RAL-2TK9479H9P

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| COMPUTED BY: | MKD | DATE: | 09/13/2021 |
| CHECKED BY: | WDY | DATE: | 09/14/2021 |

# NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
# DIVISION OF HIGHWAYS

| PROJECT NO. | SHEET NO. |
|---|---|
| U2579-AB | 3D-13 |

**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) 15 | 18 | DO NOT USE RCP | DO NOT USE CSP | DO NOT USE CAAP | DO NOT USE HDPE | DO NOT USE PVC | DO NOT USE PP PIPE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | |
| L 809+00 | 133 LT | 1124 | | 894.0 | | | | | | | | | | | |
| | | 1124 | 1131 | | 891.0 | 885.7 | | | | | | | | | |
| Y16 27+14 | 18 LT | 1128 | | 925.0 | | | | | | | | | | | |
| | | 1128 | 1127 | | 920.0 | 919.0 | | | | | | | | | |
| Y16 25+90 | 15 LT | 1129 | | 927.0 | | | | | | | | | | | |
| | | 1129 | 1128 | | 923.7 | 920.0 | | | | | | | | | |
| Y16 25+50 | 19 RT | 1130 | | 926.9 | | | | | | | | | | | |
| | | 1130 | 1129 | | 923.9 | 923.7 | | | | | | | | | |
| L 809+00 | 0 CL | 1131 | | 891.5 | | | | | | | | | | | |
| | | 1131 | 1112 | | 884.2 | 883.6 | | | | | | | | | |
| | | 1133 | | | | | | | 36 | | | | | | |
| | | 1134 | | | | | | | 36 | | | | | | |
| | | 1135 | | | | | | 36 | | | | | | | |
| L 827+50 | 131 RT | 1136 | | 896.0 | | | | | | | | | | | |
| | | 1136 | 1137 | | 893.0 | 892.3 | | | | | | | | | |
| L 827+50 | 0 CL | 1137 | | 901.3 | | | | | | | | | | | |
| | | 1137 | 1205 | | 891.8 | 887.0 | 0.3 | | | | | | | | |
| L 827+00 | 103 LT | 1138 | | 901.4 | | | | | | | | | | | |
| | | 1138 | 1137 | | 898.4 | 892.3 | | | | | | | | | |
| Y15FLYAC 76+33 | 119 LT | 1139 | | 884.4 | | | | | | | | | | | |
| | | 1139 | 1191 | | 884.4 | 865.3 | | | | | | | | | |
| L 811+50 | 115 LT | 1140 | | 895.0 | | | | | | | | | | | |
| | | 1140 | 1113 | | 891.0 | 886.0 | | | | | | | | | |
| Y15RPDREV 15+57 | 73 RT | 1142 | | | | | | | | | | | | | |
| | | 1142 | 1140 | | 894.3 | 891.0 | 0.5 | | | | | | | | |
| L 823+00 | 0 CL | 1143 | | 901.3 | | | | | | | | | | | |
| | | 1143 | 1144 | | 898.3 | 896.5 | | | | | | | | | |
| Y15RPC 31+36 | 44 RT | 1150 | | 893.6 | | | | | | | | | | | |
| | | 1150 | 1117 | | 890.6 | 889.7 | | | | | | | | | |
| | | 1153 | 1154 | | | | | | | | | | | | |
| | | 1155 | | | | | | 36 | | | | | | | |
| | | 1156 | | | | | | 36 | | | | | | | |
| | | 1157 | | | | | | 32 | | | | | | | |
| L 804+00 | 91 LT | 1160 | | 889.8 | | | | | | | | | | | |
| | | 1160 | 1161 | | 887.0 | 885.0 | | | | | | | | | |
| L 804+00 | 0 CL | 1161 | | 888.3 | | | | | | | | | | | |
| | | 1161 | 1103 | | 885.0 | 876.7 | 1.7 | | | | | | | | |
| L 804+00 | 91 RT | 1162 | | 888.2 | | | | | | | | | | | |
| | | 1162 | 1161 | | 885.5 | 885.0 | | | | | | | | | |
| Y15FLYAC 74+43 | 198 RT | 1191 | | 872.4 | | | | | | | | | | | |
| | | 1191 | 1111 | | 865.3 | 865.2 | | | | | | | | | |
| Y15RPC 19+35 | | 1192 | | 892.8 | | | | | | | | | | | |
| | | 1192 | 1109 | | 883.1 | 855.4 | | | | | | | | | |
| L 831+00 | 196 RT | 1201 | | 854.1 | | | | | | | | | | | |
| | | 1201 | 1203 | | 854.1 | 835.0 | | | | | | | | | |
| L 833+28 | 182 LT | 1203 | | 848.1 | | | | | | | | | | | |
| | | 1203 | 1202 | | 835.0 | 834.9 | 0.5 | | | | | | | | |
| L 833+50 | 84 LT | 1204 | | 894.8 | | | | | | | | | | | |
| | | 1204 | 1203 | | 886.6 | 839.0 | 2.2 | | | | | | | | |
| L 833+50 | 0 CL | 1205 | | 892.0 | | | | | | | | | | | |
| SHEET TOTALS | | | | | | | | 140 | 72 | | | | | | |

