CARYLTBURNS

COMPUTED BY:	Ecological Engineering LLP	**DATE:**	6/28/2017
CHECKED BY:	Ecological Engineering LLP	**DATE:**	6/28/2017

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-5935	3D-8

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)

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

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 %
L 83+22	57	RT	0927		132.1			
			0927	0928		128.9	128.7	
L 83+22	71	RT	0928		132.6			
			0928	0922		128.0	127.6	
L 83+35	71	LT	0929		130.8			
			0929	0926		129.5	129.5	
L 83+51	76	RT	0930		130.6			
			0930	0928		128.1	128.0	
L 83+54	10	LT	0931		133.9			
L 84+09	73	LT	0933		132.2			
			0933	0932		130.7	129.8	
L 84+09	53	LT	0934		132.9			
			0934	0935		127.8	127.7	
L 84+10	10	LT	0935		134.1			
			0935	0931		127.7	127.5	
L 84+50	56	RT	0936		132.5			
			0936	0927		129.2	128.9	
EY10 26+85	47	LT	1004		129.4			
			1004	1003		127.1	127.0	
EY10 28+00	45	LT	1005		129.4			
			1005	1004		127.4	127.1	
EY10 31+96	30	LT	1006		128.9			
			1006	1008		126.7	126.6	
EY10 32+02	45	LT	1008		129.4			
			1008	1007		126.2	126.1	0.4
EY10 32+68	45	LT	1010		128.3			
			1010	1008		126.8	126.2	
EY20 38+39	24	RT	1401		95.4			
EY20 38+40	30	RT	1402		96.2			
EY20 39+88	24	RT	1405		94.7			
EY20 39+88	28	RT	1406		95.4			
EY20 40+77	26	RT	1409		94.5			
L 30+49	71	RT	0000					
L 69+53	64	RT	0000					
L 63+24	59	LT	0000					
L 64+33	62	LT	0000					
L 65+35	29	RT	0000					
L 65+73	62	LT	0000					
L 66+90	62	LT	0000					
L 67+42	62	LT	0000					
L 68+27	63	LT	0000					
L 70+37	33	RT	0000					
L 67+22	5	LT	0000					
L 73+37	66	RT	0000					
L 70+87	73	LT	0000					
L 76+47	62	LT	0000					
L 77+27	63	LT	0000					
L 77+75	61	LT	0000					
L 78+96	61	LT	0000					
L 78+98	4	RT	0000					
								SHEET TOTALS

LINE & STATION	FROM	TO	Drainage Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12	15	18	24	30	36	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE	DO NOT USE PVC
L 83+22	0927												
	0927	0928											
L 83+22	0928												
	0928	0922											
L 83+35	0929												
	0929	0926											
L 83+51	0930												
	0930	0928											
L 83+54	0931												
L 84+09	0933												
	0933	0932											
L 84+09	0934												
	0934	0935											
L 84+10	0935												
	0935	0931											
L 84+50	0936												
	0936	0927											
EY10 26+85	1004												
	1004	1003											
EY10 28+00	1005												
	1005	1004											
EY10 31+96	1006												
	1006	1008											
EY10 32+02	1008												
	1008	1007											
EY10 32+68	1010												
	1010	1008											
EY20 38+39	1401												
EY20 38+40	1402												
EY20 39+88	1405												
EY20 39+88	1406												
EY20 40+77	1409												
L 30+49	0000												
L 69+53	0000												
L 63+24	0000												
L 64+33	0000												
L 65+35	0000												
L 65+73	0000												
L 66+90	0000												
L 67+42	0000												
L 68+27	0000												
L 70+37	0000												
L 67+22	0000												
L 73+37	0000												
L 70+87	0000												
L 76+47	0000												
L 77+27	0000												
L 77+75	0000												
L 78+96	0000												
L 78+98	0000												
SHEET TOTALS													

LINE & STATION	FROM	TO	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	54	60	66	72	78	84	
L 83+22	0927																
	0927	0928															
L 83+22	0928																
	0928	0922															
L 83+35	0929																
	0929	0926		20													
L 83+51	0930																
	0930	0928															
L 83+54	0931																
L 84+09	0933																
	0933	0932		32													
L 84+09	0934																
	0934	0935															
L 84+10	0935																
	0935	0931			56												
L 84+50	0936																
	0936	0927															
EY10 26+85	1004																
	1004	1003		44													
EY10 28+00	1005																
	1005	1004	112														
EY10 31+96	1006																
	1006	1008			16												
EY10 32+02	1008																
	1008	1007			12												
EY10 32+68	1010																
	1010	1008			68												
EY20 38+39	1401																
EY20 38+40	1402																
EY20 39+88	1405																
EY20 39+88	1406																
EY20 40+77	1409																
L 30+49	0000																
L 69+53	0000																
L 63+24	0000																
L 64+33	0000																
L 65+35	0000																
L 65+73	0000																
L 66+90	0000																
L 67+42	0000																
L 68+27	0000																
L 70+37	0000																
L 67+22	0000																
L 73+37	0000																
L 70+87	0000																
L 76+47	0000																
L 77+27	0000																
L 77+75	0000																
L 78+96	0000																
L 78+98	0000																
SHEET TOTALS			112	96	152												

