

Application Engineering Bulletin

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2MGD Sewer Bypass and Lift Station Rehabilitation in Orlando, FL

A local Central Florida contractor was called upon to rehabilitate a lift station in Orlando, FL. The work included replacing approximately 1,500-feet of 30-inch sewer line and the installation of new manholes along the system. Thompson Pump's Bypass Representative, Del Ritz was contacted to provide pumps and the necessary equipment to complete the bypass.



Two 8" Sound Attenuated Solids Handling High Pressure JSC Series pumps with the ENVIOPRIME® Priming System were used in phase one of this bypass project. The pumps were responsible for moving over 2-million gallons of sewage per day.

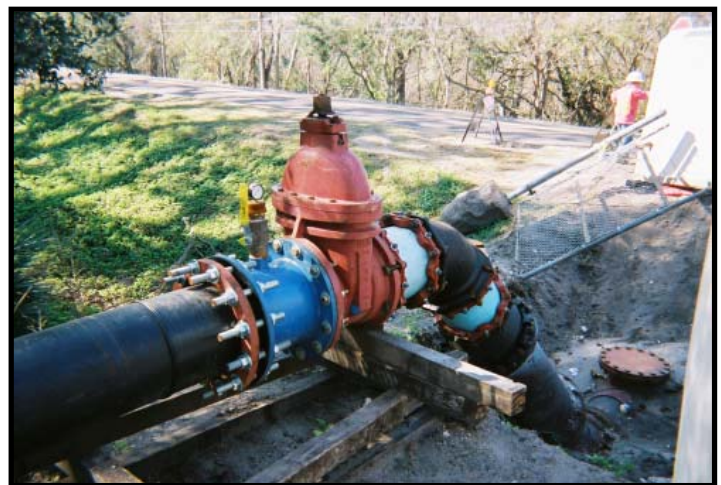


A three-port HDPE (high-density poly-ethylene) manifold, complete with isolating valves, was used to direct the discharge of the two 8JSC pumps, and allowed the customer to remove pumps, if necessary, without disturbing the bypass operation.



Because HDPE pipe is flexible it can be cut to fit and fixed at angles, driveway crossings were not needed along the road. The contractor cut the roadway to allow the HDPE pipe to be installed underground, and then re-covered the road with a temporary surface. This allowed traffic to move freely while the bypass was in operation.

This HDPE discharge was from two more 6" Sound Attenuated Solids Handling High Pressure JSC Series pumps with the ENVIOPRIME® Priming System, which pumped out of another existing manhole, and tied into this main discharge line.



From the two 6JSC Pumps, the 18" HDPE discharge line continued another 100-feet where it was to meet the 12" force main. In order to properly connect to the 12" force main, the 18" HDPE pipe was connected to a 12" reducer. From there, the discharge fed into a spool flange which included a pressure gauge to monitor pressures as the discharge entered the force main. A knife valve was also installed in order to allow the lift station to be tested thoroughly before disassembly of the bypass system.