6/20/00

COMPUTED BY: TMW	DATE: 11-10-05
CHECKED BY: RVP	DATE: 11-29-05

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
B-4027	3-A

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

STATION / SIZE / THICKNESS OR GAUGE	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) 12"	15"	18"	24"	30"	36"	42"	48"	BITUMINOUS COATED C.S. PIPE TYPE A (UNLESS NOTED OTHRWISE) 12" .064	15" .064	18" .064	24" .064	30" .079	30" .079	36"	36" .109	42"	42" .109	48" .109	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES * TOTAL L.F. FOR PAY QUANTITY SHALL BE FOL. "A" + (1.3 X COL. "B") PER EACH (0' THRU 5.0')	LIN. *FT. A 5.0' THRU 10.0'	LIN. *FT. B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME & GRATE STD. 840.16	M.D.I. TYPE "A" STD. 840.17 OR 840.26	M.D.I. TYPE "B" STD. 840.18 OR 840.27	M.D.I. TYPE "D" STD. 840.19 OR 840.28	M.D.I. FRAME WITH GRATE STD. 840.22	M.D.I. FRAME WITH TWO GRATES STD. 840.22	M.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	C.B. STD. 840.04 OR 840.05	T.B.D.I. STD. 840.35	M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT.	REMARKS
16+79	LT	1		46.7																													1																		1	1							
16+79	LT	1	2		44.0	40.8											24																																				2@15"				
19+63	LT	3		46.9																													1																		1	1							
19+63	LT	3	4		44.2	40.8											28																																				2@15"				
PROJECT																																																										
TOTAL																	52																2																		2	2					4@15"				

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

"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

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 SHOULDER WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	ANCHORS TYPE 350	M-350	CAT-1	VI	VI MOD	XI	XI MOD	III	IMPACT ATTENUATOR TYPE 350 NO.	PERMITTED G	PERMITTED NG	REMARKS
-L-	14+70.50	17+58.00 (BR)	RT	287.50			17+58.00 (BR)		6.3'	9'	50'		1		1							1				
-L-	16+20.50	17+58.00 (BR)	LT	137.50				17+58.00 (BR)	4.7'	9'		118.75'		2.3	1							1				
-L-	19+42.00 (BR)	20+79.50	RT	137.50				19+42.00 (BR)	6.3'	9'		50'		1	1							1				
-L-	19+42.00 (BR)	22+29.50	LT	287.50			19+42.00 (BR)		4.7'	9'	218.75'		2.3		1							1				
	SUB - TOTAL			850.00												ANCHOR DEDUCTIONS										
	LESS ANCHORS			-275.00												TYPE III 4 @ 18.75' = 75.00'										
																GRAU - 350 4 @ 50' = 200.00'										
	TOTAL			575.00												TOTAL 275.00'										
	SAY			575.00																						
ADDITIONAL GUARDRAIL POSTS				5 each																						