DocuSign Envelope ID: 63FF4D1D-2E41-400B-B009-2E7051E46347

COMPUTED BY: KA/MH DATE: 5/4/2017

CHECKED BY: BM DATE: 5/4/2017

| PROJECT NO. | SHEET NO. |
|---|---|
| I-5786 | 3D-2 |

# 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.**

## *LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)*

| STATION | LOCATION (LT. RT. OR CL) | STRUCTURE NO. FROM | STRUCTURE NO. TO | TOP ELEVATION | INVERT ELEVATION | INVERT ELEVATION | SLOPE CRITICAL | DRAINAGE PIPE (RCP, CSP, CAAP, HDPE, or PVC) SIZE / THICKNESS OR GAUGE | 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 38+50 -L- | RT | 0604 | | 172.4 | 170.1 | | | | | | | | | | | | | | | |
| | | 0604 | 0606 | | 170.1 | 169.9 | | | | | | | | | | | | | | |
| 39+50 -L- | LT | 0607 | | 172.3 | 170.0 | | | | | | | | | | | | | | | |
| | | 0607 | 0608 | | 170.0 | 170.0 | | | | | | | | | | | | | | |
| 39+50 -L- | RT | 0608 | | 172.5 | 170.0 | | | | | | | | | | | | | | | |
| | | 0608 | 0606 | | 170.0 | 169.9 | | | | | | | | | | | | | | |
| 39+21 -L- | LT | 0606 | | 172.4 | 169.9 | | | | | | | | | | | | | | | |
| | | 0605 | 0606 | | 169.9 | 169.9 | | | | | | | | | | | | | | |
| 39+21 -L- | RT | 0605 | | 172.4 | 169.9 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 45+74 -L- | LT | 0609 | | 174.8 | 169.4 | | | | | | | | | | | | | | | |
| | | 0609 | 0610 | | 169.4 | 169.4 | | | | | | | | | | | | | | |
| 45+74 -L- | RT | 0610 | | 174.8 | 169.4 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 54+72 -L- | RT | 0701 | | 179.2 | 173.9 | | | | | | | | | | | | | | | |
| | | 0701 | 0702 | | 173.9 | 173.9 | | | | | | | | | | | | | | |
| 54+72 -L- | LT | 0702 | | 179.1 | 173.9 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 62+55 -L- | RT | 0801 | | 182.7 | 175.8 | | | | | | | | | | | | | | | |
| | | 0801 | 0802 | | 175.8 | 175.8 | | | | | | | | | | | | | | |
| 62+55 -L- | LT | 0802 | | 182.7 | 175.8 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 70+14 -L- | LT | 0803 | | 186.3 | 180.8 | | | | | | | | | | | | | | | |
| | | 0803 | 0804 | | 180.8 | 180.7 | | | | | | | | | | | | | | |
| 70+10 -L- | RT | 0804 | | 186.3 | 180.7 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 82+97 -L- | RT | 0901 | | 188.2 | 181.5 | | | | | | | | | | | | | | | |
| | | 0901 | 0902 | | 181.5 | 181.5 | | | | | | | | | | | | | | |
| 82+97 -L- | LT | 0902 | | 188.2 | 181.5 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 83+00 -L- | LT | 0903 | | 183.7 | | | | | | | | | | | | | | | | |
| | | 0903 | 0904 | | 180.7 | 180.6 | | | | | | | | | | | | | | |
| 83+00 -L- | LT | 0904 | | 184.4 | 180.6 | | | | | | | | | | | | | | | |
| 94+29 L- | CL | 1001 | | 181.5 | | | | | | | | | | | | | | | | |
| 102+51 -L- | RT | 1101 | | 176.7 | 174.2 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 98+50 -L- | RT | 1002 | | 179.8 | 177.1 | | | | | | | | | | | | | | | |
| | | 1002 | 1003 | | 177.1 | 176.7 | | | | | | | | | | | | | | |
| 99+91 -L- | LT | 1003 | | 179.4 | 176.7 | | | | | | | | | | | | | | | |
| | | 1003 | 1004 | | 176.7 | 176.6 | | | | | | | | | | | | | | |
| 99+91 -L- | RT | 1104 | | 179.3 | 176.6 | | | | | | | | | | | | | | | |
| | | 1104 | 1106 | | 176.6 | 175.1 | | | | | | | | | | | | | | |
| 102+50 -L- | LT | 1105 | | 177.9 | 175.1 | | | | | | | | | | | | | | | |
| | | 1105 | 1106 | | 175.1 | 175.1 | | | | | | | | | | | | | | |
| 102+50 -L- | RT | 1106 | | 177.9 | 175.1 | | | | | | | | | | | | | | | |
| | | 1106 | 1108 | | 175.1 | 172.6 | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |
| 96+68 -L- | LT | 1005 | | 178.0 | | | | | | | | | | | | | | | | |
| | | 1005 | 1006 | | 174.1 | 174.1 | | | | | | | | | | | | | | |
| 96+68 -L- | | 1006 | | | 174.1 | | | | | | | | | | | | | | | |
| SHEET TOTALS | | | | | | | | | | | | | | | | | | | | |

