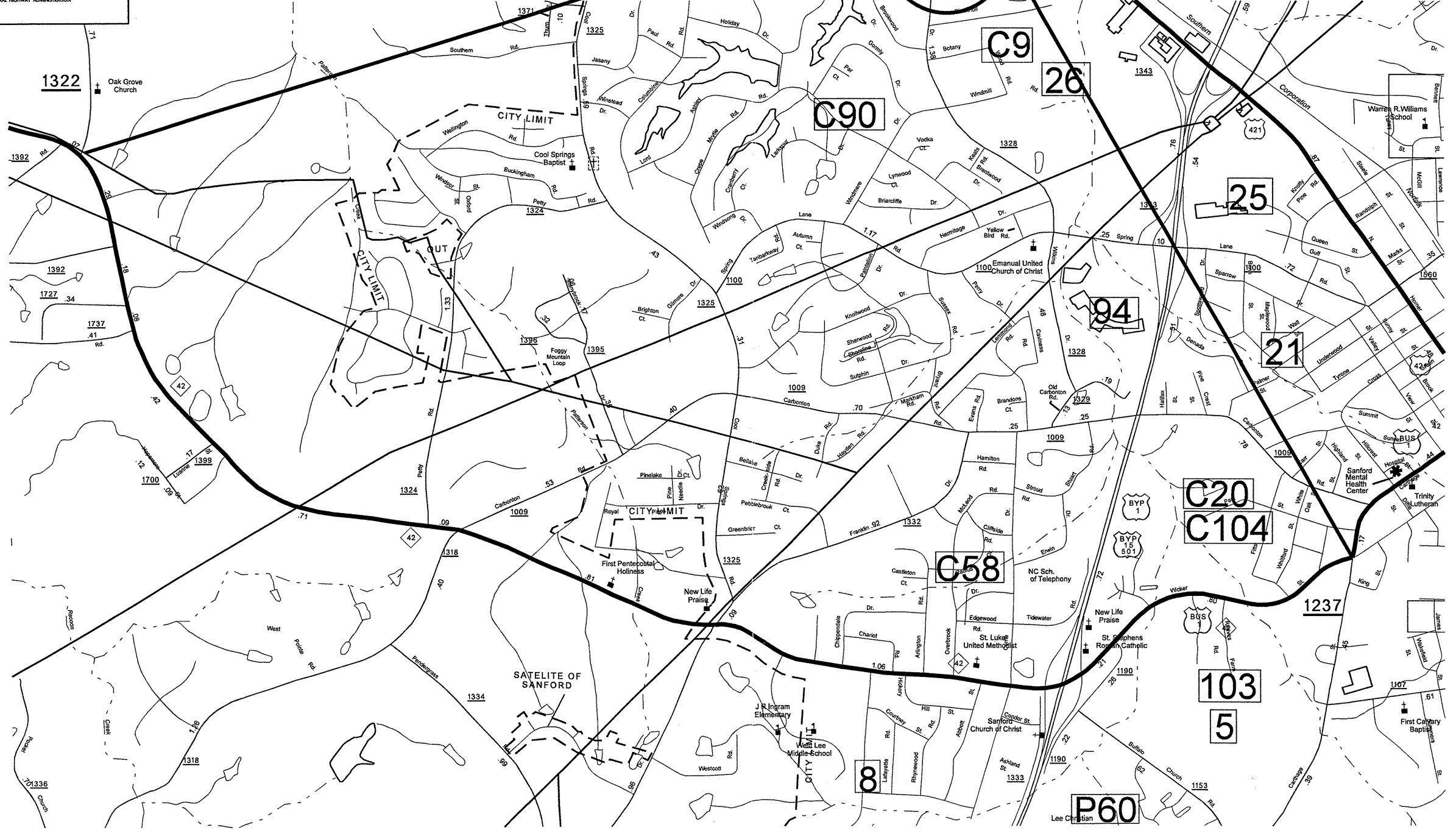
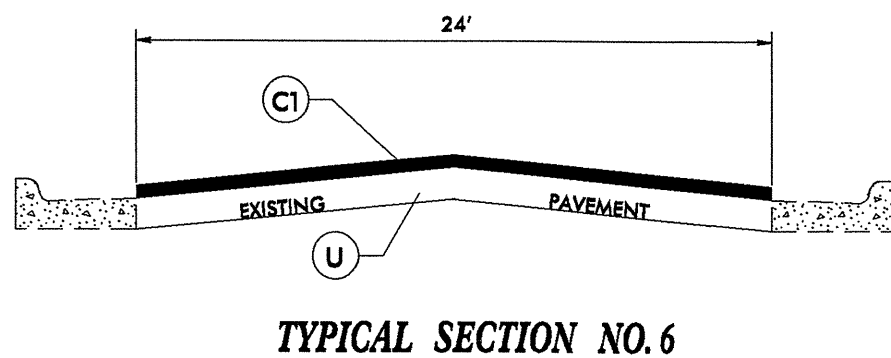
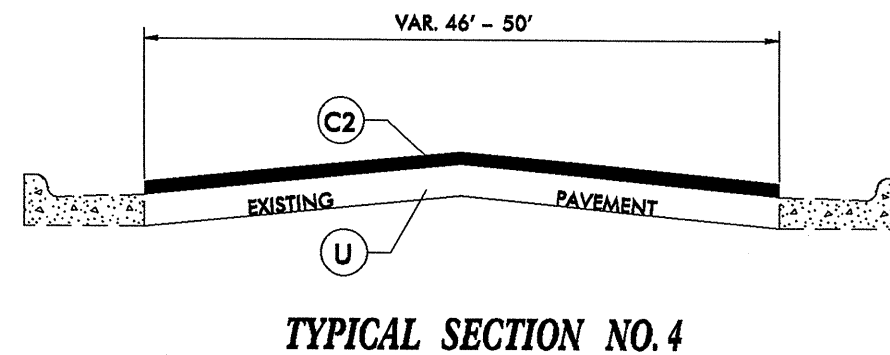
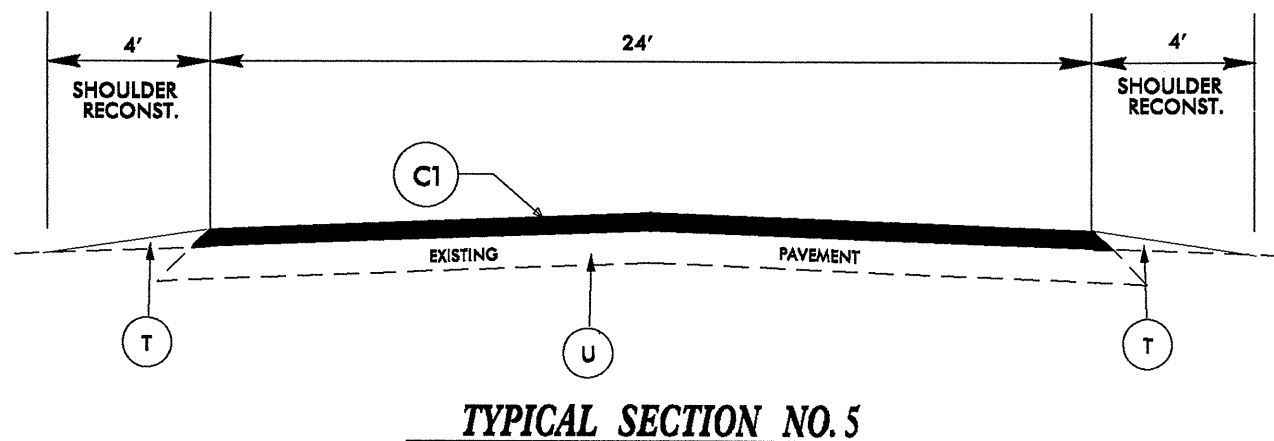
