7S9M8H4

COMPUTED BY:	Matthew Stratton, EI	DATE:	6/25/2025
CHECKED BY:	Richard Hinton, PE	DATE:	6/25/2025

PROJECT NO.	SHEET NO.
R-5759	3D-14

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	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 PVC	C. S. Pipe 12 (.064)	15 (.064)	18 (.064)	24 (.064)	30 (.079)	36 (.079)	42 (.109)	48 (.109)
L 162+67	53	LT	1530		968.9																				
			1530	1531		965.9	965.5																		
L 162+67	43	LT	1531		969.8																				
L 163+19	39	LT	1532		970.5																				
L 166+04	42	LT	1533		967.9																				
L 166+88	38	LT	1534		968.2																				
L 166+01	48	LT	1535		966.7																				
			1535	1533		963.5	963.3																		
L 166+81	54	LT	1536		966.5																				
			1536	1534		962.5	961.5																		
L 168+40	52	LT	1537		966.9																				
			1537	1538		964.5	964.4																		
L 168+41	46	LT	1538		968.2																				
L 160+47	55	LT	1539		969.4																				
L 159+68	47	LT	1540		968.8																				
L 155+19	46	LT	1541		971.4																				
			1541	1542		968.5	968.3			16							X								
L 155+19	29	LT	1542		971.9																				
			1542	1501		968.0	965.5	1.4																	
L 156+29	46	RT	1543		967.8																				
L 159+56	45	LT	1544		967.6																				
			1544	1540		963.1	963.0																		
L 166+89	46	RT	1545		966.1																				
L 160+96	55	LT	1546		969.3																				
			1546	1529		961.8	961.5																		
L 170+86	28	RT	1601		978.8																				
L 170+93	24	LT	1602		978.5																				
			1602	1604	975.5	950.4													68						
L 175+58	24	LT	1603		995.0																				
Y2 19+25	16	LT	1702		1171.0																				
			1702	1709		1164.3	1164.0																		
Y2 20+90	16	LT	1703		1172.4																				
			1703	1707		1163.6	1155.2														72				
Y2 19+03	16	LT	1704		1170.8																				
			1704	1702		1165.8	1164.3	0.7																	
Y2 17+82	16	LT	1705		1172.4																				
			1705	1704		1167.9	1165.8																		
Y2 17+82	16	RT	1706		1171.8																				
			1706	1705		1168.5	1167.9																		
Y2 20+00	16	LT	1709		1171.6																				
			1709	1703		1164.0	1163.6																		
Y2 19+25	35	RT	1710		1169.9																				
			1710	1702		1166.9	1164.8																		
L 10+12	25	LT	0409	OUT						28							X								
L 12+66	36	LT	0410	OUT						144							X								
Y4 11+42	42	LT	0632	OUT						68							X								
Y3 12+22	4	RT	0635	OUT																					
Y3 12+67	44	RT	0644	OUT						120							X								
Y3 11+70	21	LT	0646	OUT						32							X								
Y3 11+07	18	LT	0647	OUT						28							X								
SHEET TOTALS										436									68		72				

Structure From	To	R. C. Pipe Class IV 12	15	18	24	30	36	42	48	R. C. Pipe Class V 12	15	18	24	Endwalls Std. 838.01 or Std. 838.11 (Unless Noted Otherwise) CY	Reinforced Endwalls CY	Drainage Structure Masonry CY	Quantities for Drainage Structures 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
1530																	1								
1530	1531		8																						
1531																									
1532																									
1533																									
1534																									
1535																	1								
1535	1533		4																						
1536																	1								
1536	1534			16																					
1537																	1								
1537	1538		4																						
1538																	1	5.0	1.2						
1539																	1	2.1							
1540																	1	0.8							
1541																	1								
1541	1542																								
1542																	1			1			1		
1542	1501			104																					
1543																	1	0.3							
1544																	1								
1544	1540					12																			
1545																	1								
1546																	1	2.5							
1546	1529					84																			
1601																	1			1			1		
1602																	1			1		1			
1602	1604																								
1603																	1			1		1			
1702																	1	1.7		1		1			
1702	1709				72																				
1703																	1	3.8				1			
1703	1707																								
1704																	1			1	1				
1704	1702				20																				
1705																	1			1			1		
1705	1704				120																				
1706																	1			1		1			
1706	1705				28																				
1709																	1	2.6		1		1			
1709	1703				84																				
1710																	1								
1710	1702			48																					
0409	OUT																								
0410	OUT																								
0632	OUT																								
0635	OUT				56																				
0644	OUT																								
0646	OUT																								
0647	OUT																								
SHEET TOTALS			16	168	380	96											23	18.8	1.2	9	1	6	3		

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

Structure From	To	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	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 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	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	Steel Frame with Two Grates Std. 840.37	Temp Steel Plate Cover Masonry Drainage	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.	Convert Existing J.B. to D.I.	Adjust C.B.	Adjust D.I.	Adjust M.H.	15" C.S. Elbow	18" C.S. Elbow	24" C.S. Elbow	30" C.S. Elbow	36" C.S. Elbow	Berm Ditch Outlet Std. 850.10 (Per Each)	Berm Ditch Outlet Std. 850.11 (Per Each)	Flowable Fill CY	Pipe Removal LIN. FT.	Remarks
1530												1						1																						
1530	1531																																							
1531																							1			1														
1532																							1			1														
1533																							1			1														
1534																														1										
1535		1	1																																					
1535	1533																																							
1536																			1	1																				
1536	1534																																							
1537		1	1																																					
1537	1538																																							
1538																							1	1																
1539																	1																							TB JB W/ SLAB LID
1540															1																									JB W/ SLAB LID
1541												1						1																						
1541	1542																																							
1542																																								
1542	1501																																							
1543																			1	1																				
1544		1	1																																					
1544	1540																																							
1545		1	1																																					
1546																	1																							TB JB W/ SLAB LID
1546	1529																																							
1601																																								
1602																																								
1602	1604																														2									ROD & LUG CONNECTORS
1603																																								
1702																																								
1702	1709																																							
1703																																								
1703	1707																																2							ROD & LUG W/ SLEEVE GASKETS
1704																																								
1704	1702																																							
1705																																								
1705	1704																																							
1706																																								
1706	1705																																							
1709																																								
1709	1703																																							
1710					1							1																												
1710	1702																																							
0409	OUT																																						30	Remove 15" CMP
0410	OUT																																						91	Remove 15" RCP
0632	OUT																																							
0635	OUT																																							
0644	OUT																																							
0646	OUT																																							
0647	OUT																																							
SHEET TOTALS		4	4		1							3			1		2	2	2	2			4	1		3				1	2		2						121	

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