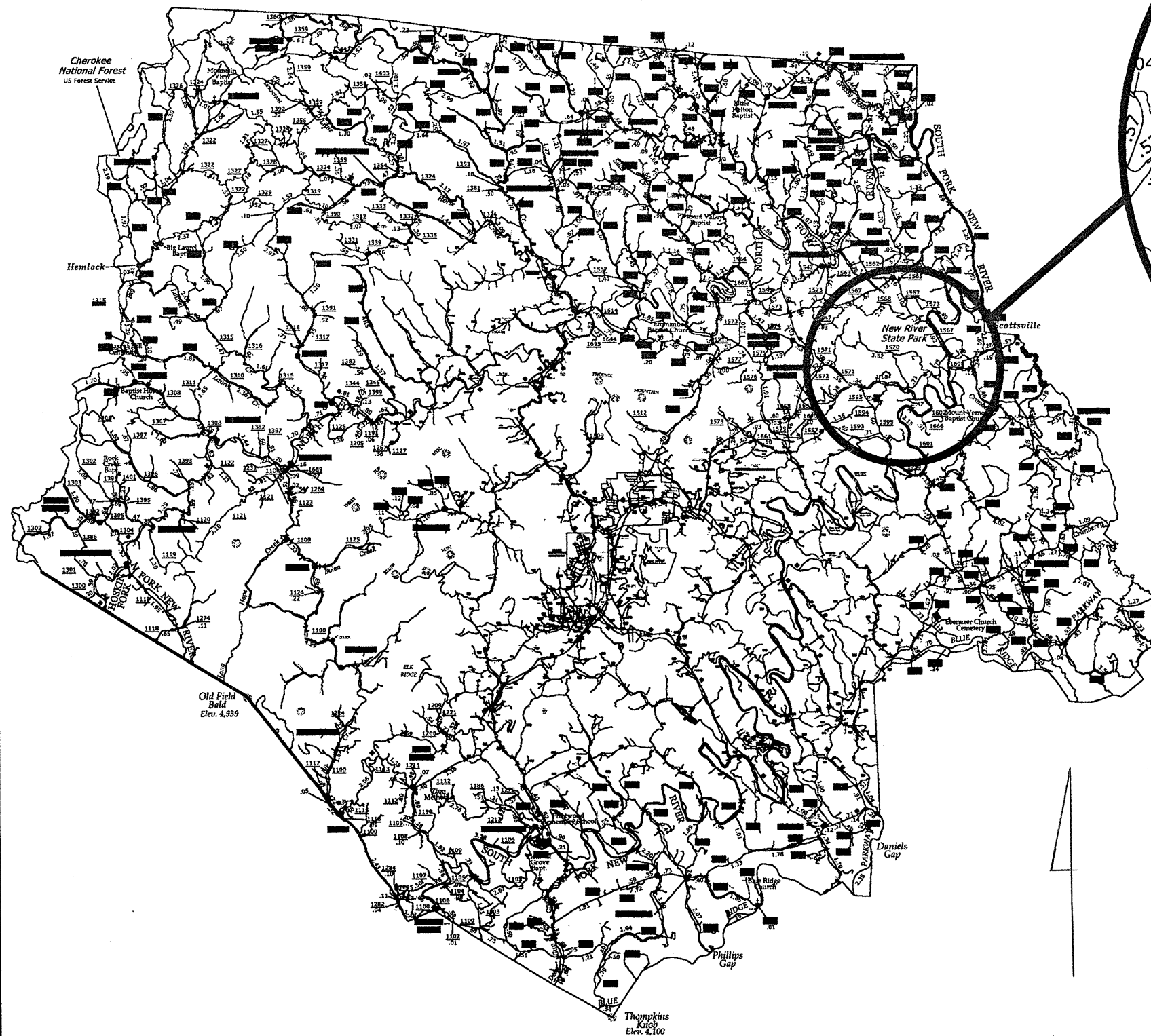
NOTE: AGGREGATE SHOULDER BORROW TO BE PLACED  
\* MAP #1 APPROX. STATION 9+00 400' (SEE DETAIL)

# ASHE COUNTY

PRIMARY ASPHALT RESURFACING

MAP # 4

11CR. 10031. 19, etc  
Sht. 2

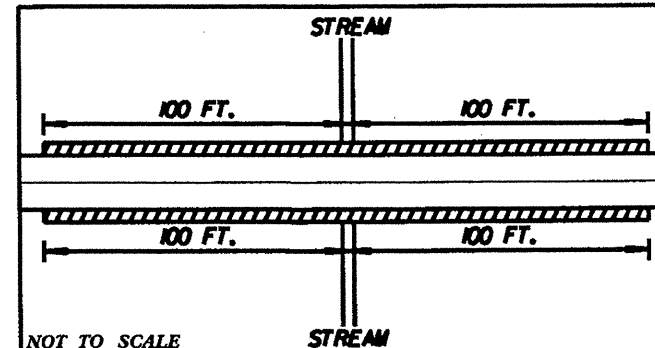


MAP #4 US 221  
FROM PROJECT LIMITS B-1037  
TO SR 1571 (TOM FOWLER RD.)

AGGREGATE SHOULDER BORROW  
TO BE PLACED AS FOLLOWS:

- \* APPROX. STATION 10+00 5 TONS (100 FT)
- \* APPROX. STATION 24+50 15 TONS (SEE DETAIL)
- \* APPROX. STATION 50+00 20 TONS (SEE DETAIL)
- \* APPROX. STATION 75+50 20 TONS (SEE DETAIL)
- \* APPROX. STATION 85+00 10 TONS (200 FT)
- \* APPROX. STATION 119+00 20 TONS (SEE DETAIL)
- \* APPROX. STATION 130+00 20 TONS (SEE DETAIL)
- \* APPROX. STATION 146+00 20 TONS (SEE DETAIL)
- \* APPROX. STATION 155+00 20 TONS (SEE DETAIL)

\*DETAIL FOR AGGREGATE SHOULDER  
BORROW AT STREAM CROSSING



HATCHED AREA SHOWS PLACEMENT  
OF AGGREGATE SHOULDER BORROW

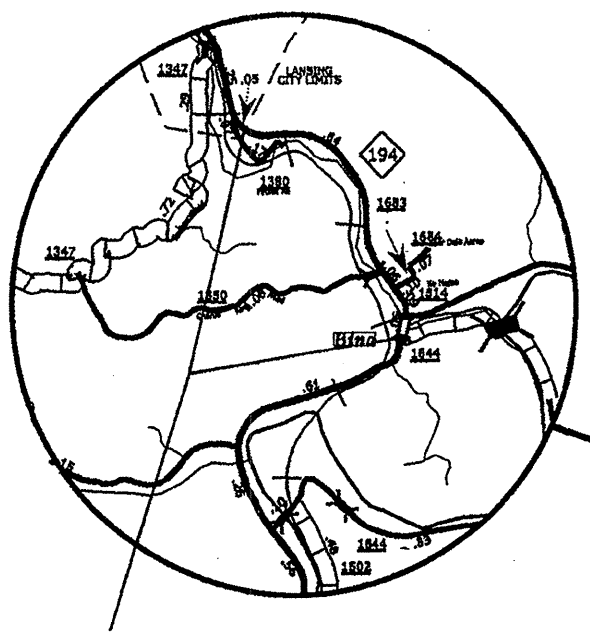
REVISIONS

SYSTEMS  
DESIGN  
INC.

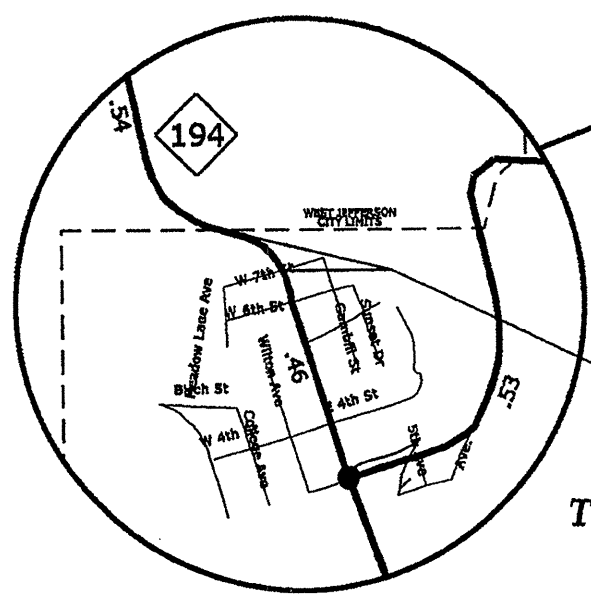
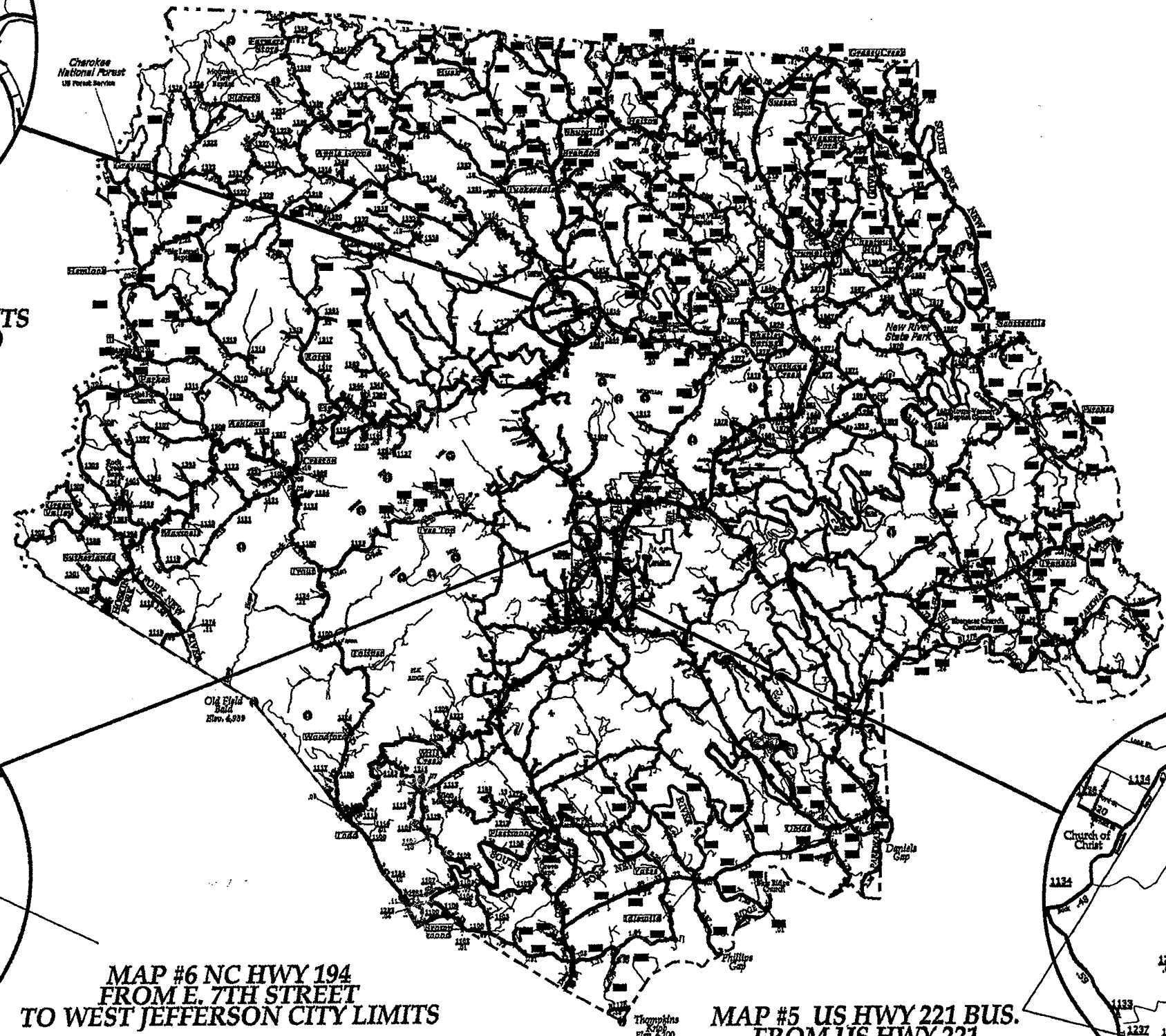
11CR-10031.19, etc.  
Sht. 3

# ASHE COUNTY

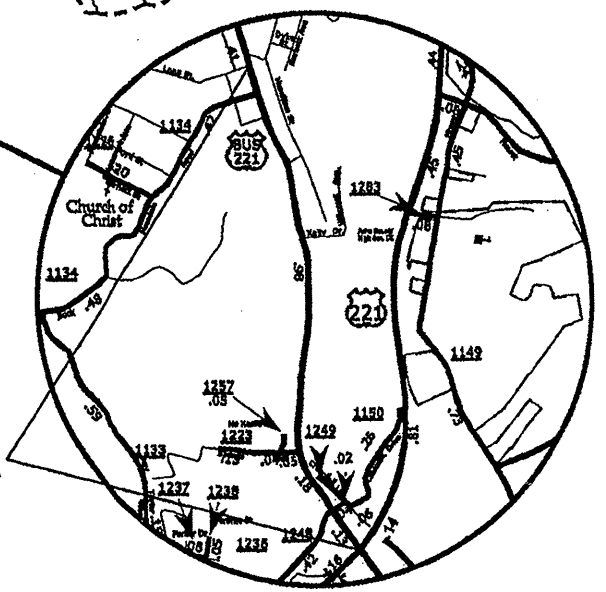
PRIMARY ASPHALT RESURFACING  
MAP # 5 THROUGH # 7



MAP #7 NC HWY 194  
FROM LANSING CITY LIMITS  
TO SR 1644 (MCNEIL RD.)



