COMPUTED BY:	C.MOORE	DATE:	9/1/2016
CHECKED BY:	S. BONDOR	DATE:	9/1/2016

MOORECO

PROJECT NO.	SHEET NO.
U-3440	3D-11

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	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %
L 144+73	10	LT	1410		805.4			
			1410	1409		798.0	794.4	0.8
L 145+60	59	RT	1411		804.6			
			1411	1409		798.7	795.2	0.8
L 145+60	72	RT	1412		803.0			
			1412	1411		798.8	798.7	
L 147+44	60	RT	1413		813.4			
			1413	1411		808.7	798.7	0.5
L 147+43	72	RT	1414		813.0			
			1414	1413		808.8	808.7	
Y18 11+06	30	RT	1417		801.0			
			1417	1407		796.8	796.0	
L 142+73	40	RT	1418		792.5			
			1418	1401		787.2	775.6	2.1
L 142+50	8	LT	1419		792.4			
			1419	1420		788.2	788.1	
L 142+73	9	RT	1420		793.2			
			1420	1418		788.1	788.0	
L 144+32	114	RT	1421		797.5			
			1421	1405		793.3	791.8	
Y22 17+55	7	RT	1424		813.7			
Y22 11+22	34	RT	1426		823.6			
			1426	1427		816.5	816.4	
Y22 11+21	28	RT	1427		823.7			
Y22 16+53	29	RT	1430		817.7			
Y22 17+64	28	RT	1431		812.9			
Y22 17+64	35	RT	1432		812.6			
			1432	1431		804.6	804.6	
PIPE REMOVAL								
L 13+80	55	LT	0411	0412				
L15+48	51	LT	0413	0414				
L 20+27	38	LT	0415	0416				
L 22+64	53	RT	0517	0518				
L 36+00	59	RT	0650	0651				
Y4 12+10	71	LT	0652	0653				
L 44+10	96	LT	0654	0655				
Y5 11+28	14	LT	0656	0657				
L 45+00	48	LT	0658	0659				
L 47-90	33	LT	0660	0661				
L 49+80	23	LT	0662	0663				
L 50+12	19	RT	0664	0665				
L51+20	20	RT	0666	0667				
L51+71	20	RT	0668	0669				
L 42+38	162	LT	0670	0671				
L 47+17	6	RT	0672	0673				
L 53+20	8	LT	0714	0715				
L 57+00	46	RT	0716	0717				
L 58+13	46	RT	0718	0719				
L 58+56	46	RT	0720	0721				

SIZE / THICKNESS OR GAUGE

FROM	TO	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	DO NOT USE PVC	C. S. PIPE 12 .064	15 .064	18 .064	24 .064	30 .079	36 .079	42 .109	48 .109	R. C. PIPE CLASS III 12	15	18	24	30	R. C. PIPE CLASS IV 12	15	48	54	60	42" WELDED STEEL PIPE 0.1094" THICK GRADE B NOT IN SOIL	42" WELDED STEEL PIPE 0.1094" THICK GRADE B IN SOIL	36" WELDED STEEL PIPE 0.1094" THICK, GRADE B NOT IN SOIL	36" WELDED STEEL PIPE 0.1094" THICK, GRADE B IN SOIL	15" SIDE DRAIN PIPE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	DRAINAGE STRUCTURE MASONRY FT
1410	1409				68						X	X	X	X																									
1411	1409		80								X	X																											
1412	1411		16																																				
1413	1411		184								X	X																											
1414	1413		16																																				
1417	1407		24																																				
1418	1401				200						X	X																											
1419	1420		32								X	X	X	X																									
1420	1418		32								X	X	X	X																									
1421	1405		52								X	X	X	X																									
1426	1427																						8																
1432	1431																									8													
SHEET TOTALS			436		268																		8			8													

FROM	TO	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 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. DETAIL 2C-10 OR 2C-14	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/ 2 GRATES STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ GRATE 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	J.B. STD. 840.31 OR STD. 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	M.H. FRAME AND COVER STD. 840.54	ADJUST MH	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	30" C.S. ELBOW	36" C.S. ELBOW	48" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
1410		1	2.4							1				1	1																												
1411		1	0.9		1			1																																			
1412		1												1	1																												
1413		1			1			1																																			
1414		1			1	1																																					
1417		1												1	1																												
1418		1	0.3		1			1																																			
1419		1								1										1										1													
1420		1	0.1							1										1										1													
1421		1												1	1																												
1424		1	4.0							1				1	1																												
1426		1	2.1																																								
1426	1427				1			1																																			
1427		1	2.4																										1		1												
1430		1	3.9																										1		1												
1431		1	3.9																										1														
1432		1	3.0		1			1																																			
0411	0412																																									30	
0413	0414																																									39	
0415	0416																																									208	
0517	0518																																									133	
0650	0651																																									39	
0652	0653																																									103	
0654	0655																																									259	
0656	0657																																									17	
0658	0659																																									46	
0660	0661																																									24	
0662	0663																																									23	
0664	0665																																									18	
0666	0667																																									22	
0668	0669																																									26	
0670	0671																																									34	
0672	0673																																									18	
0714	0715																																									76	
0716	0717																																									20	
0718	0719																																									21	
0720	0721																																									20	
SHEET TOTALS		16	23.0		6	1		5		4				5	5					2									3	2	2											1176	

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