KCI-2M663X2

COMPUTED BY:	Will Hines, Jr., PE	DATE:	4/12/2018
CHECKED BY:	Joshua G. Dalton, PE	DATE:	4/12/2018

PROJECT NO.	SHEET NO.
R-5020B	3D-2

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 (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, CSP, CAAP, HDPE, or PVC) 4	15	18	24	30	36	42	48	4 Irrigation Conduit	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
TIE 13+92	31	RT	0460		77.3																	
			0460	0461		74.0	73.0															
TIE 14+40	33	RT	0461		76.3																	
			0461	0462		73.0	52.9			80								X	X			X
TIE 15+67	113	RT	0463	0464		54.6	53.2			16									X	X		
TIE 15+40	115	RT	0464		56.5																	
			0464	0465		52.8	52.7				28								X	X		
TIE 15+13	118	RT	0465		56.8																	
			0465	0466		52.7	52.6				8								X	X		
TIE 15+09	119	RT	0466		57.0																	
			0466	0467		52.6	52.5					24							X	X		
L 190+74	65	RT	0501		81.7																	
			0501	0502		79.4	77.7			24									X	X		
L 190+74	40	RT	0502		81.0																	
			0502	0503		77.7	75.0															
L 189+08	51	RT	0503		78.3																	
			0503	0504		74.8	74.6															
L 189+08	8	RT	0504		79.6																	
			0504	0527		74.6	74.5															
L 189+08	8	LT	0527		79.6																	
			0527	0506		74.5	74.4															
L 190+28	40	LT	0505		80.3																	
			0505	0506		77.1	74.8															
L 189+10	40	LT	0506		78.6																	
			0506	0509		74.4	73.9	0.7														
			0507	0508		73.5	73.4															
Y21 11+92	11	LT	0507		76.7																	
			0508	0509		73.4	71.8															
Y21 11+92	13	RT	0508		76.7																	
L 188+39	64	LT	0509		77.9																	
			0509	0520		71.1	70.6															
L 186+50	39	RT	0510		74.8																	
			0510	0511		71.5	71.1															
L 186+50	39	LT	0511		74.8																	
			0511	0530		70.4	68.6	0.4														
L 184+22	8	LT	0512		72.5																	
			0512	0513		69.2	68.2															
L 184+22	40	LT	0513		71.4																	
			0513	0516		67.4	65.2	0.4														
L 184+12	39	RT	0514		71.3																	
			0514	0515		68.0	66.2															
L 182+89	52	RT	0515		69.5																	
			0515	0523		66.2	66.0															
L 182+71	40	LT	0516		69.2																	
			0516	0519		64.7	64.2															
Y18 12+39	18	LT	0517		69.5																	
			0517	0518		66.2	66.0															
L 182+67	62	LT	0518		69.7																	
			0518	0519		66.0	65.5															
L 182+59	45	LT	0519		69.1																	
SHEET TOTALS										120	36	24										

FROM	TO	R. C. PIPE CLASS III 15	18	24	30	36	42	48	R. C. PIPE CLASS IV 15	18	24	30	36	42	48	DUCTILE IRON PIPE TYPE 3 SEALED PIPE SYSTEM SEE SPECIAL PROVISIONS 30	36 CLASS 150	42 CLASS 150	48		QUANTITIES FOR SEALED DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5'	A 5' THRU 10'	B 10' & ABOVE	BOOTS	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY
0460																											
0460	0461								44																		
0461																											
0461	0462																										
0463	0464																										
0464																											
0464	0465																										
0465																											
0465	0466																										
0466																											
0466	0467																										
0501																											
0501	0502																										
0502																											
0502	0503								164																		
0503																											
0503	0504									40																	
0504																											
0504	0527									16																	
0527																											
0527	0506									32																	
0505																											
0505	0506								116																		
0506																											
0506	0509									76																	
0507	0508								24																		
0507																											
0508	0509								120																		
0508																											
0509																											
0509	0520										104																
0510																											
0510	0511								76																		
0511																											
0511	0530										136																
0512																											
0512	0513								44																		
0513																											
0513	0516										144																
0514																											
0514	0515								124																		
0515																											
0515	0523								44																		
0516																											
0516	0519											20															
0517																											
0517	0518								52																		
0518																											
0518	0519								20																		
0519																											
SHEET TOTALS									828	164	384	20															

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. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	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
0460		1															
0460	0461																
0461		1															
0461	0462																
0463	0464																
0464		1														1	
0464	0465																
0465		1			1	1											
0465	0466																
0466		1											1	1			
0466	0467																
0501		1											1	1			
0501	0502																
0502		1			1			1									
0502	0503																
0503		1			1			1									
0503	0504																
0504		1								1			1	1			
0504	0527																
0527		1								1			1	1			
0527	0506																
0505		1			1		1										
0505	0506																
0506		1			1		1										
0506	0509																
0507	0508																
0507		1															
0508	0509																
0508		1															
0509		1	1.8														
0509	0520																
0510		1			1			1									
0510	0511																
0511		1			1		1										
0511	0530																
0512		1								1			1	1			
0512	0513																
0513		1			1		1										
0513	0516																
0514		1			1			1									
0514	0515																
0515		1			1			1									
0515	0523																
0516		1			1		1										
0516	0519																
0517		1											1	1			
0517	0518																
0518		1											1	1			
0518	0519																
0519		1	0.3														
SHEET TOTALS		25	2.1		11	1	5	5		3			7	7		1	

FROM	TO	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 GRATE 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	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. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	CONVERT EXISTING C.B. TO J.B.	CONVERT EXISTING C.B. TO D.I.	CONVERT EXISTING D.I. TO J.B.	SLUICE GATE (DRY DETENTION BASIN)	ADJUST D.I.	15" DRAINAGE PIPE 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
0460									1			1														
0460	0461																									
0461									1			1														
0461	0462																			2						
0463	0464																									
0464									1																	
0464	0465																									
0465																										
0465	0466																									
0466																										
0466	0467																									
0501																										
0501	0502																									
0502																										
0502	0503																									
0503																										
0503	0504																									
0504																										
0504	0527																									
0527																										
0527	0506																									
0505																										
0505	0506																									
0506																										
0506	0509																									
0507	0508																									
0507									1			1														See Special Detail 2C-14
0508	0509																									
0508									1			1														See Special Detail 2C-14
0509										1				1												
0509	0520																									
0510																										
0510	0511																									
0511																										
0511	0530																									
0512																										
0512	0513																									
0513																										
0513	0516																									
0514																										
0514	0515																									
0515																										
0515	0523																									
0516																										
0516	0519																									
0517									1			1														See Special Detail 2C-14
0517	0518																									
0518																										
0518	0519																									
0519										1				1												
SHEET TOTALS									6	2		5		2						2						

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