MAP #6 NC HWY 194  
FROM E. 7TH STREET  
TO WEST JEFFERSON CITY LIMITS



MAP #5 US HWY 221 BUS.  
FROM US HWY 221  
TO LONG STREET

8/17/95

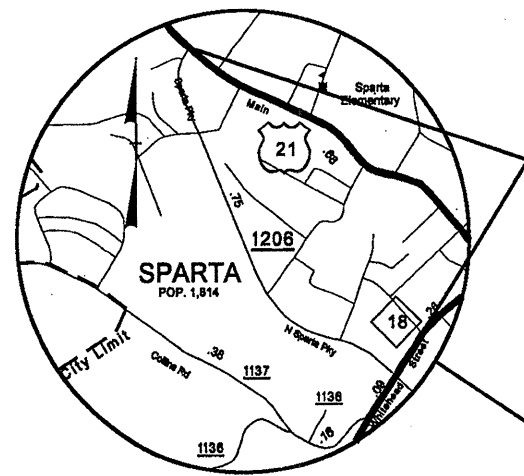
REVISIONS

85-001-2010/214  
S. C. HARRIS  
AD-251323

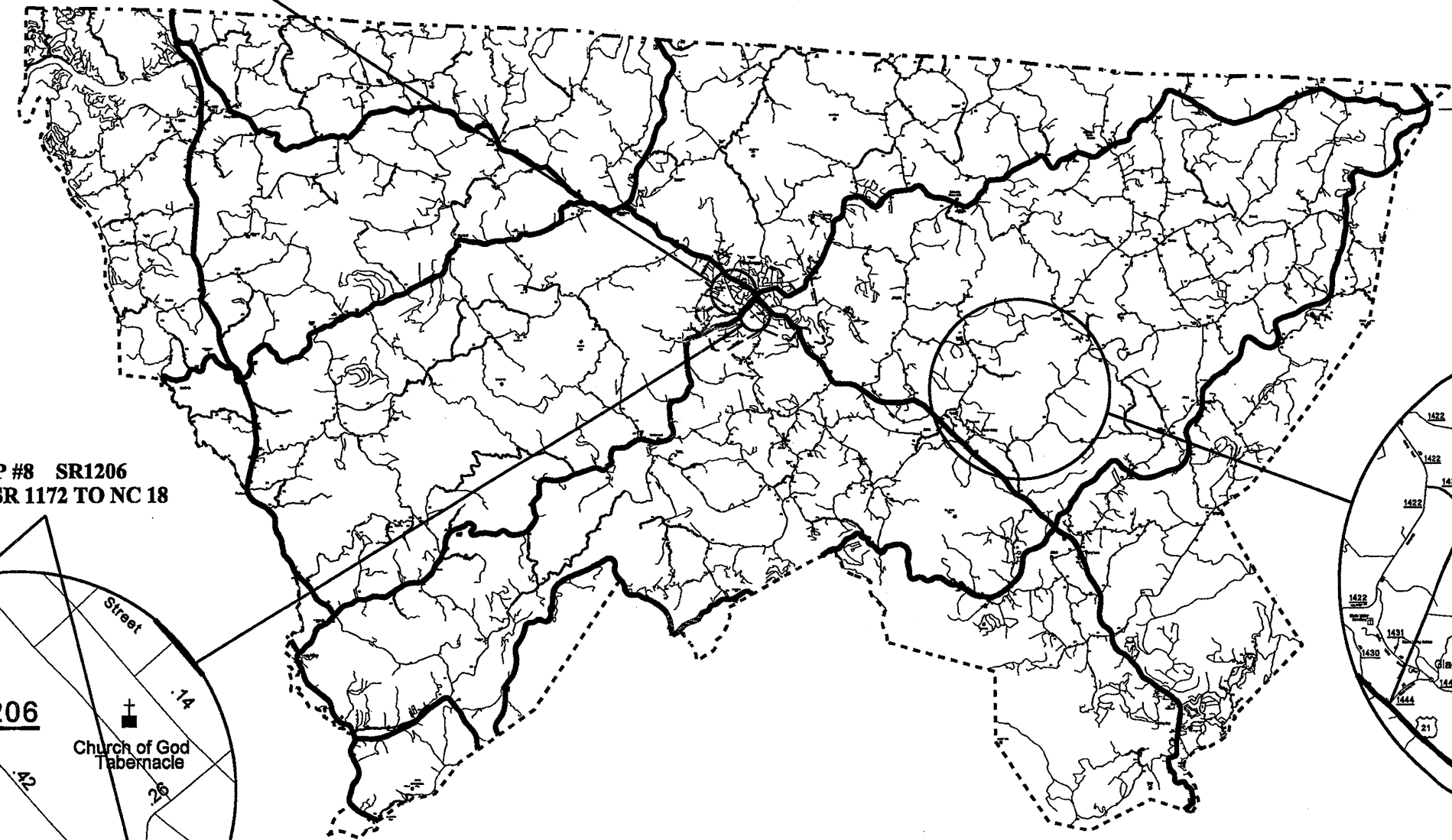
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**ALLEGHANY COUNTY**

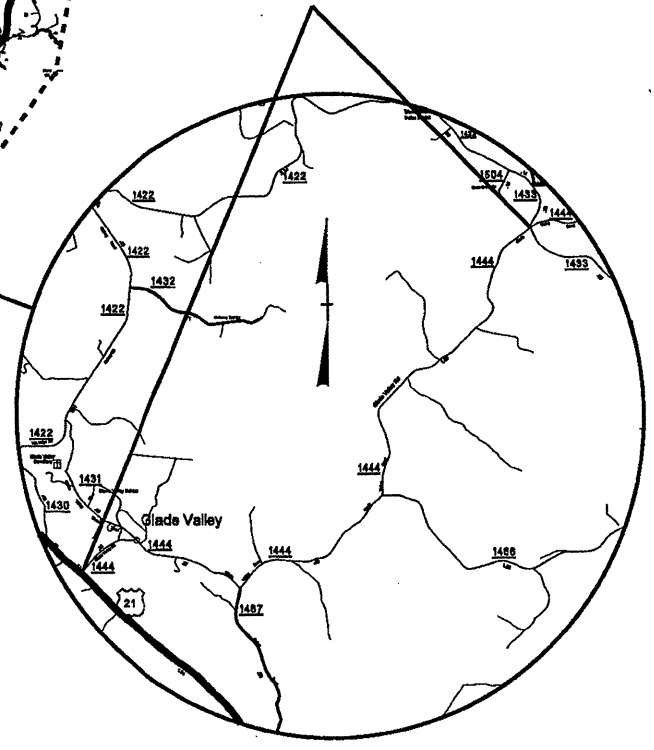
SECONDARY ASPHALT RESURFACING



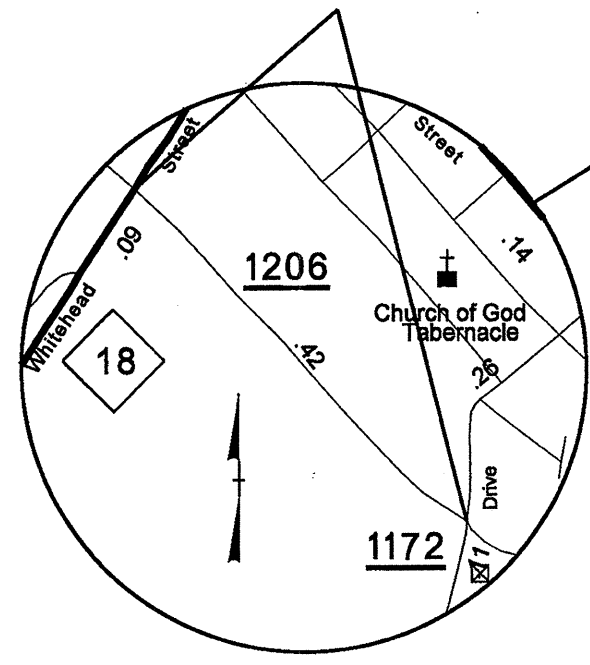
MAP #9 SR 1206  
FROM NC 18 TO US 21



MAP #10 SR 1444  
FROM US 21 TO SR 1433



MAP #8 SR 1206  
FROM SR 1172 TO NC 18



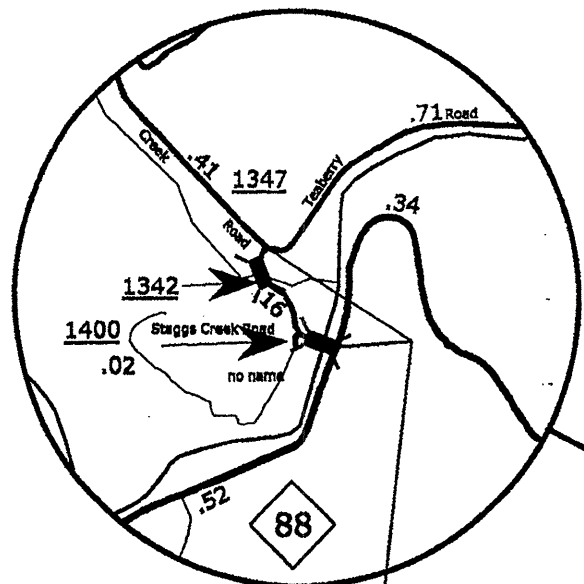
07-OCT-2011 14:55  
 C:\My Documents\11CRJ003119\11CRJ003119.dwg  
 81 D:\11CRJ003119

# ASHE COUNTY

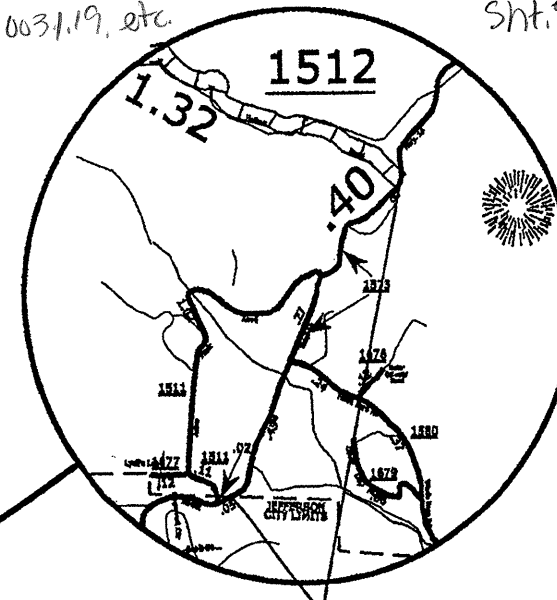
SECONDARY ASPHALT RESURFACING  
MAP # 11 THROUGH # 15

11CR.10031.19, etc.

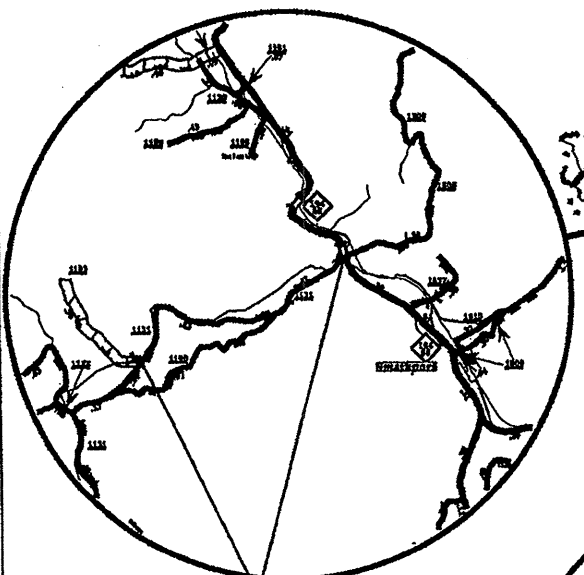
Sht. 5



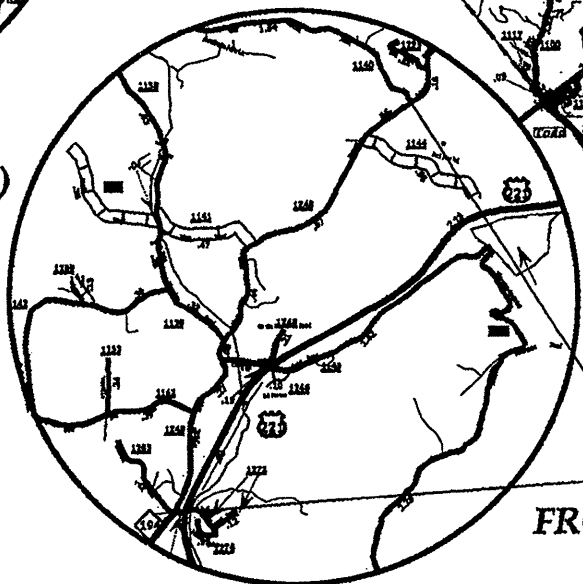
MAP #12 SR 1342  
FROM SR 1347 (TEABERRY RD.)  
TO NC HWY 88



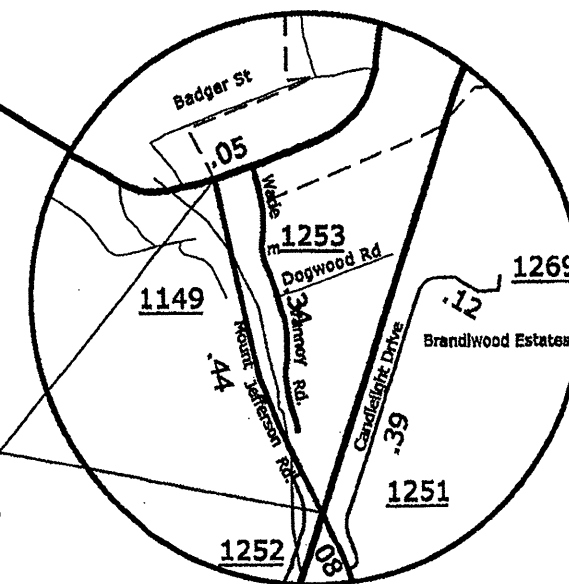
MAP #14 SR 1573  
FROM JEFFERSON CITY LIMITS  
TO SR 1512 (JOHNSON HOLLOW)



MAP #13 SR 1131  
FROM SR 1193 (LEWIS RD.)  
TO NC HWY 88



MAP #15 SR 1248  
FROM SR 1140 (GOLF COURSE RD)  
TO NC HWY 194



MAP #11 SR 1149  
FROM US HWY 221  
TO US HWY 221 BUS.

