COMPUTED BY: BAK DATE: 10-4-04
CHECKED BY: DDK DATE: 12-6-04

PROJECT REFERENCE NO.	SHEET NO.
B-4248	3-A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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"	15"	18"	24"	30"		36"		42"		48"		15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (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") 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. 840.29	M.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	T.B.D.I. STD. 840.35	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
13+65.00	RT	1		125.25																												1																			1	1				
	RT	1	2		122.67	118.20	N										20																																				
15+72.00	LT	3		126.16																												1																			1	1				
	LT	3	4		123.58	123.28	N		28																																													
15+72.00	RT	4		126.16																												1																			1	1				
	RT	4	5		123.28	120.20	N										20																																			2@15				
TOTAL									28								40															3																			3	3				

"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 SHOUL. WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	ANCHORS GRAU 350	TYPE III	AT-1	IMPACT ATTENUATOR TYPE 350 EA	G	NG	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
-L-	12+66.12	15+91.75	RT	325			BRIDGE		5.5	8	50		1		1	1								
-L-	11+92.61	15+91.75	LT	400				BRIDGE	5.5	8		50		1	1	1								
-L-	17+43.25	17+82.92	RT		25			BRIDGE	5.5	8						1	1							
-L-	17+43.25	19+80.29	LT	237.50			BRIDGE		5.5	8	50		1		1	1								
			SUBTOTAL	962.5	25										3	4	1							
	DEDUCTIONS FOR ANCHOR UNITS:						ADDITIONAL GUARDRAIL POSTS: 5 EA.																	
	GRAU-350: 3 @ 50.00 FT = 150.00																							
	TYPE 111: 4 @ 18.75 FT = 75.00																							
	AT-1: 1 @ 6.25 FT = 6.25																							
			TOTAL	731.25	25																			
			SAY	737.50	25																			

* SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
-L- 11+50.00 TO 16+03.75 (BEGIN BRIDGE)	94		1785	1691	0
-L- 17+31.25 (END BRIDGE) TO 23+50.00	1549		1304	0	245
SUBTOTAL	1643		3089	1691	245
SHOULDER MATERIAL			429	429	
WASTE IN LIEU OF BORROW				-245	-245
TOTAL	1643		3518	1875	0
EST 5% TO REPLACE TOP SOIL BORROW PIT				94	
TOTAL	1643			1969	
SAY	1650			1975	

UNDERCUT EXCAVATION = 400 CY
UNDERCUT FOR SUBGRADE STABILITY = 200 CY
SELECT MATERIAL = 700 CY

* ASPHALT PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS

LINE	STATION TO STATION	REMOVAL AREA
-L-	13+67.00 - 16+21.00	280
-L-	17+04.00 - 21+19.00	608
	TOTAL	888
	SAY	900

* APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING, BREAKING OF EXISTING PAVEMENT, AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING".

6/21/00
07-JAN-2005 15:39
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dlbryan