COMPUTED BY: C.MOORE DATE: 9/1/2016

CHECKED BY: S. BONDOR DATE: 9/1/2016

MOORECO

PROJECT NO.	SHEET NO.
U-3440	3D-5

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 %	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
		0825	0809		672.2	669.5	0.7				56									
Y7 11+00	20 RT	0826		676.4																
		0826	0811		669.3	669.2						44								
L 63+50	58 LT	0827		669.7																
		0827	0828		666.2	666.1						20								
L 63+50	41 LT	0828		670.8																
		0828	0802		666.1	664.9						128					X	X		
L 64+86	41 LT	0829		669.2																
		0829	0801		664.9	664.7						48					X	X		
L 64+78	41 RT	0830		669.3																
		0830	0831		663.7	663.0	0.6					60					X	X		
L 65+34	41 RT	0831		669.3																
		0831	0813		663.0	661.7	0.6					28								
L70+35	96 LT	0832	0833		656.3	656.2									52					
L 65+32	13 LT	0834		670.1																
		0834	0801		666.0	665.9			28											
L 70+88	11 LT	0835		672.3																
		0835	0815		667.9	667.1			28								X	X	X	X
		0901	0900		696.4	692.0	0.4													
L 85+86	41 LT	0901		715.3																
L 86+35	13 RT	0902		716.9																
		0902	0931		711.9	711.9			20								X	X	X	X
L 86+27	41 LT	0903		715.3																
		0903	0901		706.7	705.6									40		X	X		
L 87+00	41 LT	0904		715.4																
		0904	0903		706.9	706.7									72		X	X		
L 86+97	64 LT	0905		714.9																
		0905	0904		710.0	708.3			24											
L 87+53	65 LT	0906		714.4																
		0906	0905		710.2	710.0			52											
		0909	0910		702.0	691.2														
L 81+89	59 RT	0911		717.3																
		0911	0912		713.1	710.3			40								X	X	X	X
L 81+99	23 RT	0912		710.3																
L 82+81	8 RT	0913		717.1																
		0913	0914		712.8	709.6			72								X	X	X	X
L 82+09	10 LT	0914		715.6																
L 82+18	28 LT	0915		709.1																
		0915	0916		709.1	708.9				36							X	X	X	X
L 82+28	61 LT	0916		714.2																
		0916	0918		708.9	708.7	0.3			24										
L 83+45	95 LT	0917		714.2																
		0917	0916		709.7	708.9			120								X	X		
L 76+55	13 RT	0919		691.9																
		0919	0928		687.6	687.5			44								X	X	X	X
L 76+55	41 LT	0920		690.3																
		0920	0921		686.0	666.9	1.2													
L 79+50	70 RT	0922		712.4																
		0922	0923		708.5	699.3	1.4			112										
L 78+46	63 RT	0923		702.5																
							SHEET TOTALS		428	172	56	328			164					

SIZE / THICKNESS OR GAUGE

FROM	TO	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
0825	0809																									
0826																										
0826	0811																									
0827																										
0827	0828																									
0828																										
0828	0802																									
0829																										
0829	0801																									
0830																										
0830	0831																									
0831																										
0831	0813																									
0832	0833																								12.000	
0834																										
0834	0801																									
0835																										
0835	0815																									
0901	0900								56																	
0901																										
0902																										
0902	0931																									
0903																										
0903	0901																									
0904																										
0904	0903																									
0905																										
0905	0904																									
0906																										
0906	0905																									
0909	0910																			96	96				9.000	
0911																										
0911	0912																									
0912																										
0913																										
0913	0914																									
0914																										
0915																										
0915	0916																									
0916																										
0916	0918																									
0917																										
0917	0916																									
0919																										
0919	0928																									
0920																										
0920	0921	64																								
0922																										
0922	0923																									
0923																										
SHEET TOTALS		64							56											96	96				21.000	

QUANTITIES FOR DRAINAGE STRUCTURES — NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)

FROM	TO	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
0825	0809														
0826		1	2.1		1		1								
0826	0811														
0827		1										1			
0827	0828														
0828		1			1			1							
0828	0802														
0829		1			1	1									
0829	0801														
0830		1	0.5		1	1									
0830	0831														
0831		1	1.3		1			1							
0831	0813														
0832	0833														
0834		1													
0834	0801														
0835		1													
0835	0815														
0901	0900														
0901		1	5.0	8.8	1			1							
0902		1								1					
0902	0931														
0903		1	3.6		1	1									
0903	0901														
0904		1	3.5		1		1								
0904	0903														
0905		1												1	1
0905	0904														
0906		1												1	1
0906	0905														
0909	0910														
0911		1												1	1
0911	0912														
0912															
0913		1								1					
0913	0914														
0914		1	1.0							1					
0915															
0915	0916														
0916		1	0.3		1		1								
0916	0918														
0917		1			1		1								
0917	0916														
0919		1								1					
0919	0928														
0920		1			1			1							
0920	0921														
0922		1										1			
0922	0923														
0923		1												1	1
SHEET TOTALS		23	17.3	8.8	11	3	4	4		4		2		4	4

FROM	TO	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 GRATE 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
0825	0809																												
0826																													
0826	0811																												
0827																													
0827	0828																												
0828																													
0828	0802																												
0829																													
0829	0801																												
0830																													
0830	0831																												
0831																													
0831	0813																												
0832	0833																												
0834														1															
0834	0801																												
0835														1															
0835	0815																												
0901	0900																							1					
0901																													
0902						1										1													
0902	0931																												
0903																													
0903	0901																												
0904																													
0904	0903																												
0905																													
0905	0904																												
0906																													
0906	0905																												
0909	0910																												
0911																													
0911	0912																												
0912																										0.4465			
0913						1										1													
0913	0914																												
0914						1										1													
0915																										0.4465			
0915	0916																												
0916																													
0916	0918																												
0917																													
0917	0916																												
0919						1										1													
0919	0928																												
0920																													
0920	0921																		1										
0922																													
0922	0923																												
0923																													
SHEET TOTALS						4								2		4			1					1		0.8930			

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