COMPUTED BY: JBJ	DATE: 08-27-2015
CHECKED BY: LHJ	DATE: 08-27-2015

PROJECT REFERENCE NO.	SHEET NO.
17BP.1.R.62	3-A

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

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

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	% MINIMUM REQUIRED SLOPE	DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE 12"	15"	18"	24"	30"	36"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
THICKNESS OR GAUGE																			
16+40.00	15.7	RT	0401							12									
TOTAL										12									

LINE & STATION	C.S. PIPE SIZE 12"	15"	18"	24"	30"	54"	C.S. PIPE THICKNESS OR GAUGE .064	.064	.064	.064	.079	.079	R.C. PIPE CLASS III 12"	15"	18"	24"	30"	60"	R.C. PIPE CLASS IV 12"	15"	18"
16+40.00																					
TOTAL																					

LINE & STATION	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A+(1.3 X B)) A: 0' THRU 5' EACH	B: 5' THRU 10' LIN. FT.	B: 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR 840.26	G.D.I. TYPE "B" STD. 840.18 OR 840.27	G.D.I. (W.S. FLAT) FRAME W/2 GRATES STD. 840.20	T.B.D.I. STD. 840.35	CY CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN.FT. LIN. FT.	REMARKS
16+40.00						1													1	1		TB 2GI
TOTAL						1													1	1		

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

"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	LENGTH SHOP CURVED	LENGTH DOUBLE FACED	WARRANT POINT APPROACH END	WARRANT POINT TRAILING END	"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH APPROACH END	FLARE LENGTH TRAILING END	W APPROACH END	W TRAILING END	ANCHORS XI MOD	TYPE III	GRAU 350 TL-2	M-350	XIII	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+47.53	15+22.53	LT	75.00'			BRIDGE		VAR.	VAR.		25.00'		1.00'		1	1													
-L-	16+17.07	16+65.00	RT	8.78'	47.66'			BRIDGE	VAR.	VAR.	25.00'		1.00'			1	1													
-L-	15+22.00	15+42.07	RT		45.87'			BRIDGE	VAR.	VAR.	25.00'		1.00'			1	1													
-L-	15+97.53	16+26.00	LT		45.21'		BRIDGE		VAR.	VAR.		25.00'		1.00'		1	1													
			TOTAL	83.78'	138.74'											4	4													
			DEDUCTION FOR ANCHORS	-68.75'	-75.00'										DEDUCTION FOR ANCHORS:		(GRAU 350 TL-3) 1 @ 50' = 50'													
			PROJECT TOTAL	15.03'	63.74'												(TYPE IIII) 4 @ 18.75' = 75'													
			SAY	25.00'	75.00'												(TYPE AT-1) 3 @ 6.25' = 18.75'													
			ADDITIONAL GUARDRAIL POST = 2 EACH														TOTAL DEDUCTIONS = 143.75'													

SUMMARY OF EARTHWORK

IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT+%	BORROW	WASTE
-L- 12+00.00 TO 15+32.30 (BEGIN BRIDGE)	464		837	373	
-L- 16+07.30 (END BRIDGE) TO 18+00.00	0		168	168	
-Y- 10+11.12 TO 11+80.00	17		194	177	
-Y1- 10+25.00 TO 11+36.67	1		23	22	
SUB-TOTAL	482		1222	740	
LOSS DUE TO CLEARING & GRUBBING					
PROJECT TOTAL	482		1222	740	
5% TO REPLACE TOP SOIL ON BORROW PIT				37	
GRAND TOTAL	482			777	
SAY	500			800	

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

REMOVAL OF EXISTING ASPHALT PAVEMENT

LINE	BEGIN STATION	END STATION	LOCATION	SQ. YD.
-L-	13+60.00	16+80.00	CL	328.53
-Y-	10+11.12	11+00.00	CL	197.75
			TOTAL	526.28
			SAY	530

BREAKING OF EXISTING ASPHALT PAVEMENT

LINE	BEGIN STATION	END STATION	LOCATION	SQ. YD.
-L-	14+18.00	15+32.30	CL	310.18
			TOTAL	310.18
			SAY	320

6/21/00

12/4/2015
R:\Roadway\Proj\Wash03_rdy_sum.dgn
lisa.macarthur