8/17/99

REVISIONS

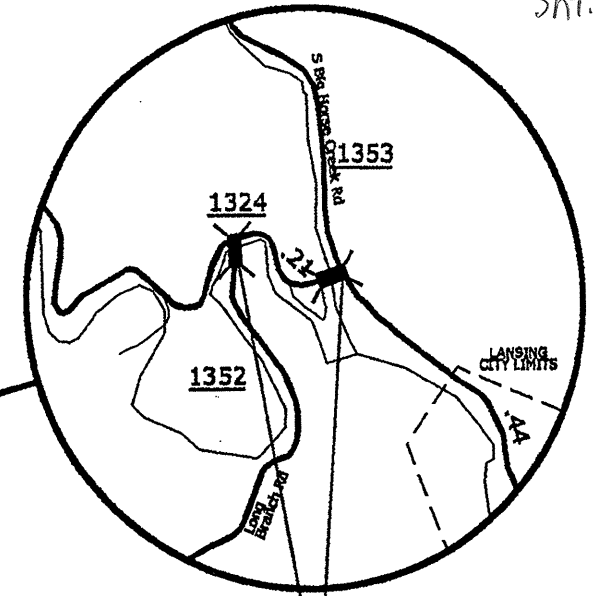
99-OCT-20 10:25  
S:\GIS\ASHE\ASHE.dwg

8/17/99

# ASHE COUNTY

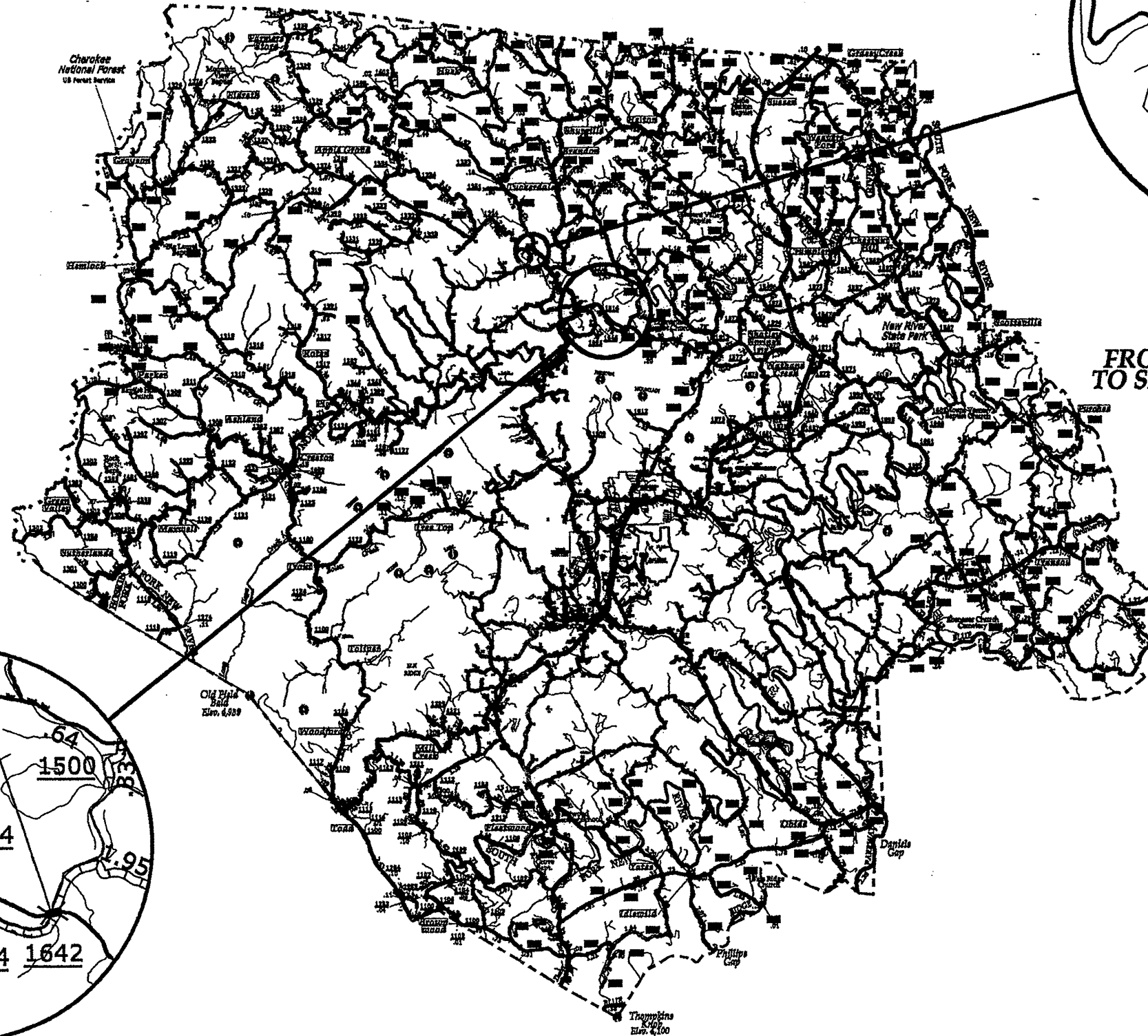
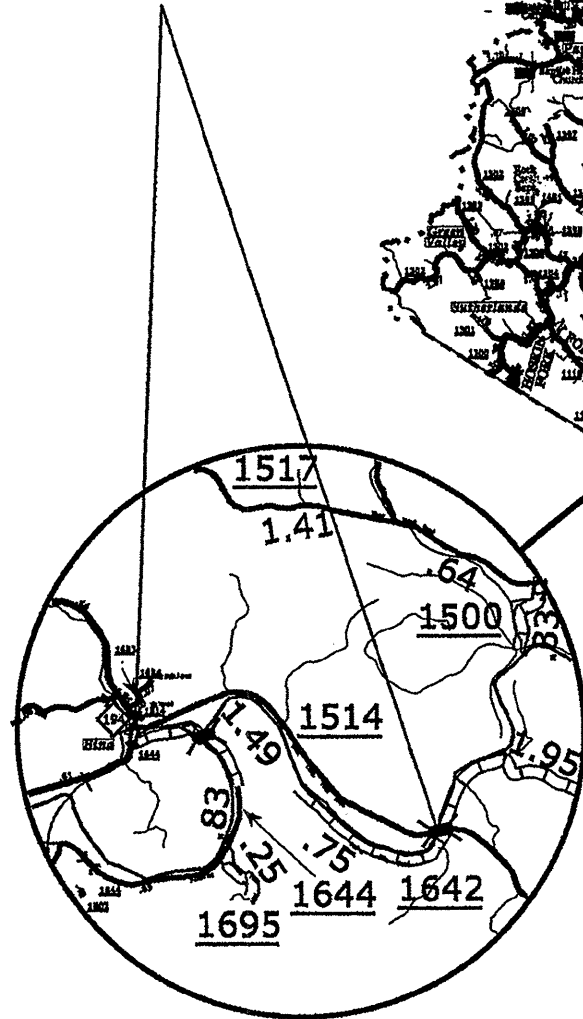
SECONDARY ASPHALT RESURFACING  
MAP # 16 AND # 17

1102. 100 31.19, etc.  
Sht. 6



MAP #16 SR 1324  
FROM SR 1352 (LONG BRANCH)  
TO SR 1353 (S. BIG HORSE CREEK)

MAP #17 SR 1514  
FROM BRIDGE # 478  
TO NC HWY 194



REVISIONS

05-OCT-2010 07:31  
S:\ASHE\ASHE-APP-AD-251323

8/17/95

1102.10031.19, etc.  
Sht. 7

# ASHE COUNTY

## SECONDARY ASPHALT RESURFACING AGGREGATE SHOULDER BORROW DETAILS

MAP #13 SR 1131  
FROM SR 1193 (LEWIS RD.)  
TO NC HWY 88

AGGREGATE SHOULDER BORROW TO BE PLACED AS FOLLOWS:  
\* APPROX. STATION 0+00 TO 65+50 LEFT 1,310 TONS (6,550 FT)  
\* APPROX. STATION 58+00 10 TONS (200 FT)

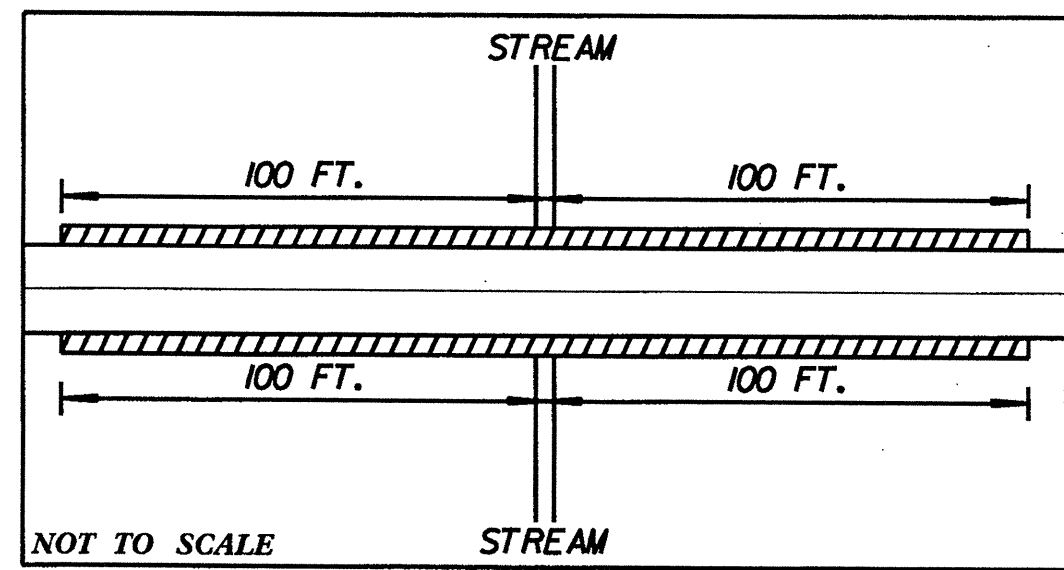
MAP #14 SR 1573  
FROM JEFFERSON CITY LIMITS  
TO SR 1512 (JOHNSON HOLLOW)

AGGREGATE SHOULDER BORROW TO BE PLACED AS FOLLOWS:  
\* APPROX. STATION 2+50 20 TONS (SEE DETAIL)  
\* APPROX. STATION 24+00 20 TONS (SEE DETAIL)

MAP #15 SR 1248  
FROM SR 1140 (GOLF COURSE RD)  
TO NC HWY 194

AGGREGATE SHOULDER BORROW TO BE PLACED AS FOLLOWS:  
\* APPROX. STATION 17+50 20 TONS (SEE DETAIL)  
\* APPROX. STATION 47+50 20 TONS (SEE DETAIL)  
\* APPROX. STATION 79+50 20 TONS (SEE DETAIL)

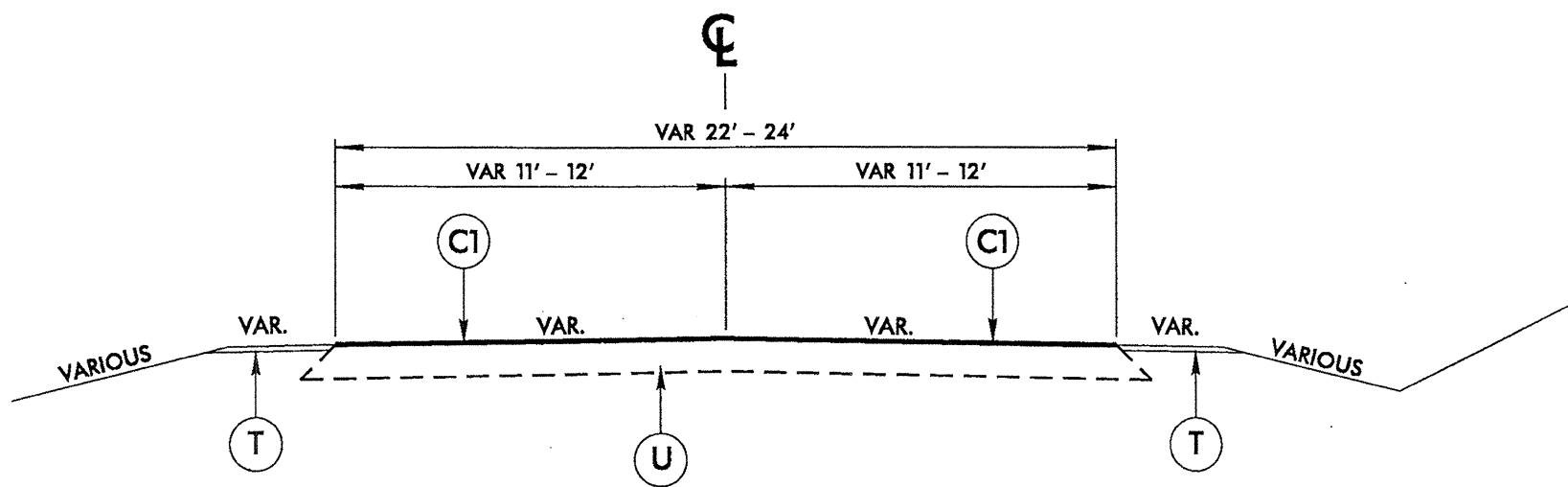
### \*DETAIL FOR AGGREGATE SHOULDER BORROW AT STREAM CROSSING



 HATCHED AREA SHOWS PLACEMENT  
OF AGGREGATE SHOULDER BORROW

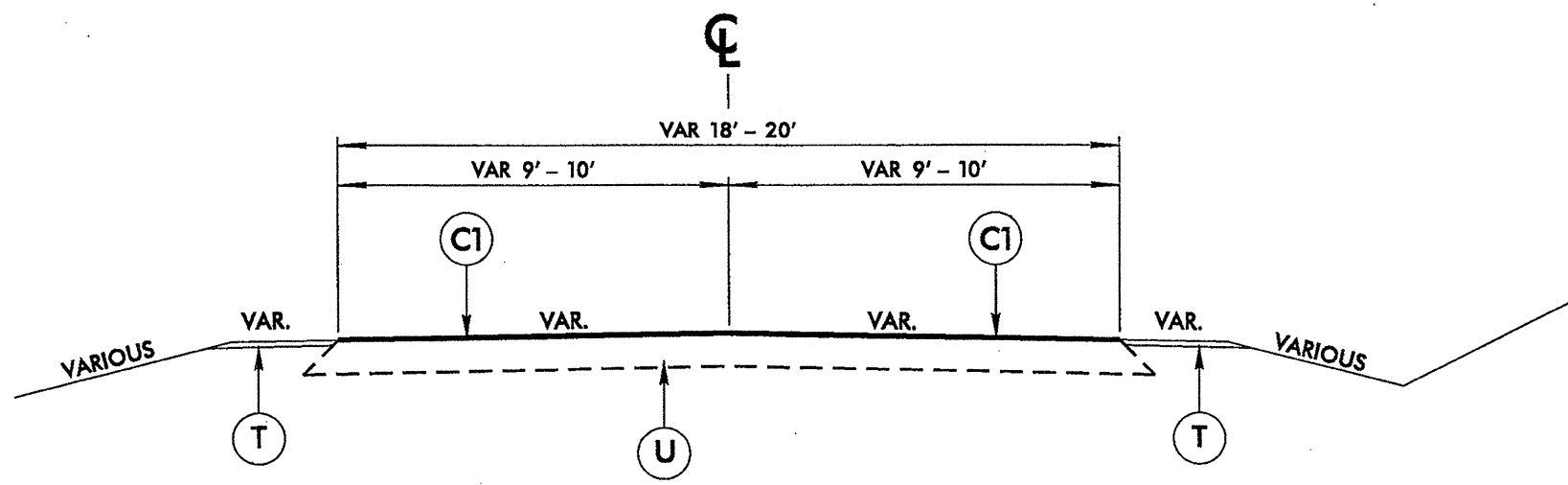
REVISIONS

\*\*\*\*\*  
SYSTEM TIME \*\*\*\*\*  
\*\*\*\*\*  
\*\*\*\*\*



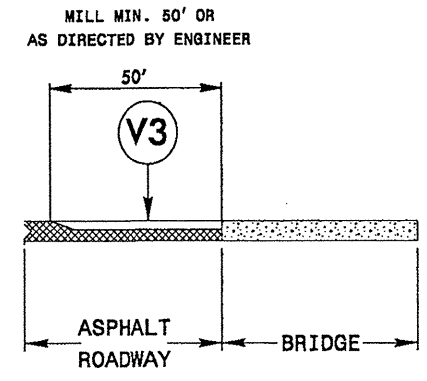
### TYPICAL SECTION NO. 1

- MAP 1 - NC 18 FROM SR 1426 TO SR 1414
- MAP 2 - US 221 FROM 100' EAST OF US 21 TO NC 93
- MAP 3 - US 21 FROM US 221 TO VIRGINIA STATE LINE
- MAP 10 - SR 1444 FROM US 21 TO SR 1433



