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12/06/07

COMPUTED BY: CLR DATE: 5/2/2023
CHECKED BY: BEP DATE: 5/4/2023

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
R-5799	3B-1

RS&H
NC FIRM LICENSE No: F-0483

SUMMARY OF EARTHWORK
IN CUBIC YARDS

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +%	BORROW	WASTE
PHASE I						
-Y2- 12+00.00 RT	-Y2- 27+10.00 RT	53		4,043	3,990	0
-Y2- 12+00.00 LT	-Y2- 27+10.00 LT	303		4,930	4,627	0
SUBTOTAL:		356		8,973	8,617	0
PHASE II STEP 1						
-L- 9+32.51 MED & LT	-L- 14+30.66 MED & LT	31		366	335	0
-Y1- 10+37.18 RT	-Y1- 16+80.00 RT	130		365	235	0
SUBTOTAL:		161		731	570	0
PHASE II STEP 2						
-L- 14+28.63 LT	-L- 14+88.93 LT	2		5	3	0
-Y1- 10+37.18 LT	-Y1- 16+80.00 LT	9		1,312	1,303	0
SUBTOTAL:		11		1,317	1,306	0
PHASE III						
-L- 7+00.00 MEDIAN	-L- 12+87.58 MEDIAN	74		193	119	0
-L- 14+50.00 MEDIAN	-L- 18+05.93 MEDIAN	47		294	247	0
-L- 19+24.22 MEDIAN	-L- 22+65.00 MEDIAN	51		568	517	0
-L- 23+82.00 MEDIAN	-L- 26+04.28 MEDIAN	0		140	140	0
-Y3- 10+85.01 LT	-Y3- 11+85.34 LT	31		62	31	0
SUBTOTAL:		203		1,257	1,054	0
PHASE IV						
-L- 7+00.00 RT	-L- 18+21.73 RT	75		812	737	0
-L- 19+56.61 RT	-L- 21+00.00 RT	8		166	158	0
-L- 23+86.93 RT	-L- 27+91.03 RT	2		1,324	1,322	0
-L- 29+31.05 RT	-L- 32+66.00 RT	55		813	758	0
-Y2- 10+85.01 LT	-Y2- 12+00.00 LT	0		163	163	0
-Y2- 10+85.01 RT	-Y2- 11+73.42 RT	1		346	345	0
-Y4- 10+84.87	-Y4- 12+85.00	10		1,789	1,779	0
-SL1- 10+16.80	-SL1- 11+94.72	2		214	212	0
SUBTOTAL:		153		5,627	5,474	0

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +%	BORROW	WASTE
PHASE V						
-L- 7+00.00 LT	-L- 17+76.80 LT	257		1,197	940	0
-L- 19+09.66 LT	-L- 22+46.93 LT	33		267	234	0
-L- 23+86.93 LT	-L- 27+91.03 LT	1,110		39	0	1,071
-L- 29+31.05 LT	-L- 32+66.00 LT	121		7	0	114
-Y3- 10+85.01 RT	-Y3- 17+20.00 RT	273		423	150	0
-Y3- 10+85.01 LT	-Y3- 17+20.00 LT	197		483	286	0
-Y5- 10+84.78	-Y5- 12+75.00	1,770		9	0	1,761
-SL2- 10+29.91	-SL2- 12+07.60	94		350	256	0
SUBTOTAL:		3,855		2,775	1,866	2,946
PHASE VI STEP 3						
-L- 24+58.89 MED	-L- 27+43.39 MED	0		197	197	0
-RA1- 10+00.00 MED	-RA1- 13+45.58 MED	0		1,686	1,686	0
-RA2- 10+00.00 MED	-RA2- 13+45.57 MED	0		1,688	1,688	0
SUBTOTAL:		0		3,571	3,571	0
PROJECT TOTALS:		4,739		24,251	22,458	2,946
LOSS DUE TO CLEARING & GRUBBING		-150			150	
ADDITIONAL UNDERCUT						
WASTE IN LIEU OF BORROW						-2,946	-2,946
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					983	
GRAND TOTALS:		4,589		24,251	20,645	
SAY:		5,280			23,750	

200 TONS INCIDENTAL STONE (CONTINGENCY PROVIDED BY DIVISION)
EST. SHALLOW UNDERCUT = 500 CY
CLASS IV SUBGRADE STABILIZATION = 1,000 TONS
PER GEOTECH RECOMMENDATION, ESTIMATED 1,450 CY OF UNDERCUT TO BE USED AT THE DISCRETION OF THE RESIDENT ENGINEER

Earthwork quantities are calculated by the roadway designer. These earthwork quantities are based in part on subsurface data provided by the geotechnical designer.

"Note: Approximate quantities only. Unclassifed excavation, fine grading, clearing and grubbing, and removal of existing pavement will be paid for at the contract lump sum price for grading."

