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12/06/07

COMPUTED BY: HEC	DATE: 1-10-2019
CHECKED BY: RHT	DATE: 2-28-2022

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
B-5893	3B-1

wsp
434 Fayetteville Street Suite 1500
Raleigh, NC 27601 - 919.836.4040
www.wspgroup.com
LICENSE NO. F-0891

ASPHALT PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
L	10+00	12+78	RT	318.14
L	13+01	18+01	RT	873.49
			TOTAL:	1191.63
			SAY:	1200

SHOULDER BERM GUTTER SUMMARY

SURVEY LINE	STATION	STATION	LENGTH
L (RT)	12+39.84	12+57.50	17.7
		TOTAL:	17.7
		SAY:	18

SUMMARY OF EARTHWORK
(CUBIC YARDS)

STATION	STATION	UNCL. EXCAV. CY	EMBANK. +% CY	BORROW CY	WASTE CY
10+00.00 -L-	12+68.38 -L-	3022	45		2977
13+10.63 -L-	18+01.49 -L-	23171	147		23024
10+11.05 -Y-	10+56.57 -Y-	129	3		126
SUBTOTALS 1:		26322	195		26127
HARD ROCK WASTE TO REPLACE EMBANKMENT					
ADJUST FOR ROCK SWELL					1
ELIMINATE EARTH SHRINKAGE FACTOR SINCE NOW ROCK					0
APPLY ROCK SWELL FACTOR TO PERM WASTED HARD ROCK					5072
APPLY EARTH SHRINKAGE FACTOR PERM WASTED HARD ROCK					4565
PROJECT TOTALS:		26322	195		35765
EST. 5% TO REPLACE TOP SOIL BORROW					
GRAND TOTALS:		26322	195		35765
SAY:		26400			

UNDERCUT EXCAVATION: 450 CY
SELECT GRANULAR MATERIAL: 400 CY
SHALLOW UNDERCUT: 100 CY

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

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

"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	B-77	TYPE III	CAT-1	VI MOD	BIC	AT-1	EA	G	NG				
L	12+36.13	12+68.38	LT	18.75	31.25			12+68.38 BRIDGE	5'-8.5"	8'-8.5"									1				1							
L	13+10.68	13+47.55	LT	31.25	43.75		13+10.63 BRIDGE		5'-8.5"	8'-8.5"									1				1							
L	12+10.18	12+68.38	RT	56.25			12+68.38 BRIDGE		5'-8.5"	8'-8.5"	25'-0"		0'-6"				1		1											
L	13+10.63	13+41.74	RT	25.0	25.0			13+10.63 BRIDGE	5'-8.5"	8'-8.5"									1				1							
L	16+34.35	17+88.28	RT	150.0	18.75		16+41.00	17+75.00									1						1				271			
			SUBTOTAL	281.25'	118.75'																									
			LESS DEDUCTIONS																											
			GREU TL-2 (2 x 25)=	50'																										
			AT-1 (4 x 6.25)=	6.25'	18.75'																									
			TYPE III (4 x 18.75)=	75'																										
			SUBTOTAL	131.25'	18.75'																									
			TOTALS	150.0'	100.0'																									
			SAY	150.0'	100.0'		ADDITIONAL GUARDRAIL POSTS = 5										2		4				4							

TEMPORARY 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	B-77	TYPE III	CAT-1	VI MOD	BIC	AT-1	EA	G	NG				
L	11+98	13+43	RT	145.0					3'-9.6"	6'-0"							2													
			SUBTOTAL	145.0'																										
			LESS DEDUCTIONS																											
			GREU TL-2 (2 x 25)=	50'																										
			SUBTOTAL	50'																										
			TOTALS	95.0'																										
			SAY	100.0'													2													

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