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T0SZJR-LAPTOP

COMPUTED BY:	Zachary Richard, PE	DATE:	3/23/2022
CHECKED BY:	David Petty, PE	DATE:	5/25/2022

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
A-0009CB	3D-4

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) 15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
L 312+40	79 LT	2707		2599.0															
		2707	2708		2596.0	2559.5	0.7												
L 311+65	100 RT	2708		2591.4															
		2708	2709		2559.5	2559.0	0.7												
L 312+39	79 RT	2710																	
L 313+50	45 RT	2711		2634.2															
		2711	2712		2631.4	2588.0	0.3												
L 313+40	43 LT	2713						48											
L 316+11	67 LT	2714		2672.3															
		2714	2715		2667.8	2652.4	1.2												
L 316+17	29 LT	2715		2658.0															
L 318+50	42 RT	2717		2678.1															
		2717	2718		2675.3	2670.5		72								X	X		
L 317+78	34 RT	2718		2673.7															
		2718	2719		2670.5	2659.6													
L 316+54	34 RT	2719		2662.8															
		2719	2720		2659.6	2652.0	0.7												
L 307+96	84 LT	2722																	
		2722	2701		2617.5	2591.8													
L 317+68	31 LT	2723							64										
L 322+21	30 LT	2801		2707.6															
		2801	2802		2706.3	2701.8		40							X				
L 321+80	22 LT	2802		2705.0															
		2802	2803		2701.8	2693.0													
L 320+75	22 LT	2803		2696.2															
		2803	2804		2693.0	2683.9													
L 319+57	22 LT	2804		2687.1															
		2804	2805		2683.9	2683.2	1.1	36								X	X		
L 323+85	52 LT	2806		2717.3															
		2806	2807		2714.3	2713.5													
L 323+85	42 RT	2807		2720.1															
		2807	2808		2713.5	2712.4	0.5					128							
L 323+79	171 RT	2808		2719.3															
		2808	2809		2712.4	2677.2	0.5												
L 326+05	34 RT	2810		2737.9															
		2810	2811		2734.7	2732.0		16							X				
L 329+14	35 LT	2812		2763.7															
		2812	2813		2759.4	2750.9	2.2		124							X	X		
L 327+90	30 LT	2813		2753.9															
		2813	2814		2750.9	2734.8	2.3												
L 330+75	28 LT	2815		2777.9															
		2815	2817		2775.1	2766.6	1.2	104								X	X		
L 329+71	59 LT	2816		2784.2															
		2816	2817		2779.7	2763.8	0.5												
L 329+72	27 LT	2817		2770.6															
		2817	2819		2763.8	2757.3													
L 330+09	42 RT	2818		2769.3															
		2818	2819		2766.5	2760.1	0.3	56							X				
L 329+50	42 RT	2819		2764.1															
		2819	2820		2757.3	2756.2	0.6							28		X	X		
SHEET TOTALS								372	188			128		28					

	C. S. PIPE .064	15	.064	18	.064	24	.064	30	.064	36	.064	42	.064	48	R. C. PIPE CLASS III 15	18	24	30	36	42	48	R. C. PIPE CLASS IV 15	18	24	30	36	42	36" CAA PIPE, 0.075" THICK	48" CAA PIPE, 0.105" THICK	36" WELDED STEEL PIPE 0.5" THICK, GRADE B, IN SOIL	36" WELDED STEEL PIPE 0.5" THICK, GRADE B, NOT IN SOIL	18" PIPE REHABILITATION CIPP LINER	24" PIPE REHABILITATION CIPP LINER	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY
L 312+40																																		2.800
																															96	96		
L 311+65																																		
										60																								
L 312+39																																		
L 313+50																																		
															116																			
L 313+40																																		
L 316+11																																		
																														40				
L 316+17																																		
L 318+50																																		
L 317+78																																		
																						124												
L 316+54																																		
		48																																
L 307+96																																		
				56																														
L 317+68																																		
L 322+21																																		
L 321+80																																		
																						100												
L 320+75																																		
																						112												
L 319+57																																		
L 323+85																																		3.400
																			96															
L 323+85																																		
L 323+79																																		
										104																								
L 326+05																																		
L 329+14																																		
L 327+90																																		
				100																														
L 330+75																																		
L 329+71																																		
												32																						
L 329+72																																		
																					72													
L 330+09																																		
L 329+50																																		
SHEET TOTALS	164	156			164		32												96		72	336							40	96	96			6.200

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.	4-SIDED OTCB, SEE DETAIL SHEET 2D-1	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, 840.26, OR 840.45	G.D.I. TYPE "B" STD. 840.18, 840.27, OR 840.45	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	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	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	6" PVC PIPE (SPRING BOX)	SPRING BOX STD. 840.41	6" HDPE PIPE (LF)	M.H. FRAME AND COVER STD. 840.54	TB PRECAST DRAINAGE STRUCTURE STD. 840.46	PRECAST 4' DIA MH STD 840.52	CONTRACTOR DESIGN 4' DIA MH OVER 30'	T.B. G.D.I TYPE "A" SEE SHEET 2D-3	CONVERT EXISTING D.I. TO J.B. SEE SHEET 2D-2	ADJUST D.I.	MIN DEPTH TYPE A SPECIAL DSN SEE SHEET 2D-7	15" C.S. ELBOW, 0.064" THICK	18" C.S. ELBOW, 0.064" THICK	24" C.S. ELBOW, 0.064" THICK	30" C.S. ELBOW, 0.064" THICK	36" C.S. ELBOW, 0.064" THICK	42" C.S. ELBOW, 0.064" THICK	48" C.S. ELBOW, 0.064" THICK	48" C.A.A. ELBOW, 0.105" THICK	BERM DRAINAGE OUTLET STD. 850.10 (SY)	BERM DRAINAGE OUTLET STD. 850.11 (SY)	BERM DRAINAGE OUTLET 36" DSN,SHT 2D-4 (SY)	BERM DRAINAGE OUTLET 42" DSN,SHT 2D-5 (SY)	BERM DRAINAGE OUTLET 48" DSN,SHT 2D-6 (SY)	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 312+40																																																		
L 311+65																												1			1																			
L 312+39	1																					40	1																											
L 313+50	1						1				1																																							
																																		2																
L 313+40																																																		
L 316+11																																																		
																																									1									
L 316+17	1	1.6									2																	1																					
L 318+50	1							1			1																																							
L 317+78	1									1					1																																			
L 316+54	1									1					1																																			
L 307+96																																											11								
L 317+68																																																		
L 322+21																																																		
L 321+80	1									1					1																																			
L 320+75	1									1					1																																			
L 319+57	1									1					1																																			
L 323+85																																																		
L 323+85	1	1.6						1		1																																								
L 323+79	1	1.9						1		1																																								
L 326+05	1									1					1																																			
L 329+14	1						1				1	1																																							
L 327+90	1							1			1																																							
																																		2																
L 330+75	1							1			1																																							
L 329+71																																																		
																																											1								
L 329+72	1	1.8						1			1																																							
L 330+09	1							1			1																																							
L 329+50	1	1.8						1			1																																							
SHEET TOTALS	18	8.7					3	7		8	1	10			6	40	1		1			1				1	2	3			2		1	1	11				62					

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