COMPUTED BY: DBG	DATE: 12/13/13
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PLANS PREPARED BY :
PARSONS
RALEIGH, NORTH CAROLINA, (919) 854-1345
NC LICENSE NO. F-0246
FOR NORTH CAROLINA DEPT. OF TRANSPORTATION

PROJECT REFERENCE NO.	SHEET NO.
B-5164	3-A

SUMMARY OF EARTHWORK
(in cubic yards)

STATION	STATION	UNCL. EXCAV.	UNDERCUT	EMBANK. +%	BORROW	WASTE
13+70.00 -L-	15+05.81 -L-	7		38	31	
	BEGIN BRIDGE					
SUBTOTALS:		7		38	31	
16+23.19 -L-	17+60.00 -L-	46		11		36
END BRIDGE						
SUBTOTALS:		46		11		36
PROJECT TOTALS:		53		49	31	36
WASTE IN LIEU OF BORROW					–31	–31
GRAND TOTALS:		53		49	0	4
SAY:		60				

UNDERCUT = 200 CY PER GEOTECHNICAL RECOMM. DATED 8/28/2012
SHALLOW UNDERCUT = 100 CY PER GEOTECHNICAL RECOMM. DATED 8/28/2012
SELECT GRANULAR MATERIAL = 200 CY PER GEOTECHNICAL RECOMM. DATED 8/28/2012
CLASS IV SUBGRADE STABILAIZTION = 200 TON PER GEOTECHNICAL RECOMM. DATED 8/28/2012

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

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.

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
–L–	14+82	15+25	CL	78.12
–L–	16+10	16+47	CL	66.10
			TOTAL:	144.22
			SAY:	150

SHOULDER BERM GUTTER SUMMARY

SURVEY LINE	STATION	STATION	LENGTH
–L– LT.	16+34.19	16+50.00	15.81
–L– RT.	16+34.19	16+50.00	15.81
		TOTAL:	31.62
		SAY:	32

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".

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

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
16+45 –L–	RT	0401		342.8															
16+45 –L–	CL	0401	0402		339.83	339.74													
16+45 –L–	LT	0402		342.8															
16+45 –L–	LT	0402	0403		339.74	333.80			20							X			
TOTAL									20										

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"
16+45 –L–																						
16+45 –L–																28						
16+45 –L–																						
16+45 –L–																						
TOTAL																28						

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	FRAME, GRATES AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G		CONCRETE TRANSITIONAL SECTION CATCH BASIN	DROP INLET	FRAMES AND NARROW SLOT FLAT GRATES STD. 840.29		T.B.D.I. STD. 840.35				DRAINAGE PIPE 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
16+45 –L–								1										1		1								
16+45 –L–																												
16+45 –L–								1										1		1								
16+45 –L–																								2–15"				
TOTAL								2										2		2				2–15"				

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	ANCHORS XI MOD	XI	GRAU 350 (TL–3)	M–350	III	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–	14+24.56	15+05.81	RT	81.25			15+05.81		3'–11"	7	50		1				1		1											
–L–	14+24.56	15+05.81	LT	81.25				15+05.81	3'–11"	7		50		1			1		1											
–L–	16+23.19	17+04.44	RT	81.25				16+23.19	3'–11"	7		50		1			1		1											
–L–	16+23.19	17+04.44	LT	81.25			16+23.19		3'–11"	7	50		1				1		1											
			TOTAL	325																										
		DEDUCT FOR ANCHOR UNITS															4		4											
		GRAU 350 TL–3 4 @ 50' =		–200																										
		TYPE III 4 @ 18.75' =		–75																										
			TOTAL	50																										
			SAY	75			5 EA ADDITIONAL GUARDRAIL POSTS																							

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