### TYPICAL SECTION NO. 2

- MAP 4 - US 221 FROM PROJECT LIMITS B-1037 TO SR 1571
- MAP 12 - SR 1342 FROM SR 1347 TO NC 88
- MAP 13 - SR 1131 FROM SR 1193 TO NC 88
- MAP 14 - SR 1573 FROM NCL JEFFERSON TO SR 1512
- MAP 15 - SR 1248 FROM SR 1140 TO NC 194



**BRIDGE TIE IN DETAIL**  
 TIE ASPHALT OVERLAY TO BRIDGE APPROACH SLABS OR AS DIRECTED BY THE ENGINEER

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, 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.
C3	PROP. APPROX. 1" THIN LIFT HOT MIX ASPHALT, AT AN AVERAGE RATE OF 100 LBS. PER SQ. YD.
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
V2	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 0" - 1"
V3	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 0" - 1½"
V4	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 0" - 4"

**ALLEGHANY AND ASHE COUNTIES  
 PRIMARY AND SECONDARY RESURFACING**

DIVISION II

REVISIONS	INT.	DATE

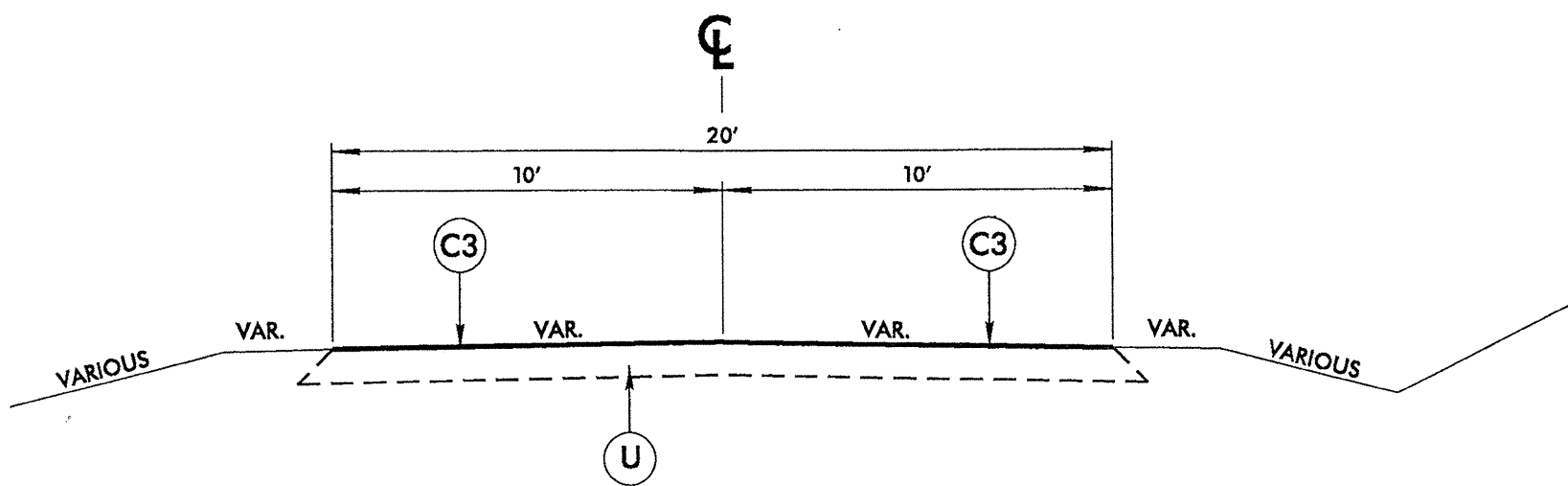
N.C. DEPARTMENT of TRANSPORTATION  
 DIVISION of HIGHWAYS  
 DIVISION ELEVEN

SCALE: N/A DATE: 10/2011

PREPARED BY: R. A. SHAW  
 REVIEWED BY: J. L. LAWS

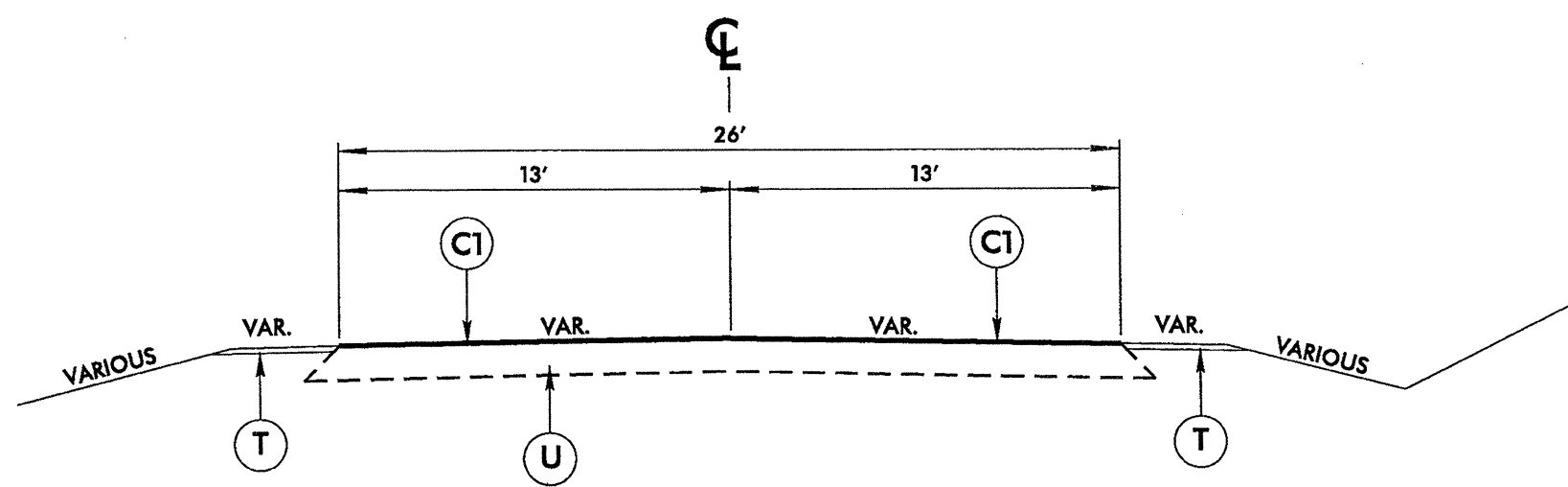


8/17/99



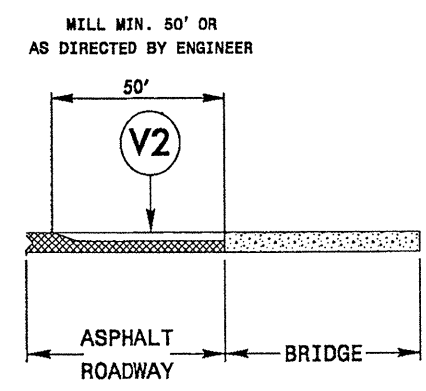
**TYPICAL SECTION NO. 3**

MAP 7 - NC 194 FROM ECL LANSING TO SR 1644  
 MAP 16 - SR 1324 FROM SR 1352 TO SR 1353  
 MAP 17 - SR 1514 FROM WEST END OF BRIDGE TO NC 194



**TYPICAL SECTION NO. 4**

MAP 8 - SR 1206 FROM SR 1172 TO NC 18  
 MAP 9 - SR 1206 FROM NC 18 TO US 21

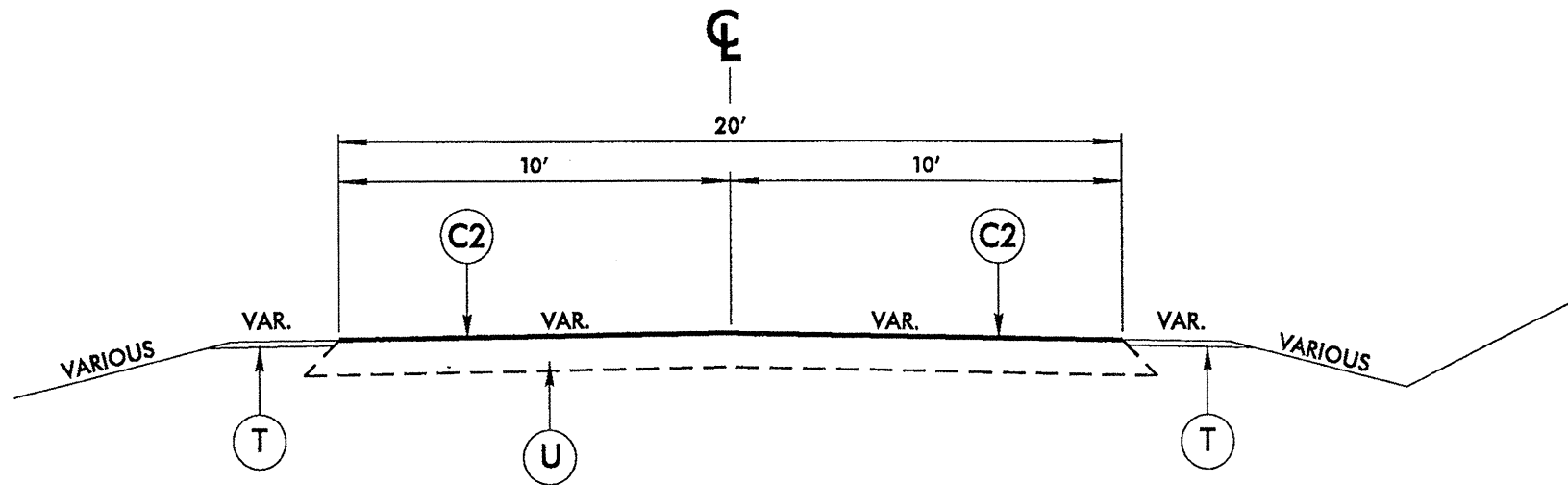


**BRIDGE TIE IN DETAIL**  
 TIE ASPHALT OVERLAY TO BRIDGE APPROACH  
 SLABS OR AS DIRECTED BY THE ENGINEER

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD.
C2	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD.
C3	PROP. APPROX. 1" THIN LIFT HOT MIX ASPHALT, AT AN AVERAGE RATE OF 100 LBS. PER SQ. YD.
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
V2	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 0" - 1"
V3	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 0" - 1½"
V4	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 0" - 4"

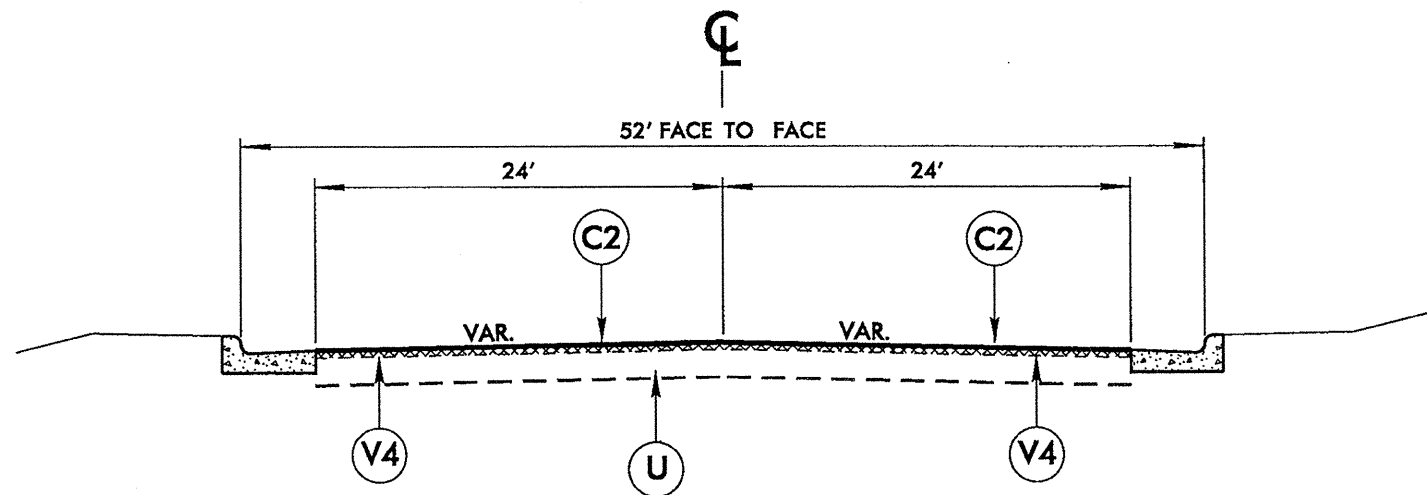
ALLEGHANY AND ASHE COUNTIES PRIMARY AND SECONDARY RESURFACING		
DIVISION II		
REVISIONS	INT.	DATE
N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION ELEVEN		SCALE: N/A    DATE: 10/2011 PREPARED BY: R. A. SHAW REVIEWED BY: J. L. LAWS REVIEWED BY:

8/17/99



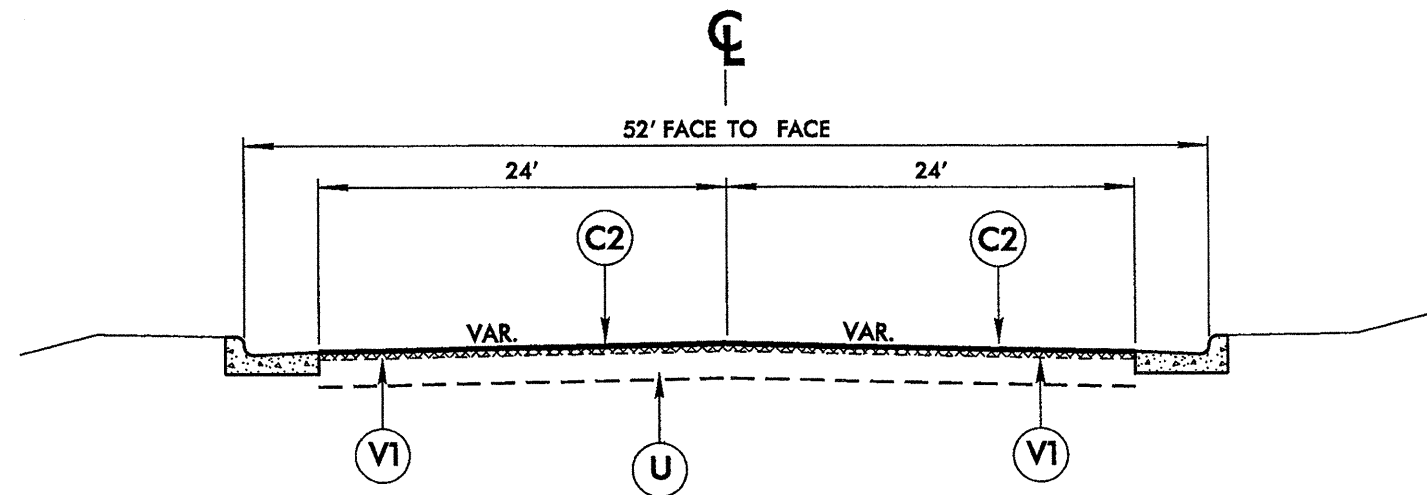
**TYPICAL SECTION NO. 5**

MAP 6 - NC 194 FROM EAST 7TH STREET TO NCL WEST JEFFERSON



**TYPICAL SECTION NO. 6**

MAP 5 - US 221 BUS FROM US 221 TO LONG STREET



**TYPICAL SECTION NO. 7**

MAP 11 - SR 1149 FROM US 221 TO US 221 BUS

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, 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.
C3	PROP. APPROX. 1" THIN LIFT HOT MIX ASPHALT, AT AN AVERAGE RATE OF 100 LBS. PER SQ. YD.
T	SHOULDER RECONSTRUCTION
U	EXISTING PAVEMENT
V1	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 1½"
V2	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 0" - 1"
V3	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 0" - 1½"
V4	MILLING OF EXISTING ASPHALT PAVEMENT AT DEPTH OF 0" - 4"

<b>ALLEGHANY AND ASHE COUNTIES PRIMARY AND SECONDARY RESURFACING</b>		
DIVISION II		
REVISIONS	INT.	DATE
N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION ELEVEN		SCALE: N/A    DATE: 10/2011 PREPARED BY: R. A. SHAW REVIEWED BY: J. L. LAWS REVIEWED BY:

PROJECT NO.	SHEET NO.	TOTAL NO.
11CR.10031.19, 11CR.10051.19 11CR.20031.19, ETC.	11	

### SUMMARY OF QUANTITIES

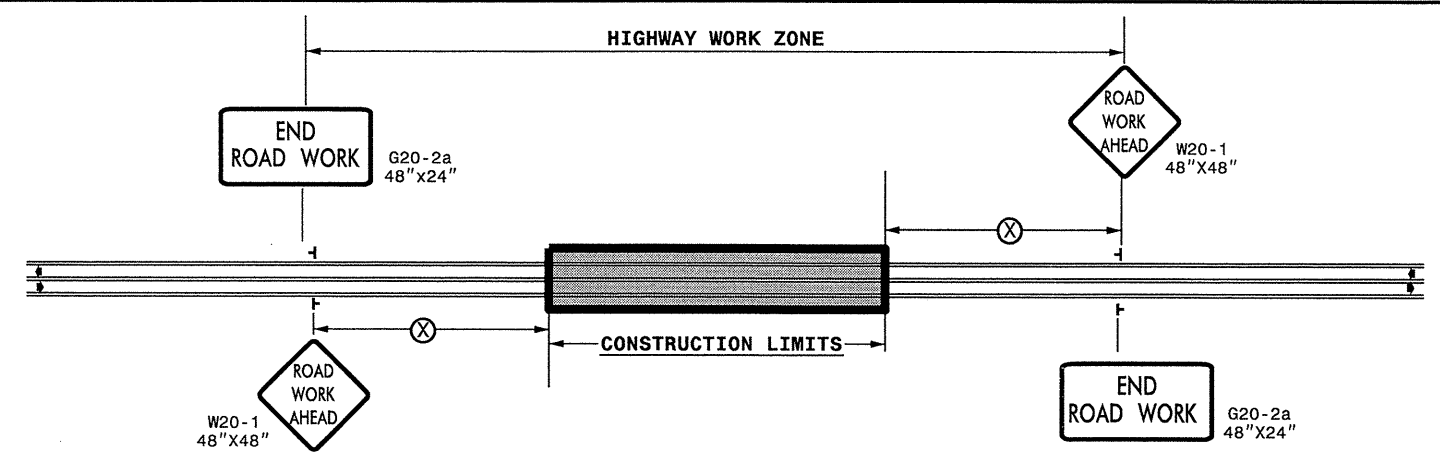
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP NO	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	BORROW EXCAVATION CY	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	1½" MILLING SY	0" TO 4" MILLING SY	0" TO 1" MILLING SY	0" TO 1.5" MILLING SY	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	ASPHALT BINDER FOR PLANT MIX TONS	THIN LIFT HMA SY	ADJ. OF MANHOLES EA	SEED & MULCHING AC	UNPAVED TRENCHING (1,2") LF	INDUCTIVE LOOP LF	LEAD-IN CABLE (14-2) LF	PORTABLE LIGHTING LS	
11CR.10031.19	Alleghany	1	NC 18	FROM SR 1426 TO SR 1414	1	NO	1.8	22	360	32	3.60					2,000	134			1.30						
		2	US 221	FROM 100' EAST OF US 21 TO NC 93	1	NO	0.9	24	180	16	1.80						1,100	74			0.65					
		3	US 21	FROM US 221 TO VIRGINIA STATE LINE	1	NO	3.35	24	670	32	6.70						3,950	265			2.40					
<b>TOTAL FOR PROJ NO. 11CR.10031.19</b>							<b>6.05</b>		<b>1,210</b>	<b>80</b>	<b>12.10</b>					<b>7,050</b>	<b>473</b>			<b>4.35</b>						
11CR.10051.19	Ashe	4	US 221	FROM PROJECT LIMITS B-1037 TO SR 1571	2	NO	2.936	18	587	100	5.87						3,575	240			2.15					
		5	US 221 BUS	FROM US 221 TO LONG STREET	6	NO	1.345	48					37,878			3,225	194		4						1	
		6	NC 194	FROM EAST 7TH STREET TO NCL WEST JEFFERSON	5	NO	0.109	20	22		0.22					120		7		1	0.08				*	
		7	NC 194	FROM ECL LANSING TO SR 1644	3	NO	1.714	20		50				225				72	20,111							1
<b>TOTAL FOR PROJ NO. 11CR.10051.19</b>							<b>6.104</b>		<b>609</b>	<b>150</b>	<b>6.09</b>		<b>37,878</b>	<b>225</b>		<b>3,345</b>	<b>3,575</b>	<b>513</b>	<b>20,111</b>	<b>5</b>	<b>2.23</b>					<b>1</b>
11CR.20031.19	Alleghany	8	SR 1206	FROM SR 1172 TO NC 18	4	NO	0.4	26	80	16	0.80					600	40				0.30					
		9	SR 1206	FROM NC 18 TO US 21	4	NO	0.7	26	140	16	1.40					1,000	67				0.50					
		10	SR 1444	FROM US 21 TO SR 1433	1	NO	3.4	22	680	64	6.80					3,700	248				2.45					
<b>TOTAL FOR PROJ NO. 11CR.20031.19</b>							<b>4.5</b>		<b>900</b>	<b>96</b>	<b>9.00</b>					<b>5,300</b>	<b>355</b>			<b>3.25</b>						
11CR.20051.19	Ashe	11	SR 1149	FROM US 221 TO US 221 BUS	7	NO	0.455	48				12,813				1,125		67				30.00	300	30		
		12	SR 1342	FROM SR 1347 TO NC 88	2	NO	0.189	20	38		0.38				225		200	13				0.14				
		13	SR 1131	FROM SR 1193 TO NC 88	2	NO	1.241	18	248	50	2.48						1,125	75				0.90				
		14	SR 1573	FROM NCL JEFFERSON TO SR 1512	2	NO	1.174	18	235	50	2.35						1,075	72				0.85				
		15	SR 1248	FROM SR 1140 TO NC 194	2	NO	2.14	20	428	100	4.28						2,325	156		1		1.60				
		16	SR 1324	FROM SR 1352 TO SR 1353	3	NO	0.208	20						568				9	2,441							
		17	SR 1514	FROM WEST END OF BRIDGE TO NC 194	3	NO	1.415	20							115			60	16,603		1		3.49	30.00	300	30
<b>TOTAL FOR PROJ NO. 11CR.20051.19</b>							<b>6.822</b>		<b>949</b>	<b>200</b>	<b>9.49</b>	<b>12,813</b>	<b>683</b>	<b>225</b>	<b>1,125</b>	<b>4,725</b>	<b>452</b>	<b>19,044</b>	<b>1</b>	<b>3.49</b>	<b>30.00</b>	<b>300</b>	<b>30</b>			
<b>GRAND TOTAL</b>							<b>23.476</b>		<b>3,668</b>	<b>526</b>	<b>36.68</b>	<b>12,813</b>	<b>37,878</b>	<b>908</b>	<b>225</b>	<b>4,470</b>	<b>20,650</b>	<b>1,793</b>	<b>39,155</b>	<b>6</b>	<b>13.32</b>	<b>30.00</b>	<b>300</b>	<b>30</b>	<b>1</b>	

PROJECT NO.	SHEET NO.	TOTAL NO.
11CR.10031.19, 11CR.10051.19 11CR.20031.19, ETC.	12	

### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	LENGTH	WIDTH	4725000000-E	4810000000-E		4820000000-E		4835000000-E	4840000000-N	4845000000-N				4905000000-N		
							THERMO SYMBOL - BIKE LANE EA	4" WHITE PAINT LF	4" YELLOW PAINT LF	8" WHITE PAINT LF	8" YELLOW PAINT LF	24" WHITE PAINT LF	PAINT MSG ONLY EA	PAINT LT ARROW EA	PAINT STR ARROW EA	PAINT RT ARROW EA	PAINT STR & RT ARROW EA	PAINT STR & LT ARROW EA	SNOW PLOWABLE MARKERS EA	
11CR.10031.19	Alleghany	1	NC 18	FROM SR 1426 TO SR 1414	1.8	22		38,016	38,016									119		
		2	US 221	FROM 100' EAST OF US 21 TO NC 93	0.9	24		19,008	19,008										60	
		3	US 21	FROM US 221 TO VIRGINIA STATE LINE	3.35	24		70,752	70,752										222	
<b>TOTAL FOR PROJ NO. 11CR.10031.19</b>					<b>6.05</b>			<b>127,776</b>	<b>127,776</b>									<b>401</b>		
								<b>255,552</b>												
11CR.10051.19	Ashe	4	US 221	FROM PROJECT LIMITS B-1037 TO SR 1571	2.936	18		62,008	62,008										194	
		5	US 221 BUS	FROM US 221 TO LONG STREET	1.345	48	10	12,000	42,600	250		170	8	13	12	5	4	2	195	
		6	NC 194	FROM EAST 7TH STREET TO NCL WEST JEFFERSON	0.109	20		2,323	2,323										9	
		7	NC 194	FROM ECL LANSING TO SR 1644	1.714	20		36,200	36,200										115	
<b>TOTAL FOR MAP NO. 7</b>					<b>1.714</b>			<b>36,200</b>	<b>36,200</b>									<b>115</b>		
<b>TOTAL FOR PROJ NO. 11CR.10051.19</b>					<b>6.104</b>		<b>10</b>	<b>112,531</b>	<b>143,131</b>	<b>250</b>		<b>170</b>	<b>8</b>	<b>13</b>	<b>12</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>513</b>	
								<b>255,662</b>		<b>250</b>										
11CR.20031.19	Alleghany	8	SR 1206	FROM SR 1172 TO NC 18	0.4	26		8,448	8,448			60		4		4			27	
		9	SR 1206	FROM NC 18 TO US 21	0.7	26		14,784	14,784			36		2		2			47	
		10	SR 1444	FROM US 21 TO SR 1433	3.4	22		71,808	71,808										224	
<b>TOTAL FOR PROJ NO. 11CR.20031.19</b>					<b>4.5</b>			<b>95,040</b>	<b>95,040</b>			<b>96</b>		<b>6</b>		<b>6</b>			<b>298</b>	
								<b>190,080</b>												
11CR.20051.19	Ashe	11	SR 1149	FROM US 221 TO US 221 BUS	0.455	48		3,840	15,300	400	200	45		2	3	4			90	
		12	SR 1342	FROM SR 1347 TO NC 88	0.189	20		4,000	4,000										83	
		13	SR 1131	FROM SR 1193 TO NC 88	1.241	18		26,210	26,210										80	
		14	SR 1573	FROM NCL JEFFERSON TO SR 1512	1.174	18		24,800	24,800										155	
		15	SR 1248	FROM SR 1140 TO NC 194	2.14	20		45,200	47,600		200	30		10				1		
		16	SR 1324	FROM SR 1352 TO SR 1353	0.208	20		4,400	4,400											
		17	SR 1514	FROM WEST END OF BRIDGE TO NC 194	1.415	20		29,884	29,884											408
<b>TOTAL FOR PROJ NO. 11CR.20051.19</b>					<b>6.822</b>			<b>138,334</b>	<b>152,194</b>	<b>400</b>	<b>400</b>	<b>75</b>		<b>12</b>	<b>3</b>	<b>4</b>	<b>1</b>	<b>408</b>		
								<b>290,528</b>		<b>800</b>										
<b>GRAND TOTAL</b>					<b>23.476</b>		<b>10</b>	<b>473,681</b>	<b>518,141</b>	<b>650</b>	<b>400</b>	<b>341</b>	<b>8</b>	<b>31</b>	<b>15</b>	<b>15</b>	<b>5</b>	<b>2</b>	<b>1,620</b>	
								<b>991,822</b>		<b>1,050</b>										

