| Station | Northing | Easting | Elevation |
|---|---|---|---|
| 5+16.77 | 365899.78 | 2742845.51 | 1204.75 |
| 5+18.40 | 365898.18 | 2742845.85 | 1204.75 |
| 5+20.76 | 365895.87 | 2742846.34 | 1205.14 |
| 5+21.24 | 365895.39 | 2742846.37 | 1205.22 |
| 5+24.16 | 365892.48 | 2742846.55 | 1205.22 |
| 5+26.88 | 365889.77 | 2742846.71 | 1205.66 |
| 5+27.00 | 365889.64 | 2742846.71 | 1205.68 |
| 5+29.92 | 365886.73 | 2742846.62 | 1205.68 |
| 5+32.76 | 365883.89 | 2742846.54 | 1206.15 |
| 5+35.68 | 365880.97 | 2742846.45 | 1206.15 |
| 5+38.52 | 365878.13 | 2742846.36 | 1206.62 |
| 5+41.44 | 365875.21 | 2742846.28 | 1206.62 |
| 5+43.51 | 365873.15 | 2742846.22 | 1206.96 |
| 5+44.28 | 365872.37 | 2742846.28 | 1207.09 |
| 5+47.03 | 365869.64 | 2742846.50 | 1207.09 |
| 5+47.20 | 365869.47 | 2742846.54 | 1207.09 |
| 5+50.04 | 365866.71 | 2742847.23 | 1207.56 |
| 5+51.02 | 365865.76 | 2742847.47 | 1207.56 |
| 5+52.96 | 365864.00 | 2742848.27 | 1207.56 |
| 5+55.01 | 365862.12 | 2742849.11 | 1207.89 |
| 5+55.80 | 365861.47 | 2742849.56 | 1208.02 |
| 5+58.72 | 365859.06 | 2742851.21 | 1208.02 |
| 5+59.01 | 365858.82 | 2742851.37 | 1208.07 |
| 5+61.56 | 365857.03 | 2742853.18 | 1208.49 |
| 5+63.61 | 365855.58 | 2742854.64 | 1208.49 |
| 5+64.48 | 365855.08 | 2742855.34 | 1208.49 |
| 5+67.32 | 365853.42 | 2742857.65 | 1208.96 |
| 5+70.24 | 365851.72 | 2742860.02 | 1208.96 |
| 5+71.15 | 365851.19 | 2742860.76 | 1209.11 |
| 5+73.08 | 365850.27 | 2742862.46 | 1209.43 |
| 5+74.89 | 365849.41 | 2742864.05 | 1209.43 |
| 5+76.00 | 365848.97 | 2742865.07 | 1209.43 |
| 5+78.84 | 365847.85 | 2742867.68 | 1209.89 |
| 5+81.76 | 365846.70 | 2742870.36 | 1209.89 |
| 5+82.46 | 365846.42 | 2742871.01 | 1210.01 |
| 5+84.60 | 365845.83 | 2742873.06 | 1210.36 |
| 5+87.52 | 365845.02 | 2742875.87 | 1210.36 |
| 5+90.36 | 365844.23 | 2742878.60 | 1210.83 |
| 5+93.28 | 365843.42 | 2742881.40 | 1210.83 |
| 5+93.61 | 365843.33 | 2742881.72 | 1210.88 |
| 5+96.12 | 365842.93 | 2742884.20 | 1211.30 |
| 5+99.04 | 365842.46 | 2742887.08 | 1211.30 |
| 6+01.88 | 365842.01 | 2742889.88 | 1211.76 |
| 6+04.80 | 365841.55 | 2742892.77 | 1211.76 |
| 6+06.34 | 365841.30 | 2742894.28 | 1212.02 |
| 6+07.64 | 365841.16 | 2742895.58 | 1212.23 |
| 6+10.56 | 365840.84 | 2742898.48 | 1212.23 |
| 6+13.40 | 365840.53 | 2742901.30 | 1212.70 |
| 6+16.32 | 365840.21 | 2742904.21 | 1212.70 |
| 6+19.16 | 365839.89 | 2742907.03 | 1213.17 |

| Station | Northing | Easting | Elevation |
|---|---|---|---|
| 6+22.08 | 365839.57 | 2742909.93 | 1213.17 |
| 6+24.30 | 365839.33 | 2742912.14 | 1213.53 |
| 6+24.92 | 365839.20 | 2742912.74 | 1213.63 |
| 6+27.84 | 365838.58 | 2742915.60 | 1213.63 |
| 6+30.68 | 365837.98 | 2742918.37 | 1214.10 |
| 6+31.84 | 365837.73 | 2742919.51 | 1214.10 |
| 6+33.60 | 365837.12 | 2742921.16 | 1214.10 |
| 6+36.44 | 365836.13 | 2742923.82 | 1214.57 |
| 6+37.31 | 365835.83 | 2742924.63 | 1214.57 |
| 6+39.36 | 365834.81 | 2742926.41 | 1214.57 |
| 6+40.83 | 365834.07 | 2742927.68 | 1214.81 |
| 6+42.20 | 365833.19 | 2742928.73 | 1215.04 |
| 6+44.82 | 365831.50 | 2742930.73 | 1215.04 |
| 6+45.12 | 365831.26 | 2742930.92 | 1215.04 |
| 6+47.96 | 365829.03 | 2742932.67 | 1215.51 |
| 6+49.37 | 365827.92 | 2742933.55 | 1215.51 |
| 6+50.88 | 365826.57 | 2742934.21 | 1215.51 |
| 6+53.72 | 365824.02 | 2742935.46 | 1215.97 |
| 6+56.64 | 365821.39 | 2742936.74 | 1215.97 |
| 6+59.48 | 365818.84 | 2742937.99 | 1216.44 |
| 6+60.17 | 365818.22 | 2742938.30 | 1216.44 |
| 6+62.40 | 365816.16 | 2742939.16 | 1216.44 |
| 6+65.24 | 365813.54 | 2742940.25 | 1216.91 |
| 6+68.16 | 365810.85 | 2742941.37 | 1216.91 |
| 6+71.00 | 365808.23 | 2742942.46 | 1217.38 |
| 6+73.92 | 365805.53 | 2742943.59 | 1217.38 |
| 6+76.76 | 365802.91 | 2742944.68 | 1217.84 |
| 6+77.51 | 365802.21 | 2742944.97 | 1217.84 |
| 6+79.68 | 365800.32 | 2742946.01 | 1217.84 |
| 6+81.04 | 365799.12 | 2742946.67 | 1218.07 |
| 6+82.52 | 365797.93 | 2742947.55 | 1218.31 |
| 6+85.04 | 365795.91 | 2742949.04 | 1218.31 |
| 6+85.44 | 365795.62 | 2742949.33 | 1218.31 |
| 6+88.28 | 365793.60 | 2742951.32 | 1218.78 |
| 6+89.03 | 365793.06 | 2742951.85 | 1218.78 |
| 6+91.20 | 365791.78 | 2742953.59 | 1218.78 |
| 6+93.99 | 365790.12 | 2742955.85 | 1219.24 |
| 6+94.04 | 365790.11 | 2742955.89 | 1219.25 |
| 6+96.96 | 365788.84 | 2742958.52 | 1219.25 |
| 6+99.80 | 365787.60 | 2742961.07 | 1219.71 |
| 7+01.54 | 365786.84 | 2742962.64 | 1219.71 |
| 7+02.72 | 365786.45 | 2742963.75 | 1219.71 |
| 7+05.44 | 365785.55 | 2742966.32 | 1220.16 |
| 7+05.56 | 365785.51 | 2742966.43 | 1220.18 |
| 7+08.48 | 365784.66 | 2742969.23 | 1220.18 |
| 7+11.32 | 365783.84 | 2742971.95 | 1220.65 |
| 7+14.24 | 365782.99 | 2742974.74 | 1220.65 |
| 7+17.08 | 365782.17 | 2742977.46 | 1221.12 |
| 7+20.00 | 365781.32 | 2742980.25 | 1221.12 |
| 7+22.84 | 365780.49 | 2742982.97 | 1221.59 |

| Station | Northing | Easting | Elevation |
|---|---|---|---|
| 7+22.94 | 365780.46 | 2742983.07 | 1221.59 |
| 7+25.76 | 365779.34 | 2742985.65 | 1221.59 |
| 7+28.60 | 365778.21 | 2742988.25 | 1222.05 |
| 7+30.47 | 365777.46 | 2742989.97 | 1222.05 |
| 7+31.52 | 365776.91 | 2742990.86 | 1222.05 |
| 7+33.36 | 365775.95 | 2742992.43 | 1222.36 |
| 7+34.36 | 365775.30 | 2742993.19 | 1222.52 |
| 7+36.87 | 365773.67 | 2742995.11 | 1222.52 |
| 7+37.28 | 365773.34 | 2742995.34 | 1222.52 |
| 7+40.12 | 365771.01 | 2742996.97 | 1222.99 |
| 7+42.81 | 365768.80 | 2742998.52 | 1222.99 |
| 7+43.04 | 365768.59 | 2742998.60 | 1222.99 |
| 7+45.88 | 365765.95 | 2742999.63 | 1223.46 |
| 7+48.80 | 365763.23 | 2743000.70 | 1223.46 |
| 7+50.41 | 365761.74 | 2743001.29 | 1223.72 |
| 7+51.64 | 365760.55 | 2743001.64 | 1223.92 |
| 7+54.56 | 365757.76 | 2743002.47 | 1223.92 |
| 7+57.40 | 365755.03 | 2743003.28 | 1224.39 |
| 7+58.40 | 365754.07 | 2743003.57 | 1224.39 |
| 7+60.32 | 365752.19 | 2743003.92 | 1224.39 |
| 7+63.16 | 365749.39 | 2743004.43 | 1224.86 |
| 7+66.08 | 365746.52 | 2743004.96 | 1224.86 |
| 7+68.92 | 365743.73 | 2743005.48 | 1225.33 |
| 7+70.44 | 365742.24 | 2743005.75 | 1225.33 |
| 7+71.84 | 365740.92 | 2743006.24 | 1225.33 |
| 7+74.68 | 365738.26 | 2743007.23 | 1225.79 |
| 7+77.60 | 365735.52 | 2743008.25 | 1225.79 |
| 7+77.97 | 365735.17 | 2743008.38 | 1225.86 |
| 7+80.44 | 365733.05 | 2743009.64 | 1226.26 |
| 7+83.36 | 365730.55 | 2743011.13 | 1226.26 |
| 7+85.96 | 365728.31 | 2743012.46 | 1226.69 |
| 7+86.20 | 365728.12 | 2743012.61 | 1226.73 |
| 7+88.83 | 365726.05 | 2743014.23 | 1226.73 |
| 7+89.12 | 365725.84 | 2743014.43 | 1226.73 |
| 7+91.96 | 365723.75 | 2743016.36 | 1227.20 |
| 7+94.88 | 365721.61 | 2743018.34 | 1227.20 |
| 7+97.72 | 365719.52 | 2743020.27 | 1227.66 |
| 8+00.64 | 365717.38 | 2743022.25 | 1227.66 |
| 8+03.48 | 365715.29 | 2743024.17 | 1228.13 |
| 8+06.40 | 365713.15 | 2743026.16 | 1228.13 |
| 8+07.43 | 365712.39 | 2743026.85 | 1228.30 |
| 8+09.24 | 365710.95 | 2743027.95 | 1228.60 |
| 8+10.95 | 365709.59 | 2743028.99 | 1228.60 |
| 8+12.16 | 365708.54 | 2743029.58 | 1228.60 |
| 8+15.00 | 365706.06 | 2743030.97 | 1229.07 |
| 8+15.05 | 365706.01 | 2743031.00 | 1229.07 |
| 8+17.92 | 365703.23 | 2743031.68 | 1229.07 |
| 8+18.54 | 365702.62 | 2743031.83 | 1229.17 |
| 8+20.76 | 365700.43 | 2743031.50 | 1229.54 |
| 8+22.52 | 365698.70 | 2743031.24 | 1229.54 |

| Station | Northing | Easting | Elevation |
|---|---|---|---|
| 8+23.68 | 365697.64 | 2743030.76 | 1229.54 |
| 8+23.92 | 365697.42 | 2743030.66 | 1229.57 |
| 8+26.52 | 365695.20 | 2743029.30 | 1230.00 |
| 8+29.44 | 365692.71 | 2743027.78 | 1230.00 |
| 8+31.47 | 365690.98 | 2743026.72 | 1230.34 |
| 8+32.28 | 365690.34 | 2743026.22 | 1230.47 |
| 8+35.20 | 365688.03 | 2743024.43 | 1230.47 |
| 8+38.02 | 365685.80 | 2743022.70 | 1230.94 |
| 8+40.94 | 365683.25 | 2743021.27 | 1230.94 |
| 8+43.78 | 365680.77 | 2743019.89 | 1231.40 |
| 8+43.88 | 365680.69 | 2743019.84 | 1231.40 |
| 8+46.70 | 365678.00 | 2743018.99 | 1231.40 |
| 8+47.39 | 365677.34 | 2743018.78 | 1231.52 |
| 8+49.54 | 365675.19 | 2743018.70 | 1231.87 |
| 8+52.38 | 365672.36 | 2743018.59 | 1231.87 |
| 8+52.46 | 365672.28 | 2743018.60 | 1231.87 |
| 8+55.30 | 365669.49 | 2743019.17 | 1232.34 |
| 8+58.22 | 365666.63 | 2743019.76 | 1232.34 |
| 8+61.06 | 365663.85 | 2743020.32 | 1232.81 |
| 8+61.28 | 365663.64 | 2743020.37 | 1232.81 |
| 8+63.98 | 365660.97 | 2743020.81 | 1232.81 |
| 8+66.82 | 365658.17 | 2743021.28 | 1233.28 |
| 8+66.87 | 365658.13 | 2743021.28 | 1233.28 |
| 8+69.74 | 365655.25 | 2743021.25 | 1233.28 |
| 8+70.39 | 365654.60 | 2743021.25 | 1233.38 |
| 8+72.58 | 365652.43 | 2743021.52 | 1233.74 |
| 8+74.39 | 365650.64 | 2743021.75 | 1233.74 |
| 8+75.50 | 365649.56 | 2743022.05 | 1233.74 |
| 8+78.38 | 365646.79 | 2743022.83 | 1234.21 |
| 8+81.30 | 365644.15 | 2743024.07 | 1234.21 |
| 8+83.41 | 365642.25 | 2743024.96 | 1234.56 |
| 8+84.14 | 365641.51 | 2743024.97 | 1234.68 |
| 8+86.91 | 365638.74 | 2743024.97 | 1234.68 |
| 8+87.06 | 365638.59 | 2743024.93 | 1234.68 |
| 8+89.82 | 365635.93 | 2743024.24 | 1235.14 |
| 8+89.90 | 365635.85 | 2743024.19 | 1235.15 |
| 8+92.82 | 365633.38 | 2743022.64 | 1235.15 |
| 8+94.38 | 365632.06 | 2743021.81 | 1235.40 |
| 8+95.66 | 365630.83 | 2743021.45 | 1235.62 |
| 8+97.09 | 365629.47 | 2743021.05 | 1235.62 |
| 8+98.58 | 365627.99 | 2743020.78 | 1235.62 |
| 9+01.22 | 365625.40 | 2743020.29 | 1236.05 |
| 9+01.42 | 365625.23 | 2743020.18 | 1236.08 |
| 9+04.34 | 365622.81 | 2743018.55 | 1236.08 |
| 9+05.32 | 365622.00 | 2743018.00 | 1236.40 |

