STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF EARTHWORK
IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
–L– 19+75.00 TO 24+00.38 (BEGIN BRIDGE)	88		751	663	
–L– 25+57.42 (END BRIDGE) TO 29+75.00	24		1156	1132	
SUBTOTAL	112		1907	1795	
MATERIAL FOR SHOULDER CONSTRUCTION			18	18	
LOSS DUE TO CLEARING & GRUBBING					
ADDITIONAL UNDERCUT					
SELECT GRANULAR MAT'L IN LIEU OF BORROW					
PROJECT TOTAL	112		1925	1813	
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT				91	
GRAND TOTAL	112		1925	1904	
SAY	130			2100	

Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

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

PER "GEOTECHNICAL REPORT – DESIGN AND CONSTRUCTION RECOMMENDATIONS" DATED APRIL 30, 2019.
ESTIMATED UNDERCUT = 300 CY (CONTINGENCY, AS DIRECTED BY THE ENGINEER)
SELECT GRANULAR MATERIAL = 300 CY (CONTINGENCY, TO BE USED AS UNDERCUT AREAS BACKFILL)
GEOTEXTILE FOR SOIL STABILIZATION = 300 SY (CONTINGENCY, AS DIRECTED BY THE ENGINEER)
ROCK EMBANKMENTS (–L– STA 23+15.00 TO 24+10.00) = 150 TONS (SEE DETAIL SHEET 2G–1)
DDE = 320 CY

PAVEMENT REMOVAL SUMMARY
IN SQUARE YARDS

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	SY
–L–	19+75	23+25	LT	107
–L–	19+75	23+25	RT	87
–L–	23+25	24+17	CL	285
–L–	25+31	26+35	CL	337
–L–	26+35	29+75	LT	100
–L–	26+35	29+75	RT	114
			TOTAL:	1030
			SAY:	1040

SHOULDER BERM GUTTER SUMMARY

SURVEY LINE	STATION	STATION	LOCATION	LENGTH (LF)
–L–	23+41.00	23+70.88	LT	29.88
–L–	20+94.45	23+81.60	RT	287.15
–L–	25+76.20	25+94.86	LT	18.66
–L–	25+86.92	26+41.99	RT	55.07
			TOTAL:	390.76
			SAY:	391

"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 TYPE GREU, TL-3	ANCHORS B-77	IMPACT ATTENUATOR TYPE 350 EA	IMPACT ATTENUATOR TYPE 350 G	IMPACT ATTENUATOR TYPE 350 NG	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
–L–	20+85.62	23+95.02	LT	310.375'				20+85.62	8'	11'		50'		1'	1	1							
–L–	25+52.06	28+62.43	LT	310.375'			28+62.43		8'	11'	50'		1'		1	1							
–L–	20+44.15	24+05.74	RT	360.375'			20+44.15		8'	11'	50'		1'		1	1							
–L–	25+62.78	29+10.65	RT	347.875'				29+10.65	8'	11'		50'		1'	1	1							

		SUBTOTAL (LF)	1329.00'
		LESS ANCHORS (LF)	291.50'
		TOTAL GUARDRAIL (LF)	1037.50'
		SAY GUARDRAIL (LF)	1037.50'

ADDITIONAL GUARDRAIL POSTS: SAY 5 EA

	TYPE GREU, TL-3	B-77
TOTAL ANCHORS OR ATTENUATORS (EA)	4	4
ANCHOR UNIT LENGTH (LF)	50'	22.875'
DEDUCTION PER TYPE (LF)	200'	91.5'
TOTAL DEDUCTION (LF)	291.50'	