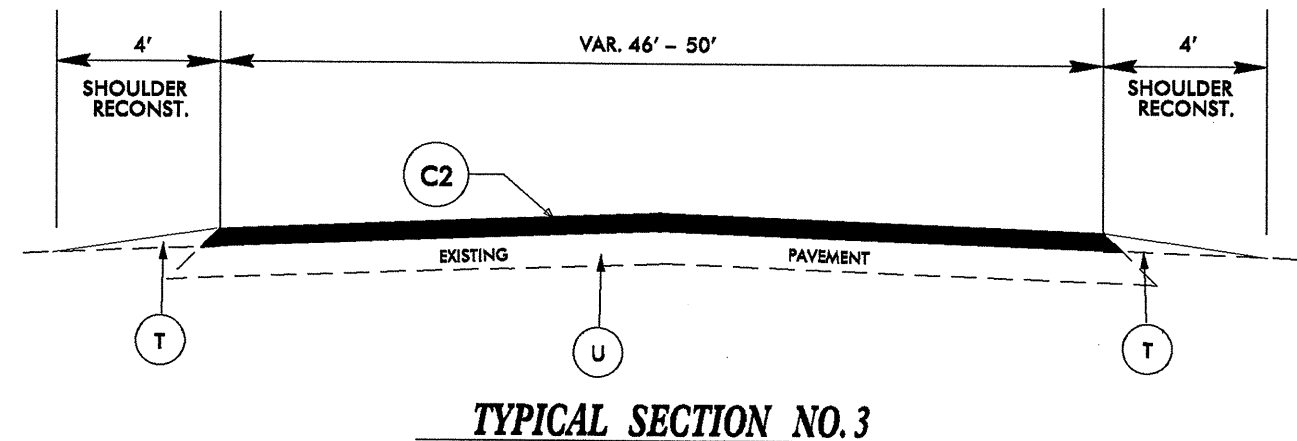
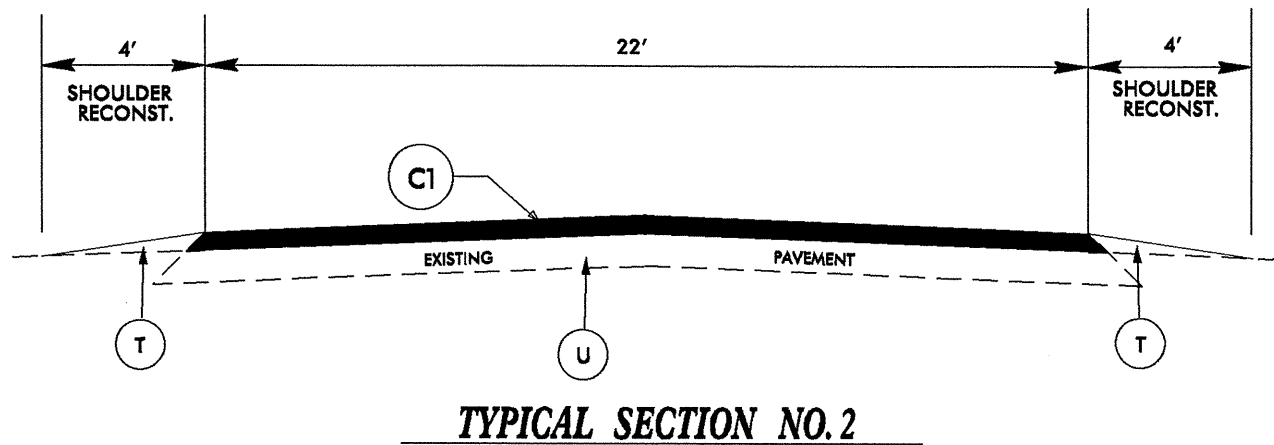
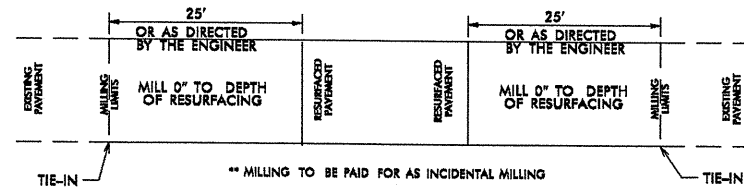
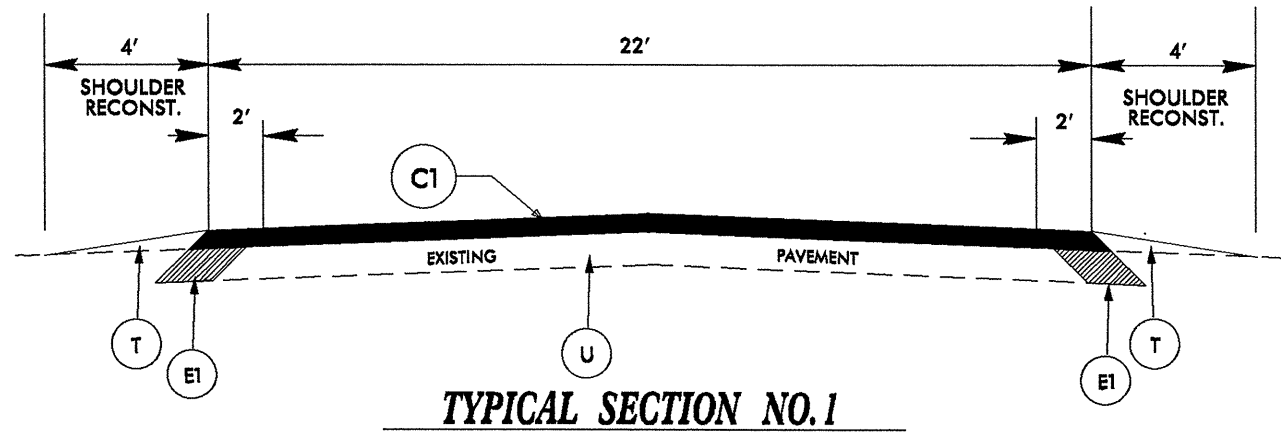




