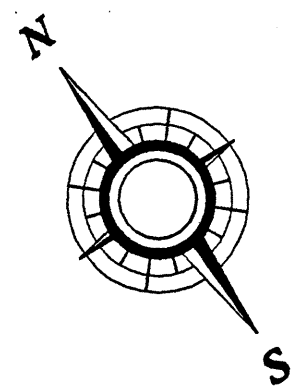
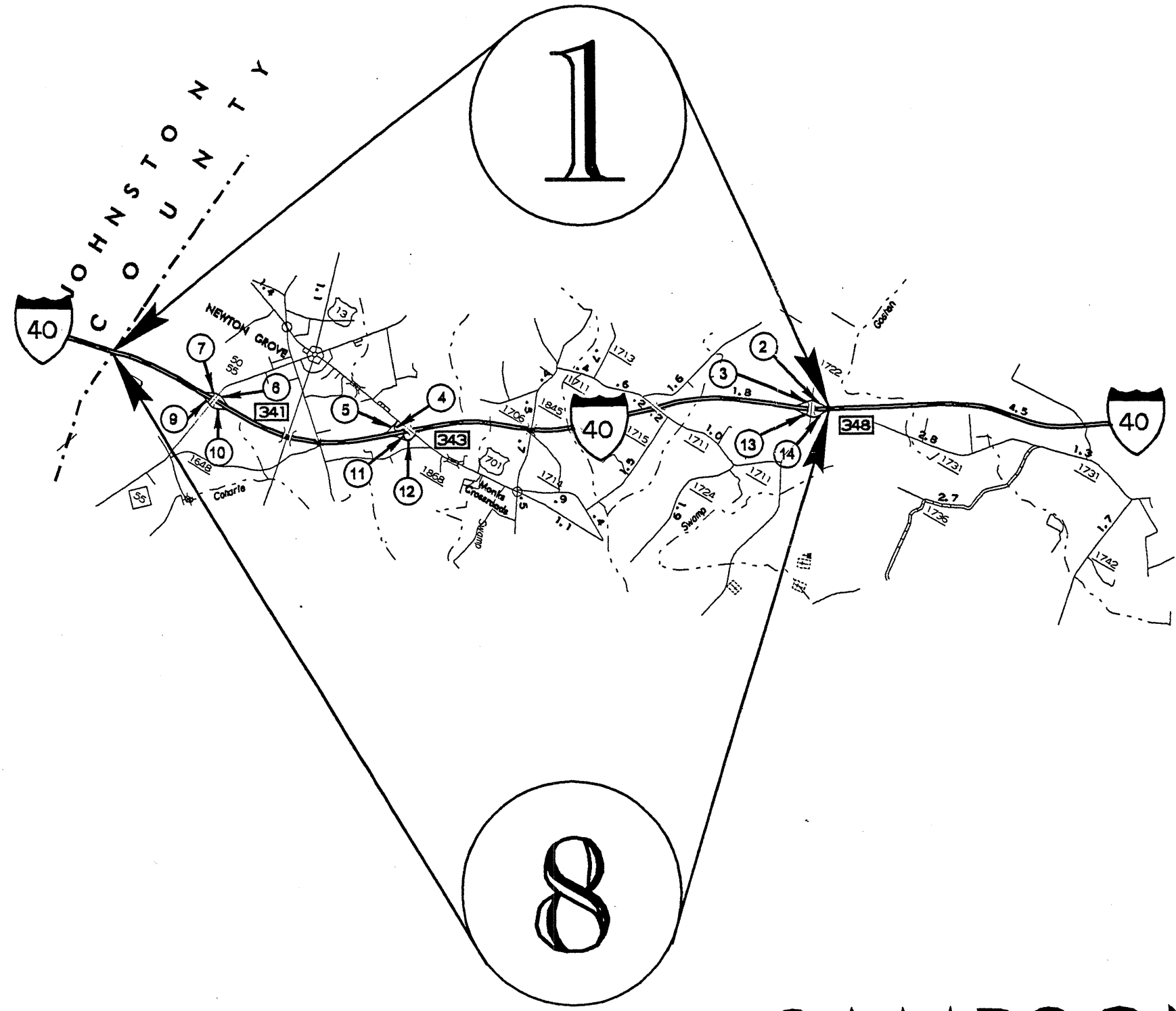


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41154.3.GV1		I-5001B
3CR.10821.45		

