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12/06/07

COMPUTED BY: SLK DATE: 01/20/15
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WETHERILL ENGINEERING
1223 Jones Franklin Rd.
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
17BP.4.R.65	3

SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
-L- 13+22.00	-L- 15+30.81 (BEGIN BRIDGE)	9	89	80	
SUBTOTALS:		9	89	80	
-L- 16+08.19 (END BRIDGE)	-L- 18+12.00	3	124	121	
SUBTOTALS:		3	124	121	
PROJECT SUBTOTALS:		12	213	201	
LOSS DUE TO CLEARING & GRUBBING				10	
GRAND TOTALS:		12	213	211	
SAY:		25		225	

Note: Approximate quantities only. Unclassified Excavation, Borrow 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."

RIGHT OF WAY AREA DATA

PARCEL NO.	PROPERTY OWNERS NAMES	TOTAL ACREAGE	AREA TAKEN	AREA REMAINING RT.	AREA REMAINING LT.	PERM. DRAINAGE EASE.	PERM. UTILITY EASE.	TEMP. CONST. EASE.
1 (RIGHT)	KATHRYN H. EDWARDS & JOHN L. HOOKS		637.96 SF			196.58 SF		
1 (LEFT)	KATHRYN H. EDWARDS & JOHN L. HOOKS		473.05 SF					
2	TILLMAN FARMS LLC.		811.25 SF					
3	GEORGE L. HOOKS JR.		832.91 SF					

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
-L-	14+95	15+53	CL	123
-L-	15+87	16+38	CL	108
			TOTAL:	231
			SAY:	240

SHOULDER BERM GUTTER SUMMARY

SURVEY LINE	STATION	STATION	LENGTH
-L- RT.	14+95.00	15+19.81	24.81'
		TOTAL:	24.81'
		SAY:	26'

SUB-REGIONAL & REGIONAL LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48" & UNDER)

NOTE: Invert Elevations are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

STATION / SIZE / THICKNESS OR GAUGE	LOCATION (LT,RT, OR CL)	STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
-L- 15+00	LT.	401		106.6	103.4														
-L- 15+00	LT.	401	402		103.4	102.9			12'										
									12'										

STATION	C.S. PIPE 12" .064	15" .064	18" .064	24" .064	36" .079	42" .109	48" .109	R.C. PIPE (CLASS III) 15"	18"	24"	30"	36"	42"	48"	R.C. PIPE (CLASS IV) 12"	15"	18"	24"	30"	36"	42"	48"
-L- 15+00																						
-L- 15+00																						

STATION	**" R. C. PIPE (CLASS V)	**" R. C. PIPE CULVERTS, CONTRACTOR DESIGN PIPE	**" R. C. PIPE CULVERTS, CONTRACTOR DESIGN PIPE	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01, STD. 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YDS. R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	* TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. *FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02
-L- 15+00								1			
-L- 15+00											
								1			

STATION	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G		CONCRETE TRANSITIONAL SECTION CATCH BASIN	DROP INLET	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	T.B.D.I. STD. 840.35	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	M.H. FRAME & COVER STD. 840.54	T.B.J.B. STD. 840.34	CORR. STEEL ELBOWS NO. & SIZE	CONC. COLLARS CL. "B" C.Y. STD 840.72	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT.	REMARKS
-L- 15+00									1	1							
-L- 15+00																	
									1	1							

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I. (N.S.)	GRATED DROP INLET (NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

"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	SHOP CURVED	DOUBLE FACED	WARRANT POINT APPROACH END	TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH APPROACH END	TRAILING END	W APPROACH END	TRAILING END
-L-	14+56.70	15+30.81	LT.	75.00'				15+30.81	3'-11"	6'-11"		50'-0"		1'-0"
-L-	14+37.06	15+30.81	RT.	93.75'			15+30.81		3'-11"	6'-11"	50'-0"		1'-0"	
-L-	16+08.19	16+83.19	LT.	75.00'			16+08.19		3'-11"	6'-11"	50'-0"		1'-0"	
-L-	16+08.19	16+83.19	RT.	75.00'				16+08.19	3'-11"	6'-11"		50'-0"		1'-0"
			PROJECT SUBTOTAL	318.75'										
		LESS ANCHOR DEDUCTIONS		(-)275.00'										
			PROJECT TOTAL	43.75'										
			SAY	43.75'										
					ADDITIONAL GUARDRAIL POSTS = 5 EACH									

SURVEY LINE	LOCATION	ANCHORS XI MOD	TYPE III	GRAU TL-3	M-350	B-77	CAT-1	VI MOD	BIC	AT-1	IMPACT ATTENUATOR TYPE 350 EA	G	NG	SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
-L-	LT.		1	1													
-L-	RT.		1	1													
-L-	LT.		1	1													
-L-	RT.		1	1													
	PROJECT SUBTOTAL		4	4													

GUARDRAIL ANCHOR DEDUCTIONS
TYPE III = 4 @ 18.75' = 75'
GRAU TL-3 = 4 @ 50' = 200'
TOTAL DEDUCTIONS = 275'

$$$$$$SYSTIME$$$$$ $$$$$$$DGN$$$$$$$$$$$$$$$$ $$$$$USERNAME$$$$$