RA11.207

| COMPUTED BY: | Allen Hodges, P.E. | DATE: | 9/29/2021 |
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| CHECKED BY: | Kase Schalois, P.E. | DATE: | 9/29/2021 |

# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
# DIVISION OF HIGHWAYS

| PROJECT NO. | SHEET NO. |
|---|---|
| R-5021 | 3D-9 |

**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 | 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 | 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) | 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 |
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