LEE COUNTY
NORTH CAROLINA

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



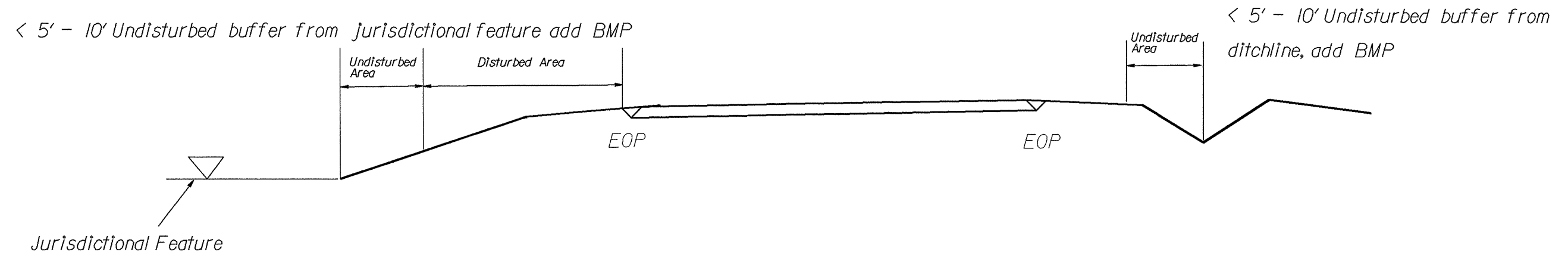
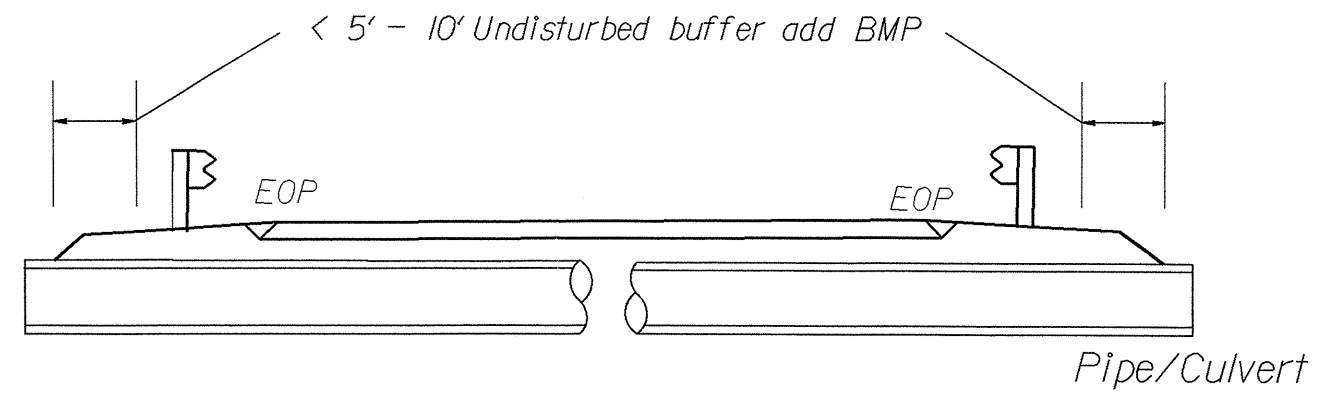