## Reach #2 Reconstructed Stream Longitudinal Profile

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 0+00.00 | 1162.88 | | Begin Riffle |
| 0+02.84 | 1163.11 | 2.84 | Begin Pool |
| 0+05.76 | 1163.11 | 2.92 | Begin Riffle |
| 0+08.60 | 1163.58 | 2.84 | Begin Pool |
| 0+11.52 | 1163.58 | 2.92 | Begin Riffle |
| 0+14.36 | 1164.05 | 2.84 | Begin Pool |
| 0+17.28 | 1164.05 | 2.92 | Begin Riffle |
| 0+20.12 | 1164.52 | 2.84 | Begin Pool |
| 0+23.04 | 1164.52 | 2.92 | Begin Riffle |
| 0+25.88 | 1164.99 | 2.84 | Begin Pool |
| 0+28.80 | 1164.99 | 2.92 | Begin Riffle |
| 0+31.64 | 1165.46 | 2.84 | Begin Pool |
| 0+34.56 | 1165.46 | 2.92 | Begin Riffle |
| 0+37.40 | 1165.93 | 2.84 | Begin Pool |
| 0+40.32 | 1165.93 | 2.92 | Begin Riffle |
| 0+43.16 | 1166.4 | 2.84 | Begin Pool |
| 0+46.08 | 1166.4 | 2.92 | Begin Riffle |
| 0+48.92 | 1166.87 | 2.84 | Begin Pool |
| 0+51.84 | 1166.87 | 2.92 | Begin Riffle |
| 0+54.68 | 1167.34 | 2.84 | Begin Pool |
| 0+57.60 | 1167.34 | 2.92 | Begin Riffle |
| 0+60.44 | 1167.8 | 2.84 | Begin Pool |
| 0+63.36 | 1167.8 | 2.92 | Begin Riffle |
| 0+66.20 | 1168.27 | 2.84 | Begin Pool |
| 0+69.12 | 1168.27 | 2.92 | Begin Riffle |
| 0+71.96 | 1168.74 | 2.84 | Begin Pool |
| 0+74.88 | 1168.74 | 2.92 | Begin Riffle |
| 0+77.72 | 1169.21 | 2.84 | Begin Pool |
| 0+80.64 | 1169.21 | 2.92 | Begin Riffle |
| 0+83.48 | 1169.68 | 2.84 | Begin Pool |
| 0+86.40 | 1169.68 | 2.92 | Begin Riffle |
| 0+89.24 | 1170.14 | 2.84 | Begin Pool |
| 0+92.16 | 1170.14 | 2.92 | Begin Riffle |
| 0+95.00 | 1170.61 | 2.84 | Begin Pool |
| 0+97.92 | 1170.61 | 2.92 | Begin Riffle |
| 1+00.76 | 1171.08 | 2.84 | Begin Pool |
| 1+03.68 | 1171.08 | 2.92 | Begin Riffle |
| 1+06.52 | 1171.55 | 2.84 | Begin Pool |
| 1+09.44 | 1171.55 | 2.92 | Begin Riffle |
| 1+12.28 | 1172.01 | 2.84 | Begin Pool |
| 1+15.20 | 1172.01 | 2.92 | Begin Riffle |
| 1+18.04 | 1172.48 | 2.84 | Begin Pool |
| 1+20.96 | 1172.48 | 2.92 | Begin Riffle |
| 1+23.80 | 1172.95 | 2.84 | Begin Pool |
| 1+26.72 | 1172.95 | 2.92 | Begin Riffle |
| 1+29.56 | 1173.42 | 2.84 | Begin Pool |
| 1+32.48 | 1173.42 | 2.92 | Begin Riffle |

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 1+35.32 | 1173.88 | 2.84 | Begin Pool |
| 1+38.24 | 1173.88 | 2.92 | Begin Riffle |
| 1+41.08 | 1174.35 | 2.84 | Begin Pool |
| 1+44.00 | 1174.35 | 2.92 | Begin Riffle |
| 1+46.84 | 1174.82 | 2.84 | Begin Pool |
| 1+49.76 | 1174.82 | 2.92 | Begin Riffle |
| 1+52.60 | 1175.29 | 2.84 | Begin Pool |
| 1+55.52 | 1175.29 | 2.92 | Begin Riffle |
| 1+58.36 | 1175.75 | 2.84 | Begin Pool |
| 1+61.28 | 1175.75 | 2.92 | Begin Riffle |
| 1+64.12 | 1176.22 | 2.84 | Begin Pool |
| 1+67.04 | 1176.22 | 2.92 | Begin Riffle |
| 1+69.88 | 1176.69 | 2.84 | Begin Pool |
| 1+72.80 | 1176.69 | 2.92 | Begin Riffle |
| 1+75.64 | 1177.16 | 2.84 | Begin Pool |
| 1+78.56 | 1177.16 | 2.92 | Begin Riffle |
| 1+81.40 | 1177.63 | 2.84 | Begin Pool |
| 1+84.32 | 1177.63 | 2.92 | Begin Riffle |
| 1+87.16 | 1178.09 | 2.84 | Begin Pool |
| 1+90.08 | 1178.09 | 2.92 | Begin Riffle |
| 1+92.92 | 1178.56 | 2.84 | Begin Pool |
| 1+95.84 | 1178.56 | 2.92 | Begin Riffle |
| 1+98.68 | 1179.03 | 2.84 | Begin Pool |
| 2+01.60 | 1179.03 | 2.92 | Begin Riffle |
| 2+04.44 | 1179.5 | 2.84 | Begin Pool |
| 2+07.36 | 1179.5 | 2.92 | Begin Riffle |
| 2+10.20 | 1179.96 | 2.84 | Begin Pool |
| 2+13.12 | 1179.96 | 2.92 | Begin Riffle |
| 2+15.96 | 1180.43 | 2.84 | Begin Pool |
| 2+18.88 | 1180.43 | 2.92 | Begin Riffle |
| 2+21.72 | 1180.9 | 2.84 | Begin Pool |
| 2+24.64 | 1180.9 | 2.92 | Begin Riffle |
| 2+27.48 | 1181.37 | 2.84 | Begin Pool |
| 2+30.40 | 1181.37 | 2.92 | Begin Riffle |
| 2+33.24 | 1181.83 | 2.84 | Begin Pool |
| 2+36.16 | 1181.83 | 2.92 | Begin Riffle |
| 2+39.00 | 1182.3 | 2.84 | Begin Pool |
| 2+41.92 | 1182.3 | 2.92 | Begin Riffle |
| 2+44.76 | 1182.77 | 2.84 | Begin Pool |
| 2+47.68 | 1182.77 | 2.92 | Begin Riffle |
| 2+50.52 | 1183.24 | 2.84 | Begin Pool |
| 2+53.44 | 1183.24 | 2.92 | Begin Riffle |
| 2+56.28 | 1183.7 | 2.84 | Begin Pool |
| 2+59.20 | 1183.7 | 2.92 | Begin Riffle |
| 2+62.04 | 1184.17 | 2.84 | Begin Pool |
| 2+64.96 | 1184.17 | 2.92 | Begin Riffle |
| 2+67.80 | 1184.64 | 2.84 | Begin Pool |
| 2+70.72 | 1184.64 | 2.92 | Begin Riffle |
| 2+73.56 | 1185.11 | 2.84 | Begin Pool |
| 2+76.48 | 1185.11 | 2.92 | Begin Riffle |

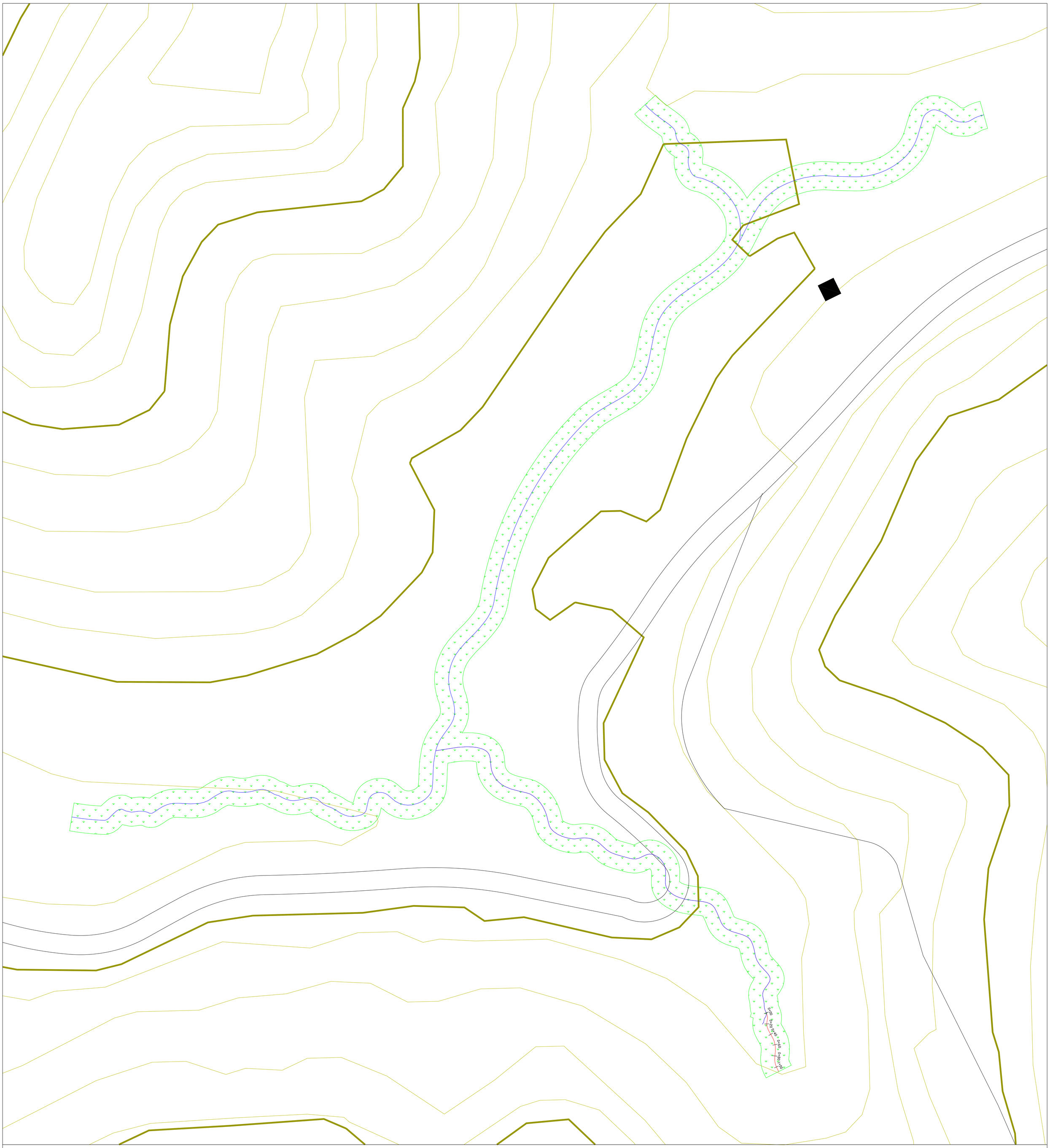
| Station | Elevation | Distance | Description |
|---|---|---|---|
| 2+79.32 | 1185.58 | 2.84 | Begin Pool |
| 2+82.24 | 1185.58 | 2.92 | Begin Riffle |
| 2+85.08 | 1186.04 | 2.84 | Begin Pool |
| 2+88.00 | 1186.04 | 2.92 | Begin Riffle |
| 2+90.84 | 1186.51 | 2.84 | Begin Pool |
| 2+93.76 | 1186.51 | 2.92 | Begin Riffle |
| 2+96.60 | 1186.98 | 2.84 | Begin Pool |
| 2+99.52 | 1186.98 | 2.92 | Begin Riffle |
| 3+02.36 | 1187.45 | 2.84 | Begin Pool |
| 3+05.28 | 1187.45 | 2.92 | Begin Riffle |
| 3+08.12 | 1187.91 | 2.84 | Begin Pool |
| 3+11.04 | 1187.91 | 2.92 | Begin Riffle |
| 3+13.88 | 1188.38 | 2.84 | Begin Pool |
| 3+16.80 | 1188.38 | 2.92 | Begin Riffle |
| 3+19.64 | 1188.85 | 2.84 | Begin Pool |
| 3+22.56 | 1188.85 | 2.92 | Begin Riffle |
| 3+25.40 | 1189.32 | 2.84 | Begin Pool |
| 3+28.32 | 1189.32 | 2.92 | Begin Riffle |
| 3+31.16 | 1189.78 | 2.84 | Begin Pool |
| 3+34.08 | 1189.78 | 2.92 | Begin Riffle |
| 3+36.92 | 1190.25 | 2.84 | Begin Pool |
| 3+39.84 | 1190.25 | 2.92 | Begin Riffle |
| 3+42.68 | 1190.72 | 2.84 | Begin Pool |
| 3+45.60 | 1190.72 | 2.92 | Begin Riffle |
| 3+48.44 | 1191.19 | 2.84 | Begin Pool |
| 3+51.36 | 1191.19 | 2.92 | Begin Riffle |
| 3+54.20 | 1191.66 | 2.84 | Begin Pool |
| 3+57.12 | 1191.66 | 2.92 | Begin Riffle |
| 3+59.96 | 1192.12 | 2.84 | Begin Pool |
| 3+62.88 | 1192.12 | 2.92 | Begin Riffle |
| 3+65.72 | 1192.59 | 2.84 | Begin Pool |
| 3+68.64 | 1192.59 | 2.92 | Begin Riffle |
| 3+71.48 | 1193.06 | 2.84 | Begin Pool |
| 3+74.40 | 1193.06 | 2.92 | Begin Riffle |
| 3+77.24 | 1193.53 | 2.84 | Begin Pool |
| 3+80.16 | 1193.53 | 2.92 | Begin Riffle |
| 3+83.00 | 1193.99 | 2.84 | Begin Pool |
| 3+85.92 | 1193.99 | 2.92 | Begin Riffle |
| 3+88.76 | 1194.46 | 2.84 | Begin Pool |
| 3+91.68 | 1194.46 | 2.92 | Begin Riffle |
| 3+94.52 | 1194.93 | 2.84 | Begin Pool |
| 3+97.44 | 1194.93 | 2.92 | Begin Riffle |
| 4+00.28 | 1195.4 | 2.84 | Begin Pool |
| 4+03.20 | 1195.4 | 2.92 | Begin Riffle |
| 4+06.04 | 1195.86 | 2.84 | Begin Pool |
| 4+08.96 | 1195.86 | 2.92 | Begin Riffle |
| 4+11.80 | 1196.33 | 2.84 | Begin Pool |
| 4+14.72 | 1196.33 | 2.92 | Begin Riffle |
| 4+17.56 | 1196.8 | 2.84 | Begin Pool |
| 4+20.48 | 1196.8 | 2.92 | Begin Riffle |