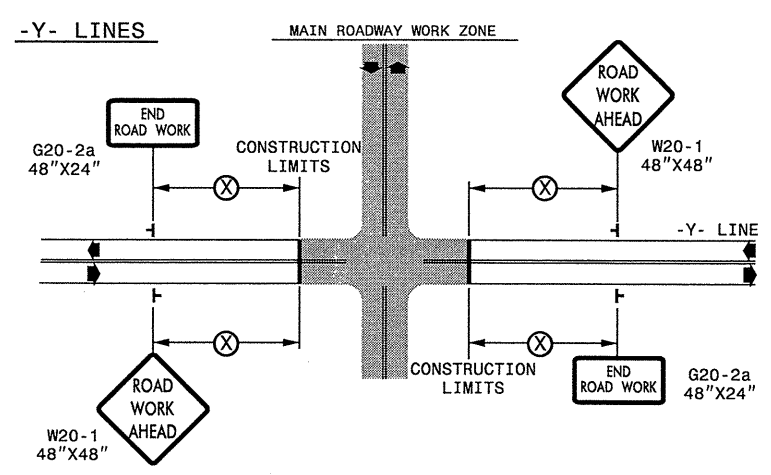
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



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)**



DETAIL DRAWING FOR  
TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

**GENERAL NOTES**

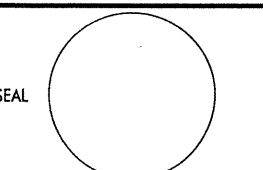

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, 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

SHEET 1 OF 1

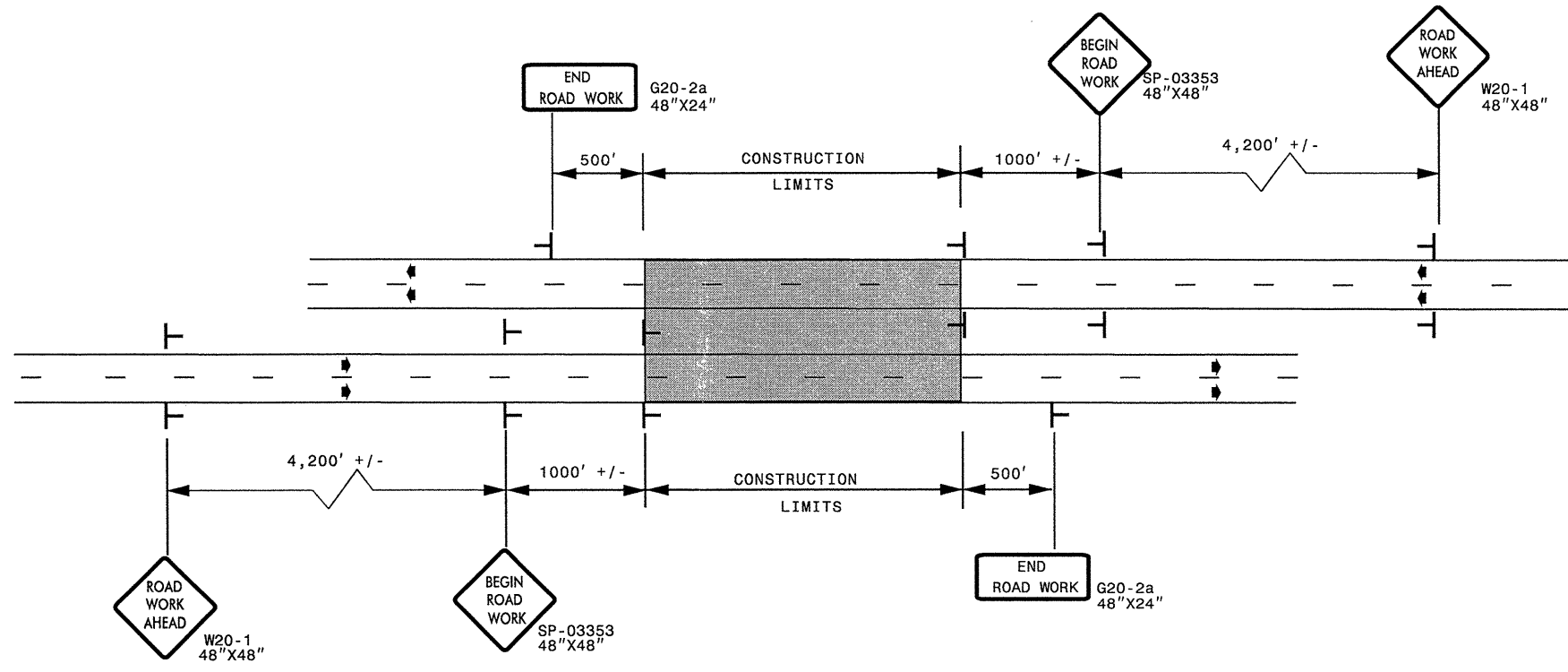
APPROVED: _____	DATE: _____	DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS	
			
SCALE: NONE		REVISIONS	
DATE: _____		7-98	10/01
DWG. BY: _____		10-98	03/04
DESIGN BY: _____		01/01	11/04
REVIEWED BY: _____	CADD FILE		

I:\OCT-2011\1742 \ADO\DFSR\ROOT\GROUPS-WZTCC\TMUN\WZTC\Resurfacing\2011\Western\2011\Div\11\202889A-D\_11CR.10031.19x4-Alleghony-Ashe-US21.sg\C202889A-D\_11CR.10031.19x4-Alleghony-Ashe-2way\_Undiv.&Urban\_Frwy-stationary.sngreen

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

PROJ. REFERENCE NO. 11CR.10031.18, 11CR.20031.18 11CR.10051.18, 11CR.20051.18	SHEET NO. TCP-2
---	--------------------

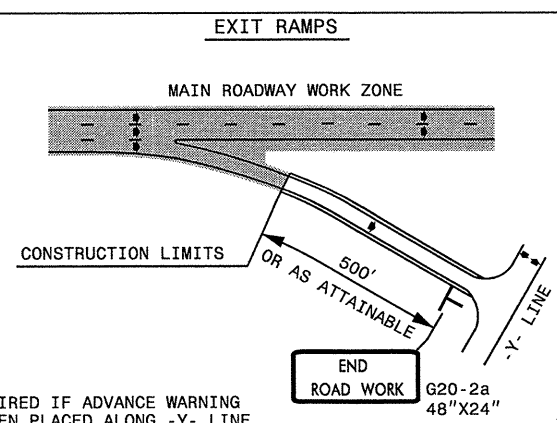
## DETAIL A



LEGEND	
	STATIONARY SIGN
▶	DIRECTION OF TRAFFIC FLOW

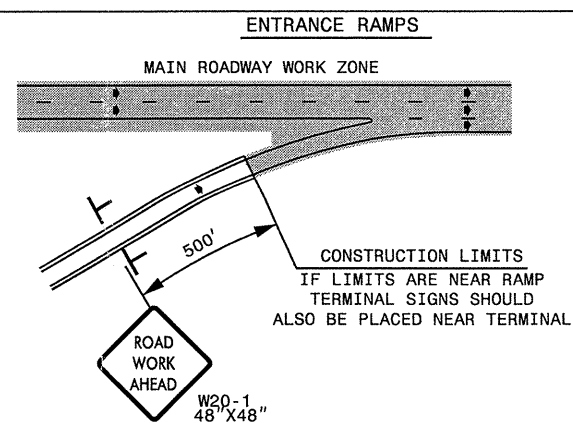
\* USE THE "\$250 SPEEDING PENALTY" SIGN, SPEED LIMIT SIGN, AND ORANGE PANEL; ONLY WHEN A "\$250 SPEEDING PENALTY" ORDINANCE HAS BEEN ISSUED BY THE REGIONAL TRAFFIC ENGINEER.

## DETAIL B

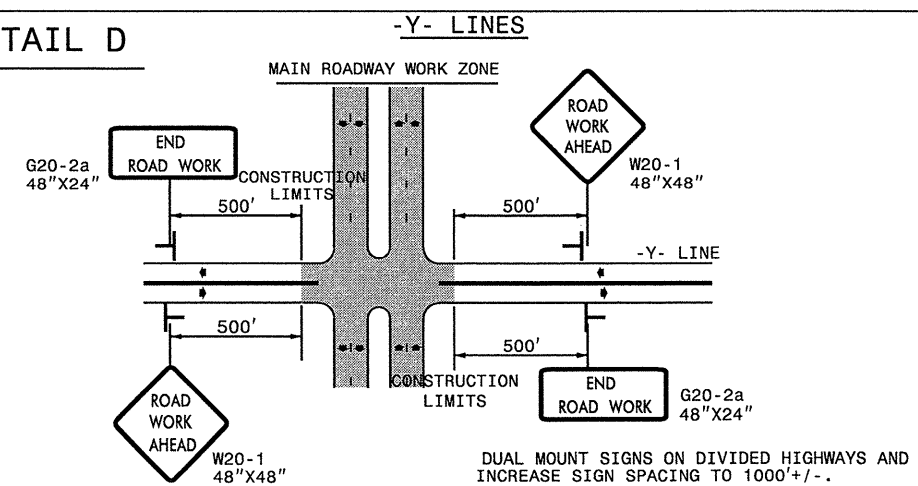


NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

## DETAIL C



## DETAIL D



## 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: _____	ADVANCED WORK ZONE WARNING SIGNS FOR FREEWAYS (4 LANES OR GREATER)								
<div style="border: 1px solid black; border-radius: 50%; width: 60px; height: 60px; margin: 0 auto; display: flex; align-items: center; justify-content: center;"> <span style="font-size: 8px;">SEAL</span> </div>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>SCALE: NONE</td> <td>REVISIONS</td> </tr> <tr> <td>DATE: 8/03</td> <td>03/04</td> </tr> <tr> <td>DESIGN BY: JI</td> <td></td> </tr> <tr> <td>REVIEWED BY:</td> <td></td> </tr> </table>	SCALE: NONE	REVISIONS	DATE: 8/03	03/04	DESIGN BY: JI		REVIEWED BY:	
SCALE: NONE	REVISIONS								
DATE: 8/03	03/04								
DESIGN BY: JI									
REVIEWED BY:									

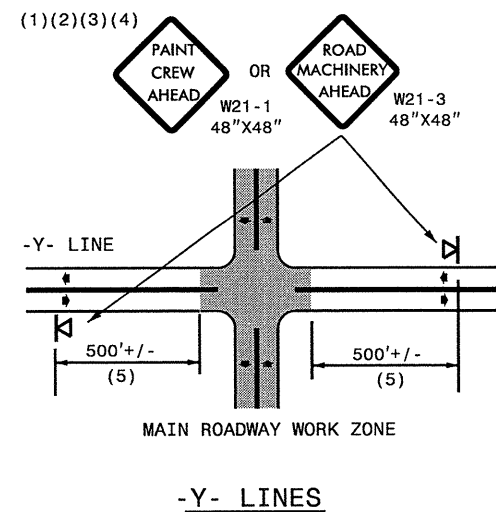
I:\DCI\20017133\DOT\CONTR\SR01\WZTC\Resurfacing\2011\Western\2011\DWG\C202889A-D\_11CR.10031.18x4-Alleghany-Ashe\_freeways\_4lanes\_or\_greater\_stationar

## GENERAL NOTES

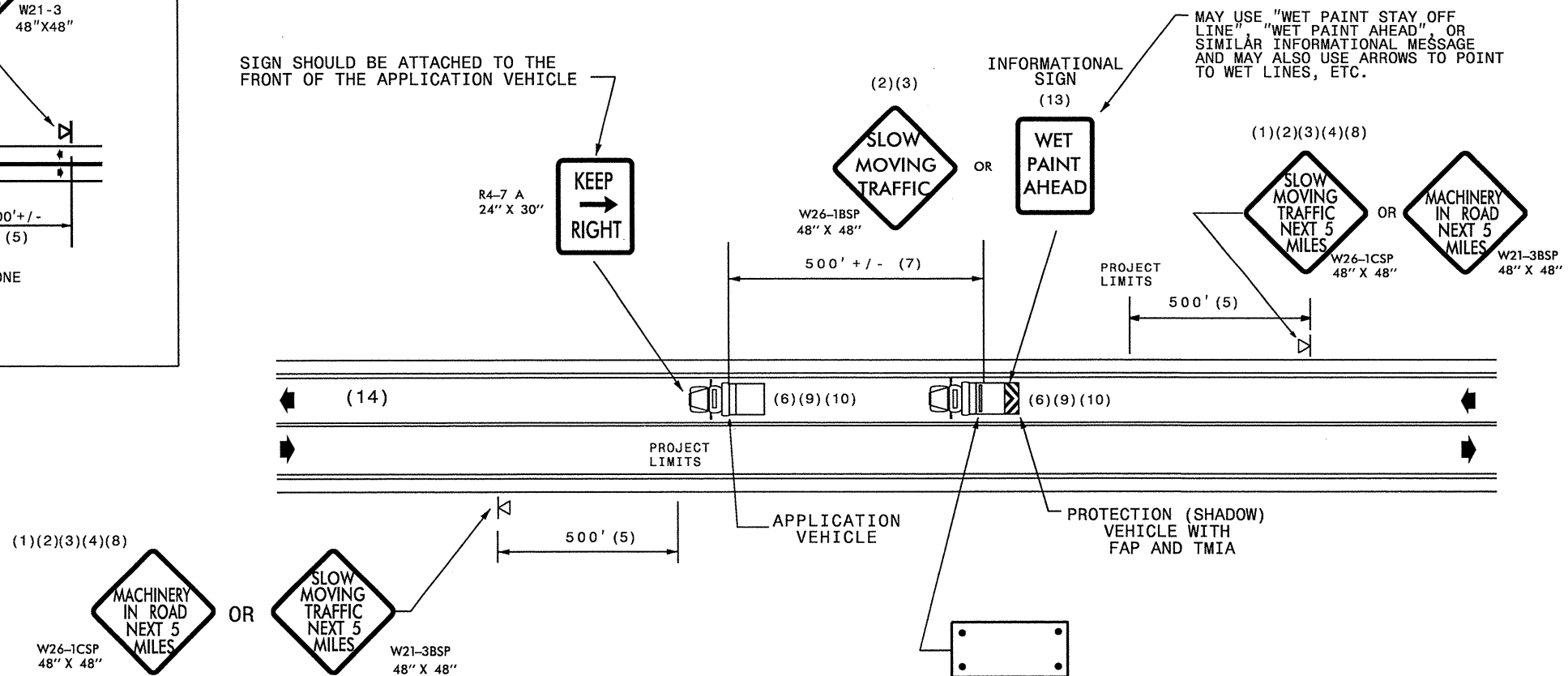
- (1) THE FOLLOWING OPTIONS MAY BE USED FOR ADVANCE WARNING SIGNS:
  - A. TRUCK MOUNTED SIGNS
  - B. TRUCK MOUNTED CHANGEABLE MESSAGE SIGN (CMS)
  - C. GROUND MOUNTED ADVANCE WARNING SIGNS (MUST CIRCLE TO PICK UP SIGNS)
  - D. GROUND MOUNTED CHANGEABLE MESSAGE SIGN (CMS) (MUST USE CIRCLE TO PICK UP SIGNS)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



