6XVKM72

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|---|---|---|---|
| COMPUTED BY: | JL | DATE: | 01/13/2020 |
| CHECKED BY: | DG | DATE: | 01/27/2020 |

# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
# DIVISION OF HIGHWAYS

| PROJECT NO. | SHEET NO. |
|---|---|
| I-40 Storm Repairs - Pender | 3D-1 |

**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 | TO | TOP ELEVATION FT. | INVERT ELEVATION FT. | INVERT ELEVATION FT. | MINIMUM REQUIRED SLOPE % | Side Drain Pipe (RCP, CSP, CAAP, HDPE, or PVC) 12 | 15 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | C. A. A. PIPE 12 .064 | 15 .064 | 18 .064 | 24 .064 | | R. C. PIPE CLASS III 12 | 15 | 18 | 24 | | R. C. PIPE CLASS IV 12 | 15 | 18 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L1 13+50 | 58 | RT | 0702 | | 25.4 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0702 | 0703 | | 22.6 | 4.2 | | | | | | | | | | 64 | | | | | | | | | | | | |
| L1 14+00 | 58 | LT | 0704 | | 26.5 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0704 | 0705 | | 23.7 | 2.6 | | | | | | | | | | 56 | | | | | | | | | | | | |
| L1 15+75 | 58 | RT | 0706 | | 23.1 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0706 | 0707 | | 20.4 | 3.4 | | | | | | | | | | 52 | | | | | | | | | | | | |
| L1 17+00 | 59 | LT | 0708 | | 23.4 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0708 | 0709 | | 20.6 | 2.3 | | | | | | | | | | 56 | | | | | | | | | | | | |
| L1 18+25 | 59 | RT | 0710 | | 20.5 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0710 | 0711 | | 17.8 | 4.0 | | | | | | | | | | 44 | | | | | | | | | | | | |
| L1 20+00 | 58 | LT | 0712 | | 20.3 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0712 | 0713 | | 17.6 | 2.1 | | | | | | | | | | 48 | | | | | | | | | | | | |
| L1 20+50 | 59 | RT | 0714 | | 18.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0714 | 0715 | | 15.4 | 2.9 | | | | | | | | | | 64 | | | | | | | | | | | | |
| L1 22+50 | 58 | LT | 0716 | | 17.9 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0716 | 0717 | | 15.2 | 3.4 | | | | | | | | | | 36 | | | | | | | | | | | | |
| L1 22+50 | 59 | RT | 0718 | | 16.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0718 | 0719 | | 12.9 | 3.2 | | | | | | | | | | 52 | | | | | | | | | | | | |
| L1 24+50 | 59 | RT | 0801 | | 14.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0801 | 0802 | | 11.5 | 4.8 | | | | | | | | | | 44 | | | | | | | | | | | | |
| L1 25+00 | 58 | LT | 0803 | | 15.4 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0803 | 0804 | | 12.7 | 3.6 | | | | | | | | | | 32 | | | | | | | | | | | | |
| L1 26+35 | 59 | RT | 0805 | | 12.5 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0805 | 0806 | | 9.2 | 8.9 | | | | | | | | | | | | | | | 28 | | | | | | | |
| L1 26+63 | 60 | RT | 0806 | | 12.2 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0806 | 0807 | | 8.9 | 6.0 | | | | | | | | | | | | | | | 40 | | | | | | | |
| L1 27+85 | 59 | LT | 0808 | | 13.0 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0808 | 0809 | | 9.7 | 9.5 | | | | | | | | | | | | | | | 28 | | | | | | | |
| L1 28+11 | 59 | LT | 0809 | | 12.8 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 0809 | 0810 | | 9.5 | 5.8 | | | | | | | | | | | | | | | 44 | | | | | | | |
| L1 11+13 | 90 | RT | E0703 | | 13.8 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | E0703 | 0701 | | 12.6 | 4.4 | | | | | | | | | | 20 | | | | | | | | | | | | |
| L1 12+89 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 14+34 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 15+29 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 17+99 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 18+31 | 60 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 19+31 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 20+57 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 20+86 | 60 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 22+02 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 23+03 | 60 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 23+40 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 24+97 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 26+30 | 60 | RT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 28+13 | 60 | LT | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 23+03 | 0 | CL | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET TOTALS | | | | | | | | | | | | | | | | | 568 | | | | | 140 | | | | | | | |
| PROJECT TOTALS | | | | | | | | | | | | | | | | | 568 | | | | | 140 | | | | | | | |