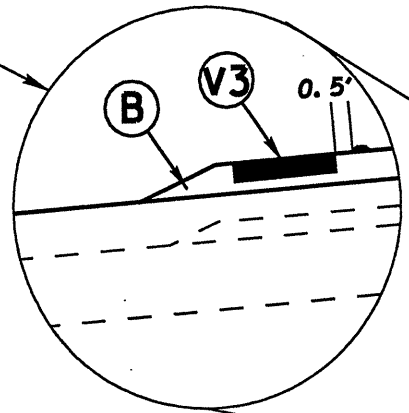


# SAMPSON COUNTY

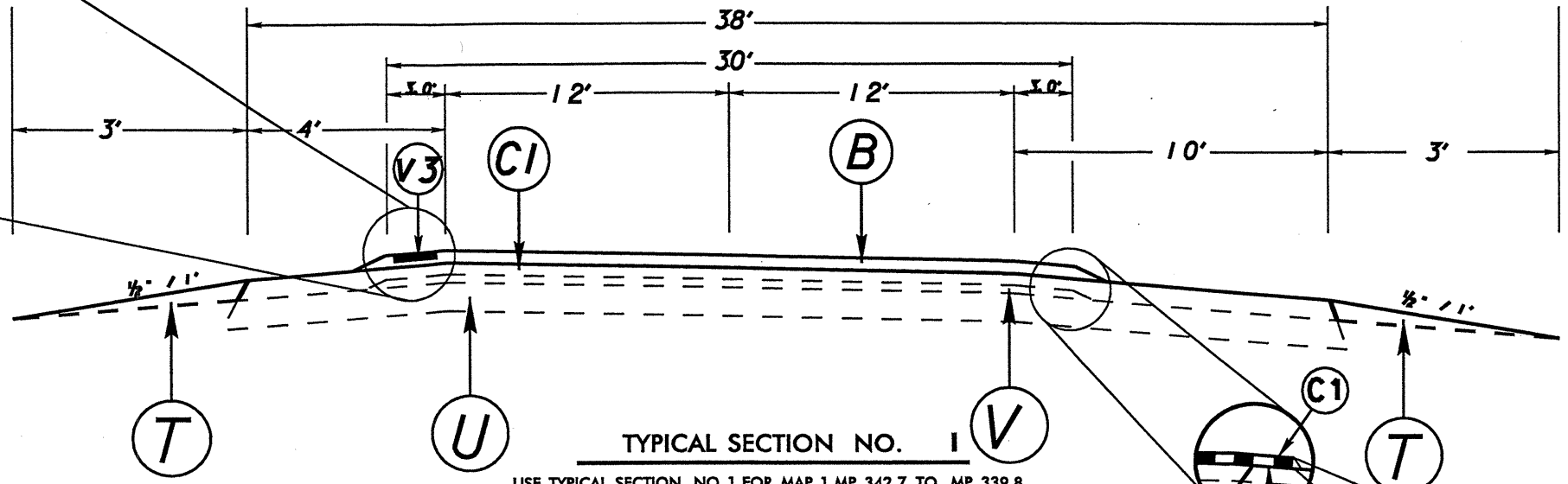


WBS ELEMENT	SHEET 3	of SHEETS
41154.3.GV1		
3CR.10821.45		

\*\*MILLED RUMBLE STRIPS TO BE PLACED ON BOTH PAVED SHOULDERS OF ROAD\*\*

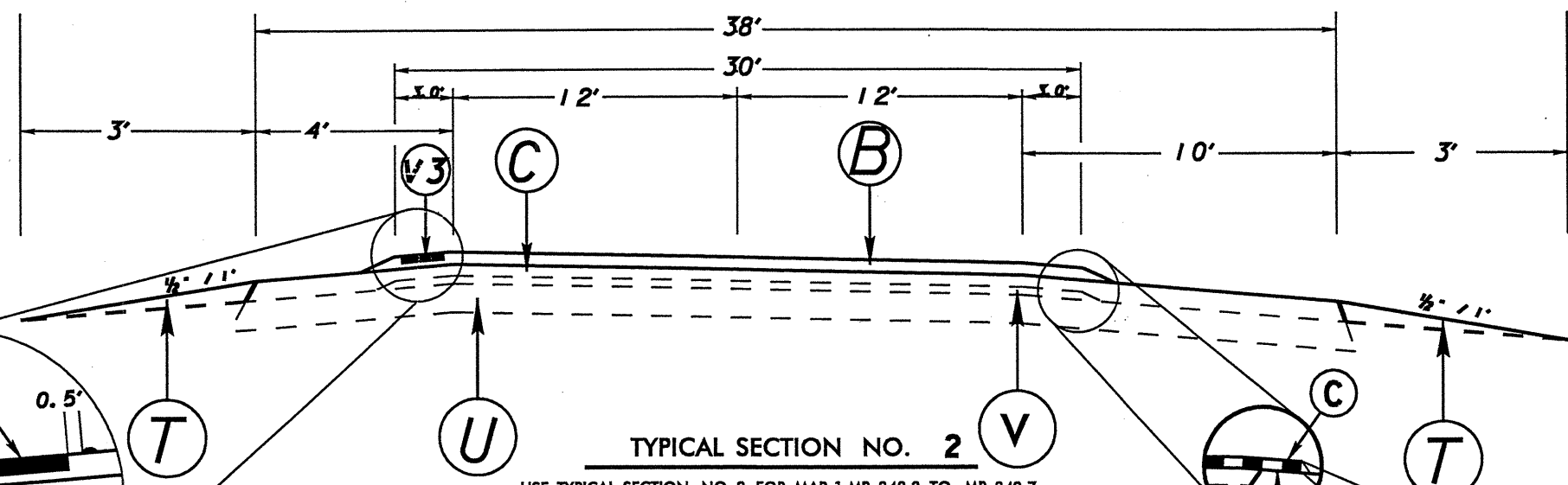


PAVEMENT SCHEDULE	
B	PROP. APPROX. 1/2" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ. YD.
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C1	PROP. APPROX. 4" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	WILLING ASPHALT PAVEMENT 0.5" TO 1 1/2" DEPTH TO REMOVE EXISTING OPEN-GRADED FRICTION COURSE.
V1	WILLING ASPHALT PAVEMENT 2" DEPTH.
V2	WILLING ASPHALT PAVEMENT 2 1/2" DEPTH.
V3	MILLED RUMBLE STRIP
V4	WILLING ASPHALT PAVEMENT 1 1/2" DEPTH.
W	WEDGING (SURFACE MIX)



TYPICAL SECTION NO. 1  
 USE TYPICAL SECTION NO.1 FOR MAP 1 MP 342.7 TO MP 339.8  
 USE TYPICAL SECTION NO.1 FOR MAP 8 MP 339.8 TO MP 342.7

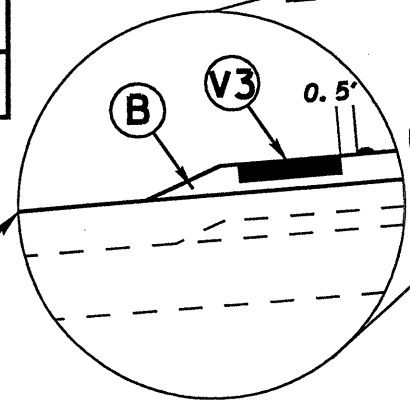
WILL TO THIS LINE

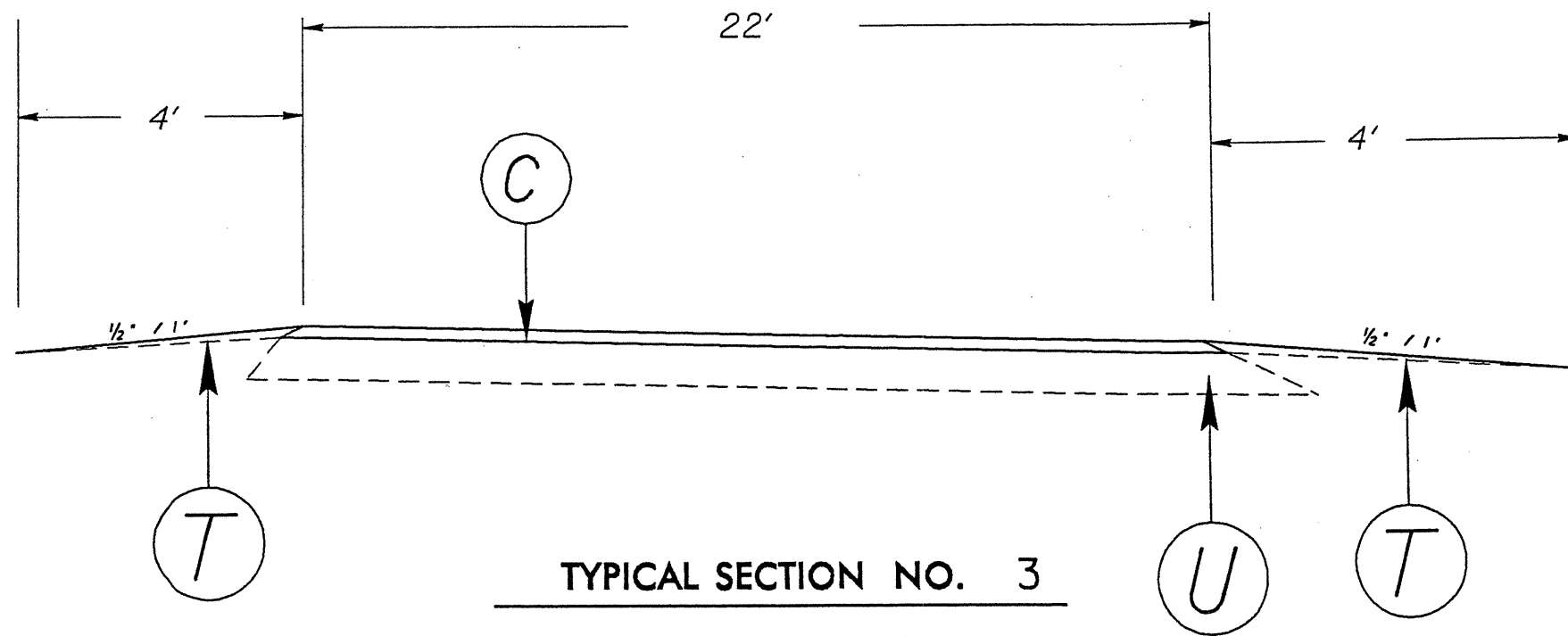


TYPICAL SECTION NO. 2  
 USE TYPICAL SECTION NO.2 FOR MAP 1 MP 348.3 TO MP 342.7  
 USE TYPICAL SECTION NO.2 FOR MAP 8 MP 342.7 TO MP 348.3

