COMPUTED BY: PWR DATE: 12-13-04
CHECKED BY: MWL DATE: 12-29-04

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
B-2905	3-A

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

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) 12"	15"	18"	24"	30"	36"	42"	48"	BITUMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHRWISE) 12" .064	15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109	15" SIDE DRAIN PIPE	18" CS PIPE CULVERT, 0.064" THICK	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES * TOTAL L.F. FOR PAY QUANTITY SHALL BE 'COL 'A' + (1.3 X COL 'B') LIN. *FT. PER EACH (0' THRU 5.0')	A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.02 OR STD. 840.01	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	TRAFFIC BEARING D.I. STD. 840.35	(N.S.) FRAME WITH TWO GRATES STD. 840.29	SPRING BOX STD. 840.41	6" C.S. PIPE .064" THICK (SPRING BOX) LIN.FT.	CORR. STEEL ELBOW NO. & SIZE	PIPE REMOVAL LIN.FT.	REMARKS
-L- 11+50	CL	1			2872.5	2870.1				52′																																25′	REMOVE 18" CMP
-L- 12+58	RT	1A																													1												
		1A	1B																																						28′			
-D4- 10+45	CL	1C												116′																														
-D3- 10+52	CL	2																										96′															
-L- 18+00	RT	2A															16′																										
-D2- 12+50	CL	3																							24′																		
-L- 21+35.5	LT	4		2836.99																											1												
		4	5		2833.82	2833.74											24′																										
-L- 21+35.5	RT	5		2836.99																											1												
		5	6		2833.74	2828.0											28′																										2-15′		
-L- 23+70	RT																																										30′	REMOVE 18" CMP
-L- 25+00	CL	7			2831.2	2828.0				52′																																	
-L- 26+58.5	CL	8			2839.9	2831.4				32′																																	
SHEET TOTAL										136′				116′			68′							24′	96′		4.5		3						2	2	1				28′	2-15′	55′	

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.

GUARDRAIL SUMMARY

BEG. STA.	END STA.	LOCATION	LENGTH STRAIGHT	LENGTH SHOP CURVED	LENGTH DBL. FACED	WARRANT POINT APPROACH END	WARRANT POINT TRAILING END	"N" DIST. FROM EOL	TOTAL SHOULDER WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	ANCHORS GRAU 350	ANCHORS TYPE III	ANCHORS AT-1	IMPACT ATTENUATOR TYPE 350 EACH	IMPACT ATTENUATOR TYPE 350 G	IMPACT ATTENUATOR TYPE 350 NG	REMARKS
-L- 13+47.00	-L- 16+97.00	RT.	350.00			14+22.00	16+97.00	2	8	50		1		1	1					TIE TO BRIDGE RAIL
-D3- 10+53.00	-L- 16+97.00	RT./LT.	62.50	50.00			17+09.00	2	8	43.75		.875			1	1				TIE TO BRIDGE RAIL
-L- 21+13.00	-D2- 10+62.00	LT./LT.	37.50	50.00		21+13.00		2	8		18.75		.375		1	1				TIE TO BRIDGE RAIL
-L- 21+13.00	-L- 22+00.50	RT.	87.50			21+13.00	21+50.50	2	8		68.75		1.375	1	1					TIE TO BRIDGE RAIL
SUBTOTAL			537.50	100.00										2	4	2				
LESS ANCHOR DEDUCTIONS																				
GRAU-350	2 @ 50.0 Ft.		100.00																	
AT-1	2 @ 6.25 Ft.		12.50																	
TYPE-III	4 @ 18.75 Ft.		75.00																	
	SUBTOTAL		- 187.50																	
PROJECT TOTAL			350.00	100.00																
SAY			350.00																	
ADDITIONAL GUARDRAIL POSTS			5 EA.																	

15-FEB-2005 10:12
B-2905_sheet_3A.dgn
FMYoung AT RD22322