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COMPUTED BY: SGM DATE: 11/10/2022	PROJECT NO.	SHEET NO.
CHECKED BY: JLT DATE: 12/9/2022	17BP.14.R.204	3B-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK

IN CUBIC YARDS

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
L- 17+00.00	-L- 23+71.00	1,912	1,961	49	
-DR2- 10+35.00	-DR2- 11+39.82	241	13		228
SUBTOTAL 1:		2,153	1,974	49	228
-L- 25+45.00	-L- 35+00.00	4,082	1,264		2,818
-DR- 10+12.00	-DR- 13+55.00	13,475	254		13,221
SUBTOTAL 2:		17,557	1,518	0	16,039
TOTALS:		19,710	3,492	49	16,267
LOSS DUE TO CLEARING & GRUBBING		-120			-120
HARD ROCK WASTE TO REPLACE BORROW				-36	-36
ADJUST FOR ROCK SWELL			-7	-7	
ELIMINATE EARTH SHRINKAGE FACTOR SINCE NOW ROCK			-6	-6	
HARD ROCK WASTE TO REPLACE EMBANKMENT					
ADJUST FOR ROCK SWELL			-279		279
ELIMINATE EARTH SHRINKAGE FACTOR SINCE NOW ROCK			-251		251
APPLY ROCK SWELL FACTOR TO PERMANENTLY WASTED HARD ROCK					2,724
APPLY EARTH SHRINKAGE FACTOR TO PERMANENTLY WASTED HARD ROCK BECAUSE IT IS UNCOMPACTED					2,452
PROJECT TOTALS:		19,590	2,949	0	21,817
GRAND TOTALS:		19,590	2,949		21,817
SAY:		20,200			

NOTE: EARTHWORK QUANTITIES ARE CALCULATED BY THE TGS ENGINEERS. THESE EARTHWORK QUANTITIES ARE BASED IN PART ON SUBSURFACE DATA PROVIDED BY THE GEOTECHNICAL ENGINEERING UNIT.

SHOULDER BORROW = 340 CUBIC YARDS
SELECT GRANULAR MATERIAL = 400 CUBIC YARDS
EST. SHALLOW UNDERCUT = 100 CUBIC YARDS
PER GEOTECH RECOMMENDATION, ESTIMATED 450 CUBIC YARDS OF UNDERCUT TO BE USED IN THE DISCRETION OF THE RESIDENT ENGINEER.

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

PAVEMENT REMOVAL SUMMARY

IN SQUARE YARDS

SURVEY LINE	Station	Station	LOCATION LT/RT/CL	ASPHALT REMOVAL	ASPHALT BREAKUP	CONCRETE REMOVAL	CONCRETE BREAKUP
-L-	18+76	24+47	LT	954.72			
-L-	26+04	30+49	LT	693.67			
TOTAL:				1648.39			
SAY:				1,650			

SHOULDER BERM GUTTER SUMMARY

IN LINEAR FEET

LINE	Station	Station	LOCATION	LENGTH
-L-	25+89	26+14	LT	24.5
TOTAL:				24.50
SAY:				30

CONCRETE EXPRESSWAY GUTTER SUMMARY

IN LINEAR FEET

LINE	SIDE	Station	Station	LENGTH
-L-	LT	17+42	20+00	258
-L-	RT	25+93	27+50	157
TOTAL:				415
SAY:				420

GUARDRAIL SUMMARY

"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

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS						IMPACT ATTENUATOR		SINGLE FACED CONCRETE BARRIER		EXTRA LENGTH GUARDRAIL POSTS (8' STEEL)	REMOVE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	Type III	GREU, TL-3	AT-1	B-83 SC	Type III SC		G	NG					
-L-	18+50.00	21+12.50	RT	262.50					8'	11'	50'	50'	1'	1'		2											
-L-	22+00.27	23+56.52	RT	156.25			23+56.52		5'	8'	137.5'		2.75'		1	1											
-L-	10+87.50 -DR2-	23+86.04	LT		37.50			23+86.04	Varies	Varies							1	1									RADIUS = 10'
-L-	25+25.85	10+86 -DR-	RT		56.25			25+25.85	Varies	Varies							1		1								RADIUS = 20'
-L-	25+65.06	34+02.56	LT	837.50			25+65.06		5'	8'	50'		1'		1	1											
SUBTOTAL				1,256.25	93.75										2	4	2	1	1								
LESS ANCHOR DEDUCTIONS																											
	TYPE III	2 @18.75FT		37.50																							
	GREU, TL-3	4 @ 50 FT		200.00																							
	AT-1	2 @ 6.25 FT			12.50																						
	B-83, SC	1 @ 25 FT			25.00																						
	TYPE III, SC	1 @ 18.75			18.75																						
ANCHOR TOTALS				237.50	56.25																						
GRAND TOTALS				1,018.75	37.50										2	4	2	1	1								
SAY				1,025	50										2	4	2	1	1								
ADDITIONAL GUARDRAIL POST =				10 EA																							
TEMPORARY GUARDRAIL SUMMARY																											
-L-	23+11+/-	24+36+/-	LT	125											1	1											TEMP. GUARDRAIL ANCHORS, ATTACH TO EXISTING BRIDGE
-L-	25+91+/-	26+66+/-	LT	75											1	1											TEMP. GUARDRAIL ANCHORS, ATTACH TO EXISTING BRIDGE
-L-	26+14+/-	26+64+/-	LT	50												1											TEMP. GUARDRAIL ANCHORS
SUBTOTAL				250											2	3											
LESS ANCHOR DEDUCTIONS																											
	TEMP. GREU, TL-3	3 @ 50 FT		150																							
	TEMP. TYPE III	2 @ 18.75		37.5																							
ANCHOR TOTALS				187.5																							
GRAND TOTALS				62.5																							
															2	3											
SAY				75											2	3											