PAVEMENT SCHEDULE	
C1	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
C2	PROP. APPROX. 1.5" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
E1	PROP. APPROX. 5.0" ASPHALT CONC. BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
T	EARTH MATERIAL
U	EXISTING PAVEMENT

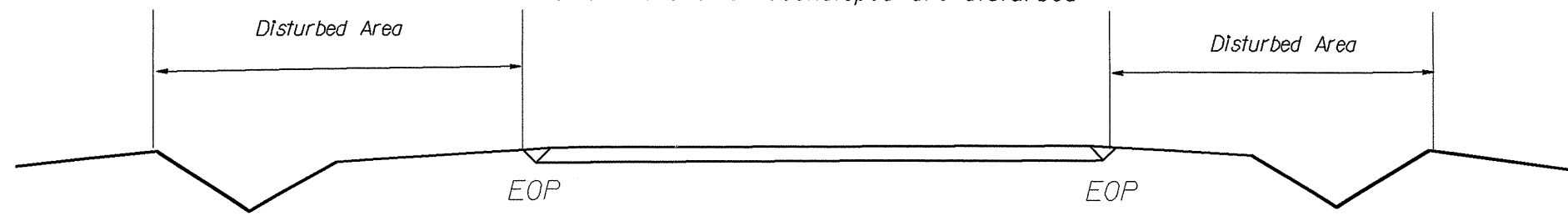
NOTES: Less than 5' - 10' undisturbed buffer from ROW, ditchline, water feature, or drainage inlet, add BMP.

EROSION CONTROL DETAIL

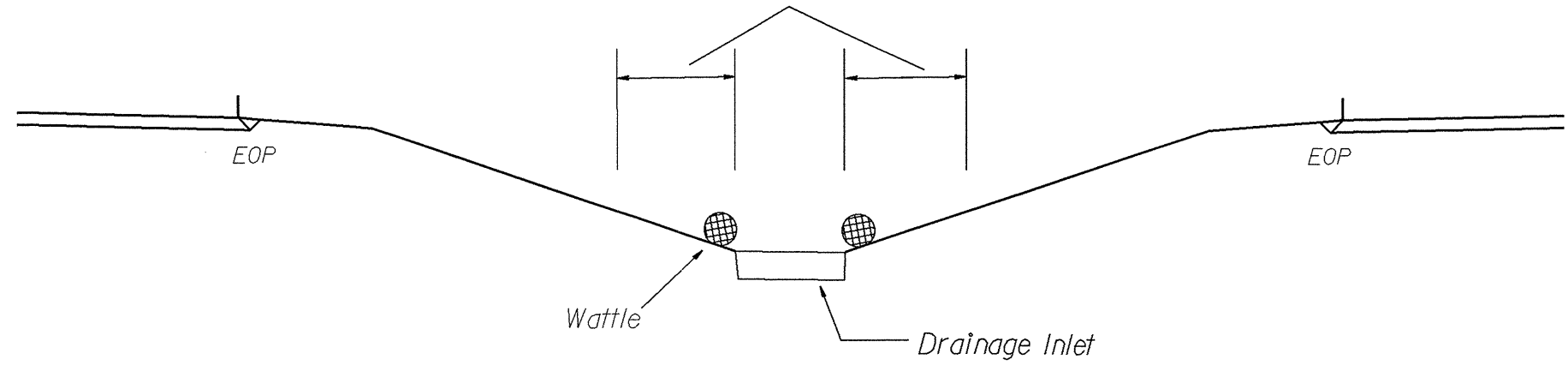
BMP Options: Wattle or Silt Fence



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



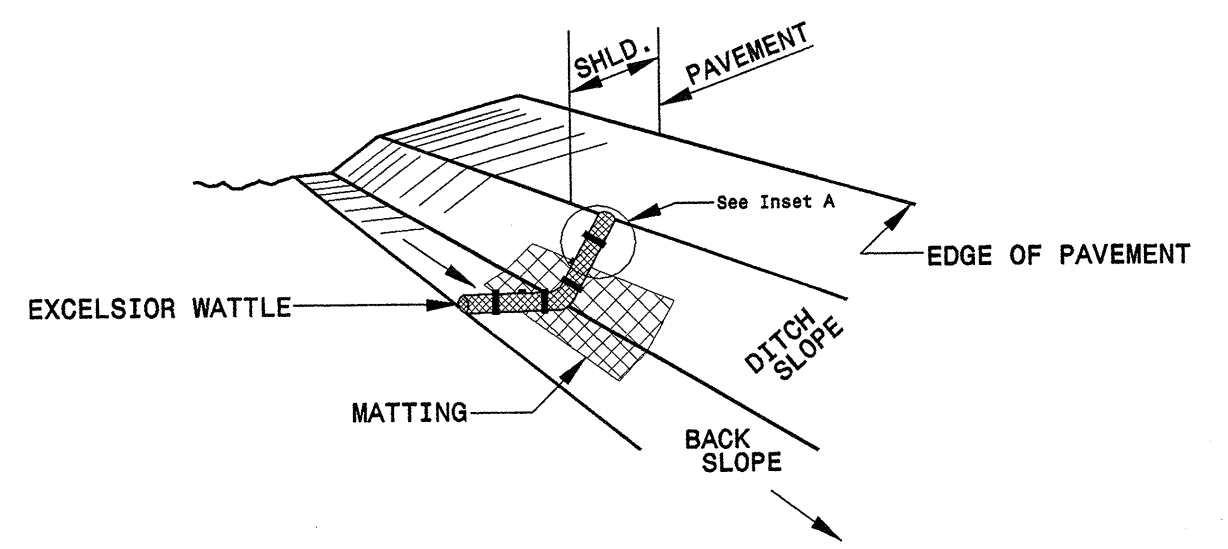
< 5' - 10' Undisturbed buffer from inlet, add wattle