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 4+23.32 | 1197.27 | 2.84 | Begin Pool |
| 4+26.24 | 1197.27 | 2.92 | Begin Riffle |
| 4+29.08 | 1197.73 | 2.84 | Begin Pool |
| 4+32.00 | 1197.73 | 2.92 | Begin Riffle |
| 4+34.84 | 1198.2 | 2.84 | Begin Pool |
| 4+37.76 | 1198.2 | 2.92 | Begin Riffle |
| 4+40.60 | 1198.67 | 2.84 | Begin Pool |
| 4+43.52 | 1198.67 | 2.92 | Begin Riffle |
| 4+46.36 | 1199.14 | 2.84 | Begin Pool |
| 4+49.28 | 1199.14 | 2.92 | Begin Riffle |
| 4+52.12 | 1199.61 | 2.84 | Begin Pool |
| 4+55.04 | 1199.61 | 2.92 | Begin Riffle |
| 4+57.88 | 1200.07 | 2.84 | Begin Pool |
| 4+60.80 | 1200.07 | 2.92 | Begin Riffle |
| 4+63.64 | 1200.54 | 2.84 | Begin Pool |
| 4+66.56 | 1200.54 | 2.92 | Begin Riffle |
| 4+69.40 | 1201.01 | 2.84 | Begin Pool |
| 4+72.32 | 1201.01 | 2.92 | Begin Riffle |
| 4+75.16 | 1201.48 | 2.84 | Begin Pool |
| 4+78.08 | 1201.48 | 2.92 | Begin Riffle |
| 4+80.92 | 1201.94 | 2.84 | Begin Pool |
| 4+83.84 | 1201.94 | 2.92 | Begin Riffle |
| 4+86.68 | 1202.41 | 2.84 | Begin Pool |
| 4+89.60 | 1202.41 | 2.92 | Begin Riffle |
| 4+92.44 | 1202.88 | 2.84 | Begin Pool |
| 4+95.36 | 1202.88 | 2.92 | Begin Riffle |
| 4+98.20 | 1203.35 | 2.84 | Begin Pool |
| 5+01.12 | 1203.35 | 2.92 | Begin Riffle |
| 5+03.96 | 1203.81 | 2.84 | Begin Pool |
| 5+06.88 | 1203.81 | 2.92 | Begin Riffle |
| 5+09.72 | 1204.28 | 2.84 | Begin Pool |
| 5+12.64 | 1204.28 | 2.92 | Begin Riffle |
| 5+15.48 | 1204.75 | 2.84 | Begin Pool |
| 5+18.40 | 1204.75 | 2.92 | Begin Riffle |
| 5+21.24 | 1205.22 | 2.84 | Begin Pool |
| 5+24.16 | 1205.22 | 2.92 | Begin Riffle |
| 5+27.00 | 1205.68 | 2.84 | Begin Pool |
| 5+29.92 | 1205.68 | 2.92 | Begin Riffle |
| 5+32.76 | 1206.15 | 2.84 | Begin Pool |
| 5+35.68 | 1206.15 | 2.92 | Begin Riffle |
| 5+38.52 | 1206.62 | 2.84 | Begin Pool |
| 5+41.44 | 1206.62 | 2.92 | Begin Riffle |
| 5+44.28 | 1207.09 | 2.84 | Begin Pool |
| 5+47.20 | 1207.09 | 2.92 | Begin Riffle |
| 5+50.04 | 1207.56 | 2.84 | Begin Pool |
| 5+52.96 | 1207.56 | 2.92 | Begin Riffle |
| 5+55.80 | 1208.02 | 2.84 | Begin Pool |
| 5+58.72 | 1208.02 | 2.92 | Begin Riffle |
| 5+61.56 | 1208.49 | 2.84 | Begin Pool |
| 5+64.48 | 1208.49 | 2.92 | Begin Riffle |

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 5+67.32 | 1208.96 | 2.84 | Begin Pool |
| 5+70.24 | 1208.96 | 2.92 | Begin Riffle |
| 5+73.08 | 1209.43 | 2.84 | Begin Pool |
| 5+76.00 | 1209.43 | 2.92 | Begin Riffle |
| 5+78.84 | 1209.89 | 2.84 | Begin Pool |
| 5+81.76 | 1209.89 | 2.92 | Begin Riffle |
| 5+84.60 | 1210.36 | 2.84 | Begin Pool |
| 5+87.52 | 1210.36 | 2.92 | Begin Riffle |
| 5+90.36 | 1210.83 | 2.84 | Begin Pool |
| 5+93.28 | 1210.83 | 2.92 | Begin Riffle |
| 5+96.12 | 1211.3 | 2.84 | Begin Pool |
| 5+99.04 | 1211.3 | 2.92 | Begin Riffle |
| 6+01.88 | 1211.76 | 2.84 | Begin Pool |
| 6+04.80 | 1211.76 | 2.92 | Begin Riffle |
| 6+07.64 | 1212.23 | 2.84 | Begin Pool |
| 6+10.56 | 1212.23 | 2.92 | Begin Riffle |
| 6+13.40 | 1212.7 | 2.84 | Begin Pool |
| 6+16.32 | 1212.7 | 2.92 | Begin Riffle |
| 6+19.16 | 1213.17 | 2.84 | Begin Pool |
| 6+22.08 | 1213.17 | 2.92 | Begin Riffle |
| 6+24.92 | 1213.63 | 2.84 | Begin Pool |
| 6+27.84 | 1213.63 | 2.92 | Begin Riffle |
| 6+30.68 | 1214.1 | 2.84 | Begin Pool |
| 6+33.60 | 1214.1 | 2.92 | Begin Riffle |
| 6+36.44 | 1214.57 | 2.84 | Begin Pool |
| 6+39.36 | 1214.57 | 2.92 | Begin Riffle |
| 6+42.20 | 1215.04 | 2.84 | Begin Pool |
| 6+45.12 | 1215.04 | 2.92 | Begin Riffle |
| 6+47.96 | 1215.51 | 2.84 | Begin Pool |
| 6+50.88 | 1215.51 | 2.92 | Begin Riffle |
| 6+53.72 | 1215.97 | 2.84 | Begin Pool |
| 6+56.64 | 1215.97 | 2.92 | Begin Riffle |
| 6+59.48 | 1216.44 | 2.84 | Begin Pool |
| 6+62.40 | 1216.44 | 2.92 | Begin Riffle |
| 6+65.24 | 1216.91 | 2.84 | Begin Pool |
| 6+68.16 | 1216.91 | 2.92 | Begin Riffle |
| 6+71.00 | 1217.38 | 2.84 | Begin Pool |
| 6+73.92 | 1217.38 | 2.92 | Begin Riffle |
| 6+76.76 | 1217.84 | 2.84 | Begin Pool |
| 6+79.68 | 1217.84 | 2.92 | Begin Riffle |
| 6+82.52 | 1218.31 | 2.84 | Begin Pool |
| 6+85.44 | 1218.31 | 2.92 | Begin Riffle |
| 6+88.28 | 1218.78 | 2.84 | Begin Pool |
| 6+91.20 | 1218.78 | 2.92 | Begin Riffle |
| 6+94.04 | 1219.25 | 2.84 | Begin Pool |
| 6+96.96 | 1219.25 | 2.92 | Begin Riffle |
| 6+99.80 | 1219.71 | 2.84 | Begin Pool |
| 7+02.72 | 1219.71 | 2.92 | Begin Riffle |
| 7+05.56 | 1220.18 | 2.84 | Begin Pool |
| 7+08.48 | 1220.18 | 2.92 | Begin Riffle |

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 7+11.32 | 1220.65 | 2.84 | Begin Pool |
| 7+14.24 | 1220.65 | 2.92 | Begin Riffle |
| 7+17.08 | 1221.12 | 2.84 | Begin Pool |
| 7+20.00 | 1221.12 | 2.92 | Begin Riffle |
| 7+22.84 | 1221.59 | 2.84 | Begin Pool |
| 7+25.76 | 1221.59 | 2.92 | Begin Riffle |
| 7+28.60 | 1222.05 | 2.84 | Begin Pool |
| 7+31.52 | 1222.05 | 2.92 | Begin Riffle |
| 7+34.36 | 1222.52 | 2.84 | Begin Pool |
| 7+37.28 | 1222.52 | 2.92 | Begin Riffle |
| 7+40.12 | 1222.99 | 2.84 | Begin Pool |
| 7+43.04 | 1222.99 | 2.92 | Begin Riffle |
| 7+45.88 | 1223.46 | 2.84 | Begin Pool |
| 7+48.80 | 1223.46 | 2.92 | Begin Riffle |
| 7+51.64 | 1223.92 | 2.84 | Begin Pool |
| 7+54.56 | 1223.92 | 2.92 | Begin Riffle |
| 7+57.40 | 1224.39 | 2.84 | Begin Pool |
| 7+60.32 | 1224.39 | 2.92 | Begin Riffle |
| 7+63.16 | 1224.86 | 2.84 | Begin Pool |
| 7+66.08 | 1224.86 | 2.92 | Begin Riffle |
| 7+68.92 | 1225.33 | 2.84 | Begin Pool |
| 7+71.84 | 1225.33 | 2.92 | Begin Riffle |
| 7+74.68 | 1225.79 | 2.84 | Begin Pool |
| 7+77.60 | 1225.79 | 2.92 | Begin Riffle |
| 7+80.44 | 1226.26 | 2.84 | Begin Pool |
| 7+83.36 | 1226.26 | 2.92 | Begin Riffle |
| 7+86.20 | 1226.73 | 2.84 | Begin Pool |
| 7+89.12 | 1226.73 | 2.92 | Begin Riffle |
| 7+91.96 | 1227.2 | 2.84 | Begin Pool |
| 7+94.88 | 1227.2 | 2.92 | Begin Riffle |
| 7+97.72 | 1227.66 | 2.84 | Begin Pool |
| 8+00.64 | 1227.66 | 2.92 | Begin Riffle |
| 8+03.48 | 1228.13 | 2.84 | Begin Pool |
| 8+06.40 | 1228.13 | 2.92 | Begin Riffle |
| 8+09.24 | 1228.6 | 2.84 | Begin Pool |
| 8+12.16 | 1228.6 | 2.92 | Begin Riffle |
| 8+15.00 | 1229.07 | 2.84 | Begin Pool |
| 8+17.92 | 1229.07 | 2.92 | Begin Riffle |
| 8+20.76 | 1229.54 | 2.84 | Begin Pool |
| 8+23.68 | 1229.54 | 2.92 | Begin Riffle |
| 8+26.52 | 1230 | 2.84 | Begin Pool |
| 8+29.44 | 1230 | 2.92 | Begin Riffle |
| 8+32.28 | 1230.47 | 2.84 | Begin Pool |
| 8+35.20 | 1230.47 | 2.92 | Begin Riffle |
| 8+38.02 | 1230.94 | 2.82 | Begin Pool |
| 8+40.94 | 1230.94 | 2.92 | Begin Riffle |
| 8+43.78 | 1231.4 | 2.84 | Begin Pool |
| 8+46.70 | 1231.4 | 2.92 | Begin Riffle |
| 8+49.54 | 1231.87 | 2.84 | Begin Pool |
| 8+52.46 | 1231.87 | 2.92 | Begin Riffle |

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 8+55.30 | 1232.34 | 2.84 | Begin Pool |
| 8+58.22 | 1232.34 | 2.92 | Begin Riffle |
| 8+61.06 | 1232.81 | 2.84 | Begin Pool |
| 8+63.98 | 1232.81 | 2.92 | Begin Riffle |
| 8+66.82 | 1233.28 | 2.84 | Begin Pool |
| 8+69.74 | 1233.28 | 2.92 | Begin Riffle |
| 8+72.58 | 1233.74 | 2.84 | Begin Pool |
| 8+75.50 | 1233.74 | 2.92 | Begin Riffle |
| 8+78.38 | 1234.21 | 2.88 | Begin Pool |
| 8+81.30 | 1234.21 | 2.92 | Begin Riffle |
| 8+84.14 | 1234.68 | 2.84 | Begin Pool |
| 8+87.06 | 1234.68 | 2.92 | Begin Riffle |
| 8+89.90 | 1235.15 | 2.84 | Begin Pool |
| 8+92.82 | 1235.15 | 2.92 | Begin Riffle |
| 8+95.66 | 1235.62 | 2.84 | Begin Pool |
| 8+98.58 | 1235.62 | 2.92 | Begin Riffle |
| 9+01.42 | 1236.08 | 2.84 | Begin Pool |
| 9+04.34 | 1236.08 | 2.92 | Begin Riffle |
| 9+05.32 | 1236.4 | 0.98 | End of Reach |




