6/16/99

COMPUTED BY: BDS DATE: 1/30/03
CHECKED BY: RCK DATE: 6/28/04

"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
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
B-3696	3-A

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: GRAU 350	ANCHORS: III	ANCHORS: AT-1	IMPACT ATTENUATOR TYPE 350: EA	IMPACT ATTENUATOR TYPE 350: G	IMPACT ATTENUATOR TYPE 350: NG	REMARKS
-L-	13+68.43	17+24.68	RT	356.25			15+00.00(F)		4	9	50		1		1	1					
-L-	15+85.67	17+30.88	LT	143.75	56.25			17+30.38(BR)	4	9		4				1	1				
-L-	18+44.68	19+88.43	RT	143.75				18+44.68(BR)	4	9		125		2	1	1					
-L-	18+50.38	23+32.07	LT	481.25			22+55.90		4	9*	50		1		1	1					* VAR. 6' TO 9' SEE X-SECTIONS
-L-	21+15.50	23+48.00	RT	212.5	62.5			22+47.73	6	9		50		1	1		1				
			SUBTOTAL	1337.5	118.75						DEDUCTIONS FOR ANCHORS:				4	4	2				
			LESS ANCHORS	-275	-12.5						GRAU-350 4 @ 50 EA. = 200										
		25' CLEAR SPAN	GUARDRAIL	-200							TYPE III 4 @ 18.75 EA. = 75										
25' CLEAR SPAN GUARDRAIL = 2 EACH			TOTAL	862.5	106.25						AT-1 2 @ 6.25 EA. = 12.5										
ADDITIONAL POSTS = 5 EACH			SAY	862.5	106.25						TOTAL = 287.5										

NOTE: SEE DETAIL 862D01 (SHEET NO. 2-J) FOR GUARDRAIL PLACEMENT OVER 96" C.S. PIPE

EARTHWORK SUMMARY (CY)

LOCATION	UNCLASS. EXC.	UNDERCUT	EMBANK+%	BORROW	WASTE
-L- 11+00.00 TO 17+40.00 (BR)	88		8245	8157	
-L- 18+35.00 (BR) TO 22+75.00	10		2140	2130	
-DR1- 10+50.00 TO 11+90.63	10		504	494	
PROJECT SUBTOTAL	108		10889	10781	
EST. FOR REPL. TOPSOIL ON BORROW PIT				539	
GRAND TOTAL	108		10889	11320	
SAY	110			11500	

DDE =14CY
UNDERCUT =200CY
-L- PAVEMENT STRUCTURE VOLUME =7CY
NOTE: APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, FINE GRADING,CLEARING AND GRUBBING, BREAKING OF EXISTING PAVEMENT AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE LUMP SUM PRICE FOR "GRADING".

LIST OF PIPES, ENDWALLS, ETC.

STATION / SIZE / THICKNESS OR GAUGE	LOCATION (LT,RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	CLASS III R.C. PIPE (UNLESS NOTED OTHERWISE) 15"	24"	48"	BITIMINOUS COATED C.S. PIPE TYPE B (UNLESS NOTED OTHERWISE) 15" .064	18" .064	96" .109	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	REINFORCED ENDWALLS CU. YDS. WITH R.C.	WITH C.S.	QUANTITIES FOR DRAINAGE STRUCTURES: PER EACH (0' THRU 5.0')	* TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B'): 5.0' THRU 10.0' A	10.0' AND ABOVE B	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	T.B.D.I. STD. 840.35	M.D.I. FRAME WITH TWO GRATES STD. 840.29	M.D.I. TYPE "B" STD. 840.18 OR 840.27	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
-L- 12+18	LT	1											24																					24
-DR1- 11+45	CL	2	3		603.8	595.9					52																							
-L- 16+92	RT	4A		604.0	601.2													1								1	1							
-L- 16+98	RT	4A	4		601.2	600.8	12																											
-L- 17+03	RT	4		603.6	600.8													1								1	1							
-L- 17+03	RT	4	5		600.8	589.4				36																			2@15"					
-L- 18+67	RT	6		598.8	596.1													1								1	1							
-L- 18+67	RT	6	7		596.1	589.9				24																			2@15"					
-L- 22+52	CL	8	9		585.0	585.0						52*					10.1																	SEE DETAIL 2-A
TOTAL							12			60	52	52	24				10.1	3								3	3		4@15"					

* CORRUGATED STEEL PIPE 3" X 1" CORRUGATIONS

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

EXISTING ASPHALT PAVEMENT BREAK-UP / REMOVAL

IN SQUARE YARDS

LINE	BEG.STA.	END STA.	LOCATION	ASPHALT BREAK-UP	ASPHALT REMOVAL
-L-	12+00	13+75	CL		359
-L-	13+75	17+27	CL	712	
-L-	17+27	17+63(BR)	CL		68
-L-	18+15(BR)	18+51	CL		70
-L-	18+51	19+25	CL	149	
-L-	19+25	20+50	CL		263
			TOTAL	861	760
			SAY	875	775

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