| LINE & STATION | C. S. PIPE 15 | 18 | 24 | 30 | 36 | 42 | R. C. PIPE CLASS III 12 | 15 | 18 | 24 | 30 | 36 | 42 | R. C. PIPE CLASS IV 48 | 15 | 18 | 24 | 30 | 36 | 42 | 48 | R. C. PIPE CLASS V 42 | 24" WELDED STEEL PIPE, IN SOIL (OUT OF SOIL) | 30" WELDED STEEL PIPE, IN SOIL (OUT OF SOIL) | 42" WELDED STEEL PIPE, IN SOIL (OUT OF SOIL) | 48" WELDED STEEL PIPE, IN SOIL (OUT OF SOIL) | ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | .064 | .064 | .064 | .079 | .079 | .109 | | | | | | | | | | | | | | | | | | | | | |
| L 809+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 136 | | | | | | | | | | | | | | | | | | |
| Y16 27+14 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | 56 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y16 25+90 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 124 | | | | | | | | | | | | | | | | | | |
| Y16 25+50 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | 52 | | | | | | | | | | | |
| L 809+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | 120 | | | | | | | | | | | | | | | |
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| L 827+50 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 132 | | | | | | | | | | | | | | | | | | |
| L 827+50 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | 596 | | | | | | | | | | | | | | | | | |
| L 827+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 116 | | | | | | | | | | | | | | | | | | |
| Y15FLYAC 76+33 | | | | | | | | | | | | | | | | | | | | | | | | | | | 4.500 |
| | | | | | | | | | | | | | | | | | | | | | | 372 | | | | | |
| L 811+50 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | 116 | | | | | | | | | | | | | | | | |
| Y15RPDREV 15+57 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 823+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 116 | | | | | | | | | | | | | | | | | | |
| Y15RPC 31+36 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 308 | | | | | | | | | | | | | | | | | | |
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| L 804+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 92 | | | | | | | | | | | | | | | | | | | |
| L 804+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 184 | | | | | | | | | | | | | | | | | | | |
| L 804+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | 92 | | | | | | | | | | | | | | | | | | | |
| Y15FLYAC 74+43 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | 16 | | | | | | | | | | | | | | | |
| Y15RPC 19+35 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 136 | | | | | | | | | | | | | | | | | | | | | | | |
| L 831+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | 3.400 |
| | | | | | | | | | | | 444 | | | | | | | | | | | | | | | | |
| L 833+28 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | 24 | | | | | | | | | | | | | | | | |
| L 833+50 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 100 | | | | | | | | | | | | | | | | | | | | | | | | |
| L 833+50 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET TOTALS | | 56 | 100 | 136 | | | | 368 | 932 | 596 | 116 | 588 | 16 | | | 132 | | | | | | 372 | | | | | 7.900 |

| LINE & STATION | QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) A: 0' THRU 5' EACH | A: 5' THRU 10' LIN. FT. | A: 10' AND ABOVE LIN. FT. | B | C.B. STD. 840.01 OR STD. 840.02 | FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E | F | G | CONCRETE TRANSITIONAL | D.I. STD. 852.04 OR STD. 852.06 | OPEN THROAT C.B. STD. 840.04 OR STD. 840.05 | 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 W/ 2 GRA. STD. 840.20 | G.D.I. (W.S. SAG) FRAME W/ GRA. STD. 840.22 | G.D.I. (W.S. SAG) FRAME W/ 2 GRA. STD. 840.22 | G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24 | G.D.I. (N.S. SAG) FRAME W/ 2 GRA. STD. 840.24 | J.B. STD. 840.31 OR STD. 840.32 | 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 | PIPE CLEANOUT (PER EACH) | 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. | ADJUST D.I. | 15" C.S. ELBOW | 18" C.S. ELBOW | 24" C.S. ELBOW | 30" C.S. ELBOW | 36" C.S. ELBOW | 42" C.S. ELBOW | BERM DITCH OUTLET STD. 850.10 (PER EACH) | ### SLUICE GATE (42" SIZE SLUICE GATE) | TRASH RACK | PREFORMED SCOUR HOLE (PER EACH) | FLOWABLE FILL CY | CONCRETE COLLARS CL. "B" STD. 840.72 CY | PIPE REMOVAL LIN. FT. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L 809+00 | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Y16 27+14 | 1 | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Y16 25+90 | 1 | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Y16 25+50 | 1 | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| L 809+00 | 1 | 2.2 | | | | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| L 827+50 | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| L 827+50 | 1 | 4.5 | | | | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Y15FLYAC 76+33 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4.500 |
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| L 811+50 | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Y15RPDREV 15+57 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | BDO |
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| L 823+00 | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Y15RPC 31+36 | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| L 804+00 | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| L 804+00 | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Y15FLYAC 74+43 | 1 | 2.1 | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
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| Y15RPC 19+35 | 1 | 4.7 | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
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| L 831+00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3.400 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| L 833+28 | 1 | 5.0 | 3.1 | | | | | | | | | | | | | | | | | | 1 | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
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| L 833+50 | 1 | 3.2 | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| L 833+50 | 1 | | | | | | | | | | | | | 1 | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SHEET TOTALS | 19 | 21.7 | 3.1 | 1 | | 1 | | | | | | | 3 | 12 | | 3 | | 12 | | | 3 | | | | | 1 | 3 | | | | | 2 | 2 | 2 | | | 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 |