6/20/00

COMPUTED BY: W. T. BEST DATE: 03-10-2004
CHECKED BY: W.A. SMITH DATE: 03-22-2004

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

METRIC

PROJECT REFERENCE NO.	SHEET NO.
R-2813C	3-1

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

STATION	LOCATION (LT, RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) SIZE	1350	1500	1650	1800	1950	2100	BITUMINOUS COATED C.S. PIPE TYPE B SIZE	1400			1500		1650	1800	SHOP ELONGATED	STRUCTURAL PLATE PIPE SIZE	1500			1650			1800			REINFORCED ENDWALLS CLASS "A" CONC. WITH R.C. cu. m.	WITH C.S. cu. m.	MASONARY DRAINAGE STRUCTURES CUBIC METERS	C.B. STD. 840.04 OR 840.05	FRAME GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	J.B. STD. 840.31 OR 840.32	M.H. FRAME & COVER STD. 840.54	FLOWABLE FILL	REINF. CONC. ELBOWS NO. & SIZE	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS, CL. "B" m^3 STD.840.72	PIPE REMOVAL (meters)	REMARKS
THICKNESS OR GAUGE																2.77	3.51	4.27	2.77	3.51				2.77	3.51	4.27	2.77	3.51	4.27	2.77	3.51	4.27												
55+93.565 –L–	RT.	82		662.72																													2.281	1	1									
		82	83		660.46	659.38										7.314																												
55+93.565 –L–	RT.	83		661.48																													3.907			1	1							
56+00.236 –L–	RT.	83	84		659.38	659.25		10.971																																			
55+93.585 –L–	LT.	97		662.47																													1.848	1	1									
		97	82		660.56	660.46	X	18.285																																				
SHEET TOTAL								29.256								7.314																	8.1	2	2				1	1		2@1400		

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
M.D.I.	MEDIAN DROP INLET
M.D.I. (N.S.)	MEDIAN DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUCTION BOX

COMPUTED BY: W.A. SMITH DATE: 1 /13 /04
CHECKED BY: W. T. BEST DATE: 1 /13 /04

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

STATE OF NORTH CAROLINA
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GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPROACH END	WARRANT POINT TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	ANCHORS AT-1	ANCHORS CAT-1	ANCHORS GRAU 350	IMPACT ATTENUATOR TYPE 350 EA	G	NG	REMARKS
–Y1–	10+71.727	11+01.075	RT.	26.670	6.131		10+71.727		0.9m	2.2m	0		0		1						TIE TO EXIST. GUARDRAIL
–Y1–	10+70.800	11+01.054	LT.	26.670	4.942			10+70.800	0.9m	2.2m		0		0	1						TIE TO EXIST. GUARDRAIL
–L–	49+26.071	50+12.271	LT.	76.200	17.613		49+80.000	49+26.071	5.0m	6.0m	15.240m	0	0.300m	0		1	1				
–L–	51+27.610	52+01.905	RT.	74.295			51+60.000	52+00.000	0.6m	3.0m	15.240m	0	0.300m	0		1	1				
–L–	56+64.760	58+83.835	RT.	220.980			57+00.000	58+80.000	0.6m	3.0m	15.240m	0	0.300m	0		1	1				
–Y8–	10+56.873	10+14.204	RT.	30.480	21.116		10+56.873	10+14.204	1.2m	2.2m	15.240m	21.116	0.300m	4.400m		1	1				
SUBTOTAL				455.295	49.802										2	4	4				
LESS ANCHOR UNITS				–66.675	–5.715																
		TOTAL		388.620	44.087																
			SAY	396.240	45.720										2	4	4				

2 AT-1 @ 1.905	=	3.810				
4 CAT-1 @ 1.905	=	7.620				
4 TYPE 350 @ 15.240	=	60.960				
TOTAL ANCHOR LENGTH	=	72.390				

GUARDRAIL REMOVAL																					
–Y1–	10+52.764	11+01.075	RT.	48.311																	
–Y1–	10+22.863	10+42.585	LT.	19.722																	
–Y1–	10+52.903	11+01.054	LT.	48.151																	
–L–	49+69.742	50+74.192	LT.	104.450																	
–L–	55+85.077	59+10.171	RT.	325.094																	
–L– /–Y8–	57+07.703	10+38.821	LT./RT.	103.693																	
–Y8– /–L–	10+16.866	60+38.936	RT./LT.	263.008																	
		TOTAL		912.429																	
			SAY	925.000			ADDITIONAL GUARDRAIL POSTS =		10													

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wasmith
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