COMPUTED BY: MKD DATE: 09/13/2021

CHECKED BY: WDY DATE: 09/14/2021

RAL-2TK9470H0P

PROJECT NO.	SHEET NO.
U-2579AB	3D-23

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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 %	Side Drain Pipe (RCP, CSP, CAAP, HDPE, PVC, or PP PIPE) 15	18	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC	DO NOT USE PP PIPE	C. S. PIPE 15 .064	18 .064	24 .064	30 .079	36 .079	42 .109
Y15 152+55	149 RT	2206		909.5																	
		2206	2205		907.0	900.9	0.9												32		
Y15 156+34	103 LT	2214		911.7																	
		2214	2213		908.7	907.1	1.1														
Y15 156+88	1 LT	2216		916.2																	
		2216	2220		912.7	904.3															
Y15 157+94	84 RT	2217		919.6																	
		2217	2218		916.4	904.3				x			x	x	x		40				
Y15 156+88	3 RT	2219		916.3																	
		2219	2216		912.8	912.7															
Y15 152+00	1 LT	2220		907.1																	
		2220	2225		904.3	895.7															
Y15 159+50	103 LT	2221		917.3																	
		2221	2214		914.3	908.7	0.6														
Y15 157+58	84 RT	2222		919.6																	
		2222	2217		916.8	916.6															
		2223	2224							x			x	x	x	44					
Y15 156+50	126 LT	2224																			
Y15 147+50	1 LT	2225		899.1																	
		2225	2123		895.6	888.1															
Y15 147+50	3 RT	2226		899.1																	
		2226	2225		895.6	895.6															
Y15 149+75	84 LT	2227		902.4																	
		2227	2228		899.7	893.4											36				
Y15 162+00	94 RT	2302		923.3																	
		2302	2301		919.6	917.2															
Y15 162+84	1 LT	2303		927.3																	
		2303	2319		920.4	920.4															
Y15 173+31	76 LT	2306		934.4																	
Y15 173+37	1 LT	2307		937.8																	
Y15 173+37	3 RT	2308		937.8																	
Y15 168+35	146 LT	2311		920.9																	
		2311	2312		920.9	920.8															
Y15 169+39	1 LT	2313		935.7																	
Y15 169+39	3 RT	2314		935.7																	
Y15 169+37	76 RT	2315		932.5																	
UXRPC 19+17	50 RT	2317		927.1																	
UXRPC 19+22	59 RT	2318		927.2																	
		2318	2317		927.2	927.1															
Y15 162+84	3 RT	2319		927.4																	
Y15 168+00	76 RT	2320		933.0																	
		2320	2315		930.3	926.8															
Y15 171+00	94 RT	2321		932.0																	
		2321	2315		932.0	926.0															
UXRPB 16+50	47 LT	2323		929.5																	
		2323	2324		926.8	925.5	1.5														
UXRPB 13+51	25 LT	2325		930.0																	
		2325	2326		927.2	926.0															
UXRPB 13+51	46 LT	2326		926.0																	
UXRPC 17+78	25 RT	2327		935.2																	
SHEET TOTALS																44	76		32		

STRUCTURE FROM	STRUCTURE TO	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 15	18	24	30	36	42	48	R. C. PIPE CLASS V 42	24" WELDED STEEL PIPE	30" WELDED STEEL PIPE	42" WELDED STEEL PIPE	48" WELDED STEEL PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY
2206																						
2206	2205																					
2214																						
2214	2213			32																		
2216																						
2216	2220									484												
2217																						
2217	2218																					
2219																						
2219	2216		4																			
2220																						
2220	2225									448												
2221																						
2221	2214			316																		
2222																						
2222	2217		36																			
2223	2224																					
2224																						
2225																						
2225	2123									264												
2226																						
2226	2225		4																			
2227																						
2227	2228																					
2302																						
2302	2301		24																			
2303																						
2303	2319		4																			
2306																						
2307																						
2308																						
2311																						
2311	2312							20														
2313																						
2314																						
2315																						
2317																						
2318																						
2318	2317					12																
2319																						
2320																						
2320	2315		136																			
2321																						
2321	2315				164																	
2323																						
2323	2324		48																			
2325																						
2325	2326		24																			
2326																						
2327																						
SHEET TOTALS			280	348	164	12		20		1196												

STRUCTURE FROM	STRUCTURE TO	QUANTITIES FOR DRAINAGE STRUCTURES 0' THRU 5' EACH	5' THRU 10' (A) LIN. FT.	10' AND ABOVE (B) LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	D.I. STD. 852.04 OR STD. 852.06 (CONCRETE TRANSITIONAL)	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	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 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	J.B. STD. 840.31 OR STD. 840.32	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
2206																									
2206	2205																								
2214		1												1				1							
2214	2213																								
2216		1	0.2																					1	1
2216	2220																								
2217		1												1		1									
2217	2218																								
2219		1	0.2																					1	1
2219	2216																								
2220		1																						1	1
2220	2225																								
2221		1												1				1							
2221	2214																								
2222		1												1		1									
2222	2217																								
2223	2224																								
2224																									
2225		1																						1	1
2225	2123																								
2226		1																						1	1
2226	2225																								
2227		1												1		1									
2227	2228																								
2302		1																			1				
2302	2301																								
2303		1	1.9																					1	1
2303	2319																								
2306		1	0.7										1					1							
2307		1																						1	1
2308		1																						1	1
2311																									
2311	2312																								
2313		1	5.0	1.7																				1	1
2314		1	5.0	1.5																				1	1
2315		1	2.5										1					1							
2317																									
2318																									
2318	2317																								
2319		1	2.0																					1	1
2320		1												1				1							
2320	2315																								
2321																									
2321	2315																								
2323		1												1				1							
2323	2324																								
2325		1												1		1									
2325	2326																								
2326																									
2327		1												1		1									
SHEET TOTALS		23	17.5	3.2									2	9		5		6			1			11	11

NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)

STRUCTURE FROM	STRUCTURE TO	PIPE CLEANOUT (PER EACH)	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.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW	42" C.S. ELBOW	BERM DITCH OUTLET STD. 850.10 (PER EACH)	##" SLUICE GATE (##" SIZE SLUICE GATE)	TRASH RACK	PREFORMED SCOUR HOLE (PER EACH)		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
2206														1						1.3120		
2206	2205										2								3			
2214																						
2214	2213																					
2216																						
2216	2220																					
2217																						
2217	2218								2													
2219																						
2219	2216																					
2220																						
2220	2225																					
2221																						
2221	2214																					
2222																						
2222	2217																					
2223	2224							2														
2224														1								BDO
2225																						
2225	2123																					
2226																						
2226	2225																					
2227																						
2227	2228																					
2302																						
2302	2301																		3		504	504' PIPE REMOVAL FOR ALL OF SHEET 23
2303																						
2303	2319																		2			
2306																						
2307																						
2308																						
2311		1																		0.8856		COLLAR AND EXTEND
2311	2312																					
2313																						
2314																						
2315						1																
2317																				0.6560		COLLAR AND EXTEND
2318																						
2318	2317																					
2319																						
2320																						
2320	2315																					
2321																						
2321	2315																					
2323																						
2323	2324																					
2325																						
2325	2326																					
2326																	1					
2327																						
SHEET TOTALS		1				1		2	2		2			2			1		8	2.8536	504	

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