LINE & STATION	FROM	TO	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	18" SIDE DRAIN PIPE	24" SIDE DRAIN PIPE		ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY
L 83+22	0927														
	0927	0928			16										
L 83+22	0928														
	0928	0922			144										
L 83+35	0929														
	0929	0926													
L 83+51	0930														
	0930	0928			28										
L 83+54	0931														
L 84+09	0933														
	0933	0932													
L 84+09	0934														
	0934	0935			40										
L 84+10	0935														
	0935	0931													
L 84+50	0936														
	0936	0927			128										
EY10 26+85	1004														
	1004	1003													
EY10 28+00	1005														
	1005	1004													
EY10 31+96	1006														
	1006	1008													
EY10 32+02	1008														
	1008	1007													
EY10 32+68	1010														
	1010	1008													
EY20 38+39	1401														
EY20 38+40	1402														
EY20 39+88	1405														
EY20 39+88	1406														
EY20 40+77	1409														
L 30+49	0000														
L 69+53	0000														
L 63+24	0000														
L 64+33	0000														
L 65+35	0000														
L 65+73	0000														
L 66+90	0000														
L 67+42	0000														
L 68+27	0000														
L 70+37	0000														
L 67+22	0000														
L 73+37	0000														
L 70+87	0000														
L 76+47	0000														
L 77+27	0000														
L 77+75	0000														
L 78+96	0000														
L 78+98	0000														
SHEET TOTALS					356										

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

LINE & STATION	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. STD. 852.04 OR STD. 852.06	CONCRETE TRANSITIONAL SECTION: C.B. STD. 852.05
L 83+22	0927		1			1			1			
	0927	0928										
L 83+22	0928		1									
	0928	0922										
L 83+35	0929											
	0929	0926										
L 83+51	0930		1									
	0930	0928										
L 83+54	0931											
L 84+09	0933											
	0933	0932										
L 84+09	0934		1			1		1				
	0934	0935										
L 84+10	0935		1	1.4								
	0935	0931										
L 84+50	0936		1			1			1			
	0936	0927										
EY10 26+85	1004		1									
	1004	1003										
EY10 28+00	1005		1									
	1005	1004										
EY10 31+96	1006		1			1			1			
	1006	1008										
EY10 32+02	1008		1									
	1008	1007										
EY10 32+68	1010											
	1010	1008										
EY20 38+39	1401		1			1		1				
EY20 38+40	1402											
EY20 39+88	1405		1			1		1				
EY20 39+88	1406											
EY20 40+77	1409		1	0.1		1		1				
L 30+49	0000											
L 69+53	0000											
L 63+24	0000											
L 64+33	0000											
L 65+35	0000											
L 65+73	0000											
L 66+90	0000											
L 67+42	0000											
L 68+27	0000											
L 70+37	0000											
L 67+22	0000											
L 73+37	0000											
L 70+87	0000											
L 76+47	0000											
L 77+27	0000											
L 77+75	0000											
L 78+96	0000											
L 78+98	0000											
SHEET TOTALS			13	1.5		7		4	3			

LINE & STATION	FROM	TO	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. (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	ADJUST M.H.	SPECIAL DI 840D14 SEE SHEET 2C-2	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.	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	18" DRAINAGE PIPE ELBOWS	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 83+22	0927																											
	0927	0928																										
L 83+22	0928									1							1											
	0928	0922																										
L 83+35	0929																									0.3990		
	0929	0926																										
L 83+51	0930				1	1																						
	0930	0928																										
L 83+54	0931																1			1								
L 84+09	0933																											Open End Pipe
	0933	0932																										
L 84+09	0934																											
	0934	0935																										
L 84+10	0935									1							1											
	0935	0931																										
L 84+50	0936																											
	0936	0927																										
EY10 26+85	1004				1	1																						
	1004	1003																										
EY10 28+00	1005				1	1																						
	1005	1004																										
EY10 31+96	1006																											
	1006	1008																										
EY10 32+02	1008									1							1											
	1008	1007																										
EY10 32+68	1010																											Open End Pipe
	1010	1008																										
EY20 38+39	1401																											
EY20 38+40	1402																1	1										
EY20 39+88	1405																											
EY20 39+88	1406																1	1										
EY20 40+77	1409																											
L 30+49	0000																										20	
L 69+53	0000																										256	
L 63+24	0000																								4			
L 64+33	0000																								1			
L 65+35	0000																								4			
L 65+73	0000																								3			
L 66+90	0000																								1			
L 67+42	0000																								1			
L 68+27	0000																								3			
L 70+37	0000																								3			
L 67+22	0000																								3			
L 73+37	0000																										57	
L 70+87	0000																								3			
L 76+47	0000																										44	
L 77+27	0000																										38	
L 77+75	0000																										53	
L 78+96	0000																										63	
L 78+98	0000																										68	
SHEET TOTALS					3	3				3							6	2		1					26	0.3990	599	