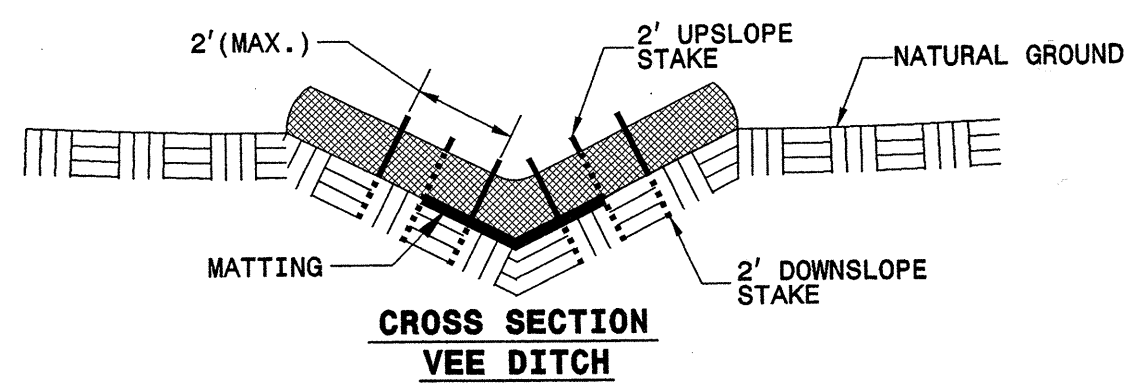
NOT TO SCALE

PROJECT REFERENCE NO.	SHEET NO.
QCR-10531.15, ETC	6
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

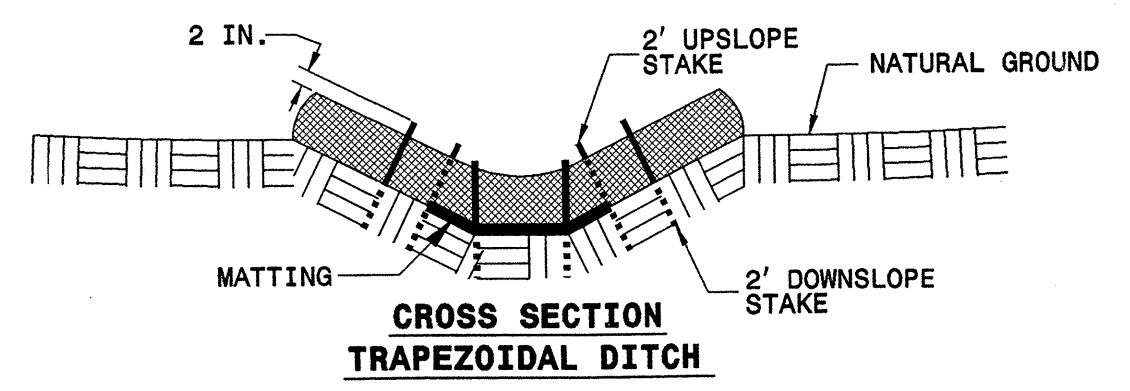
WATTLE DETAIL



ISOMETRIC VIEW

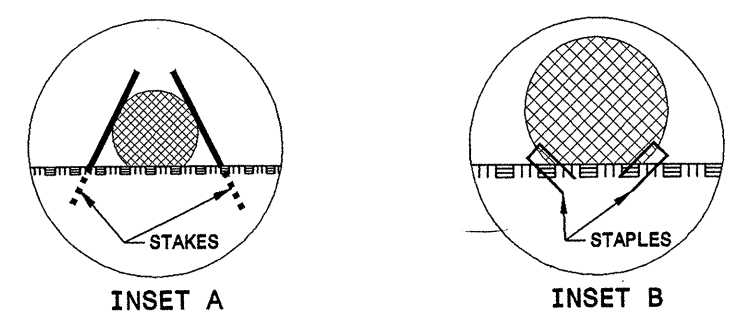


CROSS SECTION VEE DITCH



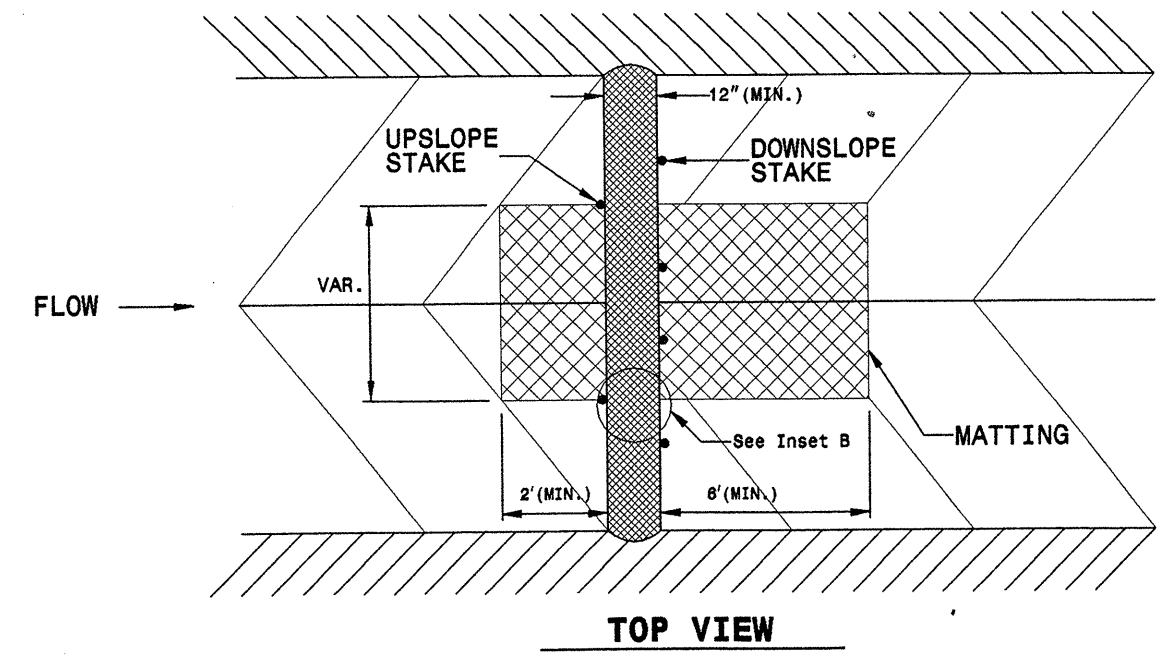
CROSS SECTION TRAPEZOIDAL DITCH

- NOTES:**
- USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.
 - USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
 - ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.
 - 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

