COMPUTED BY:	MJB	DATE:	1/16/2023
CHECKED BY:	ASB	DATE:	11/7/2023

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
R-2577A	3D-18

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" & UNDER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET		STRUCTURE NO. FROM	STRUCTURE NO. TO	TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	% MINIMUM REQUIRED SLOPE	SIDE DRAIN PIPE (RCP, CSP, CAAP, HDPE, PP or PVC) 15"	18"	24"	30"	DO NOT USE RCP	DO NOT USE CSP	DO NOT USE CAAP	DO NOT USE HDPE, PP, OR PVC
SHEET 17																
- L- 176+29.00	51	RT	1701		911.4											
- L- 176+29.00	51	RT	1701	1705		908.1	907.8	0.5%								
- L- 176+50.00	-41	LT	1704		912.2											
- L- 176+50.00	-41	LT	1704	1702		908.2	907.3	0.5%								
- L- 175+79.45	-41	LT	1702		911.3											
- L- 175+79.45	-41	LT	1702	1703		907.3	907.0	0.5%								
- L- 175+08.67	-41	LT	1703		911.3											
- L- 175+08.67	-41	LT	1703	1708		907.0	902.9	2.4%								
-L- 176+88.00	-71	LT	1714									16				
SHEET 18																
- L- 177+86.00	41	RT	1801		914.1											
- L- 177+86.00	41	RT	1801	1701		910.1	908.1	0.5%								
- L- 180+59.46	-41	LT	1829		919.8											
- L- 180+59.46	-41	LT	1829	1803		915.8	913.2	0.5%								
- L- 179+38.61	-8	LT	1804		918.0											
- L- 179+38.61	-8	LT	1804	1803		913.9	913.2	0.2%								
- L- 179+38.61	-41	LT	1803		917.2											
- L- 179+38.61	-41	LT	1803	1802		913.2	910.8	0.5%								
- L- 178+00.00	-41	LT	1802		914.8											
- L- 178+00.00	-41	LT	1802	1704		910.8	908.2	0.5%								
- L- 182+11.02	-65	LT	1821	1815		919.5	917.5	0.4%								
- L- 183+50.00	-41	LT	1818		926.4											
- L- 183+50.00	-41	LT	1818	1815		922.4	919.2	0.4%								
- L- 182+11.26	-41	LT	1815		923.2											
- L- 182+11.26	-41	LT	1815	1814		917.5	917.0	0.5%								
- L- 183+50.00	41	RT	1817		926.4											
- L- 183+50.00	41	RT	1817	1814		922.4	919.2	0.5%								
- L- 182+11.28	41	RT	1814		923.2											
- L- 182+11.28	41	RT	1814	1816		917.0	915.8	0.5%								
- L- 181+37.90	42	RT	1816		921.5											
- L- 181+37.90	42	RT	1816	1807		915.8	913.8	0.5%								
- L- 180+65.40	58	RT	1807		919.6											
- L- 180+65.40	58	RT	1807	1806		913.8	912.0	0.5%								
- L- 179+60.61	82	RT	1806		916.8											
3D-18 SHEET TOTALS												**16**				

LINE & STATION / SIZE / THICKNESS OR GAUGE	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"
	.064	.064	.064	.079	.079	.109	.109												
SHEET 17																			
- L- 176+29.00																			
- L- 176+29.00															72				
- L- 176+50.00																			
- L- 176+50.00															72				
- L- 175+79.45																			
- L- 175+79.45															72				
- L- 175+08.67																			
- L- 175+08.67	40																		
-L- 176+88.00																			
SHEET 18																			
- L- 177+86.00																			
- L- 177+86.00															156				
- L- 180+59.46																			
- L- 180+59.46															124				
- L- 179+38.61																			
- L- 179+38.61															36				
- L- 179+38.61																			
- L- 179+38.61															140				
- L- 178+00.00																			
- L- 178+00.00															152				
- L- 182+11.02													16						
- L- 183+50.00																			
- L- 183+50.00															140				
- L- 182+11.26																			
- L- 182+11.26																			84
- L- 183+50.00																			
- L- 183+50.00															140				
- L- 182+11.28																			
- L- 182+11.28																			76
- L- 181+37.90																			
- L- 181+37.90																			76
- L- 180+65.40																			
- L- 180+65.40																			108
- L- 179+60.61																			
3D-18 SHEET TOTALS	**40**												**16**		**1104**				**344**