Notes:
(1) Native vegetation begins at OHWM height
(2) Trees will be established in a random pattern for a minimum of 25' or until existing forest conditions are encountered

0+20 Station #

Reach #3

Tree planting & revegetation zone

Reach #3
Anticipated Stream Reconstruction Design
Ephemeral
Plan View

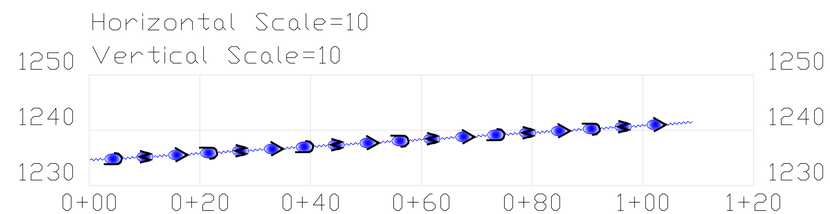
Scale 1"=50'

SINUOSITY MAY VARY BETWEEN 1-1.2

# Reach #3
## Anticipated Stream Reconstruction Design
## Ephemeral
### Profile View

Cross-vane
W-vane
J-hook
J-hook
Pool
Riffle

SLOPE .04'-.099'/ft. (Rosgen Classification "A")




| RECONSTRUCTED STREAM | | |
|---|---|---|
| | RIFFLE | POOL |
| % | 49.3% | 50.7% |
| RATIO | 1 | 1.03 |
| AVERAGE LENGTH | 2.84 | 2.92 |
| AVERAGE WATER DEPTH | 0.43 | 0.62 |
| AVERAGE BANKFULL DEPTH | 1.28 | 1.31 |

| D16 (MM) | D35 (MM) | D50 (MM) | D84 (MM) | D95 (MM) |
|---|---|---|---|---|
| 6.447 | 10.43 | 18.3 | 107 | 215 |

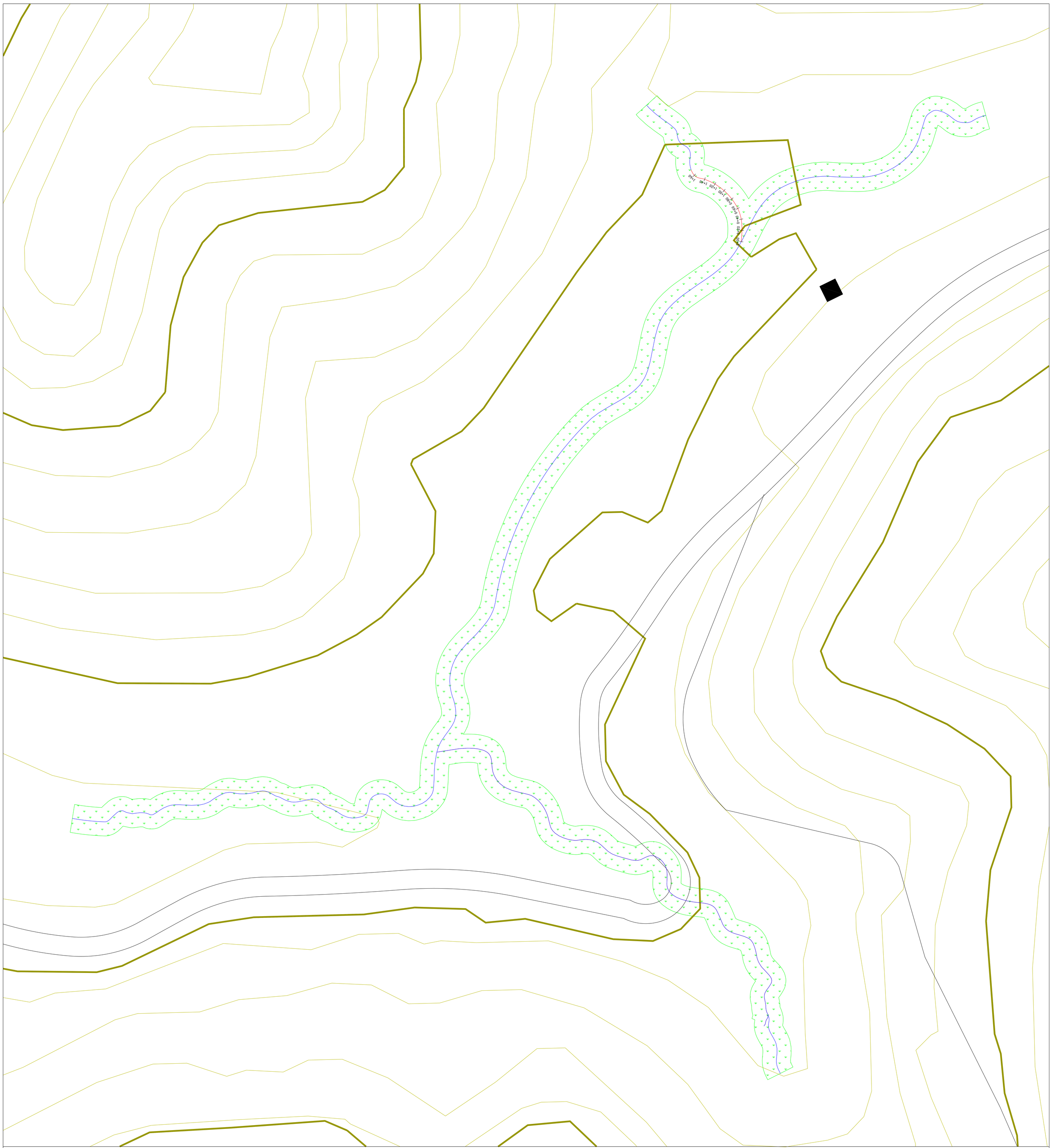
**Reach #3 Reconstructed Stream Alignment**

| Station | Northing | Easting | Elevation |
|---|---|---|---|
| 0+00.00 | 365642.10 | 2743024.96 | 1234.64 |
| 0+02.84 | 365639.44 | 2743025.95 | 1234.82 |
| 0+03.54 | 365638.79 | 2743026.20 | 1234.82 |
| 0+05.76 | 365636.63 | 2743026.73 | 1234.82 |
| 0+06.91 | 365635.52 | 2743027.01 | 1234.96 |
| 0+08.60 | 365633.83 | 2743027.05 | 1235.18 |
| 0+10.24 | 365632.18 | 2743027.09 | 1235.18 |
| 0+11.52 | 365630.91 | 2743026.94 | 1235.18 |
| 0+11.95 | 365630.49 | 2743026.89 | 1235.23 |
| 0+14.36 | 365628.11 | 2743026.48 | 1235.54 |
| 0+15.38 | 365627.11 | 2743026.31 | 1235.54 |
| 0+17.28 | 365625.22 | 2743026.06 | 1235.54 |
| 0+18.76 | 365623.76 | 2743025.87 | 1235.73 |
| 0+20.12 | 365622.40 | 2743025.92 | 1235.90 |
| 0+22.27 | 365620.25 | 2743025.99 | 1235.90 |
| 0+23.04 | 365619.49 | 2743026.14 | 1235.90 |
| 0+25.28 | 365617.29 | 2743026.57 | 1236.18 |
| 0+25.88 | 365616.72 | 2743026.76 | 1236.26 |
| 0+28.58 | 365614.16 | 2743027.60 | 1236.26 |
| 0+28.80 | 365613.96 | 2743027.70 | 1236.26 |
| 0+31.64 | 365611.38 | 2743028.88 | 1236.62 |
| 0+33.69 | 365609.52 | 2743029.74 | 1236.62 |
| 0+34.56 | 365608.76 | 2743030.16 | 1236.62 |
| 0+37.18 | 365606.46 | 2743031.42 | 1236.96 |
| 0+37.40 | 365606.27 | 2743031.53 | 1236.98 |
| 0+40.32 | 365603.74 | 2743032.99 | 1236.98 |
| 0+43.16 | 365601.28 | 2743034.41 | 1237.34 |
| 0+44.28 | 365600.31 | 2743034.97 | 1237.34 |
| 0+46.08 | 365598.72 | 2743035.81 | 1237.34 |
| 0+48.92 | 365596.20 | 2743037.13 | 1237.71 |
| 0+49.56 | 365595.63 | 2743037.43 | 1237.71 |
| 0+51.84 | 365593.52 | 2743038.28 | 1237.71 |
| 0+54.68 | 365590.89 | 2743039.35 | 1238.07 |
| 0+54.74 | 365590.83 | 2743039.37 | 1238.07 |
| 0+57.60 | 365588.03 | 2743039.92 | 1238.07 |
| 0+60.44 | 365585.24 | 2743040.48 | 1238.43 |
| 0+63.22 | 365582.51 | 2743041.02 | 1238.43 |
| 0+63.36 | 365582.38 | 2743041.02 | 1238.43 |
| 0+66.20 | 365579.54 | 2743041.04 | 1238.79 |
| 0+69.12 | 365576.62 | 2743041.05 | 1238.79 |
| 0+71.77 | 365573.97 | 2743041.07 | 1239.13 |
| 0+71.96 | 365573.78 | 2743041.05 | 1239.15 |
| 0+74.88 | 365570.87 | 2743040.80 | 1239.15 |
| 0+75.21 | 365570.54 | 2743040.77 | 1239.19 |
| 0+77.72 | 365568.04 | 2743040.53 | 1239.51 |
| 0+80.64 | 365565.13 | 2743040.25 | 1239.51 |
| 0+82.07 | 365563.71 | 2743040.11 | 1239.69 |

| Station | Northing | Easting | Elevation |
|---|---|---|---|
| 0+83.48 | 365562.30 | 2743040.04 | 1239.87 |
| 0+85.45 | 365560.34 | 2743039.95 | 1239.87 |
| 0+85.60 | 365560.18 | 2743039.96 | 1239.87 |
| 0+86.40 | 365559.39 | 2743039.98 | 1239.87 |
| 0+88.78 | 365557.01 | 2743040.06 | 1240.18 |
| 0+89.24 | 365556.55 | 2743040.14 | 1240.24 |
| 0+92.16 | 365553.68 | 2743040.63 | 1240.24 |
| 0+93.73 | 365552.13 | 2743040.90 | 1240.45 |
| 0+95.00 | 365550.93 | 2743041.31 | 1240.61 |
| 0+97.92 | 365548.16 | 2743042.24 | 1240.61 |
| 0+98.77 | 365547.35 | 2743042.51 | 1240.72 |
| 1+00.76 | 365545.53 | 2743043.31 | 1240.98 |
| 1+02.19 | 365544.22 | 2743043.88 | 1240.98 |
| 1+03.68 | 365542.89 | 2743044.55 | 1240.98 |
| 1+09.06 | 365538.08 | 2743046.96 | 1241.52 |

**Reach #3 Reconstructed Stream Longitudinal Profile**

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 0+00.00 | 1234.64 | | Begin Riffle |
| 0+02.84 | 1234.82 | 2.84 | Begin Pool |
| 0+05.76 | 1234.82 | 2.92 | Begin Riffle |
| 0+08.60 | 1235.18 | 2.84 | Begin Pool |
| 0+11.52 | 1235.18 | 2.92 | Begin Riffle |
| 0+14.36 | 1235.54 | 2.84 | Begin Pool |
| 0+17.28 | 1235.54 | 2.92 | Begin Riffle |
| 0+20.12 | 1235.9 | 2.84 | Begin Pool |
| 0+23.04 | 1235.9 | 2.92 | Begin Riffle |
| 0+25.88 | 1236.26 | 2.84 | Begin Pool |
| 0+28.80 | 1236.26 | 2.92 | Begin Riffle |
| 0+31.64 | 1236.62 | 2.84 | Begin Pool |
| 0+34.56 | 1236.62 | 2.92 | Begin Riffle |
| 0+37.40 | 1236.98 | 2.84 | Begin Pool |
| 0+40.32 | 1236.98 | 2.92 | Begin Riffle |
| 0+43.16 | 1237.34 | 2.84 | Begin Pool |
| 0+46.08 | 1237.34 | 2.92 | Begin Riffle |
| 0+48.92 | 1237.71 | 2.84 | Begin Pool |
| 0+51.84 | 1237.71 | 2.92 | Begin Riffle |
| 0+54.68 | 1238.07 | 2.84 | Begin Pool |
| 0+57.60 | 1238.07 | 2.92 | Begin Riffle |
| 0+60.44 | 1238.43 | 2.84 | Begin Pool |
| 0+63.36 | 1238.43 | 2.92 | Begin Riffle |
| 0+66.20 | 1238.79 | 2.84 | Begin Pool |
| 0+69.12 | 1238.79 | 2.92 | Begin Riffle |
| 0+71.96 | 1239.15 | 2.84 | Begin Pool |
| 0+74.88 | 1239.15 | 2.92 | Begin Riffle |
| 0+77.72 | 1239.51 | 2.84 | Begin Pool |
| 0+80.64 | 1239.51 | 2.92 | Begin Riffle |
| 0+83.48 | 1239.87 | 2.84 | Begin Pool |
| 0+86.40 | 1239.87 | 2.92 | Begin Riffle |
| 0+89.24 | 1240.24 | 2.84 | Begin Pool |
| 0+92.16 | 1240.24 | 2.92 | Begin Riffle |
| 0+95.00 | 1240.61 | 2.84 | Begin Pool |
| 0+97.92 | 1240.61 | 2.92 | Begin Riffle |
| 1+00.76 | 1240.98 | 2.84 | Begin Pool |
| 1+03.68 | 1240.98 | 2.92 | Begin Riffle |
| 1+09.06 | 1241.52 | 5.38 | End of Reach |




Notes:
(1) Native vegetation begins at OHWM height
(2) Trees will be established in a random pattern for a minimum of 25' or until existing forest conditions are encountered

