2MQ6010FQ2

**COMPUTED BY:** CGM **DATE:** 08/11/2026

**CHECKED BY:** JJM **DATE:** 08/11/2026

| PROJECT NO. | SHEET NO. |
|---|---|
| U-3422B | 3D-10 |

# 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 % | Side Drain Pipe (RCP, CSP, CAAP, HDPE, PVC, or PP PIPE) 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | DO NOT USE PP PIPE | C. S. PIPE 12 .064 | 15 .064 | 18 .064 | R. C. PIPE CLASS III 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS IV 12 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Y5 25+29 | 37 | LT | 1918 | | 173.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1918 | 1926 | | 168.9 | 167.9 | | | | | | | | | | | | | | | | 320 | | | | | | | | | | | | | | |
| Y5 18+79 | 37 | LT | 1919 | | 174.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1919 | 1904 | | 169.7 | 169.1 | | | | | | | | | | | | | | | | | | | | | | | 192 | | | | | | | |
| Y5 15+78 | 68 | RT | 1920 | | 170.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1920 | 1941 | | 167.7 | 167.6 | | | | | | | | | | | | | | | | | | | | | | | | | 32 | | | | | |
| Y5 18+45 | 62 | RT | 1921 | | 170.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1921 | 1906 | | 168.5 | 168.4 | | | | | | | | | | | | | | | | | | | | | | | 28 | | | | | | | |
| Y5 15+00 | 7 | RT | 1922 | | 173.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1922 | 1942 | | 170.4 | 167.5 | | | | | | | | | | | | | | | | | | | | | | | 76 | | | | | | | |
| Y5 29+28 | 37 | LT | 1923 | | 173.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1923 | 1924 | | 167.2 | 166.8 | | | | | | | | | | | | | | | | | 128 | | | | | | | | | | | | | |
| Y5 30+56 | 37 | LT | 1924 | | 173.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1924 | 1925 | | 166.8 | 166.3 | | | | | | | | | | | | | | | | | 172 | | | | | | | | | | | | | |
| Y5 32+27 | 37 | LT | 1925 | | 174.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1925 | 1326 | | 164.3 | 163.0 | | | | | | | | | | | | | | | | | | | | | 412 | | | | | | | | | |
| Y5 28+50 | 37 | LT | 1926 | | 173.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1926 | 1923 | | 167.4 | 167.2 | | | | | | | | | | | | | | | | | 76 | | | | | | | | | | | | | |
| Y5 28+50 | 37 | RT | 1927 | | 173.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1927 | 1931 | | 170.8 | 170.5 | | | | | | | | | | | | | | | | | | | | | | | 84 | | | | | | | |
| Y5 20+67 | 77 | RT | 1928 | | 172.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1928 | 1907 | | 170.0 | 169.9 | | | | | | | | | | | | | | | | | | | | | | | 56 | | | | | | | |
| Y5 38+75 | 6 | RT | 1929 | | 175.2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1929 | 1948 | | 172.0 | 170.2 | | | | | | | | | | | | | | | | | | | | | | | 40 | | | | | | | |
| Y5 20+26 | 7 | RT | 1930 | | 174.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1930 | 1911 | | 171.3 | 171.3 | | | | | | | | | | | | | | | | | | | | | | | 16 | | | | | | | |
| Y5 29+35 | 37 | RT | 1931 | | 173.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1931 | 1932 | | 170.5 | 170.2 | | | | | | | | | | | | | | | | | | | | | | | 112 | | | | | | | |
| Y5 30+48 | 37 | RT | 1932 | | 173.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1932 | 1933 | | 170.0 | 168.1 | | | | | | | | | | | | | | | | | | | | | | | | 176 | | | | | | |
| Y5 32+27 | 37 | RT | 1933 | | 174.5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1933 | 1925 | | 166.6 | 165.3 | | | | | | | | | | | | | | | | | | | 72 | | | | | | | | | | | |
| Y5 40+50 | 49 | LT | 1934 | | 172.4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1934 | 1935 | | 172.4 | 169.4 | | | | | | | | | | | | | | | | | | | | | | | | | | 28 | | | | |
| Y5 40+28 | 37 | LT | 1935 | | 173.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1935 | 1936 | | 169.4 | 169.1 | | | | | | | | | | | | | | | | | | | | | | | | | | 76 | | | | |
| Y5 39+51 | 37 | LT | 1936 | | 173.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1936 | 1948 | | 169.1 | 168.9 | | | | | | | | | | | | | | | | | | | | | | | | | | 76 | | | | |
| Y5 37+25 | 37 | LT | 1937 | | 174.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1937 | 1925 | | 168.5 | 165.8 | | | | | | | | | | | | | | | | | | 496 | | | | | | | | | | | | |
| Y5 40+50 | 49 | RT | 1939 | | 172.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1939 | 1940 | | 171.8 | 168.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | 52 | | | |
| Y5 40+02 | 37 | RT | 1940 | | 173.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1940 | 1943 | | 168.9 | 168.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | 60 | | | |
| Y5 15+78 | 37 | RT | 1941 | | 173.6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1941 | 1942 | | 166.3 | 166.2 | | | | | | | | | | | | | | | | | | 28 | | | | | | | | | | | | |
| Y5 15+78 | 7 | RT | 1942 | | 173.7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1942 | 1903 | | 167.5 | 167.3 | | | | | | | | | | | | | | | | | | 64 | | | | | | | | | | | | |
| Y5 39+41 | 37 | RT | 1943 | | 173.9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1943 | 1944 | | 168.7 | 168.3 | | | | | | | | | | | | | | | | | | | | | | | | | | | 144 | | | |
| | | | | | | | SHEET TOTALS | | | | | | | | | | | | | | | | 320 | 376 | 588 | 72 | | 412 | | 604 | 176 | 32 | 180 | 256 | | | |