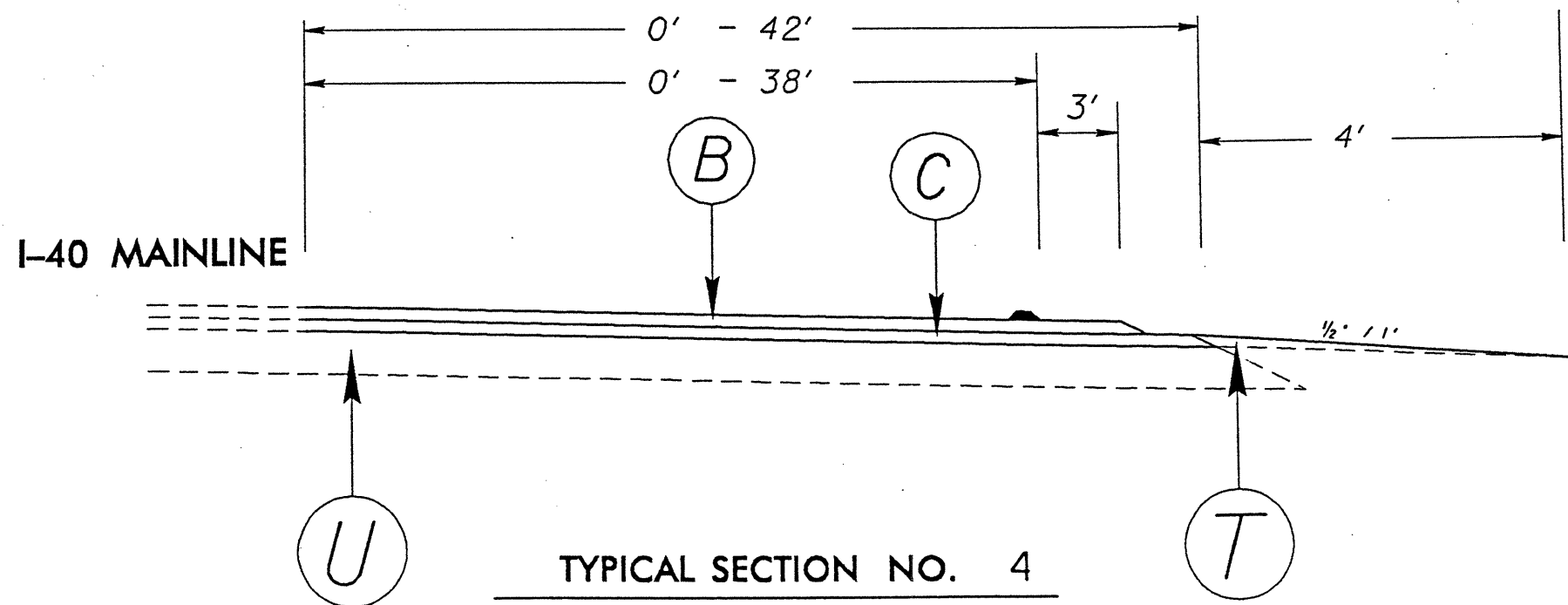
WILL TO THIS LINE

\*\*MILLED RUMBLE STRIPS TO BE PLACED ON BOTH PAVED SHOULDERS OF ROAD\*\*





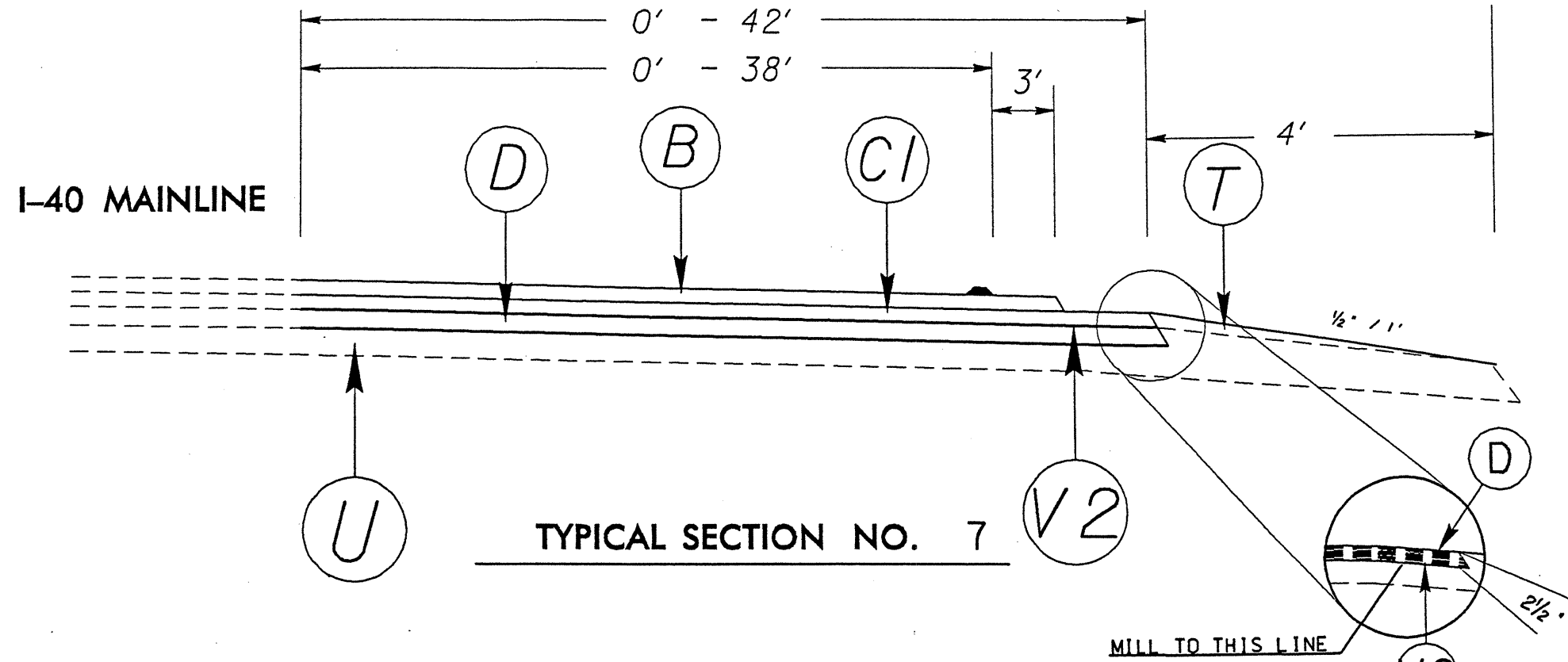
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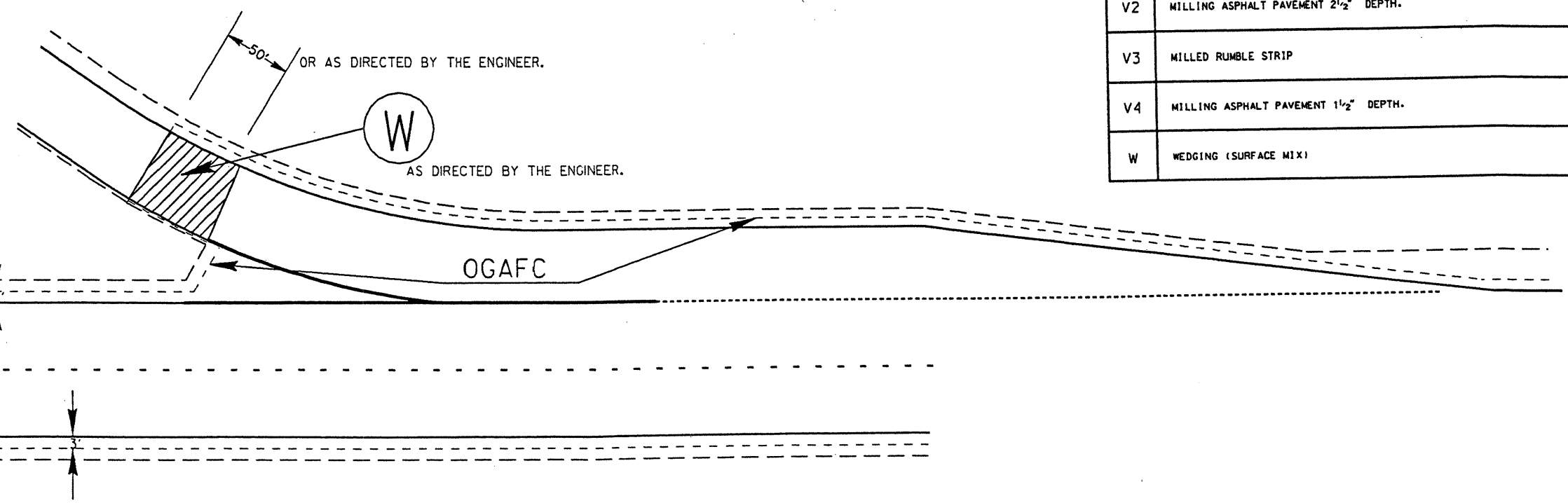
TYPICAL SECTION NO. 4

PAVEMENT SCHEDULE	
B	PROP. APPROX. 7/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ. YD.
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C1	PROP. APPROX. 4" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.DC AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.DC AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT 0.5" TO 1 1/4" DEPTH TO REMOVE EXISTING OPEN-GRADED FRICTION COURSE.
V1	MILLING ASPHALT PAVEMENT 2" DEPTH.
V2	MILLING ASPHALT PAVEMENT 2 1/2" DEPTH.
V3	MILLED RUMBLE STRIP
V4	MILLING ASPHALT PAVEMENT 1 1/2" DEPTH.
W	WEDGING (SURFACE MIX)