0+20 Station #

Reach #4 Intermittent

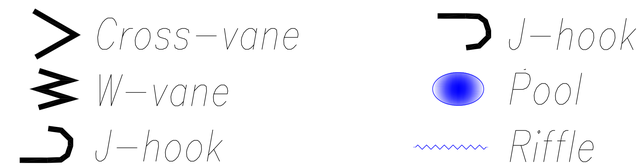
Tree planting & revegetation zone

Reach #4
Anticipated Stream Reconstruction Design
Intermittent
Plan View

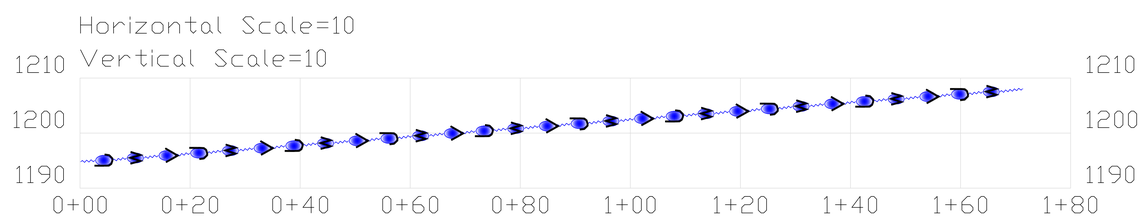
Scale 1"=50'

SINUOSITY MAY VARY BETWEEN 1-1.2

# Reach #4 Intermittent
# Anticipated Stream Reconstruction Design
# Intermittent
## Profile View




SLOPE .04'-.099'/ft. (Rosgen Classification "A")




| RECONSTRUCTED STREAM | | |
|---|---|---|
| | RIFFLE | POOL |
| % | 49.3% | 50.7% |
| RATIO | 1 | 1.03 |
| AVERAGE LENGTH | 2.84 | 2.92 |
| AVERAGE WATER DEPTH | 0.43 | 0.62 |
| AVERAGE BANKFULL DEPTH | 1.28 | 1.31 |

| D16 (MM) | D35 (MM) | D50 (MM) | D84 (MM) | D95 (MM) |
|---|---|---|---|---|
| 6.447 | 10.43 | 18.3 | 107 | 215 |

**Reach #4 (Intermittent) Reconstructed Stream Alignment**

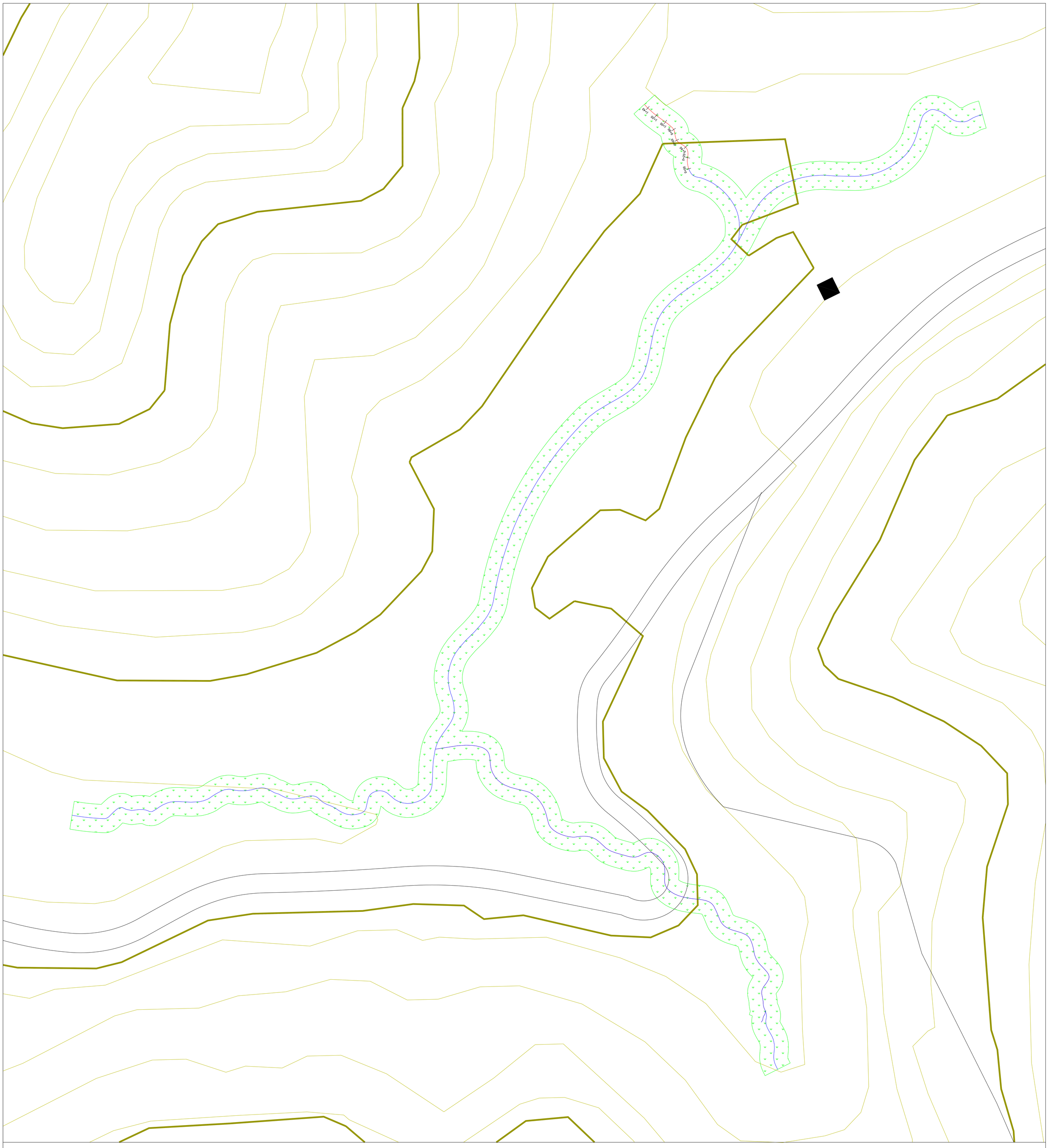
| Station | Elevation | Distance | Description |
|---|---|---|---|
| 0+00.00 | 367009.77 | 2742977.88 | 1194.80 |
| 0+02.84 | 367012.61 | 2742978.08 | 1195.02 |
| 0+05.76 | 367015.52 | 2742978.28 | 1195.02 |
| 0+08.60 | 367018.35 | 2742978.48 | 1195.47 |
| 0+11.52 | 367021.27 | 2742978.68 | 1195.47 |
| 0+14.36 | 367024.10 | 2742978.88 | 1195.92 |
| 0+15.81 | 367025.55 | 2742978.98 | 1195.92 |
| 0+17.28 | 367027.02 | 2742979.02 | 1195.92 |
| 0+20.12 | 367029.85 | 2742979.09 | 1196.36 |
| 0+23.04 | 367032.77 | 2742979.16 | 1196.36 |
| 0+23.43 | 367033.16 | 2742979.17 | 1196.42 |
| 0+25.88 | 367035.61 | 2742979.03 | 1196.81 |
| 0+28.80 | 367038.52 | 2742978.86 | 1196.81 |
| 0+31.64 | 367041.36 | 2742978.70 | 1197.26 |
| 0+34.56 | 367044.28 | 2742978.53 | 1197.26 |
| 0+35.24 | 367044.95 | 2742978.49 | 1197.36 |
| 0+37.40 | 367047.08 | 2742978.13 | 1197.70 |
| 0+40.32 | 367049.96 | 2742977.64 | 1197.70 |
| 0+42.81 | 367052.42 | 2742977.23 | 1198.09 |
| 0+43.16 | 367052.75 | 2742977.13 | 1198.15 |
| 0+46.08 | 367055.57 | 2742976.35 | 1198.15 |
| 0+48.92 | 367058.30 | 2742975.58 | 1198.60 |
| 0+50.81 | 367060.12 | 2742975.08 | 1198.60 |
| 0+51.84 | 367061.08 | 2742974.69 | 1198.60 |
| 0+54.68 | 367063.72 | 2742973.64 | 1199.04 |
| 0+57.60 | 367066.43 | 2742972.56 | 1199.04 |
| 0+58.80 | 367067.55 | 2742972.12 | 1199.23 |
| 0+60.44 | 367069.00 | 2742971.36 | 1199.49 |
| 0+63.36 | 367071.58 | 2742970.00 | 1199.49 |
| 0+66.20 | 367074.10 | 2742968.68 | 1199.94 |
| 0+66.24 | 367074.14 | 2742968.66 | 1199.94 |
| 0+69.12 | 367076.57 | 2742967.13 | 1199.94 |
| 0+71.96 | 367078.98 | 2742965.62 | 1200.38 |
| 0+73.85 | 367080.57 | 2742964.61 | 1200.38 |
| 0+74.88 | 367081.40 | 2742964.00 | 1200.38 |
| 0+77.72 | 367083.69 | 2742962.31 | 1200.83 |
| 0+80.64 | 367086.04 | 2742960.58 | 1200.83 |
| 0+81.85 | 367087.01 | 2742959.86 | 1201.02 |
| 0+83.48 | 367088.25 | 2742958.79 | 1201.28 |
| 0+86.40 | 367090.46 | 2742956.89 | 1201.28 |
| 0+89.24 | 367092.61 | 2742955.04 | 1201.72 |
| 0+89.85 | 367093.07 | 2742954.64 | 1201.72 |
| 0+92.16 | 367094.70 | 2742953.00 | 1201.72 |
| 0+95.00 | 367096.71 | 2742950.99 | 1202.17 |
| 0+97.84 | 367098.72 | 2742948.98 | 1202.17 |
| 0+97.92 | 367098.77 | 2742948.92 | 1202.17 |
| 1+00.76 | 367100.62 | 2742946.76 | 1202.62 |

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 1+03.68 | 367102.52 | 2742944.55 | 1202.62 |
| 1+05.84 | 367103.92 | 2742942.91 | 1202.96 |
| 1+06.52 | 367104.32 | 2742942.35 | 1203.06 |
| 1+09.44 | 367106.00 | 2742939.97 | 1203.06 |
| 1+12.28 | 367107.64 | 2742937.65 | 1203.51 |
| 1+15.20 | 367109.32 | 2742935.26 | 1203.51 |
| 1+17.79 | 367110.82 | 2742933.15 | 1203.92 |
| 1+18.04 | 367110.94 | 2742932.93 | 1203.96 |
| 1+20.96 | 367112.35 | 2742930.37 | 1203.96 |
| 1+23.80 | 367113.72 | 2742927.88 | 1204.40 |
| 1+25.39 | 367114.48 | 2742926.49 | 1204.40 |
| 1+26.72 | 367115.03 | 2742925.27 | 1204.40 |
| 1+29.56 | 367116.18 | 2742922.68 | 1204.85 |
| 1+32.48 | 367117.37 | 2742920.01 | 1204.85 |
| 1+35.16 | 367118.46 | 2742917.57 | 1205.27 |
| 1+35.32 | 367118.52 | 2742917.42 | 1205.30 |
| 1+38.24 | 367119.58 | 2742914.69 | 1205.30 |
| 1+41.08 | 367120.60 | 2742912.05 | 1205.74 |
| 1+42.12 | 367120.97 | 2742911.08 | 1205.74 |
| 1+44.00 | 367121.28 | 2742909.22 | 1205.74 |
| 1+45.03 | 367121.44 | 2742908.20 | 1205.90 |
| 1+46.84 | 367121.78 | 2742906.43 | 1206.19 |
| 1+47.90 | 367121.98 | 2742905.38 | 1206.19 |
| 1+49.76 | 367122.41 | 2742903.57 | 1206.19 |
| 1+49.78 | 367122.41 | 2742903.56 | 1206.19 |
| 1+52.60 | 367123.29 | 2742900.87 | 1206.62 |
| 1+53.40 | 367123.54 | 2742900.11 | 1206.62 |
| 1+55.52 | 367124.56 | 2742898.26 | 1206.62 |
| 1+57.29 | 367125.41 | 2742896.71 | 1206.89 |
| 1+58.36 | 367126.14 | 2742895.93 | 1207.06 |
| 1+60.71 | 367127.75 | 2742894.22 | 1207.06 |
| 1+61.28 | 367128.22 | 2742893.88 | 1207.06 |
| 1+63.82 | 367130.28 | 2742892.41 | 1207.45 |
| 1+64.12 | 367130.55 | 2742892.26 | 1207.50 |
| 1+65.66 | 367131.88 | 2742891.49 | 1207.50 |
| 1+67.04 | 367133.10 | 2742890.85 | 1207.50 |
| 1+67.53 | 367133.54 | 2742890.63 | 1207.56 |
| 1+69.44 | 367135.26 | 2742889.80 | 1207.80 |
| 1+71.35 | 367137.00 | 2742889.00 | 1208.05 |

**Reach #2 (Intermittent) Reconstructed Stream**
**Longitudinal Profile**

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 0+00.00 | 1194.80 | | Begin Riffle |
| 0+02.84 | 1195.02 | 2.84 | Begin Pool |
| 0+05.76 | 1195.02 | 2.92 | Begin Riffle |
| 0+08.60 | 1195.47 | 2.84 | Begin Pool |
| 0+11.52 | 1195.47 | 2.92 | Begin Riffle |
| 0+14.36 | 1195.92 | 2.84 | Begin Pool |
| 0+17.28 | 1195.92 | 2.92 | Begin Riffle |
| 0+20.12 | 1196.36 | 2.84 | Begin Pool |
| 0+23.04 | 1196.36 | 2.92 | Begin Riffle |
| 0+25.88 | 1196.81 | 2.84 | Begin Pool |
| 0+28.80 | 1196.81 | 2.92 | Begin Riffle |
| 0+31.64 | 1197.26 | 2.84 | Begin Pool |
| 0+34.56 | 1197.26 | 2.92 | Begin Riffle |
| 0+37.40 | 1197.70 | 2.84 | Begin Pool |
| 0+40.32 | 1197.70 | 2.92 | Begin Riffle |
| 0+43.16 | 1198.15 | 2.84 | Begin Pool |
| 0+46.08 | 1198.15 | 2.92 | Begin Riffle |
| 0+48.92 | 1198.60 | 2.84 | Begin Pool |
| 0+51.84 | 1198.60 | 2.92 | Begin Riffle |
| 0+54.68 | 1199.04 | 2.84 | Begin Pool |
| 0+57.60 | 1199.04 | 2.92 | Begin Riffle |
| 0+60.44 | 1199.49 | 2.84 | Begin Pool |
| 0+63.36 | 1199.49 | 2.92 | Begin Riffle |
| 0+66.20 | 1199.94 | 2.84 | Begin Pool |
| 0+69.12 | 1199.94 | 2.92 | Begin Riffle |
| 0+71.96 | 1200.38 | 2.84 | Begin Pool |
| 0+74.88 | 1200.38 | 2.92 | Begin Riffle |
| 0+77.72 | 1200.83 | 2.84 | Begin Pool |
| 0+80.64 | 1200.83 | 2.92 | Begin Riffle |
| 0+83.48 | 1201.28 | 2.84 | Begin Pool |
| 0+86.40 | 1201.28 | 2.92 | Begin Riffle |
| 0+89.24 | 1201.72 | 2.84 | Begin Pool |
| 0+92.16 | 1201.72 | 2.92 | Begin Riffle |
| 0+95.00 | 1202.17 | 2.84 | Begin Pool |
| 0+97.92 | 1202.17 | 2.92 | Begin Riffle |
| 1+00.76 | 1202.62 | 2.84 | Begin Pool |
| 1+03.68 | 1202.62 | 2.92 | Begin Riffle |
| 1+06.52 | 1203.06 | 2.84 | Begin Pool |
| 1+09.44 | 1203.06 | 2.92 | Begin Riffle |
| 1+12.28 | 1203.51 | 2.84 | Begin Pool |
| 1+15.20 | 1203.51 | 2.92 | Begin Riffle |
| 1+18.04 | 1203.96 | 2.84 | Begin Pool |
| 1+20.96 | 1203.96 | 2.92 | Begin Riffle |
| 1+23.80 | 1204.40 | 2.84 | Begin Pool |
| 1+26.72 | 1204.40 | 2.92 | Begin Riffle |
| 1+29.56 | 1204.85 | 2.84 | Begin Pool |
| 1+32.48 | 1204.85 | 2.92 | Begin Riffle |