LINE & STATION / SIZE / THICKNESS OR GAUGE	PIPE AS NOTED 24" Trenchless W.S. (IN SOIL)	24" Trenchless W.S. (NOT IN SOIL)	30" Trenchless W.S. (IN SOIL)	30" Trenchless W.S. (NOT IN SOIL)	48" Trenchless W.S. (IN SOIL)	48" Trenchless W.S. (NOT IN SOIL)	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P.	C.S.P.	QUANTITIES FOR DRAINAGE STRUCTURES *TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. "A" + (1.3 X COL. "B") PER EACH (0' THRU 5.0')	LIN. FT. A 5.0' THRU 10.0'	B 10.0' AND ABOVE	C.B. STD. 840.01 OR STD. 840.02
SHEET 17												
- L- 176+29.00									1			1
- L- 176+29.00												
- L- 176+50.00									1			1
- L- 176+50.00												
- L- 175+79.45									1			1
- L- 175+79.45												
- L- 175+08.67									1			1
- L- 175+08.67												
-L- 176+88.00												
SHEET 18												
- L- 177+86.00									1			1
- L- 177+86.00												
- L- 180+59.46									1			1
- L- 180+59.46												
- L- 179+38.61									1			
- L- 179+38.61												
- L- 179+38.61									1			1
- L- 179+38.61												
- L- 178+00.00									1			1
- L- 178+00.00												
- L- 182+11.02								3.4				
- L- 183+50.00									1			1
- L- 183+50.00												
- L- 182+11.26									1	0.8		1
- L- 182+11.26												
- L- 183+50.00									1			1
- L- 183+50.00												
- L- 182+11.28									1	1.3		1
- L- 182+11.28												
- L- 181+37.90									1	0.8		1
- L- 181+37.90												
- L- 180+65.40									1	0.8		1
- L- 180+65.40												
- L- 179+60.61									1			1
3D-18 SHEET TOTALS								**3.4**	**16**	**3.5**		**15**

LINE & STATION / SIZE / THICKNESS OR GAUGE	FRAME, GRATES, AND HOOD STANDARD 840.03 TYPE OF GRATE E	F	G	CONCRETE TRANSITIONAL SECTION DROP INLET	CATCH BASIN	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. FRAME WITH TWO FLAT GRATES STD. 840.20	G.D.I. FRAME WITH TWO GRATES STD. 840.22	G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24	G.D.I. (N.S.) FR. WITH TWO FLAT GRATES. STD. 840.29	DRIVEWAY DROP INLET LIN. FT. STD. 840.30	SPRING BOX, STD. 840.41	J.B. STD. 840.31 OR 840.32	TBJB STD. 840.34	T.B.D.I. STD. 840.35	STEEL GRATE AND FRAME STD. 840.37	M.H. FRAME AND COVER STD. 840.54	ADJUST MH	ADJUST CB	BERM DRAINAGE OUTLET	OTCB STD. 840.04 OR 840.05	FLOWABLE FILL (CY)	C.S. PIPE ELBOWS NO. & SIZE	CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71	PIPE REMOVAL LIN. FT.	REMARKS
SHEET 17																														
- L- 176+29.00			1																											
- L- 176+29.00																														
- L- 176+50.00		1																												
- L- 176+50.00																														
- L- 175+79.45	1																													
- L- 175+79.45																														
- L- 175+08.67			1																								2 @ 15			
- L- 175+08.67																														
-L- 176+88.00																														
SHEET 18																														
- L- 177+86.00			1																											
- L- 177+86.00																														
- L- 180+59.46		1																												
- L- 180+59.46																														
- L- 179+38.61				1		1	1																							
- L- 179+38.61																														
- L- 179+38.61		1																												
- L- 179+38.61																														
- L- 178+00.00		1																												
- L- 178+00.00																														
- L- 182+11.02																														
- L- 183+50.00		1																												
- L- 183+50.00																														
- L- 182+11.26		1																												
- L- 182+11.26																														
- L- 183+50.00			1																											
- L- 183+50.00																														
- L- 182+11.28			1																											
- L- 182+11.28																														
- L- 181+37.90			1																											
- L- 181+37.90																														
- L- 180+65.40			1																											
- L- 180+65.40																														
- L- 179+60.61	1																													
3D-18 SHEET TOTALS	**2**	**6**	**7**	**1**		**1**	**1**																				**2 @ 15**			

ABBREVIATIONS

C.B.	CATCH BASIN
N.D.I.	NARROW DROP INLET
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
G.D.I.(N.S.)	(NARROW SLOT)
J.B.	JUNCTION BOX
M.H.	MANHOLE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX

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