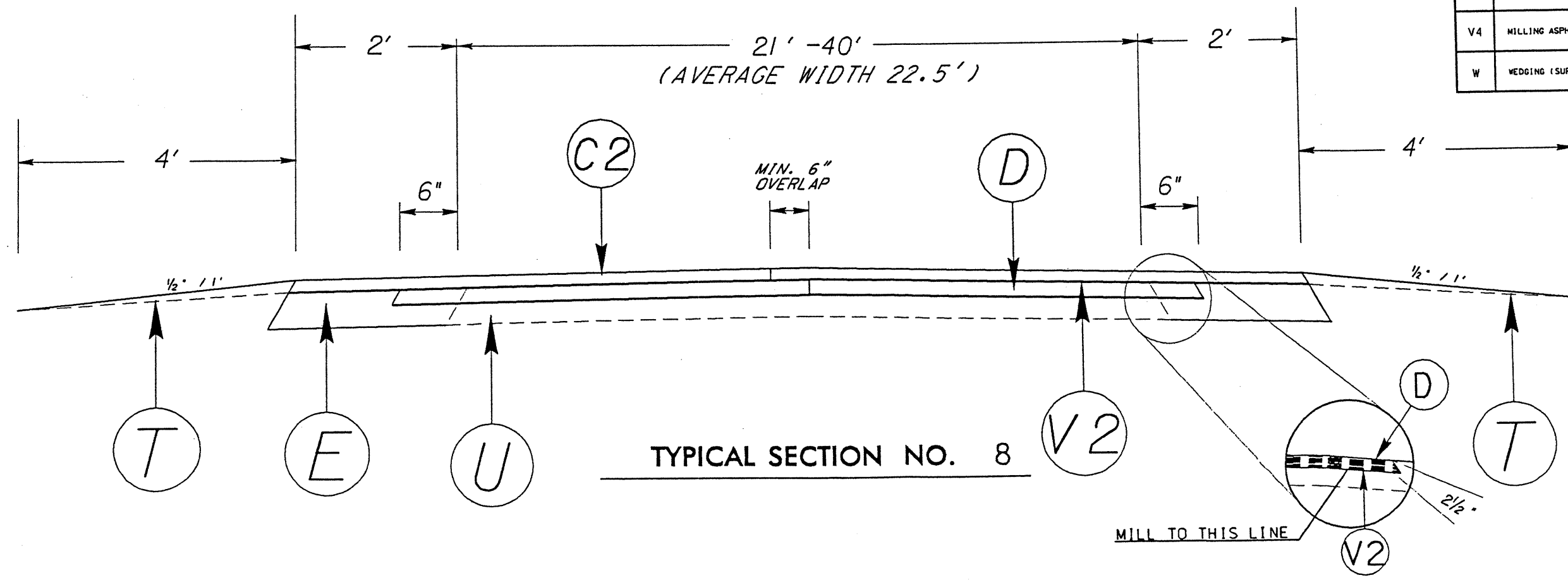
PAVEMENT SCHEDULE	
B	PROP. APPROX. 7/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ. YD.
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C1	PROP. APPROX. 4" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT 0.5" TO 1 1/4" DEPTH TO REMOVE EXISTING OPEN-GRADED FRICTION COURSE.
V1	MILLING ASPHALT PAVEMENT 2" DEPTH.
V2	MILLING ASPHALT PAVEMENT 2 1/2" DEPTH.
V3	MILLED RUMBLE STRIP
V4	MILLING ASPHALT PAVEMENT 1 1/2" DEPTH.
W	WEDGING (SURFACE MIX)



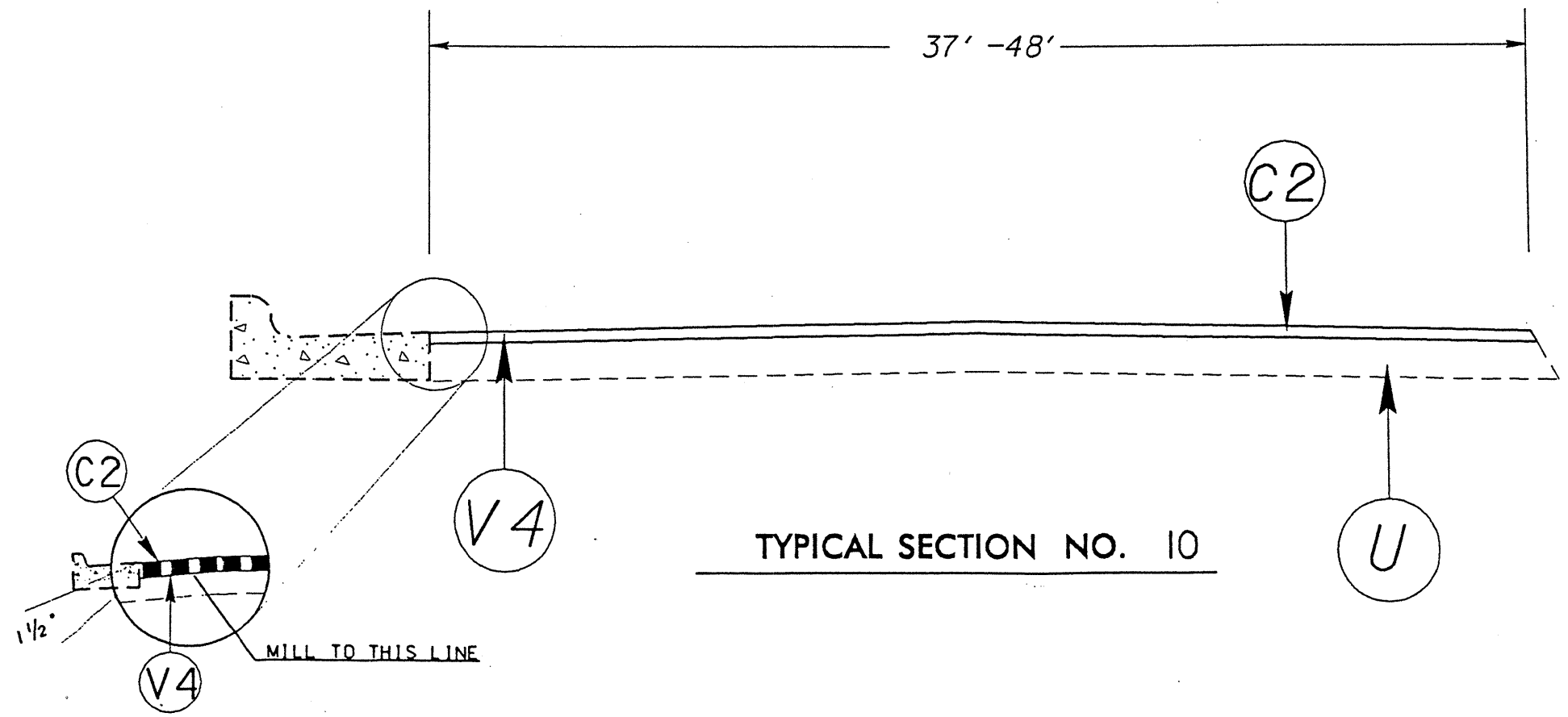
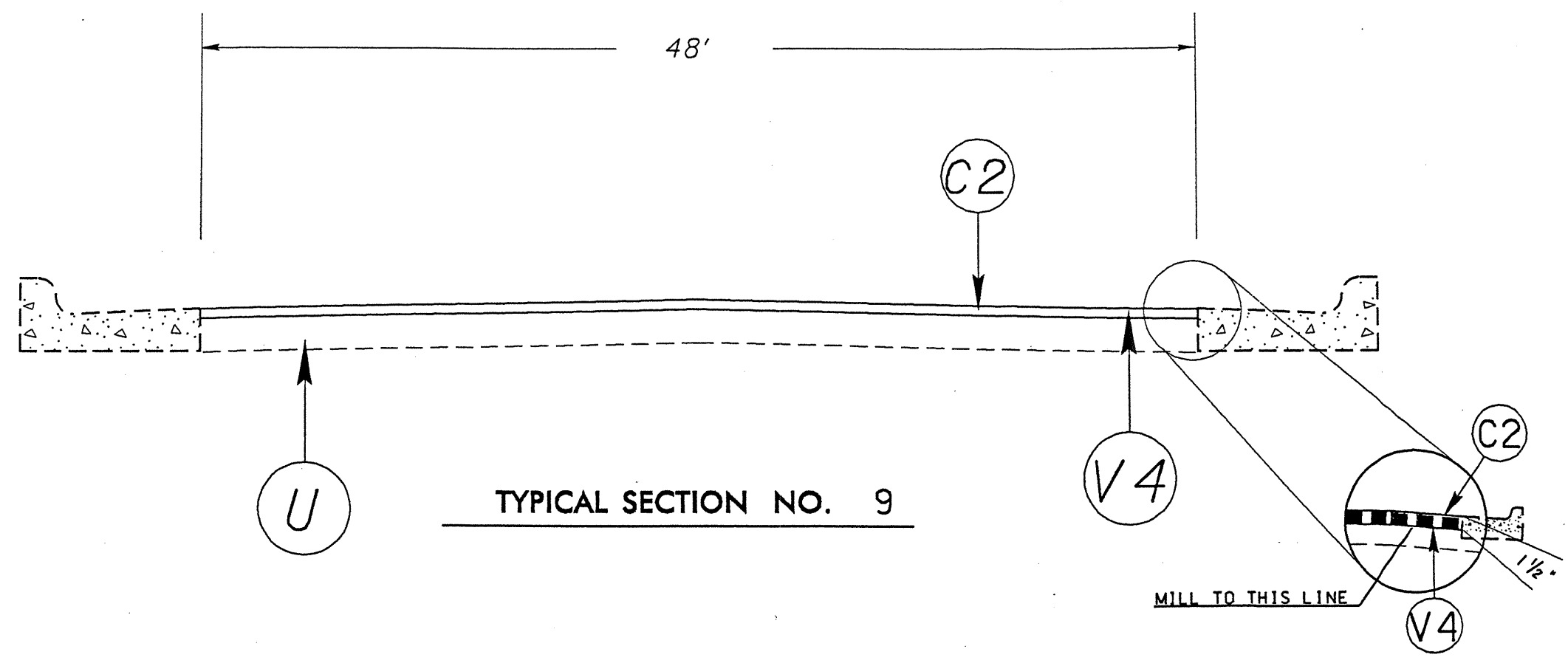
PAVING LIMITS FOR OGAFc AT EXIT AND ENTRANCE RAMPS

