COMPUTED BY: LMJ DATE: 3/9/2022

CHECKED BY: WKJ DATE: 5/4/2022

PROJECT NO.	SHEET NO.
I-5987A	3D-23

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 %	Side Drain Pipe (RCP, CSP, CAAP, HDPE, or PVC) 15	18	24	30	36	42	48	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE
		3014	3034		161.60	161.66				12								
LA2 462+59	74 RT	3014		167.90														
		3034	3015		161.69	161.53				32								
LA2 462+59	85 RT	3034		166.37														
		3033	3014		164.97	161.69												
LA2 461+99	74 RT	3033		167.72														
		3016	3017		190.40	165.40		88										
Y3 28+66	16 LT	3016		193.20														
		3018	3019		187.20	164.30		80										
Y3 27+00	16 LT	3018		189.90														
		3020	3021		181.30	162.10		80										
Y3 25+25	16 LT	3020		184.10														
		3022	3023		183.20	166.20		80										
Y3 25+75	18 RT	3022		185.90														
Y3 26+09	63 RT																	
		3024	3025		189.20	189.10												
Y3 31+81	16 LT	3024		193.00														
		3025	3026		189.10	161.10		96										
Y3 31+81	17 RT	3025		192.90														
		3027	3028		188.40	161.10		84										
Y3 32+78	16 RT	3027		191.20														
		3029	3030		187.50	164.80		80										
Y3 33+17	18 LT	3029		190.20														
		3031	3032		161.20	160.20												
Y3 33+95	93 LT	3031		164.70														
Y3 33+06	100 RT	3032		163.70														
		3107	3109		167.00	166.80												
LA2 485+63	5 LT	3107		171.00														
		3108	3109		166.80	166.80												
LA2 485+21	2 RT	3108		170.80														
		3109	3110		166.80	166.60												
LA2 485+21	5 LT	3109		171.00														
		3110	3112		166.60	165.90												
LA2 484+79	5 LT	3110		171.00														
		3111	3112		163.80	163.50												
LA2 483+80	102 LT	3111		165.80														
		3112	3113		163.50	163.20												
LA2 483+55	5 LT	3112		171.30														
		3120	3121		166.80	166.70												
LA2 477+00	2 RT	3120		170.80														
		3121	3122		166.70	166.20												
LA2 477+00	5 LT	3121		170.70														
		3122	3128		166.20	166.00												
LA2 476+04	5 LT	3122		170.50														
		3123	3124		166.30	166.10												
LA2 474+17	2 RT	3123		170.30														
		3124	3125		166.10	165.80												
LA2 474+59	2 RT	3124		170.30														
		3125	3126		165.80	165.80												
LA2 475+11	2 RT	3125		170.30														
						SHEET TOTAL		588		44								

SIZE / THICKNESS OR GAUGE — C. S. PIPE: 15 (0.064), 18 (0.064), 24 (0.064), 30 (0.079), 36 (0.079), 42 (0.109), 48 (0.109)

LINE & STATION	FROM	TO	C. S. PIPE 15	18	24	30	36	42	48	R. C. PIPE CLASS III 15	18	24	30	36	42	48	R. C. PIPE CLASS IV 15	18	24	30	36	42	48
	3014	3034																					
LA2 462+59	3014																						
	3034	3015																					
LA2 462+59	3034																						
	3033	3014																	60				
LA2 461+99	3033																						
	3016	3017																					
Y3 28+66	3016																						
	3018	3019																					
Y3 27+00	3018																						
	3020	3021																					
Y3 25+25	3020																						
	3022	3023																					
Y3 25+75	3022																						
Y3 26+09																							
	3024	3025															32						
Y3 31+81	3024																						
	3025	3026																					
Y3 31+81	3025																						
	3027	3028																					
Y3 32+78	3027																						
	3029	3030																					
Y3 33+17	3029																						
	3031	3032												216									
Y3 33+95	3031																						
Y3 33+06	3032																						
	3107	3109															40						
LA2 485+63	3107																						
	3108	3109															8						
LA2 485+21	3108																						
	3109	3110															40						
LA2 485+21	3109																						
	3110	3112															124						
LA2 484+79	3110																						
	3111	3112																					
LA2 483+80	3111																						
	3112	3113																					
LA2 483+55	3112																						
	3120	3121															8						
LA2 477+00	3120																						
	3121	3122															96						
LA2 477+00	3121																						
	3122	3128															40						
LA2 476+04	3122																						
	3123	3124															40						
LA2 474+17	3123																						
	3124	3125															52						
LA2 474+59	3124																						
	3125	3126															8						
LA2 475+11	3125																						
SHEET TOTAL														216		488		60					

