COMPUTED BY: MTP	DATE: 11/9/2012
CHECKED BY: TEH	DATE: 3/14/2015

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-2514D	3D-4

RD24062

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	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE												C.S. PIPE SIZE								R.C. PIPE CLASS III SIZE								R.C. PIPE CLASS IV 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	.064	.064	.064	.064	.079	.079	.109	.109	12"	15"	18"	24"	30"	36"	42"	48"	12"	15"	18"	24"	30"	36"	42"	48"
THICKNESS OR GAUGE		FROM	TO																																						
-L- 434+75	RT	1309	1310		55.38	55.19																																64			
-L- 434+75	RT	1310		59.61																																					
-L- 434+75	RT	1310	1311		55.19	34.80			76							X																									
-L- 437+00	LT	1412		54.98																																					
-L- 437+00	LT	1412	1413		51.81	34.20			64							X																									
-L- 438+50	RT	1414		51.81																																					
-L- 438+50	RT	1414	1415		48.64	34.00			56							X																									
-L- 441+90	RT	1405		44.64																																					
-L- 442+00	LT	1402		44.82																																					
-L- 442+02	RT	1405	1406		41.47	41.00																																24			
-L- 442+12	LT	1402	1403		41.65	41.57																																24			
-L- 442+14	RT	1406		44.17																																					
-L- 442+14	RT	1406	1407		41.00	32.00			40							X																									
-L- 442+24	LT	1403		44.75																																					
-L- 442+24	LT	1403	1404		41.57	33.80			36							X																									
-L- 444+50	CL	1408		38.30																																					
-L- 444+50	LT	1408	1409		35.55	33.10																																88			
-L- 445+19	CL	1410	1411		31.00	31.00																																			
-L- 450+17	CL	1501		34.30																																					
-L- 450+17	RT	1501	1502		31.30	29.68																																			
-L- 450+29	CL	1506	1501		31.63	31.3																																24			
-L- 450+41	CL	1506		34.38																																					
-L- 456+83	LT	1503	1504		27.68	27.61																																			
-L- 457+07	CL	1504		36.29																																					
-L- 457+31	RT	1504	1505		27.61	27.55																																			
-L- 472+50	CL	1601		36.81																																					
-L- 472+50	RT	1601	1602		34.06	30.40																																84			
-L- 476+00	CL	1702		36.11																																					
-L- 476+00	RT	1702	1703		33.36	31.20																																80			
-L- 478+26	CL	1704	1705		32.90	31.00																																			
-L- 483+26	RT	1707	1708		33.24	32.80																																			
-L- 483+53	CL	1707		38.05																																					
-L- 483+70	LT	1706	1707		33.50	33.24																																			
-L- 490+96	CL	1801	1802		36.00	35.50																																			
-L- 494+38	CL	1803	1804		35.40	35.30																																			
-L- 498+48	CL	1805		39.37																																					
-L- 498+48	LT	1805	1806		37.20	36.10																																			
-L- 502+07	CL	1807	1901		35.00	34.50																																			
-L- 505+00	CL	1904	1905		36.80	35.70																																			
-L- 513+92	CL	1902		38.43																																					
-L- 513+92	RT	1902	1903		35.43	34.90																																			
-L- 518+15	CL	2004		42.80																																					
-L- 518+15	RT	2004	2006		40.05	39.87																																64			
-L- 518+15	RT	2006		44.93																																					
-L- 518+15	RT	2006	2007		39.87	35.60			28							X																									
-L- 518+27	RT	2005	2006		42.28	41.76																																24			
-L- 518+39	RT	2005		45.45																																					
-L- 519+30	LT	2002		47.67																																					
-L- 519+30	LT	2002	2003		44.50	35.00			40							X																									
-L- 519+42	LT	2001	2002		45.10	44.50																																24			
-L- 519+54	LT	2001		48.27																																					
-L- 520+20	CL	2008	2009		29.70	29.00																																			
-L- 535+08	LT	2104		46.63																																					
-L- 535+20	LT	2104	2105		43.46	42.94																																24			
-L- 535+32	LT	2105		46.11																																					
-L- 535+32	LT	2105	2106		42.94	35.70			32							X																									
-L- 535+56	RT	2107		45.62																																					
-L- 536+02	RT	2107	2108		42.45	40.88																																92			
-L- 536+47	RT	2108		44.05																																					
-L- 536+47	RT	2108	2109		40.88	34.30			32							X																									
-L- 535+95	CL	2102	2103		28.80	26.70																																			
-L- 539+16	CL	2110		40.12																																					
-L- 539+16	RT	2110	2111		37.95	37.10																																			
-L- 548+25	CL	2202		41.32																																					
-L- 548+25	RT	2202	2203		38.75	38.10																																			
SHEET 4 TOTALS									404																													616	444		432

