RALL207

COMPUTED BY:	Allen Hodges, P.E.	DATE:	9/29/2021
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PROJECT NO.	SHEET NO.
R-5021	3D-20

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) 12	15	18	24	30	36	42	48	DO NOT USE PVC
LREV 64+10	36	RT									128						X
LREV 64+16	39	RT									104						X
LREV 83+75	1	RT										172					X
LREV 316+72	46	LT										168					X
LREV 255+65		RT											128				X
YREV 37+00		RT								120							X
LREV 71+14	23	RT															
LREV 78+49	98	RT															
LREV 78+10	134	RT															
YREV 32+73	109	RT															
YREV 33+38	109	RT															
LREV 81+44	75	RT															
LREV 88+10	4	LT															
LREV 91+58	70	RT															
LREV 94+32	3	LT															
LREV 95+96	1	RT															
LREV 98+16	63	RT															
LREV 103+65	67	RT															
LREV 108+79	4	LT															
LREV 152+16	81	RT															
LREV 154+12	67	RT															
LREV 172+17	0	LT															
LREV 208+43	70	RT															
LREV 211+60	82	LT															
LREV 211+51	70	RT															
LREV 213+84	69	RT															
LREV 210+95	1	LT															
LREV 216+81	29	RT															
LREV 242+95	7	LT															
LREV 245+10	2	LT															
LREV 251+91	3	LT															
LREV 253+46	30	RT															
LREV 254+35	5	LT															
LREV 254+09	64	RT															
LREV 255+45	70	RT															
LREV 256+39	74	RT															
LREV 256+64	73	RT															
LREV 256+86	73	RT															
LREV 257+63	72	RT															
LREV 257+57	65	RT															
LREV 257+87	4	LT															
LREV 261+30	3	LT															
LREV 275+36	4	LT															
LREV 277+86	35	RT															
LREV 305+99	6	LT															
LREV 329+68	34	LT															
LREV 330+88	79	LT															
LREV 350+22	49	LT															
LREV 376+43	38	RT															
Y19REV 11+45	26	LT															
SHEET TOTALS										120	232	340	128				

LINE & STATION	C. S. PIPE 12 .064	15 .064	18 .064	24 .064	30 .079	36 .079	DUCTILE IRON PIPE 15	18	24	30	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	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
LREV 64+10																												
LREV 64+16																												
LREV 83+75																												
LREV 316+72																												
LREV 255+65																						1						
YREV 37+00																						1						
LREV 71+14																												
LREV 78+49																												
LREV 78+10																												
YREV 32+73																												
YREV 33+38																												
LREV 81+44																												
LREV 88+10																												
LREV 91+58																												
LREV 94+32																												
LREV 95+96																												
LREV 98+16																												
LREV 103+65																												
LREV 108+79																												
LREV 152+16																												
LREV 154+12																												
LREV 172+17																												
LREV 208+43																												
LREV 211+60																												
LREV 211+51																												
LREV 213+84																												
LREV 210+95																												
LREV 216+81																												
LREV 242+95																												
LREV 245+10																												
LREV 251+91																												
LREV 253+46																												
LREV 254+35																												
LREV 254+09																												
LREV 255+45																												
LREV 256+39																												
LREV 256+64																												
LREV 256+86																												
LREV 257+63																												
LREV 257+57																												
LREV 257+87																												
LREV 261+30																												
LREV 275+36																												
LREV 277+86																												
LREV 305+99																												
LREV 329+68																												
LREV 330+88																												
LREV 350+22																												
LREV 376+43																												
Y19REV 11+45																												
SHEET TOTALS																						2						