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 1+35.32 | 1205.30 | 2.84 | Begin Pool |
| 1+38.24 | 1205.30 | 2.92 | Begin Riffle |
| 1+41.08 | 1205.74 | 2.84 | Begin Pool |
| 1+44.00 | 1205.74 | 2.92 | Begin Riffle |
| 1+46.84 | 1206.19 | 2.84 | Begin Pool |
| 1+49.76 | 1206.19 | 2.92 | Begin Riffle |
| 1+52.60 | 1206.62 | 2.84 | Begin Pool |
| 1+55.52 | 1206.62 | 2.92 | Begin Riffle |
| 1+58.36 | 1207.06 | 2.84 | Begin Pool |
| 1+61.28 | 1207.06 | 2.92 | Begin Riffle |
| 1+64.12 | 1207.50 | 2.84 | Begin Pool |
| 1+67.04 | 1207.50 | 2.92 | Begin Riffle |
| 1+71.35 | 1208.05 | 4.31 | End of Reach |



Notes:
(1) Native vegetation begins at OHWM height
(2) Trees will be established in a random pattern for a minimum of 25' or until existing forest conditions are encountered

0+20 Station #

Reach #4 Ephemeral

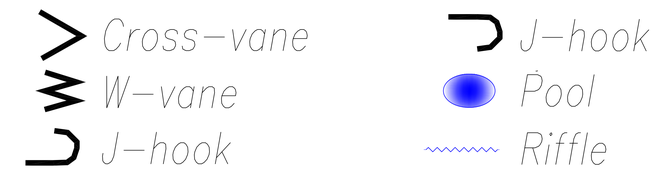
Tree planting & revegetation zone

Reach #4
Anticipated Stream Reconstruction Design
Ephemeral
Plan View

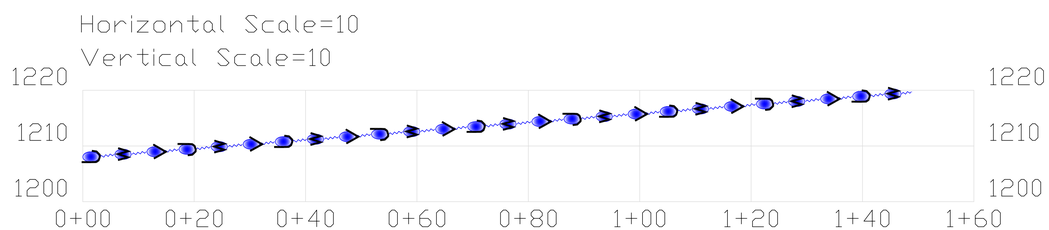
Scale 1"=50'

SINUOSITY MAY VARY BETWEEN 1-1.2

# Reach #4 Ephemeral
# Anticipated Stream Reconstruction Design
# Ephemeral
## Profile View




SLOPE .04'-.099'/ft. (Rosgen Classification "A")




| RECONSTRUCTED STREAM | | |
|---|---|---|
| | RIFFLE | POOL |
| % | 49.3% | 50.7% |
| RATIO | 1 | 1.03 |
| AVERAGE LENGTH | 2.84 | 2.92 |
| AVERAGE WATER DEPTH | 0.43 | 0.62 |
| AVERAGE BANKFULL DEPTH | 1.28 | 1.31 |

| D16 (MM) | D35 (MM) | D50 (MM) | D84 (MM) | D95 (MM) |
|---|---|---|---|---|
| 6.447 | 10.43 | 18.3 | 107 | 215 |

**Reach #3 (Ephemeral) Reconstructed Stream Alignment**

| Station | Northing | Easting | Elevation |
|---|---|---|---|
| 0+00.00 | 367137.00 | 2742889.00 | 1208.05 |
| 0+02.92 | 367139.83 | 2742888.27 | 1208.05 |
| 0+04.45 | 367141.31 | 2742887.88 | 1208.29 |
| 0+05.76 | 367142.58 | 2742887.59 | 1208.50 |
| 0+06.68 | 367143.49 | 2742887.39 | 1208.50 |
| 0+07.87 | 367144.66 | 2742887.22 | 1208.50 |
| 0+08.68 | 367145.46 | 2742887.11 | 1208.50 |
| 0+11.52 | 367148.27 | 2742886.70 | 1208.96 |
| 0+12.28 | 367149.03 | 2742886.60 | 1208.96 |
| 0+14.44 | 367151.19 | 2742886.61 | 1208.96 |
| 0+16.72 | 367153.47 | 2742886.63 | 1209.32 |
| 0+17.28 | 367154.02 | 2742886.69 | 1209.41 |
| 0+18.94 | 367155.67 | 2742886.89 | 1209.41 |
| 0+20.20 | 367156.92 | 2742887.08 | 1209.41 |
| 0+22.28 | 367158.97 | 2742887.40 | 1209.74 |
| 0+23.04 | 367159.72 | 2742887.50 | 1209.86 |
| 0+24.51 | 367161.19 | 2742887.69 | 1209.86 |
| 0+25.96 | 367162.63 | 2742887.79 | 1209.86 |
| 0+26.75 | 367163.42 | 2742887.84 | 1209.99 |
| 0+28.80 | 367165.46 | 2742887.71 | 1210.31 |
| 0+30.27 | 367166.92 | 2742887.61 | 1210.31 |
| 0+31.72 | 367168.33 | 2742887.23 | 1210.31 |
| 0+34.15 | 367170.68 | 2742886.61 | 1210.70 |
| 0+34.56 | 367171.04 | 2742886.42 | 1210.76 |
| 0+37.48 | 367173.64 | 2742885.08 | 1210.76 |
| 0+37.66 | 367173.79 | 2742885.00 | 1210.79 |
| 0+40.32 | 367175.71 | 2742883.15 | 1211.22 |
| 0+42.54 | 367177.30 | 2742881.61 | 1211.22 |
| 0+43.24 | 367177.70 | 2742881.02 | 1211.22 |
| 0+44.80 | 367178.59 | 2742879.74 | 1211.47 |
| 0+46.08 | 367179.24 | 2742878.64 | 1211.67 |
| 0+47.10 | 367179.76 | 2742877.76 | 1211.67 |
| 0+49.00 | 367180.69 | 2742876.11 | 1211.67 |
| 0+50.55 | 367181.45 | 2742874.76 | 1211.91 |
| 0+51.84 | 367182.12 | 2742873.65 | 1212.12 |
| 0+52.80 | 367182.62 | 2742872.83 | 1212.12 |
| 0+54.76 | 367183.76 | 2742871.24 | 1212.12 |
| 0+55.00 | 367183.89 | 2742871.05 | 1212.16 |
| 0+57.60 | 367185.75 | 2742869.22 | 1212.57 |
| 0+58.50 | 367186.39 | 2742868.59 | 1212.57 |
| 0+60.52 | 367188.17 | 2742867.62 | 1212.57 |
| 0+62.45 | 367189.86 | 2742866.70 | 1212.88 |
| 0+63.36 | 367190.72 | 2742866.40 | 1213.02 |
| 0+64.68 | 367191.97 | 2742865.97 | 1213.02 |
| 0+66.28 | 367193.52 | 2742865.58 | 1213.02 |
| 0+68.16 | 367195.35 | 2742865.12 | 1213.32 |
| 0+69.12 | 367196.29 | 2742864.94 | 1213.48 |

| Station | Northing | Easting | Elevation |
|---|---|---|---|
| 0+71.73 | 367198.85 | 2742864.44 | 1213.48 |
| 0+72.04 | 367199.16 | 2742864.41 | 1213.48 |
| 0+74.88 | 367201.98 | 2742864.11 | 1213.93 |
| 0+75.24 | 367202.34 | 2742864.08 | 1213.93 |
| 0+77.80 | 367204.76 | 2742863.24 | 1213.93 |
| 0+79.23 | 367206.11 | 2742862.77 | 1214.16 |
| 0+80.64 | 367207.29 | 2742862.00 | 1214.38 |
| 0+83.22 | 367209.45 | 2742860.60 | 1214.38 |
| 0+83.56 | 367209.69 | 2742860.34 | 1214.38 |
| 0+86.40 | 367211.60 | 2742858.24 | 1214.83 |
| 0+87.66 | 367212.44 | 2742857.31 | 1214.83 |
| 0+89.32 | 367213.52 | 2742856.04 | 1214.83 |
| 0+92.16 | 367215.35 | 2742853.88 | 1215.28 |
| 0+95.01 | 367217.19 | 2742851.70 | 1215.28 |
| 0+95.08 | 367217.24 | 2742851.65 | 1215.28 |
| 0+97.92 | 367218.88 | 2742849.33 | 1215.74 |
| 1+00.84 | 367220.58 | 2742846.95 | 1215.74 |
| 1+03.68 | 367222.22 | 2742844.64 | 1216.19 |
| 1+06.60 | 367223.92 | 2742842.26 | 1216.19 |
| 1+09.44 | 367225.56 | 2742839.95 | 1216.64 |
| 1+10.20 | 367226.00 | 2742839.33 | 1216.64 |
| 1+12.36 | 367227.31 | 2742837.61 | 1216.64 |
| 1+15.20 | 367229.02 | 2742835.34 | 1217.09 |
| 1+18.12 | 367230.79 | 2742833.01 | 1217.09 |
| 1+20.96 | 367232.50 | 2742830.75 | 1217.54 |
| 1+23.88 | 367234.26 | 2742828.42 | 1217.54 |
| 1+25.87 | 367235.46 | 2742826.84 | 1217.86 |
| 1+26.72 | 367236.04 | 2742826.21 | 1218.00 |
| 1+29.64 | 367238.00 | 2742824.05 | 1218.00 |
| 1+32.48 | 367239.92 | 2742821.95 | 1218.45 |
| 1+35.40 | 367241.88 | 2742819.79 | 1218.45 |
| 1+38.24 | 367243.79 | 2742817.69 | 1218.90 |
| 1+41.16 | 367245.76 | 2742815.53 | 1218.90 |
| 1+41.68 | 367246.11 | 2742815.15 | 1218.98 |
| 1+44.00 | 367247.83 | 2742813.59 | 1219.35 |
| 1+46.92 | 367249.99 | 2742811.62 | 1219.35 |
| 1+48.87 | 367251.43 | 2742810.31 | 1219.73 |

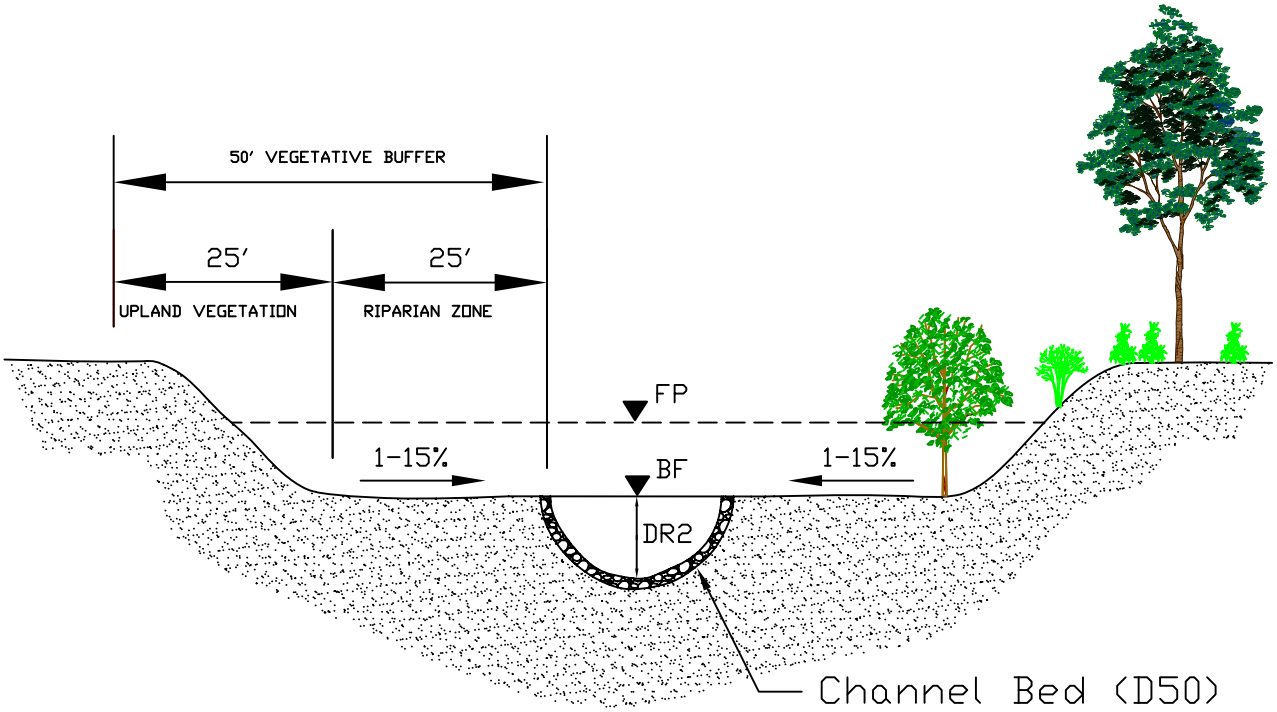
**Reach #4 (Ephemeral) Reconstructed Stream**
**Longitudinal Profile**

