COMPUTED BY: WEJ DATE: 06-15
CHECKED BY: THB DATE: 06-15

PROJECT REFERENCE NO.	SHEET NO.
R-4416	3B-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

"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			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL WIDTH	FLARE LENGTH		W		ANCHORS									IMPACT ATTENUATOR TYPE 350		SINGLE FACED CONCRETE BARRIER	REMOVE EXISTING GUARDRAIL	REMOVE & STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI	GRAU 350	M-350	XIII	CAT-1	VI MOD	BIC	AT-1	G	NG				
L	10+00.00	11+37.50	LT	137.50			11+37.50	Exist	13/9	18/14	30																154.64		Tie Existing Guardrail (Approach)
L	11+37.53	11+65.92	LT		28.39																		1						
L	28+35.38	28+54.90	LT		25.00																		1						
L	25+54.90	35+42.40	LT	987.50			34+17.40	25+45.90	8	13	50		1				1										684.14		
L	35+00.00	38+37.50	RT	337.50			36+25.00	37+12.5	8	13	50	50	1	1			2												
L	37+50.00	41+50.00	LT	400.00			40+25.00	38+75.00	8	13	50	50	1	1			2										433.43		
L	50+65.30	60+15.30	RT	950.00			51+90.30	58+90.30	8	13	50		1				1						1				980.13		
L	60+15.40	60+36.50	RT		37.50																								
L	88+04.00	93+16.50	LT	512.50			91+91.50	89+29.00	8	13	50	50	1	1			2										514.91		
L	127+50.00	127+76.00	LT		26.00																						292.09		Tie Shop Curve GR to Existing Guardrail
L	127+74.00	130+49.00	LT	275.00			129+24.00	128+99.00	8	13	50		1				1												
L	137+20.33	150+70.33	LT	1,350.00			149+45.33	138+45.33	8	13	50	50	1	1			1										1344.39		Tie Existing Guardrail (Trailing)
L	159+87.50	163+00.00	LT	312.50			163+00.00	161+12.5	22/8	27/13		50		1			1										310.01		Tie Existing Guardrail (Trailing)
L	210+88.52	216+01.00	LT	512.48			214+76.01	210+88.53	8	13	50	30	1	1			1												
			SUBTOTAL	**5,262.50**	**116.89**												**12**						**3**				**4713.74**		
LESS ANCHOR DEDUCTION																													
GRAU, TYPE 350			**12 @ 50'**	**= 600'**																									
AT-1			**3 @ 6.25'**		**= 18.75'**																								
	TOTAL			**4,662.50**	**98.14**												**12**						**3**				**5226.21**		
			SAY	**4,700.00**	**100.00**																						**5230**		
		ADDITIONAL POSTS =		15																									

SUMMARY OF EARTHWORK (IN CUBIC YARDS)

STATION	STATION	EXCAVATION TOTAL UNCLASS.	EXCAVATION UNDERCUT	EMBANKMENT EMBANK. +%	BORROW	TOTAL
-L- 10+00	-L- 40+00	4,472		3,609		863
-L- 40+00	-L- 70+00	3,761		6,161	2,400	
-L- 70+00	-L- 100+00	3,719		8,464	4,745	
-L- 100+00	-L- 130+00	3,938		7,237	3,299	
-L- 130+00	-L- 160+00	5,712		7,875	2,163	
-L- 160+00	-L- 190+00	3,168		7,254	4,086	
-L- 190+00	-L- 223+20.51	4,925		4,307		618
-Y1- 10+95	-Y1- 11+46.90	82				82
	SUBTOTAL	29,777		44,906	16,693	1,564
TOTAL		29,777		44,906	16,693	1,564
WASTE TO REPLACE BORROW					-1,564	-1,564
MATERIAL FOR SHOULDER CONSTRUCTION				10,672	10,672	
	SUBTOTAL	29,777		55,578	25,801	0
ESTL 5% TO REPLACE TO SOIL ON BORROW PIT					1,290	
GRAND TOTAL		29,777		55,578	27,091	
SAY		30,000			27,250	
ADDITIONAL UNDERCUT : 1,000 CY						
6" PERFORATED SUBDRAINS PIPES: 500 LF						
SHALLOW UNDERCUT EXCAV. CONTINGENCY PER GEO. REPORT: 1000 CY						
EST. DDE = 20 CY						
CLASS IV SUBGRADE STABLIZATION: 1900 TONS						
PAVEMENT STRUCTURE VOLUME = 71460 CY						

EARTHWORK QUANTITIES ARE CALCULATED BY DIVISION 14. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATE PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

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

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

SURVEY LINE	STATION	STATION	LOCATION LT / RT	YD^2
L	50 + 42	52 + 70	LT	19.03
L	63 + 43	66 + 04	LT	43.50
L	84 + 65	87 + 76	LT	34.56
L	96 + 49	103 + 30	LT	158.90
L	136 + 73	140 + 27	RT	177.00
L	157 + 80	160 + 29	RT	41.50
L	161 + 74	163 + 90	RT	67.20
L	165 + 31	171 + 32	LT	207.01
L	184 + 42	191 + 53	LT	165.90
L	191 + 83	192 + 94	LT	9.25
L	199 + 59	209 + 82	LT	605.00
L	210 + 12	211 + 06	LT	43.13
L	215 + 99	222 + 36	LT	237.00
			TOTAL	1,808.97
			SAY	1,810

12/06/07

2/19/2016 3:39:28 PM
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USER:cpollinger