WBS ELEMENT	SHEET 7	OF SHEETS
41154.3.GV1		
3CR.10821.45		

PAVEMENT SCHEDULE	
B	PROP. APPROX. 1/8" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ. YD.
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C1	PROP. APPROX. 4" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT 0.5" TO 1 1/4" DEPTH TO REMOVE EXISTING OPEN-GRADED FRICTION COURSE.
V1	MILLING ASPHALT PAVEMENT 2" DEPTH.
V2	MILLING ASPHALT PAVEMENT 2 1/2" DEPTH.
V3	MILLED RUMBLE STRIP
V4	MILLING ASPHALT PAVEMENT 1 1/2" DEPTH.
W	WEDGING (SURFACE MIX)



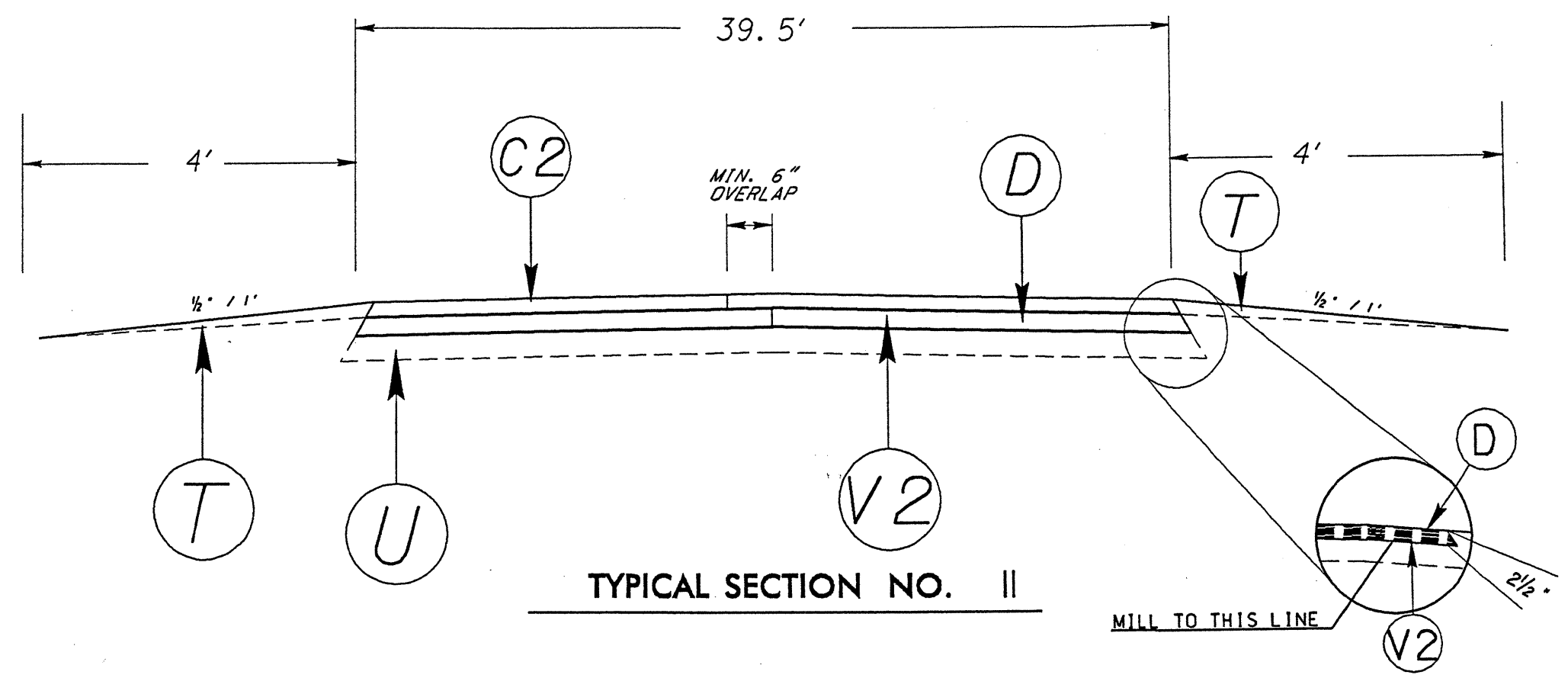
PAVEMENT SCHEDULE	
B	PROP. APPROX. 1/4" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ. YD.
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C1	PROP. APPROX. 4" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.0C AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT 0.5" TO 1 1/4" DEPTH TO REMOVE EXISTING OPEN-GRADED FRICTION COURSE.
V1	MILLING ASPHALT PAVEMENT 2" DEPTH.
V2	MILLING ASPHALT PAVEMENT 2 1/2" DEPTH.
V3	MILLED RUMBLE STRIP
V4	MILLING ASPHALT PAVEMENT 1 1/2" DEPTH.
W	WEDGING (SURFACE MIX)





WBS ELEMENT	SHEET 9	of SHEETS
41154.3.GV1		
3CR.10821.45		

PAVEMENT SCHEDULE	
B	PROP. APPROX. 1/2" OPEN-GRADED ASPHALT FRICTION COURSE, TYPE FC-2 MODIFIED, AT AN AVERAGE RATE OF 90 LBS. PER SQ. YD.
C	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.SC, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD.
C1	PROP. APPROX. 4" ASPHALT CONCRETE SURFACE COURSE, TYPE S12.SC, AT AN AVERAGE RATE OF 224 LBS. PER SQ. YD. IN EACH OF TWO LAYERS
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.SC, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
D	PROP. APPROX. 2 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.OC AT AN AVERAGE RATE OF 285 LBS. PER SQ. YD.
E	PROP. APPROX. 5 1/2" ASPHALT CONCRETE BASE COURSE, TYPE B25.OC AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	MILLING ASPHALT PAVEMENT 0.5" TO 1 1/4" DEPTH TO REMOVE EXISTING OPEN-GRADED FRICTION COURSE.
V1	MILLING ASPHALT PAVEMENT 2" DEPTH.
V2	MILLING ASPHALT PAVEMENT 2 1/2" DEPTH.
V3	MILLED RUMBLE STRIP
V4	MILLING ASPHALT PAVEMENT 1 1/2" DEPTH.
W	WEDGING (SURFACE MIX)



TYPICAL SECTION NO. II





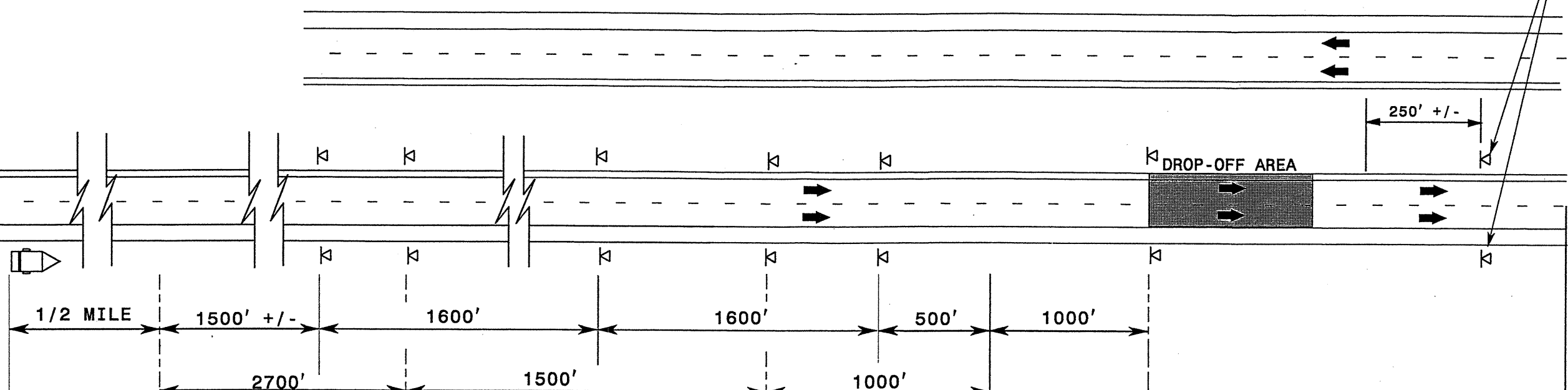
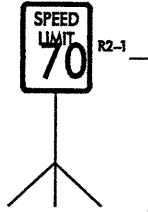
PROJECT NO. 41154.3.GV1 3CR.10821.45	SHEET NO. <b>12</b>	TOTAL NO.
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**THERMOPLASTIC AND PAINT QUANTITIES**