SIGN SHOULD BE ATTACHED TO THE FRONT OF THE APPLICATION VEHICLE



## 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

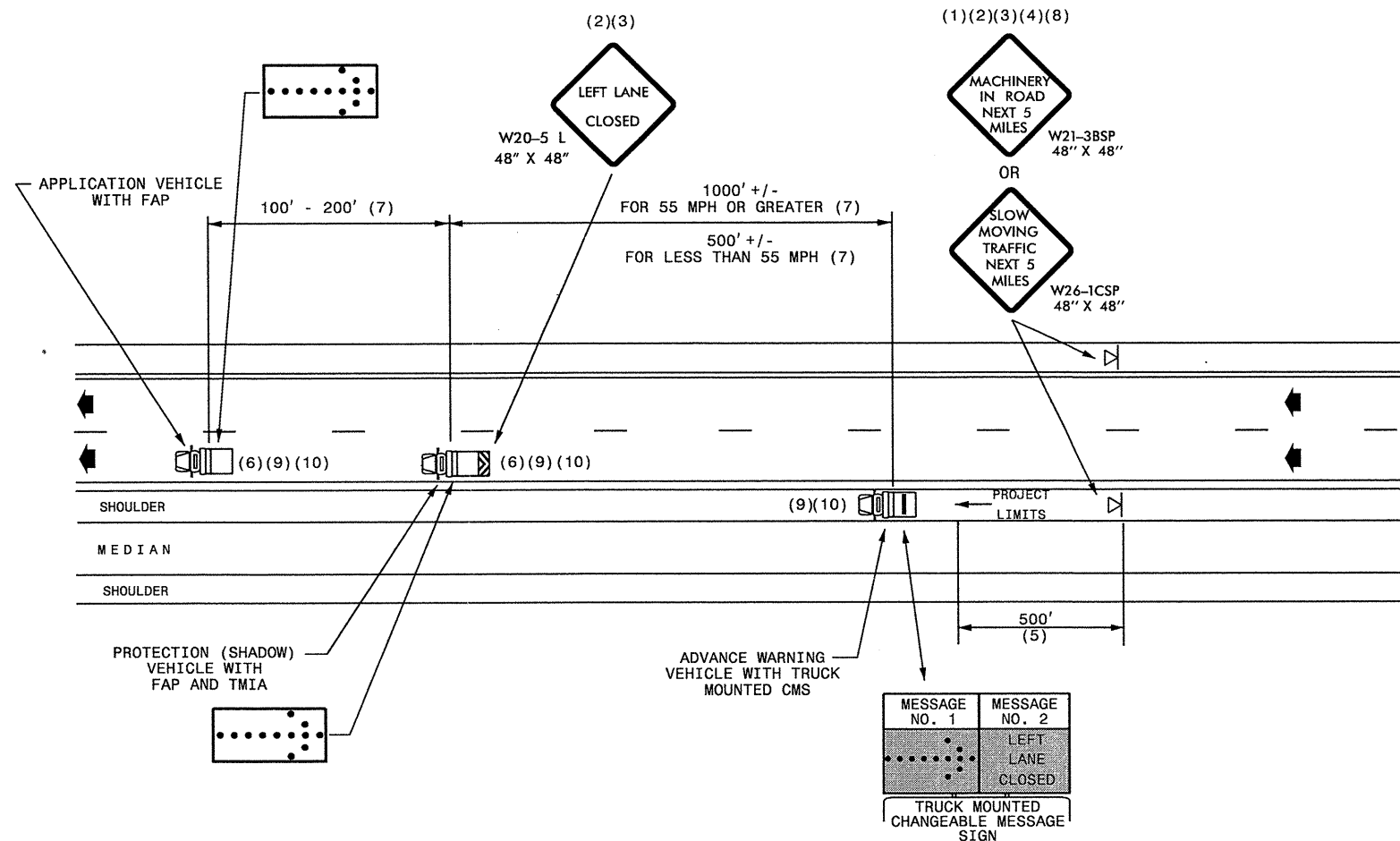
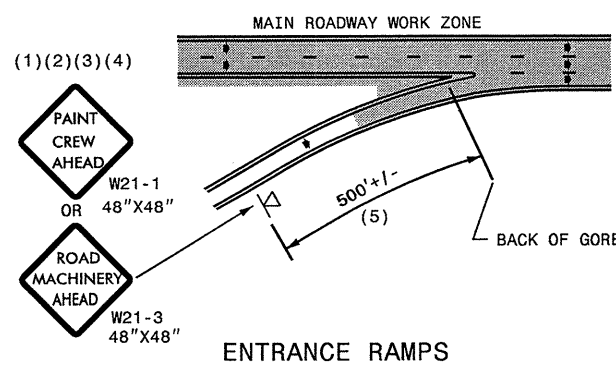
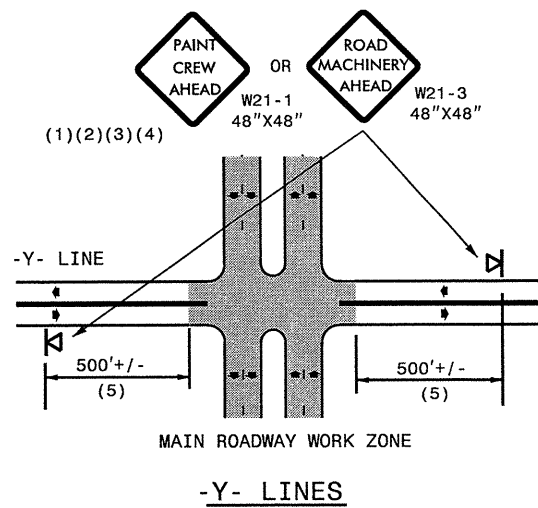
### GENERAL NOTES

- (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 CHANGEABLE 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

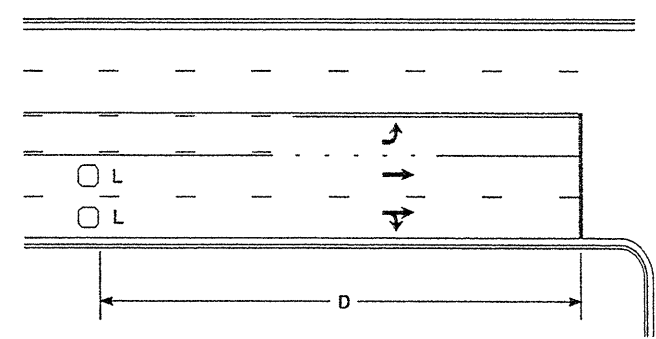


## MOVING OPERATION CARAVAN (OPERATIONS TRAVELING 3 MPH OR FASTER) PLACING PAVEMENT MARKING OR MARKERS ON NON-INTERSTATE MULTILANE DIVIDED ROADWAYS

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



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

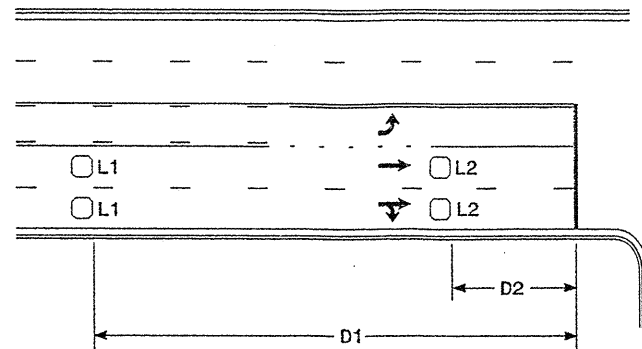


Speed Limit mph (km/hr)	D ft (m)
40 (64)	250 (75)
45 (72)	300 (90)
50 (80)	355 (110)
55 (88)	420 (130)

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

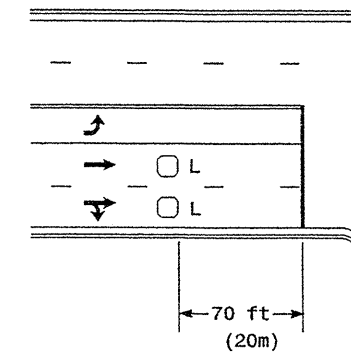


Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

L1 = 6ft X 6ft  
 (1.8m X 1.8m)  
 Wired in series  
 L2 = 6ft X 6ft  
 (1.8m X 1.8m)  
 Wired in series

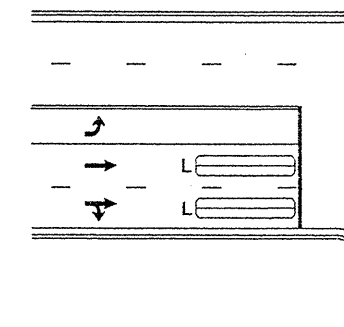
"Stretch" Operation

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



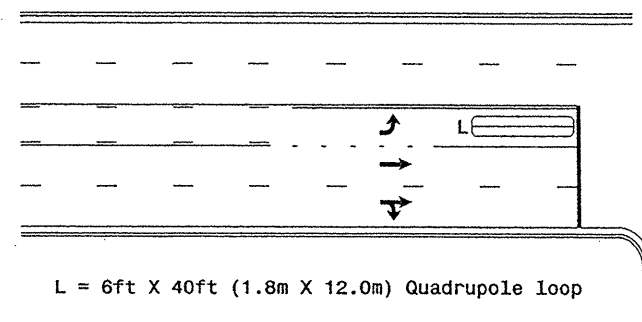
L = 6ft X 6ft (1.8m X 1.8m)  
 Wired in series

OR



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

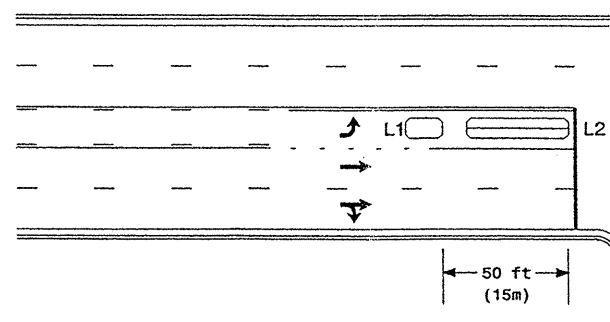
### Left Turn Lane Detection



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

Presence Loop Detection

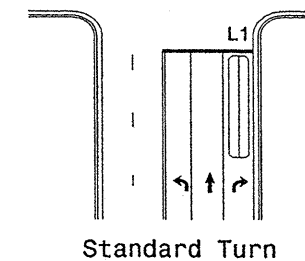
OR



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

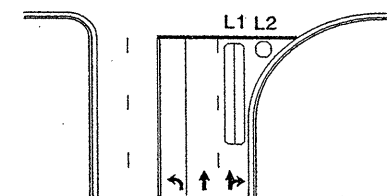
Queue Loop Detection

### Right Turn Lane Detection

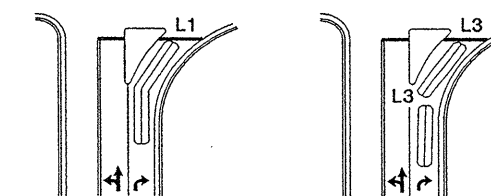


Standard Turn

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

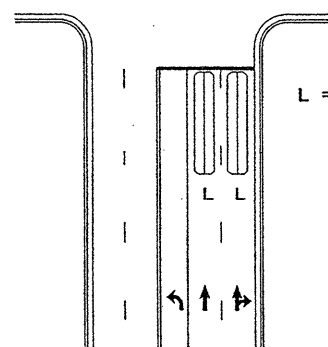


Wide Radius Turn



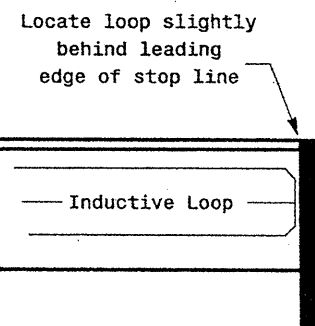
Channelized Turn

### 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	REVIEWED BY:
PREPARED BY: P. L. Alexander	REVIEWED BY:
REVISIONS	INIT. DATE
1. Revise pavement markings	
SCALE: N/A	SIG. INVENTORY NO.