STATION	** " R.C. PIPE (CLASS V)	*** " RC PIPE CULVERTS, CONTRACTOR DESIGN	**** " RC PIPE CULVERTS, CONTRACTOR DESIGN	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')	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATE 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. TYPE "D" STD. 840.19 OR 840.28	G.D.I. FRAME WITH TWO GRATES STD. 840.20	G.D.I. FRAME WITH GRATE STD. 840.22	G.D.I. FRAME WITH TWO GRATES STD. 840.22	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	SPECIAL 3GI, SEE DETAIL SHEET 2C-2	C.B. STD. 840.04 OR 840.05	T.B.D.I. STD. 840.36	T.B.D.I. STEEL FRAME WITH TWO GRATES STD. 840.37	BERM DRAINAGE OUTLET STD. 850.11	CONVERT EXIST. D.I. TO J.B.	MANHOLE FRAME AND COVER STD. 840.54	SPECIAL JB, SEE DETAIL SHEET 2C-2	SIDE DRAIN PIPE ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	CONC. COLLARS CL. "B" C.Y. STD. 840.72	PIPE REMOVAL LIN. FT.	REMARKS
-L- 434+75																																									
-L- 434+75						1													1		1																				
-L- 434+75																																						2 @ 15"			
-L- 437+00						1													1		1																				
-L- 437+00																																						2 @ 15"			
-L- 438+50						1													1		1																				
-L- 438+50																																						2 @ 15"			
-L- 441+90						1													1		1																				
-L- 442+00						1													1		1																				
-L- 442+02																																									
-L- 442+12																																									
-L- 442+14						1													1		1																				
-L- 442+14																																						2 @ 15"			
-L- 442+24						1													1		1																				
-L- 442+24																																						2 @ 15"			
-L- 444+50						1													1				1																		
-L- 444+50																																									
-L- 445+19				6.8																																					
-L- 450+17						1												1				1	1																		3 GI
-L- 450+17																																									
-L- 450+29																																									
-L- 450+41						1													1				1																		
-L- 456+83				3.4																																					
-L- 457+07						1	3.68												1				1																		
-L- 457+31																																									
-L- 472+50						1													1				1																		
-L- 472+50																																									
-L- 476+00						1													1			1	1																		3 GI
-L- 476+00																																									
-L- 478+26				3.4																																					
-L- 483+26																																									
-L- 483+53						1													1				1																		
-L- 483+70																																									
-L- 490+96				3.4																																					
-L- 494+38				3.4																																					
-L- 498+48						1												1				1	1																		3 GI
-L- 498+48																																									
-L- 502+07																																									
-L- 505+00																																									
-L- 513+92						1												1				1	1																		3 GI
-L- 513+92																																									
-L- 518+15						1													1				1																		
-L- 518+15																																									
-L- 518+15						1	0.06												1		1																				
-L- 518+15																																						2 @ 15"			
-L- 518+27																																									
-L- 518+39						1													1		1																				
-L- 519+30						1													1		1																				
-L- 519+30																																						2 @ 15"			
-L- 519+42																																									
-L- 519+54						1													1		1																				
-L- 520+20				3.4																																					
-L- 535+08						1													1		1																				
-L- 535+20																																									
-L- 535+32						1													1		1																				
-L- 535+32																																						2 @ 15"			
-L- 535+56						1													1		1																				
-L- 536+02																																									
-L- 536+47						1													1		1																				
-L- 536+47																																						2 @ 15"			
-L- 535+95				4.5																																					
-L- 539+16						1																	1	1			1														3 GI-D
-L- 539+16																																									
-L- 548+25						1														1			1																		2 GI-D
-L- 548+25																																									
SHEET 4 TOTALS				28.3		27	3.74											3	22	1	15	5	12			1								18 @ 15"				

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