COMPUTED BY: VT DATE: 8-15-13
CHECKED BY: LJ DATE: 8-15-13

PROJECT REFERENCE NO.	SHEET NO.
BD-5102Z	3A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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/PVC	CORRUGATED ALUMINUM 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- 14+97.49	LT	1			11.50	11.00								148		*			*																							
-L- 15+13.07	RT	2			15.00	13.50					148					*			*																							
-L- 15+09.00	LT	3		23.17	19.67																																				
-L- 15+09.00	RT	4		23.17	19.17																																				
-L- 15+09.00	CL	3	4		19.67	19.17																												26							
-L- 15+09.00	RT	4	OUT		19.17	17.15																												32							
-L- 17+04.55	LT	5		23.20	18.20																																				
-L- 17+04.55	RT	6		23.20	19.20																																				
-L- 17+04.55	CL	6	5		19.20	18.20																												26							
-L- 17+04.55	LT	5	OUT		18.20	17.15																												16							
TOTALS											148			148		*			*																100							

STATION / SIZE / THICKNESS OR GAUGE	*** 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 * TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL. 'B') LIN. FT. PER EACH (0' THRU 5.0')	5.0' THRU 10.0' A	10.0' AND ABOVE B	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	G.D.I. FRAME WITH GRATE STD. 840.22	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	T.B.D.I. STD. 840.35	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- 14+97.49																															
-L- 15+13.07																															
-L- 15+09.00								1														1		1							
-L- 15+09.00								1														1		1							
-L- 15+09.00																															
-L- 15+09.00																															
-L- 17+04.55								1														1		1							
-L- 17+04.55								1														1		1							
-L- 17+04.55																															
-L- 17+04.55																															
TOTALS								4														4		4							

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 (WITH ANCHOR DEDUCTIONS) STRAIGHT	SHOP CURVED	DOUBLE FACED	WARRANT POINT APPROACH END	TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH APPROACH END	TRAILING END	W APPROACH END	TRAILING END	ANCHORS TYPE 350	TYPE III	CAT-1							IMPACT ATTENUATOR TYPE 350 NO.	PERMITTED G	NG	SINGLE FACED GUARDRAIL	REMOVE AND RESET EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
-L-	14+83.09	15+58.09	LT	6.25	0			15+58.09	2.4	5.33		50		1.0	1	1														
-L-	14+90.54	15+65.54	RT	6.25	0		15+65.54		2.4	5.33	50		1.0		1	1														
-L-	16+53.32	17+28.32	LT	6.25	0		16+53.32		2.4	5.33	50		1.0		1	1														
-L-	16+60.77	17+35.77	RT	6.25	0			16+60.77	2.4	5.33		50		1.0	1	1														
TOTAL				25	0										4	4														

SUMMARY OF EARTHWORK
IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
-L- 12+00.00 - 15+61.93	0	0	1498	1498	0
-L- 16+56.93 - 19+00.00	0	0	422	422	0
UNDERCUT (CONTINGENCY)		200	240	240	200
UNCLASSIFIED STRUCTURE EXCAVATION	200	0	0	0	200
SUB TOTAL	200	200	2160	2160	400
SAY	200	200	2160	2160	400

PAVEMENT REMOVAL SUMMARY
IN SQUARE YARDS

LINE	STATION - STATION	LOCATION	REMOVAL (SY)
-L-	15+49.80 - 15+73.48	CL	58
-L-	16+43.71 - 16+69.06	CL	58
TOTAL			116
		SAY	120

NOTE:

APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, STRUCTURE 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."

4/04/05
30-JUL-2015 13:21
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$$$$USERNAME$$$$