COMPUTED BY: Joshua G. Dalton, P.E. DATE: 3/2/2022

CHECKED BY: Brian N. Elam, P.E. DATE: 3/2/2022

JSTANOVICH

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
R-5816	3D-1

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 / SIZE / THICKNESS OR GAUGE	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) 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 12" .064	15" .064	18" .064	24" .064	30" .079	36" .079	42" .109	48" .109
10+04 -L-	LT	401		3.2																							
		401	402		0.2	0.0																					
10+12 -L-	LT	402		3.2																							
		402	403		0.0	-0.2																					
11+29 -L-	LT	403		3.0																							
		403	404		-0.2	-0.25																					
11+57 -L-	LT	404		3.9																							
		404	405		-0.25	-0.3																					
11+45 -Y-	RT	405		3.3																							
		405	406		-0.3	-0.5																					
10+90 -Y-	RT	406		3.2																							
		406	407		-0.5	-0.8																					
9+93 -Y-	RT	407		3.2																							
		407	418		-0.8	-1.0																					
12+38 -L-	LT	408		3.4																							
		408	416		-0.6	-0.8																					
9+91 -Y-	LT	409		3.0																							
		409	410		-1.1	-1.2																					
9+92 -Y-	LT	410		4.5	-1.2																						
12+90 -L-	RT	411		3.0																							
		411	412		0.3	-0.1																					
12+69 -L-	RT	412		3.0																							
		412	413		-0.1	-0.4																					
12+68 -L-	LT	413		2.7																							
		413	414		-0.4	-0.5																					
12+59 -L-	LT	414		2.6																							
		414	408		-0.5	-0.6																					
11+29 -L-	LT	415	403		0.1	-0.1																					
11+19 -Y-	LT	416		3.2																							
		416	409		-0.8	-1.1																					
10+10 -L-	LT	417	402		0.05	0.0																					
9+91 -Y-	LT	418		3.2																							
		418	409		-1.0	-1.1																					
11+00 -Y-	CL																										
11+42 -Y-	CL																										
11+72 -Y-	RT																										
11+40 -L-	LT																										
11+00 -L-	LT																										
11+57 -Y-	LT																										
12+35 -L-	LT																										
12+57 -L-	LT																										
12+61 -L-	CL																										
9+92 -Y-	CL																										
12+77 -L-	RT																										
11+45 -Y-	RT																										
PROJECT TOTALS																											

STATION	FROM	TO	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"	24" DUCTILE IRON PIPE	***" RC PIPE CULVERTS, CONTRACTOR DESIGN	***" RC PIPE CULVERTS, CONTRACTOR DESIGN	15" SIDE DRAIN PIPE	18" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.
10+04 -L-	401																								
	401	402										8													
10+12 -L-	402																								
	402	403												116											
11+29 -L-	403																								
	403	404												28											
11+57 -L-	404																								
	404	405												24											
11+45 -Y-	405																								
	405	406												52											
10+90 -Y-	406																								
	406	407												96											
9+93 -Y-	407																								
	407	418												56											
12+38 -L-	408																								
	408	416												56											
9+91 -Y-	409																								
	409	410												20											
9+92 -Y-	410																								
12+90 -L-	411																								
	411	412										20													
12+69 -L-	412																								
	412	413												72											
12+68 -L-	413																								
	413	414												8											
12+59 -L-	414																								
	414	408												20											
11+29 -L-	415	403										52													
11+19 -Y-	416																								
	416	409												128											
10+10 -L-	417	402												16											
9+91 -Y-	418																								
	418	409												8											
11+00 -Y-																									
11+42 -Y-																									
11+72 -Y-																									
11+40 -L-																									
11+00 -L-																									
11+57 -Y-																									
12+35 -L-																									
12+57 -L-																									
12+61 -L-																									
9+92 -Y-																									
12+77 -L-																									
11+45 -Y-																									
PROJECT TOTALS												80		700											

STATION	FROM	TO	QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0')	*TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B') LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	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 GRATE STD. 840.20	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		T.B.J.B. STD. 840.34	M.H. FRAME AND COVER STD. 840.54	T.B.D.I. STD. 840.35	MIN. DEPTH CB STD. 840.D02 [PSH 2C-1]	DRAINAGE PIPE ELBOWS NO. & SIZE	CONC. COLLAR, C.Y. STD. 840.72	FLOWABLE FILL C.Y.	PIPE REMOVAL LIN. FT.	REMARKS
10+04 -L-	401		1				1																		1					REMOVE EXIST. CB
	401	402																												
10+12 -L-	402		1				1																		1					
	402	403																												
11+29 -L-	403		1				1																		1					REMOVE EXIST. CB
	403	404																												
11+57 -L-	404		1																				1	1							
	404	405																												
11+45 -Y-	405		1						1																	1					REMOVE EXISTING CB
	405	406																												REMOVE EXISTING 15" RCP - EST. 55 LF
10+90 -Y-	406		1						1																	1					
	406	407																												
9+93 -Y-	407		1				1																		1					REMOVE CB AND EST. 60 LF EXIST. 15" RCP
	407	418																												
12+38 -L-	408		1																				1	1							
	408	416																												
9+91 -Y-	409		1			1		1																						REM. EXIST. JB
	409	410																												REMOVE EST. 20 LF EXIST. 18" RCP
9+92 -Y-	410		1	0.7																			1	1							REMOVE EXIST. BLIND JB
12+90 -L-	411		1						1																	1					REMOVE EXIST. CB
	411	412																												
12+69 -L-	412		1						1																	1					REM. EXIST. JB & EST. 15 LF 15" RCP
	412	413																												REM. EST. 13 LF EXIST. 15" RCP
12+68 -L-	413		1					1																		1					
	413	414																												
12+59 -L-	414		1				1																		1					
	414	408																												
11+29 -L-	415	403																												REM. EST. 50 LF EXIST. 12" RCP & BLIND JB
11+19 -Y-	416		1			1		1																						
	416	409																												
10+10 -L-	417	402																												REMOVE EST. 15 LF EXIST. 12" RCP
9+91 -Y-	418		1																				1								REMOVE EXST. JB w/ MH & EXST. BLIND JB
	418	409																												REM. EST. 4 LF EXIST. 15" RCP
11+00 -Y-																												10.4		FLOW FILL EXIST. 18" RCP
11+42 -Y-																												2.8		FLOW FILL EXIST. 15" RCP, REM. JB
11+72 -Y-																												2.3		FLOW FILL EXIST. 15" RCP
11+40 -L-																												1.5		FLOW FILL EXIST. 15" RCP
11+00 -L-																												3.4		FLOW FILL EXIST. 12" RCP
11+57 -Y-																												1.5		FLOW FILL EXIST. 15" RCP, REM. JB
12+35 -L-																												2.0		FLOW FILL EXIST. 15" RCP
12+57 -L-																												0.6		FLOW FILL EXIST. 15" RCP
12+61 -L-																												1.9		FLOW FILL EXIST. 15" RCP, REM. JB
9+92 -Y-																											0.5526			TEMP. PIPE COLLAR FOR DEWATERING
12+77 -L-																													13	REMOVE EXIST. 15" RCP
11+45 -Y-																													7	REMOVE EXIST. 15" RCP
PROJECT TOTALS			16	0.7		2	5	3	4														4	3		10		0.5526	26.4	20	

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