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4415000000-N	4420000000-N	4480000000-N	4655000000-E	4686000000-E	4702000000-E	4710000000-E	4721000000-E	4725000000-E	4810000000-E	4820000000-E	4835000000-E	4845000000-N	4847000000-E	4847110000-E	4895000000-N	4900000000-N	4905000000-N	4905000000-N												
					FLASHING ARROW PANELS, TYPE C EA	CHANGEABLE MESSAGE SIGN EA	TMIA EA	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	12" X 120 M WHITE THERMO LF	24" X 120 M WHITE THERMO LF	THERMO CHARACTER 120 MIL EA	THERMO LT ARROW 90 M EA	THERMO STR & RT ARROW 90 M EA	4" WHITE PAINT LF	4" YELLOW PAINT LF	8" WHITE PAINT LF	8" YELLOW PAINT LF	24" WHITE PAINT LF	PAINT LT ARROW EA	PAINT STR & RT ARROW EA	4" WHITE POLYUREA LINE LF	4" YELLOW POLYUREA LINE LF	8" WHITE POLYUREA LINE LF	8" YELLOW POLYUREA LINE LF	MARKERS FOR DRAINAGE STRUCTURE & CONC. PAD EA	CYAN & RED MARKERS EA	SNOW FLOWABLE MARKERS (C/R) EA	SNOW FLOWABLE MARKERS (Y/Y) EA				
41154.3.GV1	Sampson	1	I-40 WBL	MP 348.3 TO MP 342.7 MP 342.7 TO MP 339.8 (JOHNSTON CO LINE)	1	1	1				62						73,820	58,136	1,260						36,960	28,568	630			34	739	370			
				TOTAL FOR MAP NO. 1	1	1	1				62						131,340	105,072	2,205						56,100	44,880	945		64	1,122	561				
				2 EXIT RAMP EXIT 348 TO SR 1722 (0' TO 42') FULL WIDTH																															
				TOTAL FOR MAP NO. 2																					2,070	1,220	595					30			
				3 ENTRANCE RAMP EXIT 348, SR 1722 TO I-40 WEST (0'-42')																					2,390	265	265					14			
				TOTAL FOR MAP NO. 3																					2,390	265	265					14			
				4 EXIT RAMP EXIT 343 TO US 701 (0'-42')																													10		
				TOTAL FOR MAP NO. 4													980	700	195	80					980	700	195	80				10			
				5 ENTRANCE RAMP EXIT 343, US 701 TO I-40 WEST (0'-42')																													12		
				TOTAL FOR MAP NO. 5																					2,425	1,185	230					12			
				6 EXIT RAMP EXIT 341 TO NC 50/NC 55 (0'-42')																													12		
				TOTAL FOR MAP NO. 6														1,525	910	445					1,525	910	445						23		
				7 ENTRANCE RAMP EXIT 341, NC 50/NC 55 TO I-40 WEST (0'-42')																														23	
				TOTAL FOR MAP NO. 7														2,320	1,065	235					2,320	1,065	235						12		
				8 I40 EBL MP 339.8 (JOHNSTON CO LINE) TO MP 342.7 MP 342.7 TO MP 348.3							63							57,420	45,936	945					19,140	15,312	315		30	383	191				
				TOTAL FOR MAP NO. 8							63							73,820	58,136	1,260					36,960	28,568	630	34	739	370					
				9 EXIT RAMP EXIT 341 TO NC 50/NC 55 (0'-42')																													21		
				TOTAL FOR MAP NO. 9														1,490	910	910					1,490	910	420					21			
				10 ENTRANCE RAMP EXIT 341, NC 50/NC 55 TO I-40 EAST (0'-42')																														11	
				TOTAL FOR MAP NO. 10														2,285	1,055	215					2,285	1,055	215						11		
				11 EXIT RAMP EXIT 343 TO US 701 (0'-42')																														23	
				TOTAL FOR MAP NO. 11																														23	
				12 ENTRANCE RAMP EXIT 343, US 701 TO I-40 EAST (0'-42')																															7
				TOTAL FOR MAP NO. 12														1,780	1,010	135					1,780	1,010	135						7		
				13 EXIT RAMP EXIT 348 TO SR 1722 (0'-42')																															28
				TOTAL FOR MAP NO. 13																														28	
				14 ENTRANCE RAMP EXIT 348, SR 1722 TO I-40 EAST (0'-42')																															16
				TOTAL FOR MAP NO. 14																														16	
				TOTAL FOR PROJ. NO. 41154.3.GV1	1	1	1				125							273,060	215,794	6,545	80				136,525	100,855	5,930	80	128	2,244	1,329				
																		488,854		6,625					237,380		6,010								
3CR.10821.45	Sampson	15	NC 403	US 701 BUS TO SR 1904 C&G SECTION	1	1	1	30,666																										188	
				TAPER 48' - 37' C&G LEFT SIDE				148	53	275																								5	
				3 LANE SECTION				753	11	824																								3	
				TAPER 28' - 40'				2,592	4	3,802																								5	
				TAPER 37' - 26'				367	25	380																								63	
				TOTAL FOR MAP NO. 15	1	1	1	34,537	382	24,570								25	380															10	
				TOTAL FOR PROJ. NO. 3CR.10821.45	1	1	1	34,537	382	24,570								525	56,074							40	5	3					23		
								34,537	382	24,570								525	56,074						40	5	3						23		
								34,537	382	24,570								525	56,074						40	5	3						23		
								34,537	382	24,570								525	56,074						40	5	3						23		
				GRAND TOTAL	2	2	2	34,537	382	24,570	125	40	9	5	3			273,585	215,868	6,545	80				136,525	100,855	5,930	80	128	2,244	1,352		274		
								34,537	382	24,570	125	40	9	5	3			488,854		6,625					237,380		6,010						1,628		

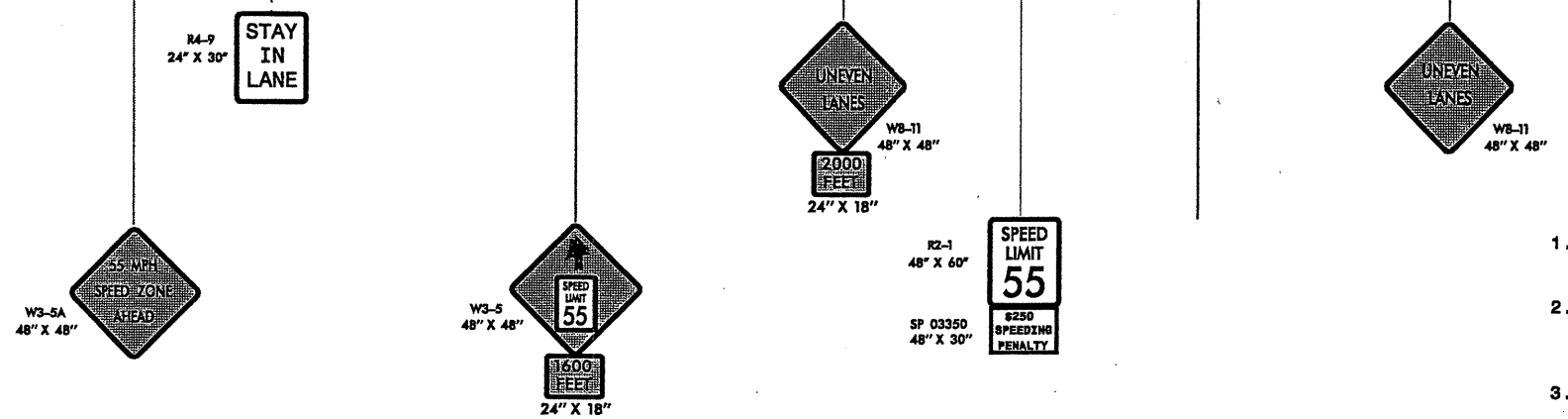


WBS Elements: 3CR.10821.45 & 41154.3.GV1 (I-5001B)