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	YD^2
-L-	7+00	29+60	2431.04
-RA1-	10+00	13+46	1134.11
-RA2-	10+00	13+46	999.61
-Y1-	10+44	16+60	150.65
-Y2-	10+93	24+67	1888.84
-Y3-	10+95	15+67	1291.29
-Y4-	10+84	12+85	121.29
-Y5-	10+83	12+76	314.47
		TOTAL:	8,331.31
		SAY:	8,340

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL BERM WIDTH = DISTANCE FROM FACE OF CURB 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 BERM WIDTH	FLARE LENGTH		W		ANCHORS								IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GREU TL-2	GREU TL-3	CAT-1	TYPE-III	TYPE-III SC				EA	G	NG				
-L-	9+32.24	12+78.46	LT	343.75			12+50.00	9+39.76	14.0	14.0	0	0	0	0	1		1												TRAILING END CONTROLLED BY PROPOSED DRIVEWAY
-L-	16+42.28	17+89.38	MED-LT	143.75			N/A	17+89.38	0.75	VARIES	0	25	0	.5	1			1											END BRIDGE
-L-	16+57.80	18+05.50	MED-RT	143.75			18+05.50	N/A	0.75	VARIES	25	0	.5	0	1			1											BEGIN BRIDGE
-L-	17+01.95	17+75.67	LT	75			N/A	17+75.67	2.0	6.0	0	0	0	0			1	1											END BRIDGE
-L-	17+49.06	18+21.73	RT	68.75			18+21.73	N/A	2.0	6.0	25	0	.5	0	1			1											BEGIN BRIDGE
-L-	19+09.96	20+07.63	LT	93.75			19+09.96	N/A	2.0	6.0	25	0	.5	0	1			1											BEGIN BRIDGE
-L-	19+24.22	20+71.88	MED-LT	143.75			19+24.22	N/A	0.75	VARIES	25	0	.5	0	1			1											BEGIN BRIDGE
-L-	19+40.35	20+87.37	MED-RT	143.75			N/A	19+40.35	0.75	VARIES	0	25	0	.5	1			1											END BRIDGE
-L-	19+56.61	20+17.77	RT	62.5			N/A	19+56.61	2.0	6.0	0	0	0	0			1	1											END BRIDGE
-L-	24+71.29	25+30.47	RT	56.25			25+00.00	N/A	2.0	10.0	25	0	.5	0	1		1												APPROACH END CONTROLLED BY PROPOSED CURB RAMP
-L-	30+48.10	31+20.24	RT	68.75			31+50.00	32+66.00	2.0	6.0	25	0	.5	0	1		1												TRAILING END CONTROLLED BY PROPOSED DRIVEWAY
-L-	31+49.84	32+59.06	RT	106.25			31+50.00	32+66.00	2.0	6.0	25	0	.5	0	1		1												TRAILING END CONTROLLED BY END PROJECT
-Y1-	11+88.81	12+57.79	LT	68.75			31+50.00	12+00.00	2.0	15.5	25	0	.5	0	1		1												APPROACH END CONTROLLED BY PROPOSED DRIVEWAY
-Y2-	15+42.30	18+25.20	LT	275			18+00.00	15+41.73	2.0	10.5	25	0	.5	0	2														APPROACH END CONTROLLED BY PROPOSED DRIVEWAY
-Y2-	16+75.33	18+20.77	RT	137.5			17+31.69	17+62.71	2.0	11.5	25	0	.5	0	2														APPROACH END CONTROLLED BY PROPOSED DRIVEWAY
-Y2-	18+62.22	24+30.01	LT	568.75			23+00.00	19+00.00	14.0	14.0	0	0	0	0		1	1												TRAILING END CONTROLLED BY PROPOSED DRIVEWAY
-Y2-	23+32.46	27+12.42	RT	375	18.75		24+50.00	N/A	14.0	14.0	0	0	0	0		1			1										APPROACH END CONTROLLED BY PROPOSED DRIVEWAY; TIE TO R-5605 GUARDRAIL
-Y4-	11+28.16	12+23.50	RT	87.5			11+31.24	12+24.48	2.0	7.5	25	0	.5	0	2														APPROACH END CONTROLLED BY PROPOSED CURB RAMP; TRAILING END CONTROLLED BY PROPOSED DRIVEWAY
			SUBTOTALS	2962.5																									
			ANCHOR DEDUCTION	743.75																									
			TOTAL	2218.75	18.75																								
			SAY	2250	25																								

ANCHOR DEDUCTION
GREU TL-2: 17 @ 25' = 425'
GREU TL-3: 2 @ 50' = 100'
TYPE-III: 8 @ 18.75' = 150'
CAT-1: 8 @ 6.25' = 50'
TYPE III SHOP CURVE: 1 @ 18.75' = 18.75'
GRAND TOTAL = 743.5'
ADDITIONAL GUARDRAIL POSTS = 10

26-JUN-2023 15:01
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