COMPUTED BY: C. HARRIS DATE: 09/27/17
CHECKED BY: H. BARE DATE: 11/10/17

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
B-5161	3B-1

HDR Engineering, Inc. of the Carolinas
555 Fayetteville St, Suite 900 Raleigh, N.C. 27601
N.C.B.E.L.S. License Number: F-0116

REVISIONS

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	EMBANK. + %	BORROW	WASTE
-L- STA. 10+50.00 TO STA. 14+32.81 (BEGIN BRIDGE)	128	2,964	2,836	0
-Y- STA. 10+17.23 TO STA. 10+90.00	11	36	25	0
SUBTOTAL	139	3,000	2,861	0
-L- STA. 15+95.19 (END BRIDGE) TO STA. 23+00.00	327	11,767	11,440	0
-DR1- STA. 10+11.15 TO STA. 11+12.00	2	433	431	0
SUBTOTAL	329	12,200	11,871	0
-GWY- STA. 10+76.43 TO STA. 11+15.00 (BEGIN BRIDGE EXCAVATION)	33			33
-GWY- STA. 11+90.00 (END BRIDGE EXCAVATION) TO STA. 12+15.94	25			25
SUBTOTAL	58			58
TOTAL	526	15,200	14,732	58
MATERIAL FOR SHOULDER CONSTRUCTION		142	142	
WASTE IN LIEU OF BORROW			-58	-58
PROJECT TOTAL	526	15,342	14,816	0
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT			740	0
GRAND TOTAL	526	15,342	15,556	0
SAY	600		15,600	0

ESTIMATED UNDERCUT EXCAVATION = 300 CY
ESTIMATED SELECT GRANULAR MATERIAL = 300 CY
ESTIMATED GEOTEXTILE FOR SOIL STABILIZATION = 300 SY
ESTIMATED DDE = 130 CY

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

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

SUMMARY OF PAVEMENT REMOVAL

IN SQUARE YARDS

LOCATION	ASPHALT REMOVAL	ASHPALT BREAK UP	CONCRETE REMOVAL	CONCRETE BREAK UP
-L- STA. 11+80 TO 12+60	211			
-L- STA. 12+60 TO 14+34(BEG BRIDGE)		413		
-L- STA. 15+94(END BRIDGE) TO 21+10		1,178		
-L- STA. 21+10 TO 21+55	103			
TOTAL	314	1,591		
SAY	320	1,600		

"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 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	XI MOD	XI	GREU TL-2	M-350	XIII	CAT-1	VI MOD	TYPE III	AT-1	EA	G	NG				
-L-	12+89.06	14+32.81 (BR)	RT	143.75'			13+70.00	14+32.81 (BR)	12'	14'	100'		3.25'				1					1								
-L-	13+51.56	14+32.81 (BR)	LT	81.25'			14+32.81 (BR)		7'	10'		37.5'		1.3'			1					1								
-L-	15+95.19 (BR)	19+26.44	RT	331.25'			15+95.19 (BR)	18+50.00	12'	14'	100'		6.5'				1					1								
-L-	15+95.19 (BR)	17+23.55	LT	118.75'	37.50'		17+00.00	15+95.19 (BR)	7'	10'		100'		2'								1	1							
		SUBTOTAL		675'												TOTAL:	3					4	1							
		DEDUCTIONS	GREU 350 @ 25'X3	-75'																										
			TYPE III @ 18.75'X4	-75'																										
			TYPE AT-1 @ 6.25'X1		-6.25'																									
		TOTAL		525'	31.25'																									
		SAY		550'	37.50'		ADDITIONAL GUARDRAIL POSTS = 5																							

6/21/00

2/26/2018
8:17:28 AM
P:\0_Proj\B5161_RDY_SUM.dgn