RALD158

COMPUTED BY: Allen Hodges, E.I. DATE: 5/17/2021

CHECKED BY: James Byrd, P.E. DATE: 5/17/2021

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-4906	3D-5

Note: Invert Elevations indicated 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 INCHES & UNDER)

LINE & STATION (SIZE / THICKNESS OR GAUGE)	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	42	48	DO NOT USE PVC	C. S. PIPE 12 .064	15 .064	18 .064	24 .064	30 .079	36 .079	
-L1- 76+62	24	RT	2610		11.9																			
-L1- 76+79	25	RT	2610	2612		6.6	6.3																	
-L1- 76+94	31	RT	2611	2612		9.0	8.4																	
-L1- 76+96	26	RT	2612		12.8																			
-L1- 77+68	22	RT	2612	2614		6.3	5.1																	
-L1- 78+40	23	RT	2614		11.4																			
-L1- 79+00	23	RT	2614	2615		5.1	4.1																	
-L1- 79+60	26	RT	2615		9.2																			
-L1- 80+46	25	RT	2615	2616		4.1	2.5																	
-L1- 81+34	26	RT	2616		8.8																			
-L1- 81+34	4	LT	2616	2613		2.5	2.1																	
-L- 52+24	26	LT																						
-L- 85+95	2	RT																						
-L- 87+30	25	RT																						
-L- 108+39	25	LT																						
-L- 108+90	24	LT																						
-L- 108+60	25	RT																						
-L- 109+87	25	RT																						
-L- 111+55	26	RT																						
-L- 112+21	24	LT																						
-L- 113+59	0	RT																						
-L- 116+54	26	RT																						
-L- 118+21	0	LT																						
-L- 118+13	24	RT																						
-L- 118+31	26	LT																						
-L- 119+22	26	RT																						
-L- 120+52	0	RT																						
-L- 120+72	24	RT																						
-L- 121+79	24	RT																						
-L- 125+77	0	RT																						
-Y2_REV- 16+05	41	RT																						
-L- 157+82	42	LT																						
-Y2_REV- 13+73	66	LT																						
-L- 160+95	26	RT																						
-L- 161+52	26	RT																						
-L- 162+09	26	RT																						
-L- 162+49	26	RT																						
-Y2_REV- 18+47	49	LT																						
-Y2_REV- 19+21	23	RT																						
-L- 194+54	23	LT																						
-L- 200+81	0	RT																						
-L1- 14+65	24	LT																						
-L1- 18+54	21	LT																						
-L1- 17+25	29	LT																						
-L1- 18+08	74	LT																						
-L1- 18+41	30	LT																						
-L1- 18+96	65	LT																						
-L1- 19+66	27	LT																						
SHEET TOTALS																								

LINE & STATION	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	MISC PIPE HERCP	WSP	28" x 20" CAAP	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (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)) 0' THRU 5' EACH	A 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	
-L1- 76+62																		1	0.3						
-L1- 76+79				32																					
-L1- 76+94		12																							
-L1- 76+96																		1	1.5						
-L1- 77+68				144																					
-L1- 78+40																		1	1.3						
-L1- 79+00				120																					
-L1- 79+60																		1	0.1						
-L1- 80+46				176																					
-L1- 81+34																		1	1.3						
-L1- 81+34				60																					
-L- 52+24																									
-L- 85+95																									
-L- 87+30																									
-L- 108+39																									
-L- 108+90																									
-L- 108+60																									
-L- 109+87																									
-L- 111+55																									
-L- 112+21																									
-L- 113+59																									
-L- 116+54																									
-L- 118+21																									
-L- 118+13																									
-L- 118+31																									
-L- 119+22																									
-L- 120+52																									
-L- 120+72																									
-L- 121+79																									
-L- 125+77																									
-Y2_REV- 16+05																									
-L- 157+82																									
-Y2_REV- 13+73																									
-L- 160+95																									
-L- 161+52																									
-L- 162+09																									
-L- 162+49																									
-Y2_REV- 18+47																									
-Y2_REV- 19+21																									
-L- 194+54																									
-L- 200+81																									
-L1- 14+65																									
-L1- 18+54																									
-L1- 17+25																									
-L1- 18+08																									
-L1- 18+41																									
-L1- 18+96																									
-L1- 19+66																									
SHEET TOTALS		12		532														5	4.5						

LINE & STATION	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 STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B.	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	BERM DITCH OUTLET STD. 850.10 (PER EACH)	BERM DITCH OUTLET STD. 850.11 (PER EACH)	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
-L1- 76+62			1	1																																					
-L1- 76+79																																									
-L1- 76+94																																									
-L1- 76+96			1	1																																					
-L1- 77+68																																									
-L1- 78+40																		1							1																
-L1- 79+00																																									
-L1- 79+60																		1							1																
-L1- 80+46																																									
-L1- 81+34																		1							1																
-L1- 81+34																																									
-L- 52+24																																								18	Remove 15" RCP
-L- 85+95																																								50	Remove 24" RCP
-L- 87+30																																								39	Remove 24" RCP
-L- 108+39																																								34	Remove 15" RCP
-L- 108+90																																								21	Remove 15" HDPE
-L- 108+60																																								30	Remove 15" HDPE
-L- 109+87																																								22	Remove 15" RCP
-L- 111+55																																								37	Remove 15" RCP
-L- 112+21																																								41	Remove 18" RCP
-L- 113+59																																								56	Remove 18" RCP
-L- 116+54																																								25	Remove 15" RCP
-L- 118+21																																								51	Remove 18" RCP
-L- 118+13																																								33	Remove 15" RCP
-L- 118+31																																								21	Remove 15" RCP
-L- 119+22																																								20	Remove 15" RCP
-L- 120+52																																								55	Remove 18" RCP
-L- 120+72																																								30	Remove 15" HDPE
-L- 121+79																																								54	Remove 15" RCP
-L- 125+77																																								48	Remove 24" RCP
-Y2_REV- 16+05																																								22	Remove 24" RCP
-L- 157+82																																								61	Remove 18" RCP
-Y2_REV- 13+73																																								34	Remove 12" RCP
-L- 160+95																																								25	Remove 18" RCP
-L- 161+52																																								23	Remove 18" CMP
-L- 162+09																																								18	Remove 15" RCP
-L- 162+49																																								18	Remove 15" RCP
-Y2_REV- 18+47																																								22	Remove 15" RCP
-Y2_REV- 19+21																																								22	Remove 15" RCP
-L- 194+54																																								26	Remove 15" RCP
-L- 200+81																																								65	Remove 48" CMP
-L1- 14+65																																								56	Remove 24" RCP
-L1- 18+54																																								183	Remove 24" RCP
-L1- 17+25																																								106	Remove 24" RCP
-L1- 18+08																																								106	Remove 15" RCP
-L1- 18+41																																								131	Remove 24" RCP
-L1- 18+96																																								69	Remove 15" RCP
-L1- 19+66																																								127	Remove 24" RCP
SHEET TOTALS			2	2														3							3															1799	

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