

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS



**LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 1200 mm & UNDER)**

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO.	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE)								BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE)								ENDWALLS	QUANTITIES: STRUCTURES	FOR DRAINAGE TOTAL M. FOR PAV. QUANTITY SHALL BE COL. X + (1/2 X COL. #)	FRAME, GRATES, AND HOOD STD. 840.03	TYPE OF GRATE	CORR. STEEL ELBOW NO. & SIZE	CONC. COLLARS, CL. "B" m <sup>3</sup> STD. 840.72	CONC. & BRICK PIPE PLUG m <sup>3</sup> STD. 840.71	PIPE REMOVAL (meters)	REMARKS	ABBREVIATIONS							
							300	375	400	600	750	900	1050	300	400	450	600	800	900	1000	1200	375mm SIDE DRAIN PIPE												450mm SIDE DRAIN PIPE	600mm SIDE DRAIN PIPE	R.C.P.	C.S.P.	METERS	CU. METERS	E
-L- 11+40.000	RT	1			87.310						12.0											1																		
-L- 11+43.000	LT	2				85.100					16.8																											0.4		
-L- 12+40.000	LT	3		90.569	89.759	87.000								12.0									1											2@400mm				FALSE SUMP		
-L- 17+36.000	LT	5		88.145	87.335	82.490								14.4										1														FALSE SUMP		
-Y- 13+27.000	CL	6			84.000	83.820						50.4												1																
-D- 10+83.000	CL	7			85.130	84.454					33.6																													
-Y- 14+64.000	RT	8						7.2																														6.0		
TOTAL								7.2	62.4	50.4				26.4									3												4@400mm			0.4		
SAY								7.2	62.4	50.4				26.4									3												4@400mm			0.4		

**LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 1350 mm & OVER)**

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO.	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE)						BITUMINOUS COATED C.S. PIPE TYPE B				STRUCTURAL PLATE PIPE			REINFORCED ENDWALLS		MASONRY DRAINAGE STRUCTURES CUBIC METERS	REINF. CONC. FLARED END SECTION NO. & SIZE	CORR. STEEL FLARED END SECTIONS NO. & SIZE	REINF. CONC. ELBOWS NO. & SIZE	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS, CL. "B" m <sup>3</sup> STD. 840.72	PIPE REMOVAL (meters)	REMARKS	ABBREVIATIONS												
							1350	1500	1650	1800	1950	2100	1400	1500	1650	1800	SHOP ELONGATED	1500	1650	1800	WITH R.C. cu. m.										WITH C.S. cu. m.	CONC. COLLARS, CL. "B" m <sup>3</sup> STD. 840.72	PIPE REMOVAL (meters)									
-L- 17+30.000	RT	4			82.493	81.638										18.0																								2.28		
TOTAL																18.0																								2.28		
SAY																18.0																								2.28		

**GUARDRAIL SUMMARY**

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS						IMPACT ATTENUATOR TYPE 350	REMARKS																	
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GRAU 350	TYPE III	AT-1									EA	G	NG											
L	13+56.240	14+47.680	RT	91.440			14+47.680		3.0	4.0	15.240		0.300		1	1																							
L	14+18.320	14+60.230	LT	41.910				14+60.230	3.0	4.0		36.195	0.724	1	1																								
L	15+22.250	16+63.220	RT	118.110	22.860			15+22.250	3.0	4.0				1	1																								
L	15+38.600	16+33.850	LT	95.250			15+38.600		3.0	4.0	15.240		0.300		1	1																							
L	16+48.000	19+52.800	RT	285.750	19.050			19+10.000	3.0	4.0		15.24	0.300	1																									
Y	13+20.127	14+57.500	LT	137.160			14+57.500		1.2	2.2		15.24	0.300	1																									
Y	13+24.592	13+58.882	RT	26.670	7.620				1.2	2.2																													
Y	13+64.560	14+67.430	RT	95.250	7.620			14+67.430	1.2	2.2	15.24		0.300																										
D	10+90.292	11+05.532	RT	15.240				10+90.292	0.6	1.6										1																			
D	10+93.766	10+97.576	LT	3.810				10+93.766	0.6	1.6										1																			
				SUBTOTAL	910.590	57.150									6	4	2																						
ANCHOR DEDUCTIONS				GRAU-350 6 @ 15.240	-91.440																																		
				TYPE III 4 @ 5.715	-22.860																																		
				AT-1 2 @ 1.905	-3.810																																		
				TOTAL	792.480	57.150									6	4	2																						
				SAY	803.910	60.960									6	4	2																						
ADDITIONAL GUARDRAIL POSTS				SAY	5																																		

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