COMPUTED BY: DLH DATE: 04/20/2016
CHECKED BY: DON DATE: 5-3-2016

PROJECT NO.	SHEET NO.
R-4060	3-C

RD248621

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

[IN CUBIC YARDS]

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
-L- 16+50.00	18+00.00	306	230	--	810
-Y- 11+00.00	13+50.00 LT	553	87	--	466
-Y- 11+00.00	13+50.00 RT	192	130	--	62
SUBTOTAL:		1,051	447	--	1,338
-D- 10+11.50	27+72.39	47,857	128	--	47,729
-L- 18+00.00	35+85.00	71,742	34,830	--	36,912
SUBTOTAL:		119,599	34,958	--	84,641
-L- 37+05.00	38+50.00	3,126	527	--	2,599
-T1- 10+10.00	10+50.00	277	--	--	277
-T2- 10+10.00	10+50.00	141	13	--	128
SUBTOTAL:		3,544	540	--	3,004
-L- 38+50.00	44+00.94	11,839	1,208	--	10,631
-Y2- 13+00.00	22+00.00 LT	1,114	217	--	897
-Y2- 13+00.00	22+00.00 RT	2,450	198	--	2,252
SUBTOTAL:		15,403	1,623	--	13,780
PROJECT TOTALS:		**139,597**	**37,568**	--	**102,763**
ADDITIONAL UNDERCUT			920	920	800
ROCK WASTE TO REPLACE BORROW				-777	-777
ELIMINATE EARTH SHRINKAGE			-117	-117	
WASTE IN LIEU OF BORROW				-26	-26
GRAND TOTALS:		139,597	38,371	--	102,760
SAY:		**140,000**			
SHALLOW UNDERCUT		150 CY			
SELECT GRANULAR MATERIAL		1,755 CY			
SHOULDER BORROW		2,300 CY			
EST. DRAINAGE DTICH EXCAVATION		20 CY			

UNDERCUT BY STATION RANGE TO BE FILLED BY SELECT GRANULAR MATERIAL

Note: Earthwork quantities are calculated by the Division Design Construct Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical EngineeringUnit.

Note: Approximate quantities only. Fine Grading, Clearing and Grubbing, Removal of Existing Asphalt Pavement, and Shoulder Borrow will be paid for at the contract lump sum price for "Grading."

ASPHALT PAVEMENT REMOVAL SUMMARY

[IN CUBIC YARDS]

SURVEY LINE	Station	Station	LOCATION	AREA	YD^2
-L-	16+50	17+59	RT	242.81	26.98
-L-	16+50	17+81	CL	4995.38	555.04
-Y1-	17+80	19+19	CL	2426.63	269.63
-Y2-	17+38	17+80	LT	1435.14	159.46
-L-	42+48	44+14	RT	2607.18	289.69
			PROJECT TOTAL:		1,300.79
			SAY:		**1,310**

'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

LINE	BEG. STA.	END STA.	LOC.	LENGTH STRAIGHT	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPR. END	WARRANT POINT TRAIL. END	'N" DIST FROM E.O.L.	TOTAL SHLDR WIDTH	FLAIR LENGTH APPR. END	FLAIR LENGTH TRAIL. END	W APPR. END	W TRAIL. END	ANCHORS XI	ANCHORS III	ANCHORS GRAU 350	ANCHORS XII	ANCHORS B-77	ANCHORS AT-1	ANCHORS TES	IMP. ATTEN. TYPE 350 EA	IMP. ATTEN. TYPE 350 G	IMP. ATTEN. TYPE 350 NG	REMOVE EXISTING ANCHOR	REMOVE EXISTING GRDRAIL	REMARKS
-L-	12+83.00	17+45.50	RT	462.5			13+33.00	16+95.50	8	11	50	50	1	1			2									388	REMOVE & REPLACE EXISTING GUARDRAIL
-L-	12+40.00	16+65.00	LT	425			12+90.00	16+15.00	8	11	50	50	1	1			2									362	REMOVE & REPLACE EXISTING GUARDRAIL
-L-	22+25.00	28+50.00	RT	625			22+75.00	28+00.00	8	11	50	50	1	1			2										
-L-	33+46.75	35+90.50	RT	243.75			35+90.50		4	11	225		4.5				1		1								TIE TO BRIDGE ON TRAILING END
-L-	33+84.59	35+78.34	LT	193.75				35+78.34	4	11		175		3.5			1		1								TIE TO BRIDGE ON APPROACH END
-L-	37+12.50	38+50.00	RT	137.5			37+12.50	38+50.00	8	11									2								TIE TO BRIDGE ON APPROACH END; TIE TO CONCRETE BARRIER ON TRAILING END
-L-	37+00	39+50.00	LT	250			39+50.00	37+00.00	8	11									2								TIE TO CONCRETE BARRIER ON APPROACH END; TIE TO BRIDGE ON TRAILING END
-Y1-	19+85.00	20+45.00	RT	62.5	37.5		19+85.00	20+45.00	4	7										2							
-L-	40+20.00	42+51.25	RT	231.25			40+20.00	42+01.25	8	11		50		1			1		1								TIE TO CONCRETE BARRIER ON APPROACH END
-Y2-	14+93.75	17+75.00	LT	281.25			17+75.00	15+18.75	6	11		25		0.5			1		1							186	REMOVE & REPLACE EXISTING GUARDRAIL; TIE TO CONCRETE BARRIER ON APPROACH END; GRAU 350 TL-2 USED HERE
-Y2-	17+32.00	19+94.50	LT	175	87.5		19+94.50	17+32.00	2	5										2							GUARDRAIL @ THIS STATION IS LOCATED OFF OF RIVER VIEW I
-L-	42+75.00	42+96.00	LT				42+75.00															1		X			PLACE ATTENUATOR @ Sta. -L-42+75.00 LT
-Y2-	21+00.00	21+21.00	LT				21+00.00															1		X			PLACE ATTENUATOR @ Sta. -Y2-21+00.00 LT
-Y1-	17+79.00	17+79.00	CL	25			17+79.00														2						
-Y1-	19+18.50	19+18.50	CL	25			19+18.50														2						
LESS INCLUDED ANCHOR DEDUCTIONS																											
	AT-1	4 @ 6.25'	=	-25																							
	B-77	8 @ 18.75'	=	-150																							
GRAU 350 TL-3		9 @ 50.0'	=	-450																							
GRAU 350 TL-2		1 @ 25.0'	=	-25																							
Project Subtotal				**2487.5**	**125**					**PROJECT TOTAL NEW ANCHOR UNITS REQUIRED**							**10**		**8**	**4**	**4**	**2**				**936**	
Additional Guardrail Posts				**15**																							