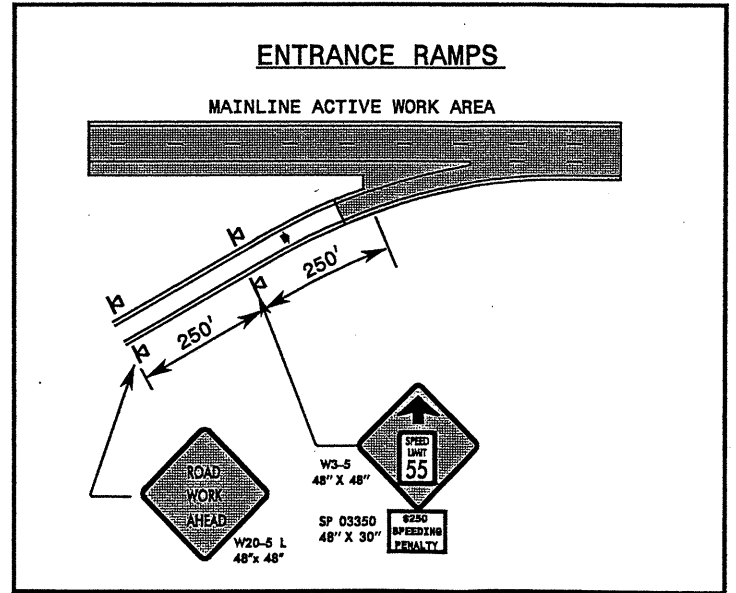
MESSAGE NO. 1	MESSAGE NO. 2
REDUCE SPEED AHEAD	UNEVEN LANES AHEAD

CHANGEABLE MESSAGE SIGN



### GENERAL NOTES

1. THIS DRAWING IS INTENDED TO SHOW THE LOCATIONS AND SIGNING REQUIRED FOR A "TEMPORARY SPEED LIMIT" REDUCTION ON A FREEWAY WHICH IS TO BE REDUCED FROM 70 MPH TO 55 MPH.
2. EACH DIRECTION OF THE PROJECT IS TO BE EVALUATED FOR THE "TEMPORARY SPEED LIMIT" REDUCTION. THIS DRAWING INTENTIONALLY HAS 1 DIRECTION SIGNED AS A REMINDER TO CAREFULLY CONSIDER WHETHER BOTH DIRECTIONS OF THE PROJECT NEED TO HAVE THE SPEED LIMIT REDUCED.
3. IN ADDITION, FOR DROP-OFF AREAS THAT EXCEED 2 MILE IN LENGTH, AN EVALUATION IS TO BE MADE TO DETERMINE IF ADDITIONAL SIGNS ARE NEEDED TO SUPPLEMENT THE INITIAL ONES. PORTABLE MOUNTED W3-5 SIGNS WITH SPEED PENALTY SIGNS ARE TO BE PLACED ALONG ENTRANCE RAMPS WITHIN THE ACTIVE WORK AREA.
4. THE \$250 SPEEDING PENALTY APPLIES FOR ALL PROJECTS THAT QUALIFY FOR A "TEMPORARY SPEED LIMIT" REDUCTION.
5. THE "TEMPORARY SPEED LIMIT" REDUCTION IS ONLY IN EFFECT WHEN A GREATER THAN TWO INCH DROP-OFF BETWEEN OPEN LANES OF TRAFFIC EXISTS. THE SPEED LIMIT AND SPEED PENALTY SIGNS ARE TO BE REMOVED WHEN NEITHER CONDITIONS EXIST. OTHER PERTINENT SIGNS MAY BE DISPLAYED AT THE DIRECTION OF THE ENGINEER IN COORDINATION WITH THE WORK ZONE TRAFFIC CONTROL UNIT (919-250-4159). AT THE COMPLETION OF THE PROJECT, THE ENGINEER SHALL NOTIFY THE REGIONAL TRAFFIC ENGINEER TO RESCIND THE ORDINANCE.
6. WHEN "TEMPORARY SPEED LIMIT" REDUCTIONS ARE IN EFFECT, THE CONTRACTOR IS TO COVER ANY EXISTING SPEED LIMIT SIGNS LOCATED WITHIN THE ACTIVE WORK AREA THAT CONFLICT WITH THE "TEMPORARY SPEED LIMIT" REDUCTION.



APPROVED: [Signature] DATE: 6/23/07

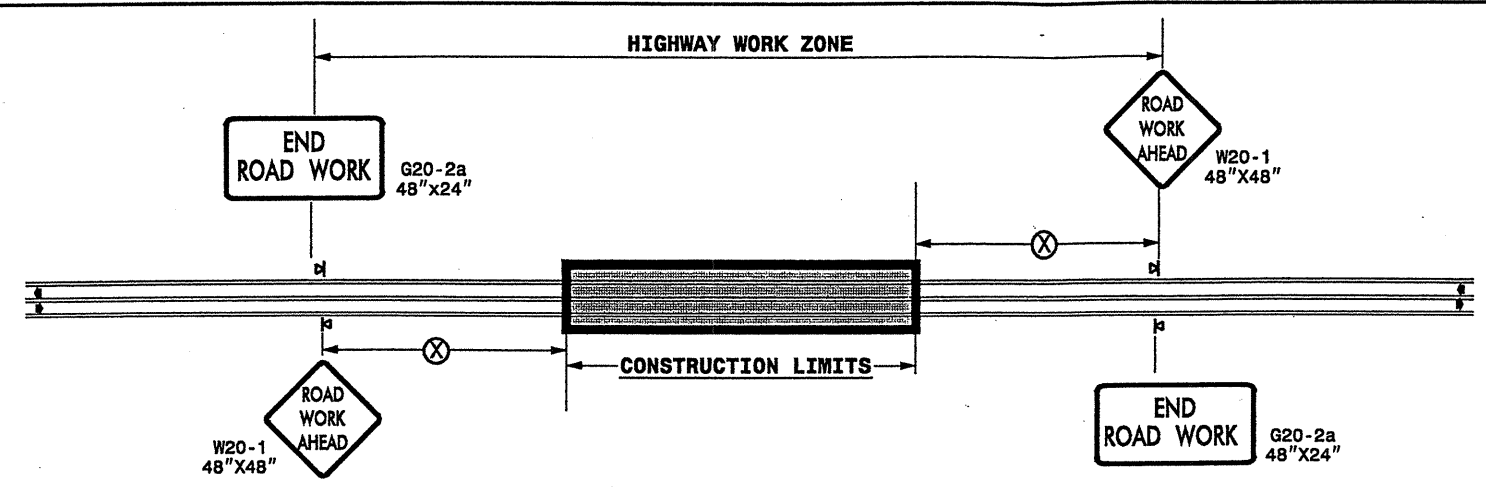


### "TEMPORARY SPEED LIMIT" REDUCTION FOR > 2" DROP-OFFS BETWEEN OPEN LANES

SCALE: NONE	REVISIONS
DATE: 06/07	06/07
DWG. BY: PS	
DESIGN BY: PS	
REVIEWED BY: CLL	

28-JUN-2007 15:52 \\001\dfs\ROOT\01\GROUPS-WZT\cc\design\group4\resurfacing\resurfacing2006\div03\411543\visampson140\_1500lb\_speedreduction2\inch.dgn