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 0+00.00 | 1208.05 | | Begin Pool |
| 0+02.92 | 1208.05 | 2.92 | Begin Riffle |
| 0+05.76 | 1208.50 | 2.84 | Begin Pool |
| 0+08.68 | 1208.50 | 2.92 | Begin Riffle |
| 0+11.52 | 1208.96 | 2.84 | Begin Pool |
| 0+14.44 | 1208.96 | 2.92 | Begin Riffle |
| 0+17.28 | 1209.41 | 2.84 | Begin Pool |
| 0+20.20 | 1209.41 | 2.92 | Begin Riffle |
| 0+23.04 | 1209.86 | 2.84 | Begin Pool |
| 0+25.96 | 1209.86 | 2.92 | Begin Riffle |
| 0+28.80 | 1210.31 | 2.84 | Begin Pool |
| 0+31.72 | 1210.31 | 2.92 | Begin Riffle |
| 0+34.56 | 1210.76 | 2.84 | Begin Pool |
| 0+37.48 | 1210.76 | 2.92 | Begin Riffle |
| 0+40.32 | 1211.22 | 2.84 | Begin Pool |
| 0+43.24 | 1211.22 | 2.92 | Begin Riffle |
| 0+46.08 | 1211.67 | 2.84 | Begin Pool |
| 0+49.00 | 1211.67 | 2.92 | Begin Riffle |
| 0+51.84 | 1212.12 | 2.84 | Begin Pool |
| 0+54.76 | 1212.12 | 2.92 | Begin Riffle |
| 0+57.60 | 1212.57 | 2.84 | Begin Pool |
| 0+60.52 | 1212.57 | 2.92 | Begin Riffle |
| 0+63.36 | 1213.02 | 2.84 | Begin Pool |
| 0+66.28 | 1213.02 | 2.92 | Begin Riffle |
| 0+69.12 | 1213.48 | 2.84 | Begin Pool |
| 0+72.04 | 1213.48 | 2.92 | Begin Riffle |
| 0+74.88 | 1213.93 | 2.84 | Begin Pool |
| 0+77.80 | 1213.93 | 2.92 | Begin Riffle |
| 0+80.64 | 1214.38 | 2.84 | Begin Pool |
| 0+83.56 | 1214.38 | 2.92 | Begin Riffle |
| 0+86.40 | 1214.83 | 2.84 | Begin Pool |
| 0+89.32 | 1214.83 | 2.92 | Begin Riffle |
| 0+92.16 | 1215.28 | 2.84 | Begin Pool |
| 0+95.08 | 1215.28 | 2.92 | Begin Riffle |
| 0+97.92 | 1215.74 | 2.84 | Begin Pool |
| 1+00.84 | 1215.74 | 2.92 | Begin Riffle |
| 1+03.68 | 1216.19 | 2.84 | Begin Pool |
| 1+06.60 | 1216.19 | 2.92 | Begin Riffle |
| 1+09.44 | 1216.64 | 2.84 | Begin Pool |
| 1+12.36 | 1216.64 | 2.92 | Begin Riffle |
| 1+15.20 | 1217.09 | 2.84 | Begin Pool |
| 1+18.12 | 1217.09 | 2.92 | Begin Riffle |
| 1+20.96 | 1217.54 | 2.84 | Begin Pool |
| 1+23.88 | 1217.54 | 2.92 | Begin Riffle |
| 1+26.72 | 1218.00 | 2.84 | Begin Pool |
| 1+29.64 | 1218.00 | 2.92 | Begin Riffle |
| 1+32.48 | 1218.45 | 2.84 | Begin Pool |

| Station | Elevation | Distance | Description |
|---|---|---|---|
| 1+35.40 | 1218.45 | 2.92 | Begin Riffle |
| 1+38.24 | 1218.90 | 2.84 | Begin Pool |
| 1+41.16 | 1218.90 | 2.92 | Begin Riffle |
| 1+44.00 | 1219.35 | 2.84 | Begin Pool |
| 1+46.92 | 1219.35 | 2.92 | Begin Riffle |
| 1+48.87 | 1219.73 | 1.95 | End of Reach |