LINE & STATION	FROM	TO	16" WELDED STEEL PIPE 0.25" THICK, GRADE B IN SOIL	18" WELDED STEEL PIPE 0.25" THICK, GRADE B IN SOIL	24" WELDED STEEL PIPE 0.50" THICK, GRADE B IN SOIL	30" WELDED STEEL PIPE 0.50" THICK, GRADE B IN SOIL	36" WELDED STEEL PIPE 0.50" THICK, GRADE B IN SOIL	42" WELDED STEEL PIPE 0.625" THICK, GRADE B IN SOIL	48" WELDED STEEL PIPE 0.625" THICK, GRADE B IN SOIL	16" WELDED STEEL PIPE 0.25" THICK, GRADE B NOT IN SOIL	18" WELDED STEEL PIPE 0.25" THICK, GRADE B NOT IN SOIL	24" WELDED STEEL PIPE 0.50" THICK, GRADE B NOT IN SOIL	30" WELDED STEEL PIPE 0.50" THICK, GRADE B NOT IN SOIL	36" WELDED STEEL PIPE 0.50" THICK, GRADE B NOT IN SOIL	42" WELDED STEEL PIPE 0.625" THICK, GRADE B NOT IN SOIL	48" WELDED STEEL PIPE 0.625" THICK, GRADE B NOT IN SOIL	ENDWALLS STD. 838.01 OR STD.838.11 (UNLESS OTHERWISE NOTED) CY	REINFORCED ENDWALLS CY
	3014	3034																
LA2 462+59	3014																	
	3034	3015																
LA2 462+59	3034																	
	3033	3014																
LA2 461+99	3033																	
	3016	3017																
Y3 28+66	3016																	
	3018	3019																
Y3 27+00	3018																	
	3020	3021																
Y3 25+25	3020																	
	3022	3023																
Y3 25+75	3022																	
Y3 26+09																		
	3024	3025																
Y3 31+81	3024																	
	3025	3026																
Y3 31+81	3025																	
	3027	3028																
Y3 32+78	3027																	
	3029	3030																
Y3 33+17	3029																	
	3031	3032																
Y3 33+95	3031																5	
Y3 33+06	3032																5	
	3107	3109																
LA2 485+63	3107																	
	3108	3109																
LA2 485+21	3108																	
	3109	3110																
LA2 485+21	3109																	
	3110	3112																
LA2 484+79	3110																	
	3111	3112			52							52						
LA2 483+80	3111																	
	3112	3113			60							60						
LA2 483+55	3112																	
	3120	3121																
LA2 477+00	3120																	
	3121	3122																
LA2 477+00	3121																	
	3122	3128																
LA2 476+04	3122																	
	3123	3124																
LA2 474+17	3123																	
	3124	3125																
LA2 474+59	3124																	
	3125	3126																
LA2 475+11	3125																	
SHEET TOTAL					112							112					9	

QUANTITIES FOR DRAINAGE STRUCTURES: *TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. 'A' + (1.3 X COL.'B')

LINE & STATION	FROM	TO	PER EACH (0' THRU 5.0')	LIN.FT. A 5.0' THRU 10.0'	LIN.FT. 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 D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	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. (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. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	J.B. STD. 840.31 OR 840.32	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME AND TWO GRATES STD. 840.37	M.H. STD. 840.51, STD. 840.52, OR STD.53	M.H. FRAME AND COVER STD. 840.54	TEMP STEEL PLATE COVER MASONARY DRAINAGE	15" C.S. ELBOW	15" SIDE DRAIN PIPE ELBOW	FLOWABLE FILL, C.Y.	PIPE REMOVAL LIN. FT.	REMARKS
	3014	3034																														
LA2 462+59	3014		1	1.3																			1	1								
	3034	3015																														
LA2 462+59	3034		1													1		1														
	3033	3014																														
LA2 461+99	3033		1																				1	1								
	3016	3017																											2			
Y3 28+66	3016		1																				1	1								
	3018	3019																											2			
Y3 27+00	3018		1																				1	1								
	3020	3021																											2			
Y3 25+25	3020		1																				1	1								
	3022	3023																											2			
Y3 25+75	3022		1																				1	1								
Y3 26+09																															45	
	3024	3025																													47	
Y3 31+81	3024		1																				1	1								
	3025	3026																											2		48	
Y3 31+81	3025		1																				1	1								
	3027	3028																											2			
Y3 32+78	3027		1																				1	1								
	3029	3030																											2			
Y3 33+17	3029		1																				1	1								
	3031	3032																														
Y3 33+95	3031																															SEE SPECIAL DETAIL SHEET 2C-9
Y3 33+06	3032																															SEE SPECIAL DETAIL SHEET 2C-9
	3107	3109																														
LA2 485+63	3107		1																				1	1								
	3108	3109																														
LA2 485+21	3108		1																				1	1								
	3109	3110																														
LA2 485+21	3109		1																				1	1								
	3110	3112																														
LA2 484+79	3110		1																				1	1								
	3111	3112																												12.0		
LA2 483+80	3111																															
	3112	3113																														
LA2 483+55	3112		1	2.8																			1	1								
	3120	3121																														
LA2 477+00	3120		1																				1	1								
	3121	3122																														
LA2 477+00	3121		1																				1	1								
	3122	3128																														
LA2 476+04	3122		1																				1	1								
	3123	3124																														
LA2 474+17	3123		1																				1	1								
	3124	3125																														
LA2 474+59	3124		1																				1	1								
	3125	3126																														
LA2 475+11	3125		1																				1	1								
SHEET TOTAL			22	4.1												1		1					21	21					14	12.0	140	

ABBREVIATIONS

C.A.A - CORRUGATED ALUMINUM INLET
C.B - CATCH BASIN
C.S. - CORRUGATED STEEL
D.I. - DROP INLET
G.D.I. - GRATED DROP INLET
P.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