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

| LINE & STATION | QUANTITIES FOR DRAINAGE STRUCTURES A: 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 WITH GRATE STD. 840.2 | G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.1 | G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22 | G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.2 | 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. 840.2 | 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 | TEMP STEEL PLATE COVER MASONRY DRAINAGE | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L1 13+50 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 14+00 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 15+75 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 17+00 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 18+25 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 20+00 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 20+50 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 22+50 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
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| L1 22+50 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
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| L1 24+50 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
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| L1 25+00 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 26+35 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 26+63 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
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| L1 27+85 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
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| L1 28+11 | 1 | | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 11+13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| SHEET TOTALS | 15 | | | | | | | | | | | | | | | 15 | | 15 | | | | | | | | | | | | | | | | | |
| PROJECT TOTALS | 15 | | | | | | | | | | | | | | | 15 | | 15 | | | | | | | | | | | | | | | | | |

| LINE & STATION | 15" C.A.A. ELBOW | 18" C.A.A. ELBOW | 24" C.A.A. ELBOW | 30" C.A.A. ELBOW | 36" C.A.A. ELBOW | | | | | | | BERM DITCH OUTLET STD. 850.10 (PER EACH) | BERM DITCH OUTLET STD. 850.11 (PER EACH) | | | MODIFIED CONC. FLUME | PREFORMED SCOUR HOLE (PER EACH) | ENERGY DISSIPATION BASIN | PIPE CLEAN OUT EACH | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L1 13+50 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 14+00 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 15+75 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 17+00 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 18+25 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 20+00 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 20+50 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 22+50 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 22+50 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 24+50 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 25+00 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | |
| L1 26+35 | | | | | | | | | | | | | | | | | | | | | | | | |
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| L1 26+63 | | | | | | | | | | | | | | | | | | | | | | | | |
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| L1 27+85 | | | | | | | | | | | | | | | | | | | | | | | | |
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| L1 28+11 | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| L1 11+13 | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | | | | | | | | | | | | | | | | | | | | | | 15" CMP EXTENSION |
| L1 12+89 | | | | | | | | | | | | | | | | | | | | | | | 30 | |
| L1 14+34 | | | | | | | | | | | | | | | | | | | | | | | 28 | |
| L1 15+29 | | | | | | | | | | | | | | | | | | | | | | | 30 | |
| L1 17+99 | | | | | | | | | | | | | | | | | | | | | | | 33 | |
| L1 18+31 | | | | | | | | | | | | | | | | | | | | | | | 33 | |
| L1 19+31 | | | | | | | | | | | | | | | | | | | | | | | 28 | |
| L1 20+57 | | | | | | | | | | | | | | | | | | | | | | | 34 | |
| L1 20+86 | | | | | | | | | | | | | | | | | | | | | | | 27 | |
| L1 22+02 | | | | | | | | | | | | | | | | | | | | | | | 25 | |
| L1 23+03 | | | | | | | | | | | | | | | | | | | | | | | 18 | |
| L1 23+40 | | | | | | | | | | | | | | | | | | | | | | | 35 | |
| L1 24+97 | | | | | | | | | | | | | | | | | | | | | | | 13 | |
| L1 26+30 | | | | | | | | | | | | | | | | | | | | | | | 25 | |
| L1 28+13 | | | | | | | | | | | | | | | | | | | | | | | 20 | |
| L1 23+03 | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| SHEET TOTALS | 24 | | | | | | | | | | | | | | | | | | 1 | | | | 379 | |
| PROJECT TOTALS | 24 | | | | | | | | | | | | | | | | | | 1 | | | | 379 | |

**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 |