| STATION | WELDED STEEL PIPE SIZE / THICKNESS OR GAUGE | 12" | 15" | 18" | 24" | 30" | 36" | 42" | 48" | 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" |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0.28" THICK, GRADE B N SOIL | 0.31" THICK, GRADE B N SOIL | 0.31" THICK, GRADE B N SOIL | | | | | | | | | | | | | | | | | | | | | | | |
| 38+50 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39+50 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39+50 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39+21 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39+21 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45+74 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45+74 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 54+72 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 4 | | | | | | |
| 54+72 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 62+55 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | 4 | | | | | |
| 62+55 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70+14 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70+10 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 82+97 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 82+97 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 83+00 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 83+00 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 94+29 L- | CL | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 102+51 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 98+50 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 140 | | | | | | |
| 99+91 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 4 | | | | | | |
| 99+91 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 256 | | | | | | |
| 102+50 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | 4 | | | | | | |
| 102+50 -L- | RT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 96+68 -L- | LT | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 96+68 -L- | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET TOTALS | | | | | | | | | | | | | | | | | | | | | 412 | 408 | | | 16 | | |

| STATION | ** R.C. PIPE (CLASS V) | *** RC PIPE CULVERTS, CONTRACTOR DESIGN | **** RC PIPE CULVERTS, CONTRACTOR DESIGN | 15" SIDE DRAIN PIPE | 18" SIDE DRAIN PIPE | ENDWALLS STD. 838.01 838.11 OR STD. 838.80 (UNLESS NOTED OTHERWISE) CU. YARDS R.C.P. | C.S.P. | QUANTITIES FOR DRAINAGE STRUCTURES PER EACH (0' THRU 5.0') | LIN. FT. A 5.0' THRU 10.0' | LIN. FT. B 10.0' AND ABOVE | *TOTAL L.F. FOR PAY QUANTITY SHALL BE COL. "A" + (1.3 X COL. "B") | C.B. STD. 840.01 OR STD. 840.02 | 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 WITH TWO GRATES 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 GRATE STD. 840.20 | G.D.I. FRAME WITH TWO GRATES STD. 840.20 | G.D.I. FRAME WITH TWO GRATES STD. 840.22 | G.D.I. (N.S.) FRAME WITH GRATE STD. 840.24 | G.D.I. (N.S.) FRAME WITH TWO GRATES STD. 840.24 | J.B. STD. 840.31 OR 840.32 | FRAME w/ COVER, STD. 840.54 | ADJUST D.I. | CONV. EXIST'G DI TO J.B. | T.B.D.I. STD. 840.35 | G.D.I. (N.S.) FRAME WITH GRATE STD. 840.29 | T.B.J.B. STD. 840.34 | FLOWABLE FILL (C.Y.) | G.D.I. TYPE "A" EXTRA DEPTH (SEE DETAIL SHEET 2C-18) | DRAINAGE PIPE ELBOWS NO. & SIZE | CONC. & BRICK PIPE PLUG, C.Y. STD. 840.71 | CONC. COLLARS CL. "B" C.Y. STD. 840.72 | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 38+50 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | 68 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39+50 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39+50 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39+21 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39+21 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45+74 -L- | | | | | | | | 1 | 0.4 | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45+74 -L- | | | | | | | | 1 | 0.7 | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 54+72 -L- | | | | | | | | 1 | 0.2 | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 54+72 -L- | | | | | | | | 1 | 0.2 | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 62+55 -L- | | | | | | | | 1 | 1.9 | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 62+55 -L- | | | | | | | | 1 | 1.9 | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70+14 -L- | | | | | | | | 1 | 0.5 | | | | | | | | | | 1 | | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70+10 -L- | | | | | | | | 1 | 0.6 | | | | | | | | | | 1 | | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 82+97 -L- | | | | | | | | 1 | 1.7 | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 82+97 -L- | | | | | | | | 1 | 1.7 | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 83+00 -L- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0.764 | |
| | | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 83+00 -L- | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | |
| 94+29 L- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 102+51 -L- | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 98+50 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 99+91 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 99+91 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 102+50 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 102+50 -L- | | | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | | | | | | 1 | | | | | | | | | | | | | | ADJUST DI FOR TRAFFIC PHASING |
| | | | | | | 296 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 96+68 -L- | | | | | | | | 1 | | | | | | | | | | | | | | 1 | | | 1 | | | | | | | | | | | | | | | | | | | | |
| | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 96+68 -L- | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| SHEET TOTALS | | | | | | 408 | | 23 | 9.8 | | | | | | | | | | 2 | 14 | 7 | | 19 | 4 | | | | | | | 19 | 1 | | | | | | | | | 0.764 | | |

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 |