



## Project Details

In most of our daily lives, running water is taken for granted. We demand a continuous and uninterrupted supply of water to our homes and businesses twenty-four hours a day, seven days a week. Rarely do we think of what it takes, behind the scenes to make that happen.

Water pump stations are an important and integral part of water supply for most communities. They typically consist of large storage tanks, and buildings that house large pumps and control systems. They are strategically located in many places in a community, but will often be hidden from view for aesthetic purposes.

Upgrades to a water pump station can be performed without interrupting supply to the community. It takes a well-thought-out plan, and complete coordination between the owner, engineer and contractor to be successful.



The demands on the Ridge Road Pump Station in Henrico County, Virginia, could no longer be met with the current equipment. Essentially, a completely new pump station (except for the storage tanks) would need to be built. Waco won the contract and began construction in 2016.

Much of the equipment had aged past its useful life. Many existing valves were so deteriorated that they would not completely close or open. Hot taps were utilized to bypass some valves to avoid service interruption. Once the new pumps and valves were tested and ready for service, the temporary bypass system could be disconnected and the old pump station could be demolished. Extensive excavation was required for the new building basement to accommodate the depth of the new piping.

New suction header piping was 24 inches in diameter, and the discharge and water main piping was 16 inches. The main pumps located on the top floor of the building were two vertical turbine 150 HP Flowserve pumps. One of these pumps is sufficient for handling the current demand with the second functioning as an alternate. The new pump station is designed to accommodate up to three additional pumps for future demand. All additional piping, valves, flow meters, manholes and vaults were installed by Waco. New drain sump pumps for the water tanks were also installed by Waco. Waco subcontracted the electrical controls work for the new PLC (Programmable Logic Controller) and SCADA system upgrades.

### Project Facts:

- Waco Project Manager: Jon Coon
- Waco Project Superintendent: Rich Foster
- Project Size: \$3MM
- Completion Date: December 2017

The new pump station was operational nine months ahead of schedule, with no disruption of service to the residents of Henrico County. Waco again demonstrated how a coordinated team effort could bring about a successful conclusion, and prepare this area of the county for future growth.



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