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

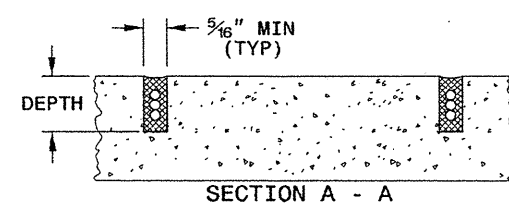
11-08

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**

SHEET 1 OF 3  
**1725D01**

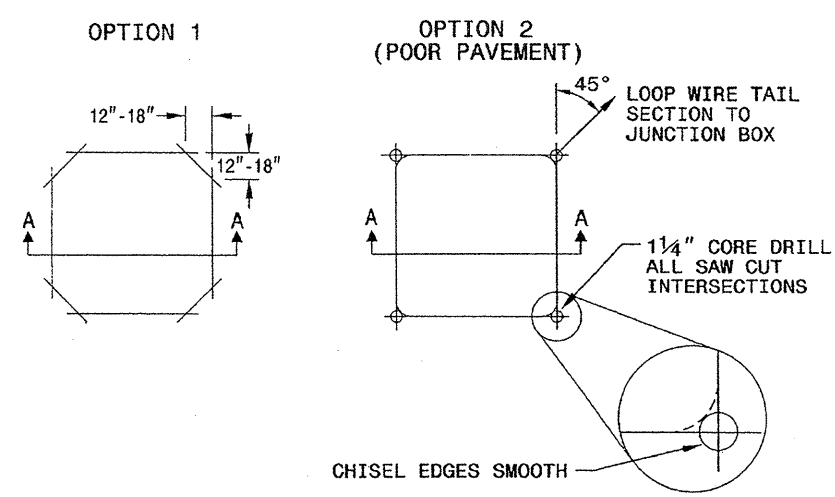
**SAW SLOT DEPTH CHART**

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

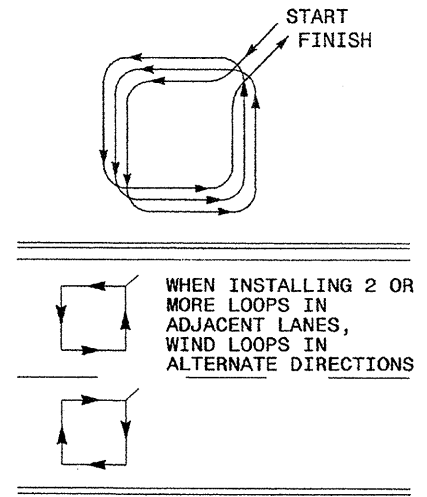


**CONVENTIONAL 4-SIDED LOOP**

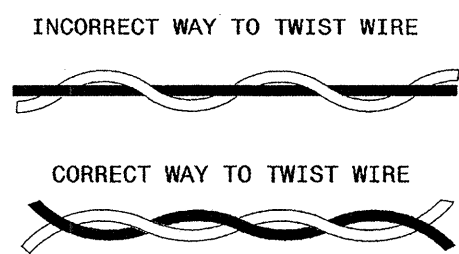
**SAW CUT OPTIONS**



**LOOP WINDING METHOD**



**LOOP WIRE TWISTING METHOD**

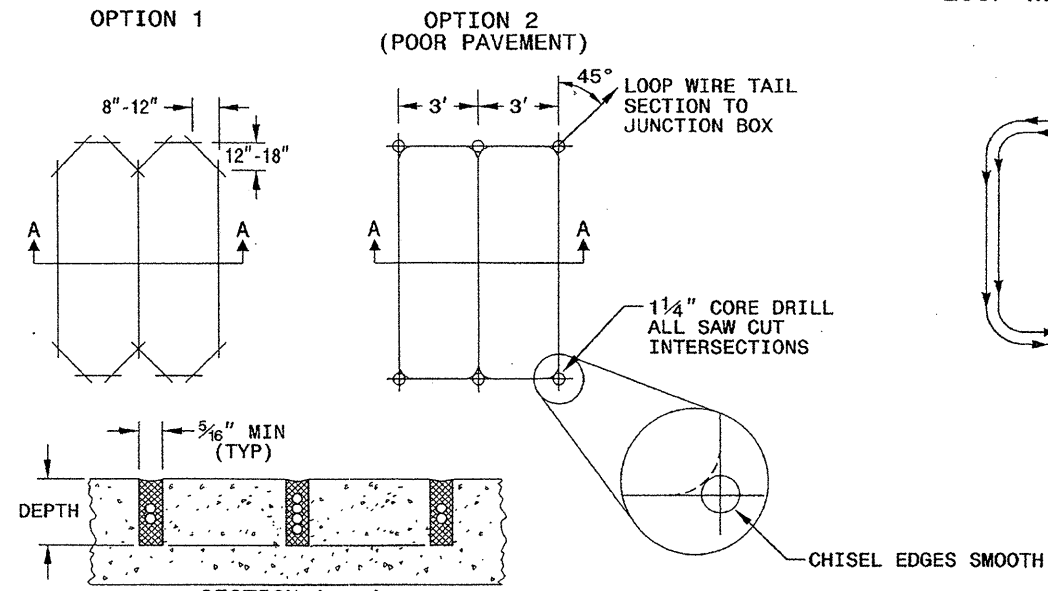


**NOTES**

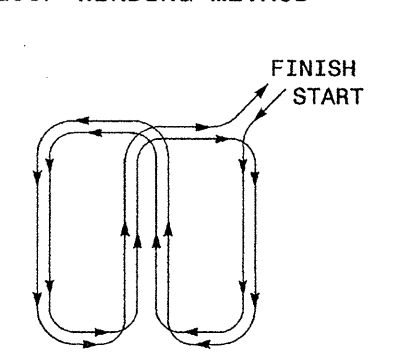
- OVERLAP SAW CUTS AT CORNERS AND INTERSECTION POINTS TO ENSURE UNIFORM SAW SLOT DEPTH.
- MAINTAIN 12" SPACING BETWEEN LOOP WIRE TAIL SECTIONS.
- WIRE LOOPS CONNECTED TO THE SAME DETECTOR CHANNEL IN SERIES.
- LOCATE LOOPS IN CENTER OF LANES UNLESS OTHERWISE SHOWN ON PLANS OR APPROVED BY ENGINEER.

**QUADRUPOLE LOOP**

**SAW CUT OPTIONS**



**LOOP WINDING METHOD**



DEPTH IS 2.5" FOR CONCRETE AND 3.0" FOR ASPHALT

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

11-08

ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**

SHEET 1 OF 3  
**1725D01**

See Plate for Title

Prepared in the Offices of:

750 N. Greenfield Parkway  
Garner, NC 27529

SEAL

*Milton I. Dean* 11/24/08  
SIGNATURE DATE

24-NOV-2008 09:28  
d:\work\1725D01\1725D01.dgn

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

11-08

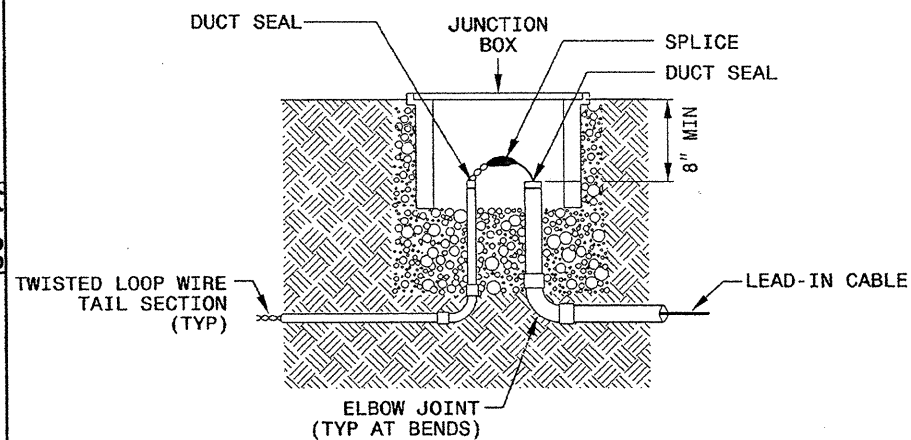
ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
LOOP WIRE DETAILS

SHEET 2 OF 3

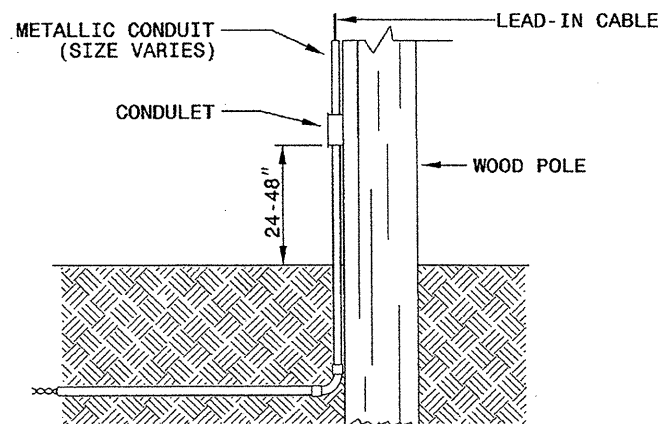
**1725D01**

**LOOP WIRE SPLICE POINT DETAILS**

**LOOP WIRE AT JUNCTION BOX**



**LOOP WIRE AT POLE**

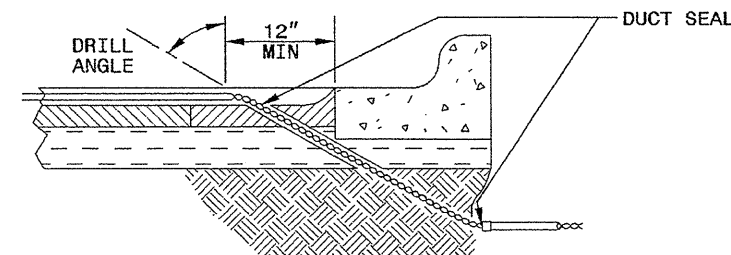


**NOTE**

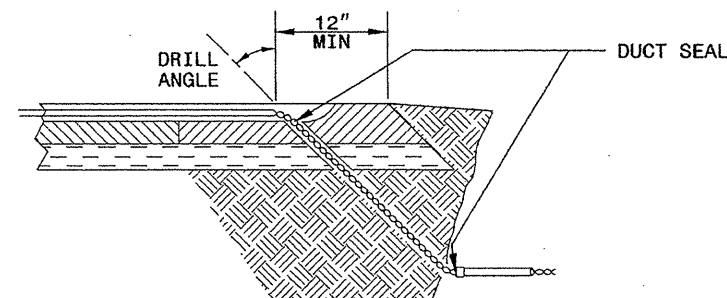
SPLICE ALL LOOP WIRE TAIL SECTIONS/LEAD-IN CABLE IN JUNCTION BOXES OR APPROVED CONDULETS.

**LOOP WIRE PAVEMENT EDGE DETAILS**

**LOOP WIRE AT CURB & GUTTER SECTION**



**LOOP WIRE AT PAVEMENT SECTION**



**NOTES**

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

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

11-08

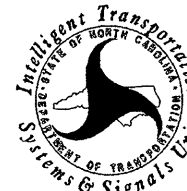
ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
LOOP WIRE DETAILS

SHEET 2 OF 3

**1725D01**

See Plate for Title

Prepared in the Offices of:



750 N. Greenfield Parkway  
Garner, NC 27529

SEAL



*Milton I. Dean* 11/24/08  
SIGNATURE DATE

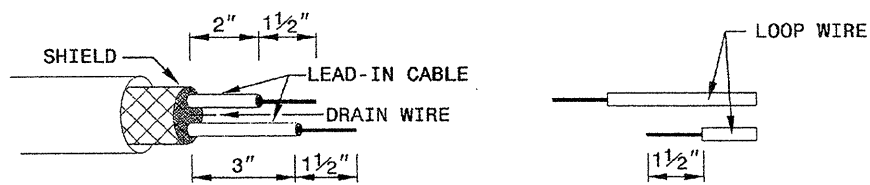
STATE OF  
 NORTH CAROLINA  
 DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 RALEIGH, N.C.

11-08

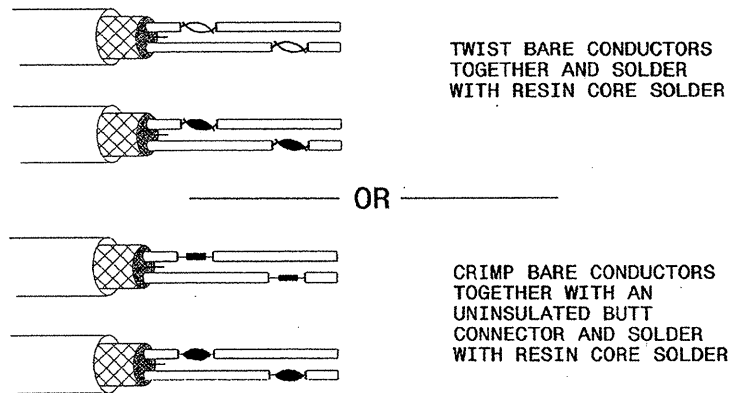
ENGLISH DETAIL DRAWING FOR  
**INDUCTIVE DETECTION LOOPS**  
 SPLICING FOR LEAD-IN CABLE AND LOOP WIRE

SHEET 3 OF 3  
 1725D01

STEP 1. STRIP LOOP WIRE AND LEAD-IN CABLE

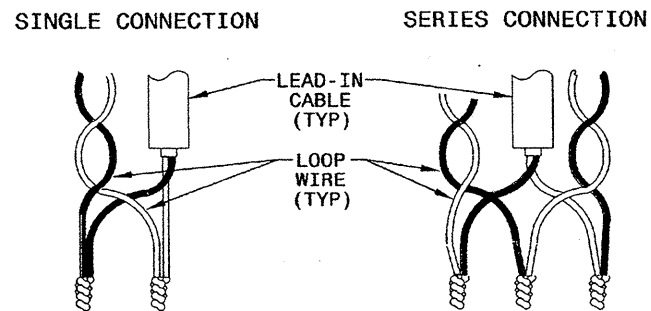


STEP 2. CONNECT AND SOLDER

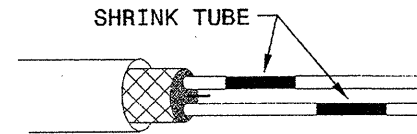


BOND SHIELD DRAIN WIRE AT SPLICE SECTIONS (DO NOT GROUND)

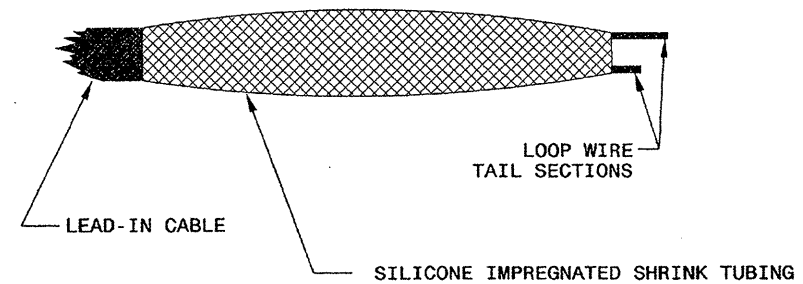
LOOP WIRE AND LEAD-IN CABLE CONNECTION DETAILS



STEP 3. INSULATE EACH SOLDER JOINT SEPARATELY



STEP 4. ENVIRONMENTALLY PROTECT SPLICE



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

11-08

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

SHEET 3 OF 3  
 1725D01

See Plate for Title

Prepared in the Offices of:

750 N. Greenfield Parkway  
 Garner, NC 27529

SEAL

Milton Dean 11/24/08  
 SIGNATURE DATE