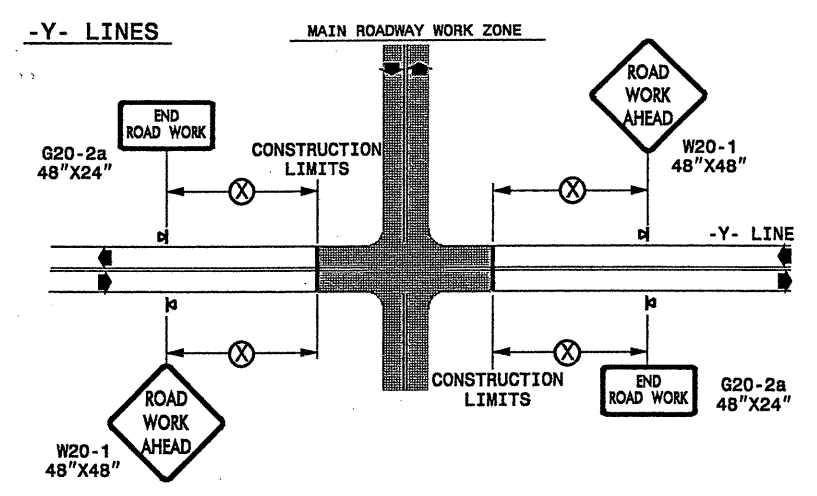
**TWO-WAY UNDIVIDED \*\* (L-LINES)**



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

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

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



**GENERAL NOTES**

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

**LEGEND**

◀ PORTABLE SIGN

➡ DIRECTION OF TRAFFIC FLOW

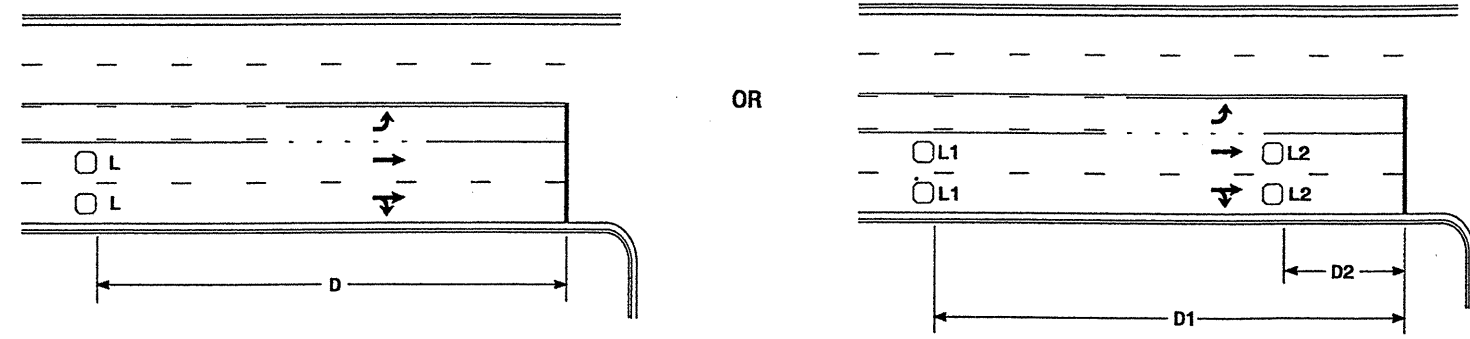
DETAIL DRAWING  
FOR TWO-WAY UNDIVIDED  
WORK ZONE WARNING SIGNS

SHEET 1 OF 1

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

13-JUL-2007 10:23  
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 psey@more AT WZTCC206427

### 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

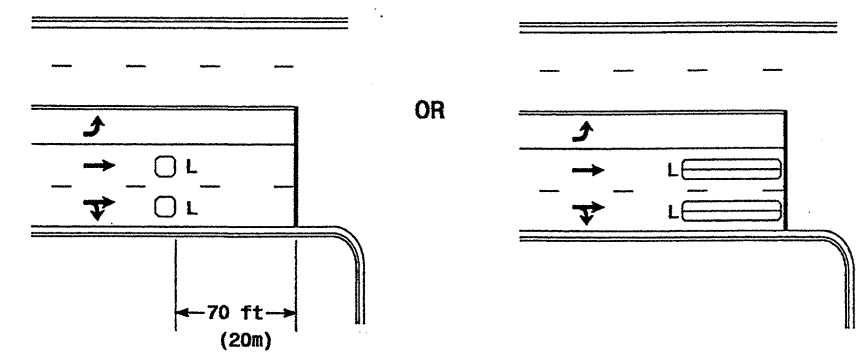
Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

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

Volume Density Operation

"Stretch" Operation

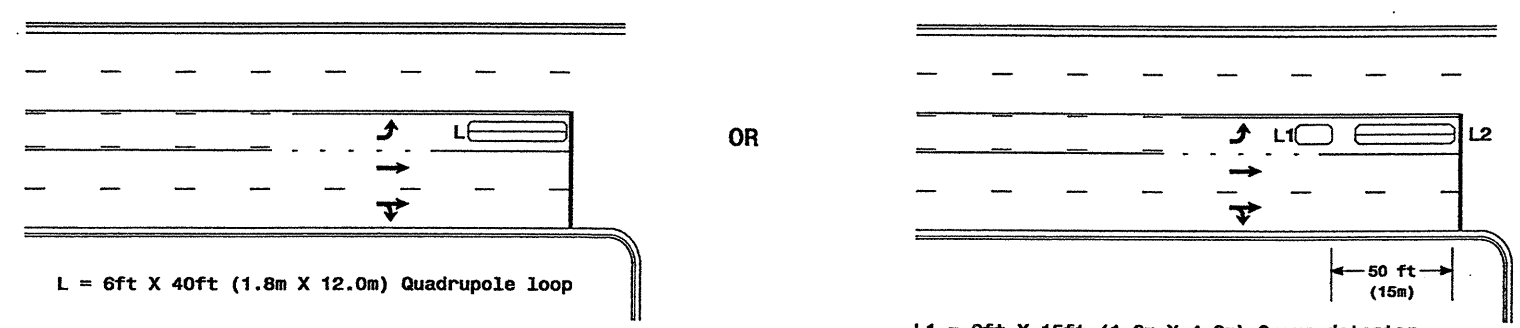
### Low Speed Detection [≤35 mph (56 km/hr)]



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

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

### Left Turn Lane Detection



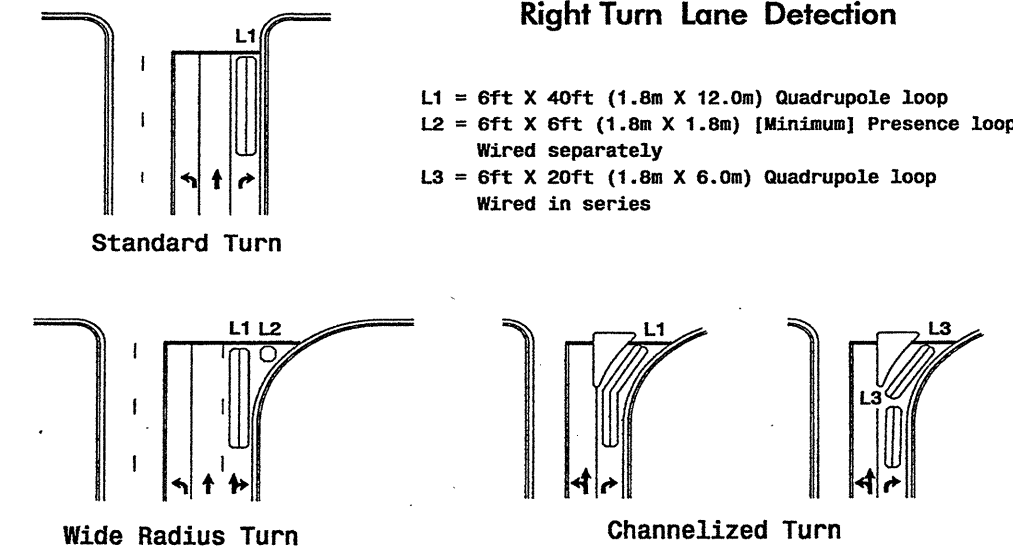
L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

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

Presence Loop Detection

Queue Loop Detection

### Right Turn Lane Detection

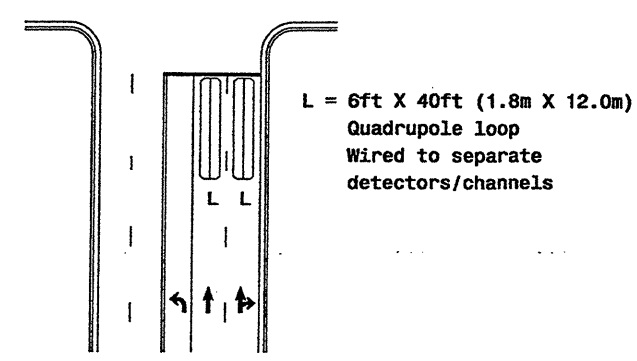


L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop  
L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop  
Wired separately  
L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop  
Wired in series

Wide Radius Turn

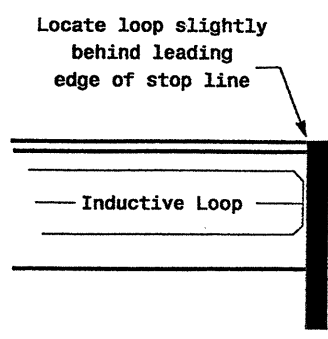
Channelized Turn

### Side Street Detection



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

### Presence Loop Placement at Stop Lines



Note:  
Loop may be located in advance  
of stop line when stop line is  
greater than 15' (4.5m) from edge  
of intersecting roadway; or, when  
loop detects a permissive or  
protected/permissive left turn.

### Recommended Number of Turns

Single 6' X 6' (1.8m X 1.8m)  
loop (wired separately):

Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

Quadrupole loops: Use 2-4-2 turns  
6' X 15' (1.8m X 4.6m) Loops:  
Lead-in < 150' (45 m), use 2 turns  
Lead-in > 150' (45 m), use 3 turns

122 N. McDowell St., Raleigh, NC 27603

#### Typical Loop Locations

PLAN DATE: June 2006  
PREPARED BY: P L Alexander

SEAL  
PROFESSIONAL ENGINEER  
STATE OF NORTH CAROLINA  
23488

REVISIONS	INIT.	DATE
Revise pavement markings	PL	12/11/06

SIGNATURE: *P L Alexander* DATE: 6/6/06  
SIG. INVENTORY NO.