RAL-SCG548309L

COMPUTED BY:	KYLE STOFFER	DATE:	9/15/2016
CHECKED BY:	ALEX SNIDER, PE	DATE:	10/04/2016

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5311A	3D-2

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, CAAP, HDPE, or PVC) 12	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
		0925	0926		50.9	45.0			60								X			
Y2LPD 14+27	14 RT	0927		51.1																
		0927	0928		47.8	46.1			36								X			
Y2LPD 14+97	85 LT	0908			45.9															
Y2LPB 15+40	91 LT	0907			48.0															
Y2LPB 16+11	14 RT	0929		58.0																
		0929	0930		53.8	48.7			52								X			
Y2LPB 14+81	14 RT	0931		53.1																
		0931	0932		49.9	48.2			36								X			
L2 15+67	65 LT	0935		47.3																
		0935	0936		45.3	45.2	0.3													
Y2LPB 11+18	18 RT	0936		51.4																
		0936	0937		45.2	44.9	0.3													
Y2 46+48	6 RT	0938		76.2																
		0938	0939		73.0	45.9			168							X	X			
Y2 54+78	6 LT	0940		75.2																
		0940	0941		71.9	44.1			136							X	X			
Y2RPB 13+65	3 RT	0945		59.9																
		0945	0929		56.8	54.7														
Y2RPB 12+15	5 RT	0946		55.1																
		0946	0931		51.9	49.9														
Y2RPD 11+88	4 RT	0947		52.4																
		0947	0927		49.3	47.8														
Y2RPD 13+37	3 RT	0948		57.3																
		0948	0925		54.1	51.9														
L2 18+50	69 LT	0953		48.2																
		0953	0950		46.2	45.6														
Y2 41+30	40 RT	1401		60.0																
		1401	1402		56.7	47.0	0.4		52							X	X			
Y2 41+30	28 LT	1403		60.2																
		1403	1404		57.0	47.0			52							X	X			
Y2 41+73	40 RT	1405		61.4																
		1405	1401		58.1	56.7														
Y2 54+18	150 LT	0951		47.5																
		0951	0944		45.5	44.7														
Y2 59+90	28 RT	1501		58.6																
		1501	1502		55.3	53.7														
Y2 60+40	27 RT	1502		56.9																
		1502	1503		53.7	46.1			52							X	X			
Y2 60+30	40 LT	1504		57.0																
		1504	1505		53.8	52.2														
Y2 60+80	40 LT	1505		55.5																
		1505	1506		52.2	46.1	0.5		40							X	X			
SHEET TOTALS									684											
PROJECT TOTALS									1640	248	52									

LINE & STATION / SIZE / THICKNESS OR GAUGE	C. S. PIPE 12	15	18	24	30	36	42	48	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE
	.064	.064	.064	.064	.079	.079	.109	.109																			
Y2LPD 14+27																											
Y2LPD 14+97														148													
Y2LPB 15+40														156													
Y2LPB 16+11																											
Y2LPB 14+81																											
L2 15+67																											
												40															
Y2LPB 11+18																											
												104															
Y2 46+48																											
Y2 54+78																											
Y2RPB 13+65																											
																	24										
Y2RPB 12+15																											
																	40										
Y2RPD 11+88																											
																	40										
Y2RPD 13+37																											
																	24										
L2 18+50																											
												136															
Y2 41+30																											
Y2 41+30																											
Y2 41+73																											
																	44										
Y2 54+18																											
												284															
Y2 59+90																											
																	52										
Y2 60+40																											
Y2 60+30																											
																	52										
Y2 60+80																											
SHEET TOTALS												564		304			276										
PROJECT TOTALS												1124		304			636										

LINE & STATION / SIZE / THICKNESS OR GAUGE	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) A: 0' THRU 5' EACH	B: 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	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.06 OR STD. 852.04	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	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	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
Y2LPD 14+27	1			1			1																																				
Y2LPD 14+97																																											EQUALIZER PIPE
Y2LPB 15+40																																											EQUALIZER PIPE
Y2LPB 16+11	1			1			1																																				
Y2LPB 14+81	1			1			1																																				
L2 15+67																																											
Y2LPB 11+18	1	1.2																								1						1	1										
																																										153	REMOVE EX. 24" RCP
Y2 46+48	1								1			1	1																														
																																		2									ROD & LUG W/SLEEVES
Y2 54+78	1								1			1	1																														
																																		2								61	REMOVE EX. 30" CMP, ROD & LUG W/SLEEVES
Y2RPB 13+65	1								1			1	1																														
Y2RPB 12+15	1								1			1	1																														
Y2RPD 11+88	1			1			1		1																																		
Y2RPD 13+37	1			1			1		1																																		
L2 18+50																																											
																																									141	REMOVE EX. 24" RCP
Y2 41+30	1													1									1																				
																																		2									ROD & LUG W/SLEEVES
Y2 41+30	1													1									1																				
																																		2									ROD & LUG W/SLEEVES
Y2 41+73	1													1									1																				
Y2 54+18																																											
Y2 59+90	1													1									1																				
Y2 60+40	1													1									1																				
																																		2									ROD & LUG W/SLEEVES
Y2 60+30	1													1									1																				
Y2 60+80	1													1									1																				
																																		2									ROD & LUG W/SLEEVES
SHEET TOTALS	17	1.2		5			5		6			4	4		7											7		1				1	1	12							355	
PROJECT TOTALS	32		1.2	6			6		8			6	6		8	2							2		17		1			9		1	1	28						1.4456	1071	

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