# RECONSTRUCTED STREAM CHANNEL

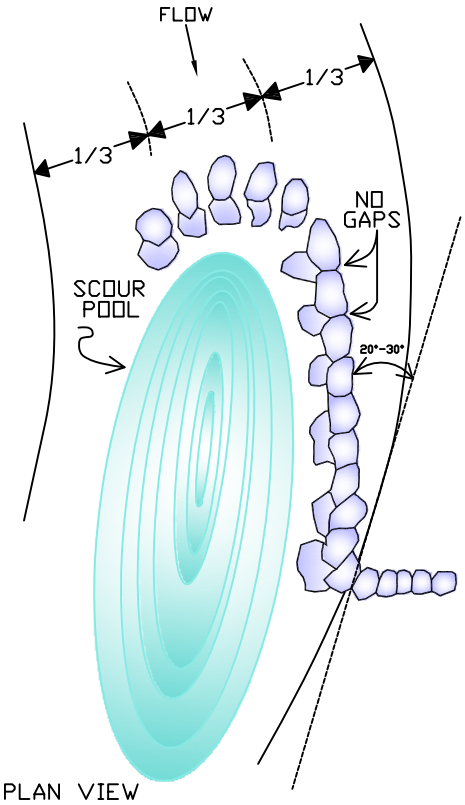
TYPICAL DRAWING
NOT TO SCALE

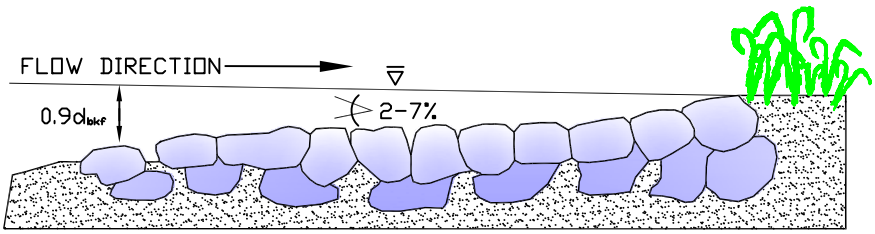


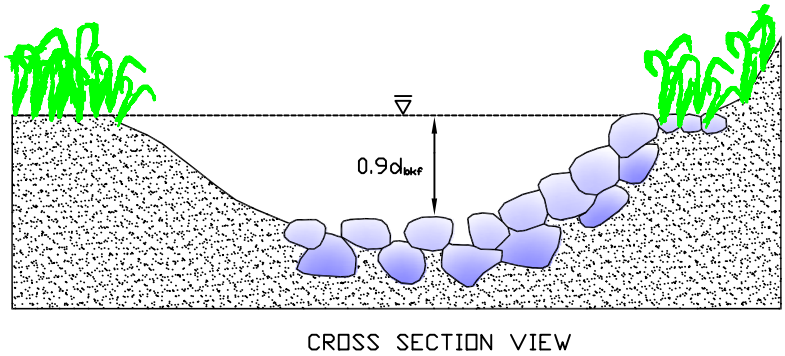
# Appendix E

# J-HOOK VANES

TYPICAL DRAWING
NOT TO SCALE

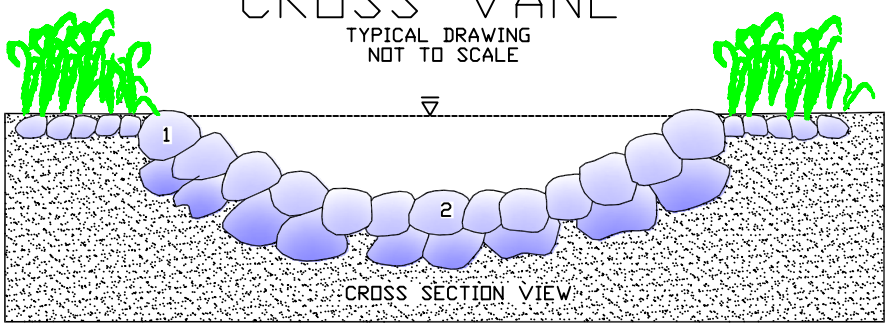


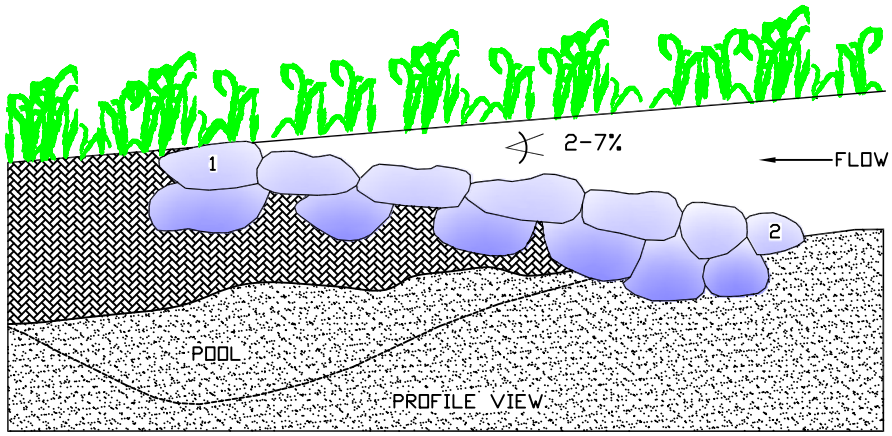



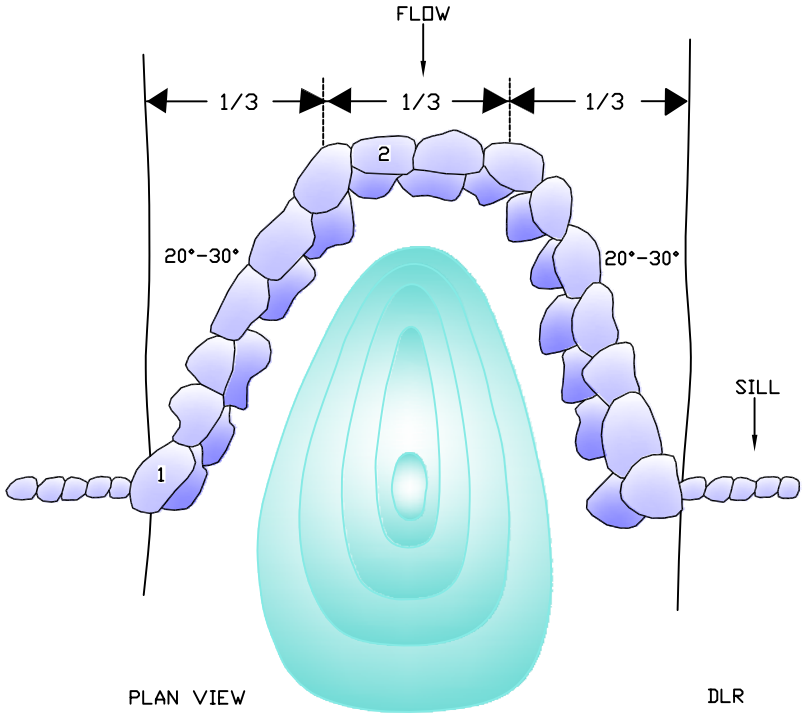



# CROSS-VANE

TYPICAL DRAWING
NOT TO SCALE



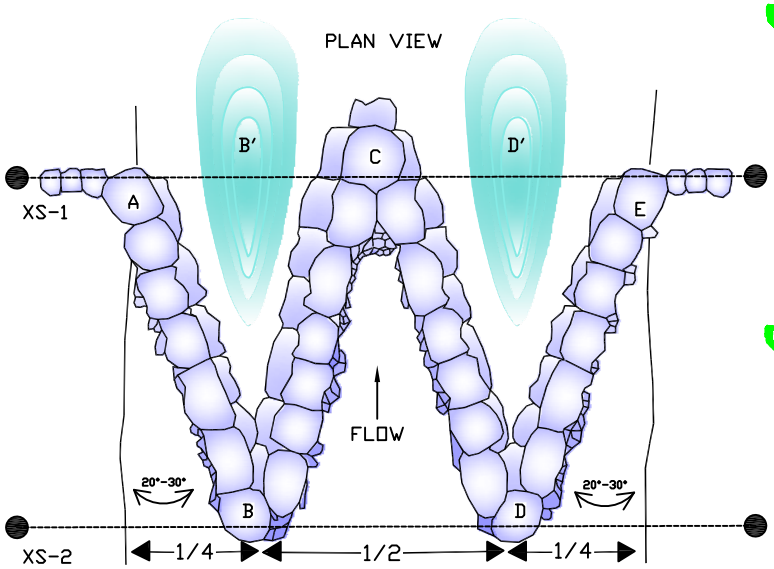



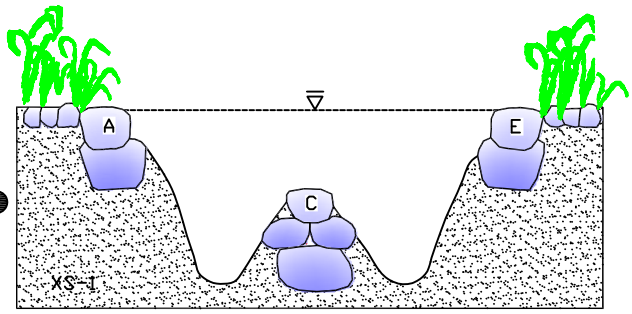



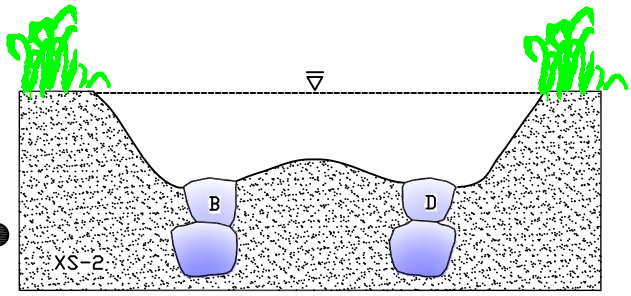

DLR

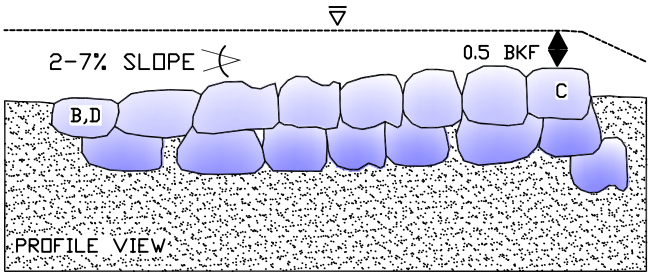
# W-WEIR

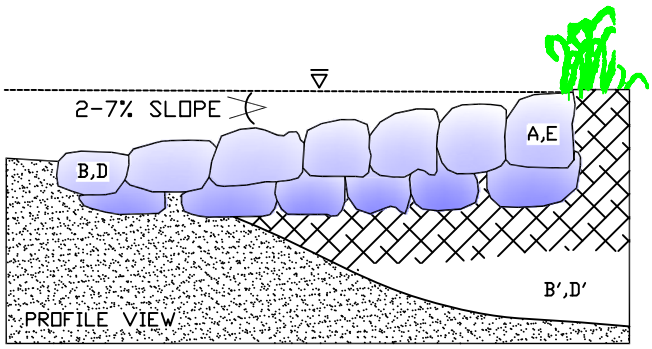
TYPICAL DRAWING
NOT TO SCALE



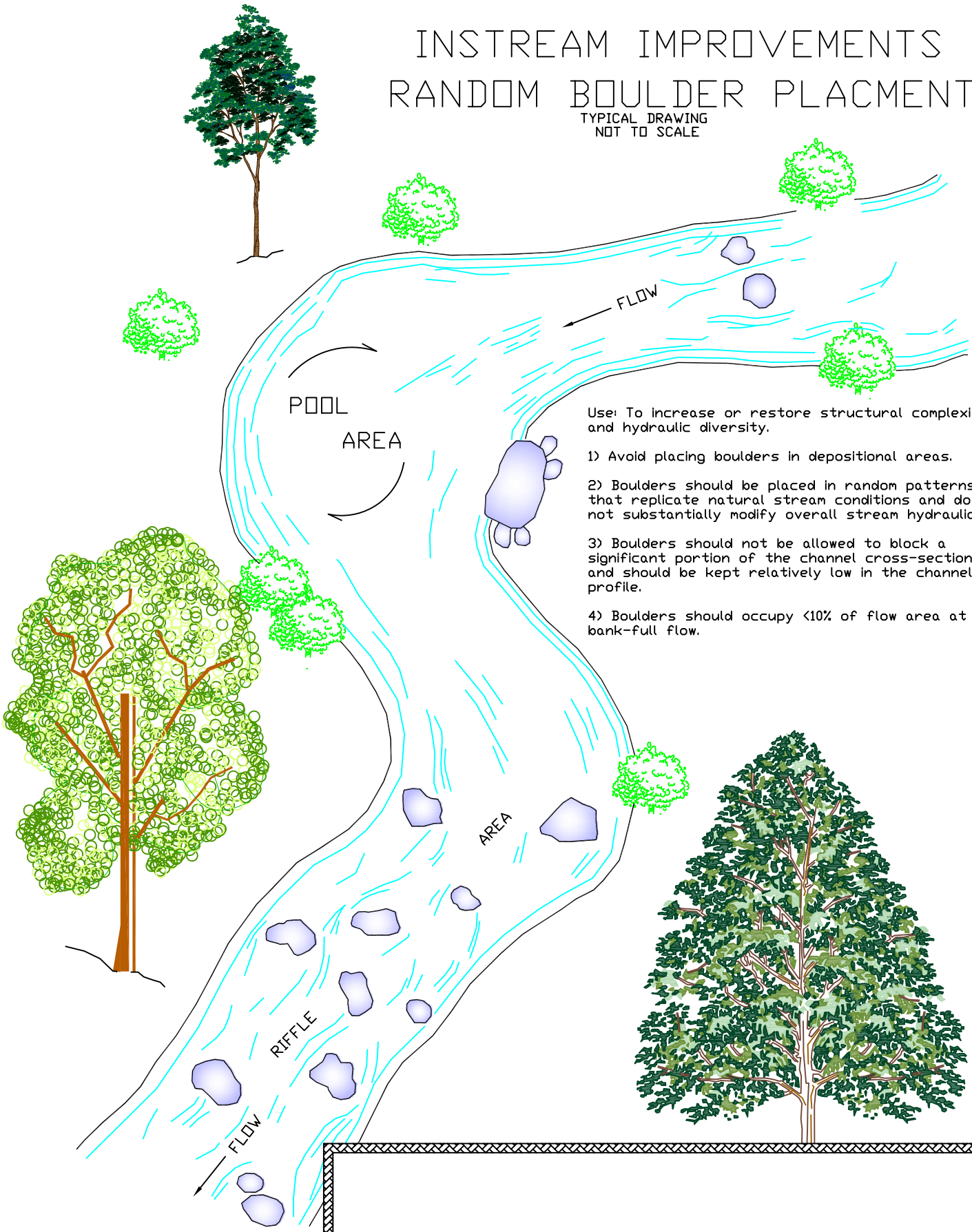



# INSTREAM IMPROVEMENTS
# RANDOM BOULDER PLACMENT

TYPICAL DRAWING
NOT TO SCALE




Use: To increase or restore structural complexity and hydraulic diversity.

1) Avoid placing boulders in depositional areas.

2) Boulders should be placed in random patterns that replicate natural stream conditions and do not substantially modify overall stream hydraulics.

3) Boulders should not be allowed to block a significant portion of the channel cross-section and should be kept relatively low in the channel profile.

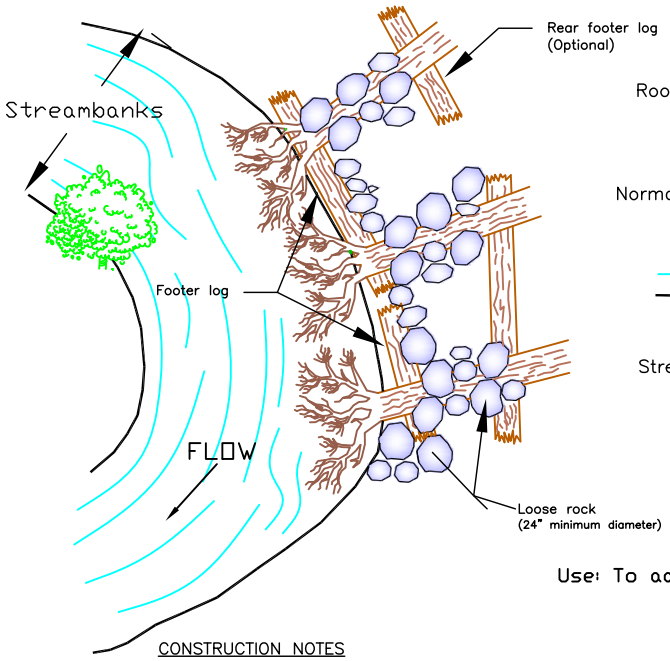
4) Boulders should occupy <10% of flow area at bank-full flow.

# INSTREAM IMPROVEMENTS

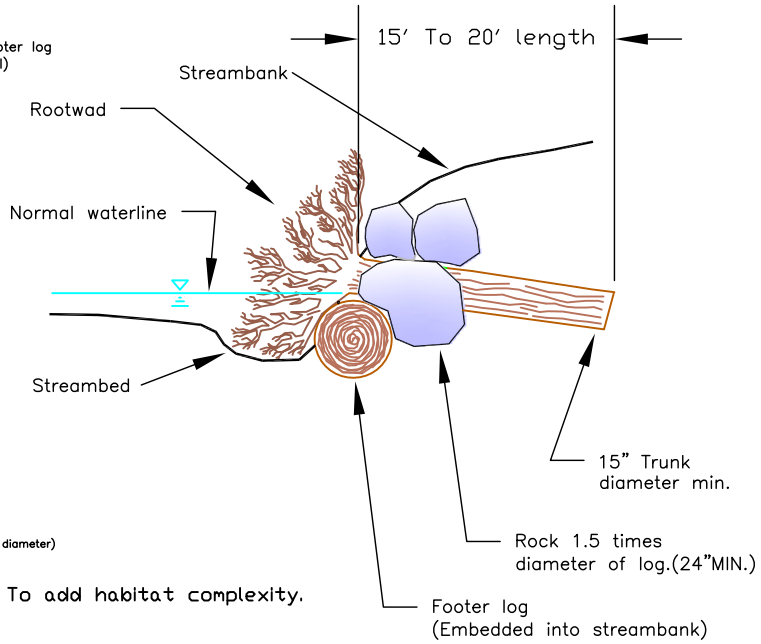
TYPICAL DRAWING
NOT TO SCALE

## Root wads

Plan View
Not to Scale




Cross-section View
Not to Scale




Use: To add habitat complexity.

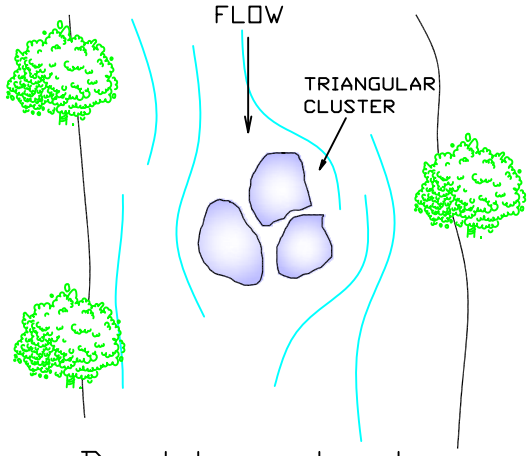
CONSTRUCTION NOTES

1. The footer log is placed where the toe of slope will be. Footer logs shall be firmly pressed into the streambed so that water is not flowing under it. A rear footer log can be used to make the rootwad tip toward the water more. If a low flow channel is to be created, it will be done prior to beginning rootwad installation.

2. The bole of the tree will rest on the footer log. The lower part of the rootwad will be in the water where it can deflect water and create habitat.

3. Rootwads will overlap slightly with the upstream rootwad to the outside of the downstream rootwad.(shingle affect)

4. If large rocks are available, they will be placed between the rootwads.




## Boulder cluster

Use: To increase or restore structural complexity and hydraulic diversity.

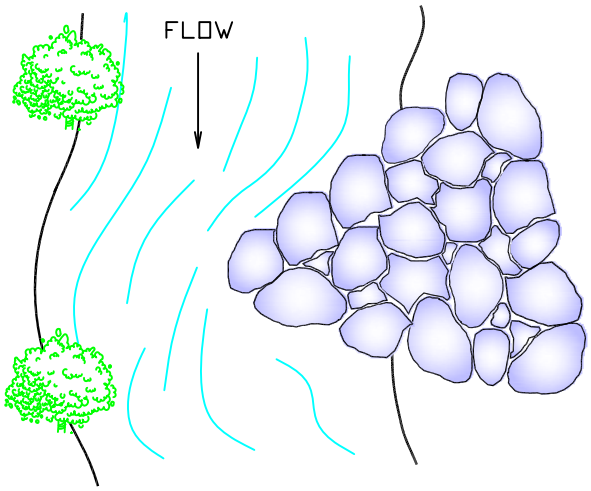
1) Use boulders only where cover and/or diversity is limited.

2) Boulders should occupy <10% of flow area at bank-full flow.

3) Avoid placement in braided, unstable sections.

4) Use boulders sized for stability at bank-full flow.

5) Avoid placement of boulder clusters near the upper end of riffles.




## Boulder wing-deflector

Use: In areas with bank erosion potential only

# Appendix F

# Suggested Riparian Species List

**Herbaceous Species**

| | |
|---|---|
| Rice cutgrass | *Leersia oryzoides* |
| Managrass | *Glyceria striata* |
| Spangle grass | *Chasmanthium latifolium* |
| Switchgrass | *Panicum virgatum* |
| Annual rye | *Secale cereale* |
| Wild rye | *Elymus virginicus* |
| Deertongue grass | *Panicum clandestinum* |
| Panic grass | *Panicum microcarpon* |
| Giant Cane Bambo | *Arundinaria gigantea* |

**Tree Species**

| | |
|---|---|
| Pin Oak | *Quercus palustria* |
| Cherrybark Oak | *Quercus pagoda* |
| Bur Oak | *Quercus macrocarpa* |
| Swamp Chestnut Oak | *Quercus michauxii* |
| Shingle Oak | *Quercus imbricaria* |
| Northern Red Oak | *Quercus rubra* |
| Post Oak | *Quercus stellata* |
| Red Maple | *Acer rubrum* |
| Green Ash | *Fraxinus pennsylvanica* |
| Shellbark Hickory | *Carya laciniosa* |
| Blackgum | *Nyssa sylvatica* |
| American Elm | *Ulmus americana* |
| Eastern Cottonwood | *Populus deltoides* |
| Black Walnut | *Juglans nigra* |
| River Birch | *Betula nigra* |
| Yellow Poplar | *Liriodendron tulipifera* |
| Persimmon | *Diospyrus virginiana* |

**Shrubs**

| | |
|---|---|
| Arrow-wood | *Viburnum dentatum* |
| American Plum | *Prunus americana* |
| Deciduous Holly | *Ilex decidua* |
| Gray Dogwood | *Cornus racemosa* |
| Silky Dogwood | *Cornus amomun* |
| Spicebush | *Lindera benzoin* |
| Sassafrass | *Sassafras albinum* |

# NATIVE SEED AND PLANT RESOURCES

Shooting Star Nursery
160 Soards Road
Georgetown, KY
(502) 867–7979
http://www.shootingstarnursery.com/

Dropseed Native Plant Nursery
13930 Brush Run Road
Louisville, KY 40299
(502) 762–1080
http://www.dropseednursery.org/

Caudill Seed Company
1201 Story Avenue
Louisville, KY 40206
(502) 583-4402
http://www.macraesbluebook.com/search/company.cfm?company=519074

# Appendix G