PROJECT NO.	SHEET NO.	TOTAL NO.
8CR.10531.15, 8CR.20531.15	7	8

SUMMARY OF QUANTITIES

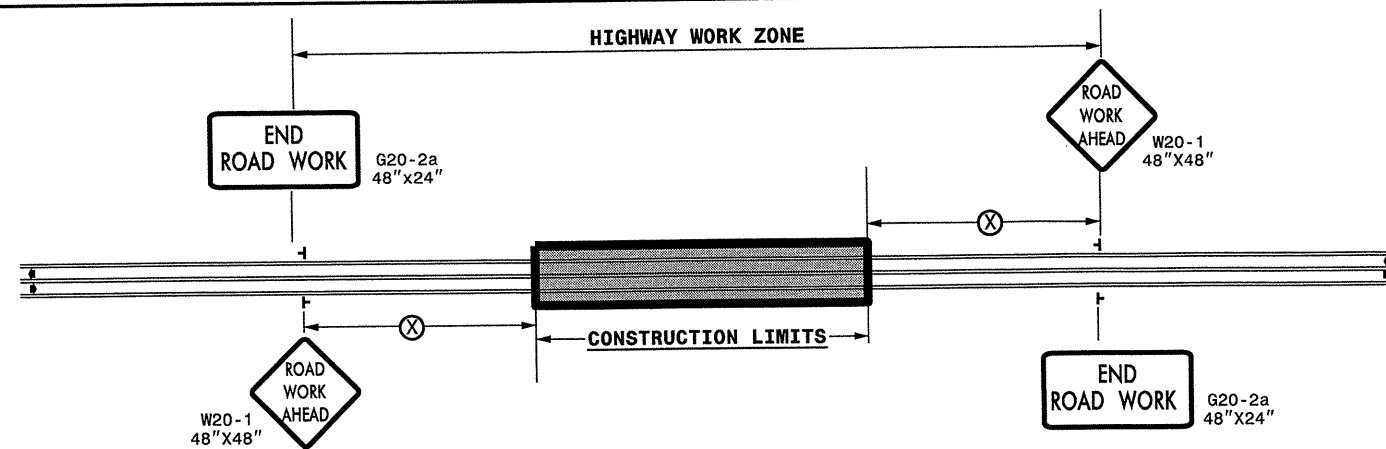
PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	TYP	FINAL SURFACE TESTING REQUIRED	LENGTH MI	WIDTH FT	BORROW CY	INCIDENTAL STONE BASE TONS	SHOULDER RECONSTRUCTION SMI	INCIDENTAL MILLING SY	BASE COURSE, B25.0B TONS	SURFACE COURSE, S9.5B TONS	SURFACE COURSE, SF9.5A TONS	PG 64-22 PLANT MIX TONS	PATCHING EXISTING PAVEMENT TONS	ADJ. OF MANHOLES EA	ADJ. OF METER OR VALVE BOX EA	TEMPORARY SILT FENCE LF	WATTLE LF	SEED & MULCHING AC	SEED FOR REPAIR SEEDING LB	FERTILIZER FOR REPAIR SEEDING TON			
8CR.10531.15	Lee	1	NC 42	FROM SR 1322 TO SR 1237	5&6	NO	4.66	24	605	180	9.32	2,200			6,750	439	335	2	4	466	70	6.78	340	2.00			
TOTAL FOR MAP NO. 1							4.66		605	180	9.32	2,200			6,750	439	335	2	4	466	70	6.78	340	2.00			
TOTAL FOR PROJ NO. 8CR.10531.15							4.66		605	180	9.32	2,200			6,750	439	335	2	4	466	70	6.78	340	2.00			
8CR.20531.15	Lee	2	SR 1007	FROM SR 1365 TO SR 1318	1	NO	2.49	22	810	220	4.98	600	1,935		2,935	274	120			250	40	3.62	250	1.50			
TOTAL FOR MAP NO. 2							2.49		810	220	4.98	600	1,935		2,935	274	120					250	40	3.62	250	1.50	
		3	SR 1007	FROM SR 1303 TO US 15-501	2	NO	1.59	22	205	165	3.18	500			1,905	124	30			159	30	2.31	115	1.00			
TOTAL FOR MAP NO. 3							1.59		205	165	3.18	500			1,905	124	30					159	30	2.31	115	1.00	
		4	SR 1519	FROM SR 1514 TO NC 42	3 & 4	NO	0.89	46	30	60	0.42	420		2,125		127	60	4	3	89	20	0.30	15	0.25			
TOTAL FOR MAP NO. 4							0.89		30	60	0.42	420		2,125		127	60	4	3			89	20	0.30	15	0.25	
		5	SR 1514	FROM SR 1558 TO US 421	4	NO	1.19	50				900		3,090		185	50	12	10		20						
TOTAL FOR MAP NO. 5							1.19					900		3,090		185	50	12	10				20				
TOTAL FOR PROJ NO. 8CR.20531.15							6.16		1,045	445	8.58	2,420	1,935	5,215	4,840	710	260	16	13			498	110	6.23	380	2.75	
GRAND TOTAL							10.82		1,650	625	17.90	4,620	1,935	5,215	11,590	1,149	595	18	17			964	180	13.01	720	4.75	