LINE & STATION	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 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	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	STEEL FRAME WITH TWO GRATES STD. 840.37	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 TB J.B.	CONVERT EXISTING D.I. TO TB J.B. (2C-13)
LREV 64+10																											
LREV 64+16																											
LREV 83+75																											
LREV 316+72																											
LREV 255+65																		2							2		
YREV 37+00			1	1																							
LREV 71+14																											
LREV 78+49																											
LREV 78+10																											
YREV 32+73																											
YREV 33+38																											
LREV 81+44																											
LREV 88+10																											
LREV 91+58																											
LREV 94+32																											
LREV 95+96																											
LREV 98+16																											
LREV 103+65																											
LREV 108+79																											
LREV 152+16																											
LREV 154+12																											
LREV 172+17																											
LREV 208+43																											
LREV 211+60																											
LREV 211+51																											
LREV 213+84																											
LREV 210+95																											
LREV 216+81																											
LREV 242+95																											
LREV 245+10																											
LREV 251+91																											
LREV 253+46																											
LREV 254+35																											
LREV 254+09																											
LREV 255+45																											
LREV 256+39																											
LREV 256+64																											
LREV 256+86																											
LREV 257+63																											
LREV 257+57																											
LREV 257+87																											
LREV 261+30																											
LREV 275+36																											
LREV 277+86																											
LREV 305+99																											
LREV 329+68																											
LREV 330+88																											
LREV 350+22																											
LREV 376+43																											
Y19REV 11+45																											
SHEET TOTALS			1	1														2							2		

LINE & STATION	ADJUST MH	ADJUST C.B.	ADJUST D.I.	15" CSP ELBOW	18" CSP ELBOW	18" DIP ELBOW	24" DIP ELBOW	30" DIP ELBOW	BERM DITCH OUTLET STD. 850.10 (SY)	BERM DITCH OUTLET STD. 850.11 (SY)	PREFORMED SCOUR HOLE (PER EACH)	TEMP STEEL PLATE (SEE SHEET 2C-10)	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	PIPE REMOVAL LIN. FT.	REMARKS
LREV 64+10																Temp. 18" Pipe for Culvert 1 Phasing
LREV 64+16																Temp. 18" Pipe for Culvert 1 Phasing
LREV 83+75																Temp. 24" Pipe for Culvert 2 Phasing
LREV 316+72																Temp. 24" Pipe for Culvert 4 Phasing
LREV 255+65																Temp. JB's and 30" Pipe for Traffic Control
YREV 37+00																Temp. DI and 15" Pipe for Traffic Control
LREV 71+14															80	Remove 30" RCP
LREV 78+49															138	Remove 18" RCP
LREV 78+10															48	Remove 15" RCP
YREV 32+73															46	Remove 15" RCP
YREV 33+38															109	Remove 15" RCP
LREV 81+44															79	Remove 15" RCP
LREV 88+10															41	Remove 18" RCP
LREV 91+58															29	Remove 15" RCP
LREV 94+32															20	Remove 18" RCP
LREV 95+96															20	Remove 15" RCP
LREV 98+16															24	Remove 18" RCP
LREV 103+65															105	Remove 15" RCP
LREV 108+79															66	Remove 24" RCP
LREV 152+16															24	Remove 18" RCP
LREV 154+12															105	Remove 18" RCP
LREV 172+17															67	Remove 30" RCP
LREV 208+43															420	Remove 18" RCP
LREV 211+60															21	Remove 12" HDPE
LREV 211+51															32	Remove 24" RCP
LREV 213+84															428	Remove 24" RCP
LREV 210+95													7			Fill 18" RCP w/ Flowable Material
LREV 216+81													17		28	Remove 48" RCP Extensions
LREV 242+95															41	Remove 18" CMP
LREV 245+10															27	Remove 18" CMP
LREV 251+91															26	Remove 18" CMP
LREV 253+46													7			Plug and Fill 24" RCP w/ Flowable Material
LREV 254+35															15	Remove 15" RCP
LREV 254+09															122	Remove 18" RCP
LREV 255+45															150	Remove 18" RCP
LREV 256+39															33	Remove 18" RCP
LREV 256+64															15	Remove 24" RCP
LREV 256+86															28	Remove 24" RCP
LREV 257+63															121	Remove 24" RCP
LREV 257+57															138	Remove 36" RCP
LREV 257+87															27	Remove 24" RCP
LREV 261+30															15	Remove 24" RCP
LREV 275+36															29	Remove 24" RCP
LREV 277+86													7			Plug and Fill 24" RCP w/ Flowable Material
LREV 305+99															91	Remove 36" RCP
LREV 329+68															49	Remove 15" RCP
LREV 330+88															155	Remove 36" RCP
LREV 350+22															14	Remove 24" HDPE
LREV 376+43															30	Remove 18" RCP
Y19REV 11+45															53	Remove 15" RCP
SHEET TOTALS													38		3109	

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