COMPUTED BY: KAP DATE: 10/3/2016

CHECKED BY: DZK DATE: 10/3/2016

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-4753	3D-1

R0248621

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)

STATION	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) SIZE 12"	15"	18"	24"	30"	36"	42"	48"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	C.S. PIPE SIZE 12"	15"	18"	24"	30"	36"	42"	48"	C.S. PIPE THICKNESS OR GAUGE .064	.064	.064	.064	.079	.079	.109	.109	R.C. PIPE CLASS III SIZE 12"	15"	18"	24"	30"	36"	42"	48"	R.C. PIPE CLASS IV SIZE 12"	15"	18"	24"	30"	36"	42"	48"
18+00 -L-	RT	431		2133.0'																																															
18+84 -L-	RT	431	428		2129.9'	2128.3'																																						164							
19+67 -L-	RT	428		2131.5'																																															
19+79 -L-	RT	428	429		2128.3'	2127.9'																																						20							
19+91 -L-	RT	429		2131.6'																																															
19+88 -L-	LT	401		2129.8'																																															
19+90 -L-	C/L	401	429		2125.9'	2125.5'																																									40						
19+92 -L-	RT	429	402		2125.5'	2109.9'																		20																												
20+20 -L-	RT	430	429		2128.3'	2127.9'																																						56							
20+50 -L-	RT	430		2131.4'																																															
23+49 -L-	C/L	403	424		2123.1'	2115.4'																																													
23+45 -L-	RT	424		2129.2'																																															
23+49 -L-	RT	424	425		2115.4'	2107.8'																																													
24+48 -L-	LT	404																																																	
26+22 -L-	LT	405																																																	
26+35 -L-	RT	426		2128.5'																																															
26+35 -L-	RT	426	427		2125.4'	2121.7'														16																															
28+60 -L-	C/L	407	422		2123.9'	2120.1'																	44																												
28+60 -L-	RT	422		2123.6'																																															
28+60 -L-	RT	422	423		2120.1'	2110.8'																	20																												
29+73 -L-	RT	420		2121.9'																																															
30+13 -L-	RT	420	421		2118.7'	2118.0'																																						76							
30+53 -L-	LT	408		2123.8'																																															
30+53 -L-	C/L	408	421		2120.4'	2118.0'																																							32						
30+53 -L-	RT	421		2121.4'																																															
30+53 -L-	RT	421	409		2118.0'	2117.0'																	16																												
31+15 -L-	LT	410																																																	
31+15 -L-	LT	410	411		2155.6'	2119.3'																		20																												
31+25 -L-	LT	411		2123.7'																																															
31+28 -L-	C/L	411	413		2119.3'	2118.0'																																										32					
31+30 -L-	RT	413		2122.5'																																															
31+30 -L-	RT	413	412		2118.0'	2116.3'																			20																											
31+77 -L-	LT	411	501		2119.3'	2121.8'																																							104							
32+30 -L-	LT	501		2125.2'																																															
32+70 -L-	LT	501	503		2121.8'	2124.5'																																							76							
33+10 -L-	LT	503		2127.9'																																															
33+15 -L-	LT	502	503		2129.9'	2124.5'														16																															
33+69 -L-	LT	503	504		2124.5'	2129.5'																																						116							
34+28 -L-	LT	504		2133.1'																																															
34+28 -L-	C/L	504	519		2129.5'	2129.7'																																						36							
34+28 -L-	RT	519		2131.6'																																															
37+90 -L-	RT	520		2135.1'																																															
37+95 -L-	C/L	520	517		2133.1'	2132.0'																																						36							
38+00 -L-	LT	517		2135.2'																																															
SHEET TOTALS																				**32**	**80**	**40**	**20**			**48**																		**504**	**212**	**40**	**32**				

STATION	15" R.C. PIPE CLASS V	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	48" WELDED STEEL PIPE, 0.638" THICK, GRADE B IN SOIL	48" WELDED STEEL PIPE, 0.688" THICK, GRADE B NOT IN SOIL	ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	ENDWALLS CU. YARDS C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0 THRU 5.0)	LIN. FT. A 5.0 THRU 10.0	LIN. FT. B 10.0 AND ABOVE	"TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. A + (1.3 X COL.B)"	SPECIAL TB.J.B (SEE DETAIL SHEET 2C-1)	OTCB STD. 840.04 OR 840.05	T.B.J.B. STD. 840.34	M.H. FRAME AND COVER STD. 840.54	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. TYPE "D" STD. 840.19 OR 840.28	T.B.D.I. STD. 840.35	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.29	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.29	G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	C.S. PIPE ELBOWS 15"	C.S. PIPE ELBOWS 18"	C.S. PIPE ELBOWS 24"	C.S. PIPE ELBOWS 36"	C.S. PIPE ELBOWS 48"	CONC. & BRICK PIPE PLUG. C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
18+00 -L-								1											1		1														
18+84 -L-																																			
19+67 -L-								1											1		1														
19+79 -L-																																			
19+91 -L-								1	1.1										1		1														
19+88 -L-								1											1		1														
19+90 -L-																																		---	REMOVE 18" CMP
19+92 -L-																																			
20+20 -L-																																			
20+50 -L-								1											1		1														
23+49 -L-				34	34		4.9																												TRENCHLESS INSTALL, 30" CMP FLOW. FILL
23+45 -L-								1	5	3.8									1		1														EXTRA DEPTH
23+49 -L-							4.9																						2						ENDWALL ON OUTLET
24+48 -L-	40																																	35	REMOVE 18" CMP
26+22 -L-	32																																		
26+35 -L-								1											1		1														
26+35 -L-																								2											
28+60 -L-																																		---	REMOVE 18" CMP & HW
28+60 -L-								1											1		1														
28+60 -L-																								2											
29+73 -L-								1											1		1														
30+13 -L-																																			
30+53 -L-								1									1				1														
30+53 -L-																																		41	REMOVE 18" CMP
30+53 -L-								1											1		1														
30+53 -L-																																			
31+15 -L-								1								1						1	1												
31+15 -L-																																			
31+25 -L-								1									1				1														
31+28 -L-																																		41	REMOVE 24" CMP, ROCK DI & HW
31+30 -L-								1											1		1														
31+30 -L-																																			
31+77 -L-																																			
32+30 -L-								1									1				1														
32+70 -L-																																		17	REMOVE 18" CMP
33+10 -L-								1									1				1														
33+15 -L-																																			BERM DITCH OUTLET REQD
33+69 -L-																																			
34+28 -L-								1									1				1														
34+28 -L-																																			
34+28 -L-								1											1		1														
37+90 -L-								1											1		1														
37+95 -L-																																			
38+00 -L-								1									1				1														
SHEET TOTALS	**72**		**34**	**34**			**9.8**	**20**	**6.1**	**3.8**						**1**	**6**		**13**		**19**	**1**	**1**		**2**	**2**			**2**				**134**	

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.)	(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