PROJECT NO.	SHEET NO.	TOTAL NO.
8CR.10531.15, 8CR.20531.15	8	8

THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	DESCRIPTION	4589000000-N	4685000000-E		4686000000-E		4695000000-E		4697000000-E	4705000000-E	4710000000-E	4721000000-E			4725000000-E				4810000000-E		4900000000-N		
					TRAFFIC CONTROL	4" X 90 M WHITE THERMO	4" X 90 M YELLOW THERMO	4" X 120 M YELLOW THERMO	4" X 120 M WHITE THERMO	8" X 90 M YELLOW THERMO	8" X 90 M WHITE THERMO	8" X 120 M WHITE THERMO	16" X 120 M WHITE THERMO	24" X 120 M WHITE THERMO	THERMO MSG SCHOOL 120 M	THERMO RXR 120 M	THERMO MSG ONLY 120 M	THERMO LT ARROW 90 M	THERMO RT ARROW 90 M	THERMO STR ARROW 90 M	THERMO STR & RT ARROW 90 M	4" WHITE PAINT	4" YELLOW PAINT	YELLOW & YELLOW MARKERS		
NO		NO			LS	LF	LF	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA		
8CR.10531.15	Lee	1	NC 42	FROM SR 1322 TO SR 1237	*	49,200		44,750		500		180		200	12			17	1	4	6			340		
TOTAL FOR MAP NO. 1						49,200		44,750		500		180		200	12			17	1	4	6			340		
TOTAL FOR PROJ NO. 8CR.10531.15						49,200		44,750		500		180		200	12	12		17	1	4	6			340		
8CR.20531.15	Lee	2	SR 1007	FROM SR 1365 TO SR 1318	*																			52,600	37,420	
TOTAL FOR MAP NO. 2																								52,600	37,420	
		3	SR 1007	FROM SR 1303 TO US 15-501	*																			33,600	18,908	
TOTAL FOR MAP NO. 3																								33,600	18,908	
		4	SR 1519	FROM SR 1514 TO NC 42	*	2,900	9,560			60	180		150	325		6	12	32	12	3	3				90	
TOTAL FOR MAP NO. 4						2,900	9,560			60	180		150	325		6	12	32	12	3	3				90	
		5	SR 1514	FROM SR 1558 TO US 421	*			13,224	3,700				300	360			12	16	3	9	1				110	
TOTAL FOR MAP NO. 5								13,224	3,700				300	360			12	16	3	9	1				110	
TOTAL FOR PROJ NO. 8CR.20531.15						2,900	9,560	13,224	3,700	60	180		300	150	685		6	24	48	15	12	4		86,200	56,328	200
TOTAL FOR PROJ NO. 8CR.10531.15							12,460		16,924		240						30			79					142,528	
GRAND TOTAL					1	52,100	9,560	57,974	3,700	560	180		480	150	885		6	24	65	16	16	10		86,200	56,328	540
						61,660		61,674		740						42			107					142,528		

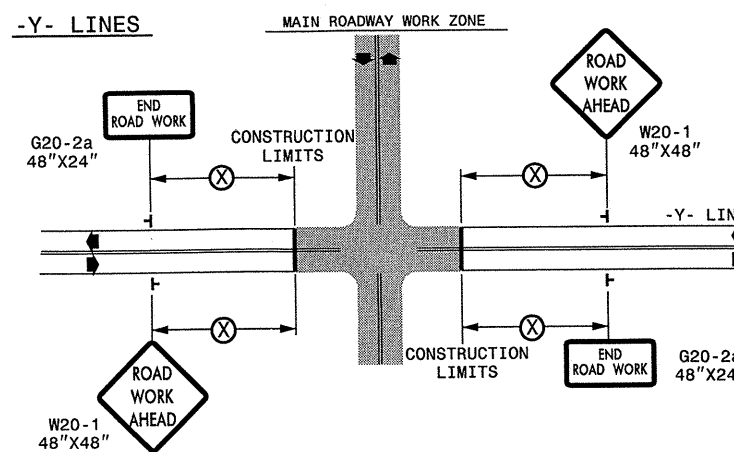
TWO-WAY UNDIVIDED ** (L-LINES)



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

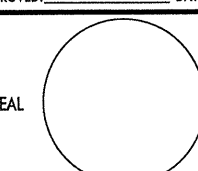
GENERAL NOTES

- 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

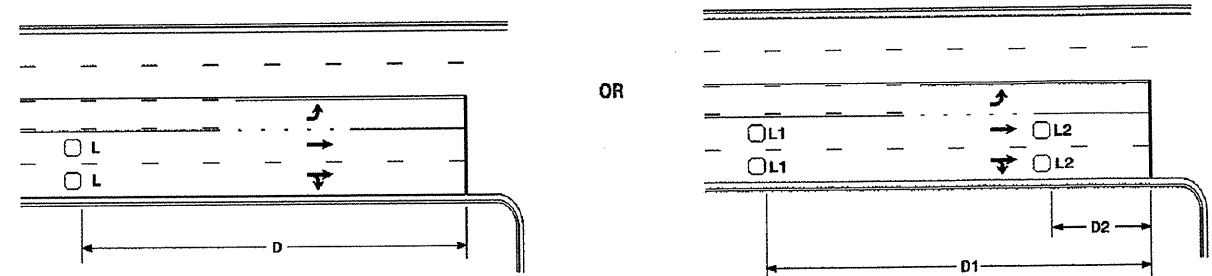
- └ STATIONARY SIGN
- ◀ DIRECTION OF TRAFFIC FLOW