| STRUCTURE NUMBER FROM | TO | 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 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | CONCRETE BRIDGE APPROACH D.I. STD. 840.13 | 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 W/ GRATE STD. 840.20 | G.D.I. (W.S. FLAT) FR. W/ 2 GRATES STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22 | G.D.I. (W.S. SAG) FR. W/ 2 GRATES STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24 | G.D.I. (N.S. SAG) FR. W/ 2 GRATES STD. 840.24 | G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29 | G.D.I. (N.S. FLAT) FR. 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 | ANG. VANE GRATES AND FRAMES STD. 840.33 | T.B.J.B. STD. 840.34 | T.B.D.I. STD. 840.35 | 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 M.H. | | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONC. AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1918 | | | | | 1 | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1918 | 1926 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1919 | | | | | 1 | | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1919 | 1904 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1920 | | | | | 1 | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1920 | 1941 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1921 | | | | | 1 | | | | | | | | | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1921 | 1906 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1922 | | | | | 1 | | | | | | | | 1 | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1922 | 1942 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1923 | | | | | 1 | 1.5 | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1923 | 1924 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1924 | | | | | 1 | 2.2 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1924 | 1925 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1925 | | | | | 1 | 5.0 | 0.3 | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1925 | 1326 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1926 | | | | | 1 | 1.4 | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1926 | 1923 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1927 | | | | | 1 | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1927 | 1931 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1928 | | | | | 1 | | | | | | | | | | | | | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| 1928 | 1907 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1929 | | | | | 1 | | | | | | | | 1 | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1929 | 1948 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1930 | | | | | 1 | | | | | | | | 1 | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1930 | 1911 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1931 | | | | | 1 | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1931 | 1932 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1932 | | | | | 1 | | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1932 | 1933 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1933 | | | | | 1 | 2.9 | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1933 | 1925 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1934 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1934 | 1935 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1935 | | | | | 1 | | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1935 | 1936 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1936 | | | | | 1 | | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1936 | 1948 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1937 | | | | | 1 | 1.3 | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1937 | 1925 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1939 | | 3.400 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1939 | 1940 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1940 | | | | | 1 | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1940 | 1943 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1941 | | | | | 1 | 2.3 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1941 | 1942 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1942 | | | | | 1 | 0.9 | | | | | | | 1 | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1942 | 1903 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1943 | | | | | 1 | 0.2 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1943 | 1944 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET TOTALS | | 3.400 | | | 23 | 17.7 | 0.3 | 16 | 2 | 7 | 7 | | 4 | | | | 6 | 6 | | 1 | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |

**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 |