Beaver Creek Crossing Writeup

**Beaver Creek 4-inch Steel Gas Main Aerial Crossing**

**Southwestern Virginia Gas Company, September 2017**

Fifth Mountain Engineering designed the aerial crossing of Beaver Creek wih a 4-inch steel gas main to be operated at 150 psig. The aerial span of the crossing is approximately 40 feet and is 3 feet downstream and at the same elevation as an existing aerial 8-inch PVC sewer crossing within 16-inch steel casinig pipe. The 4-inch gas main is installed within 80 feet of 14-inch steel casing anchored at the banks with 14-inch slip-on flanges welded to the casing pipe and embedded in one cubic yard of concrete each. The design included stress analyses on the pipe at various creek flow levels and velocities, and includion of the design of erosion and sediment control measures for controling sediment during the construction and stabilizing the creek embankments following construction.