SHEET 1 OF 1

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

05 DEC 2010 11:50 C:\PROPS-WTICCC\M&S Division\Share\Resur\facimg\2010\Central\2010\Div08\C202670A-B-8CR.10531.15x2.Lee.nc42SRs.m5\VC202670A-B-8CR.10531.15x2.2way_Undiv.&.Urban_Fr.wys_stationary.dgn
 boschoenbauer AT WZTC24137

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

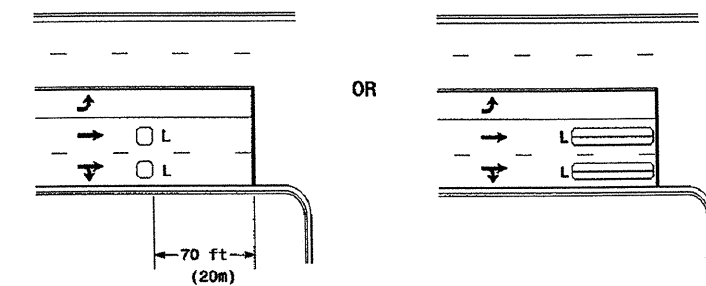
Speed Limit mph (km/hr)	D1 ft (m)	D2 ft (m)
40 (64)	250 (75)	80 (25)
45 (72)	300 (90)	90 (27)
50 (80)	355 (110)	100 (30)
55 (88)	420 (130)	110 (35)

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

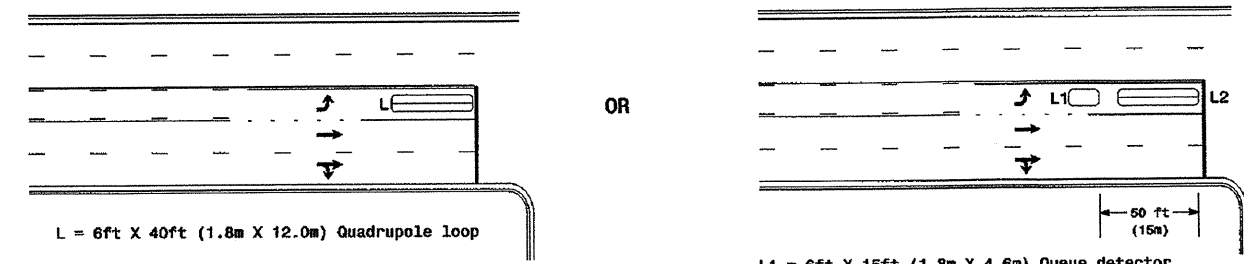
Low Speed Detection [≤35 mph (56 km/hr)]



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



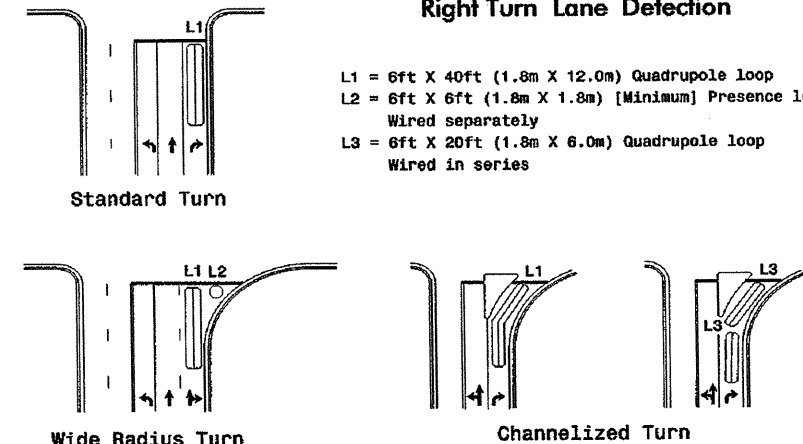
L = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop

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



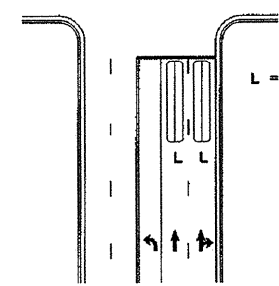
L1 = 6ft X 40ft (1.8m X 12.0m) Quadrupole loop
 L2 = 6ft X 6ft (1.8m X 1.8m) [Minimum] Presence loop
 Wired separately
 L3 = 6ft X 20ft (1.8m X 6.0m) Quadrupole loop
 Wired in series

Standard Turn

Wide Radius Turn

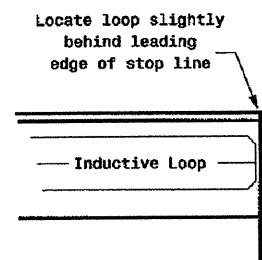
Channelized Turn

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



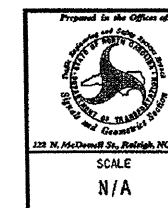
Note:
 Loop may be located in advance
 of stop line when stop line is
 greater than 15' (4.5m) from edge
 of intersecting roadway; or, when
 loop detects a permissive or
 protected/permissive left turn.

Recommended Number of Turns

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

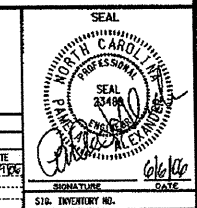
Length of Lead-in ft (m)	Number of Turns
< 250 (75)	3
250-375 (75-115)	4
375-525 (115-160)	5
> 525 (160)	6

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



Typical Loop Locations

PLAN DATE:	REVIEWED BY:	
JUN 2006		
PREPARED BY:	REVIEWED BY:	
P. L. Alexander		
REVISIONS:	INIT.	DATE



19-000-0008 14123
 19-000-0008 14123
 19-000-0008 14123