



## New Huguenot Road Pump Station fulfills Chesterfield County's increased Water Demands

The residents of Chesterfield County, Virginia, acquire the majority of their water needs from three main sources: The James River, Lake Chesdin and the Swift Creek Reservoir. Regional cooperation between the City of Richmond and Chesterfield County is critical due to the fact that a large percentage of the water (almost 24%) comes from the James River, through land located in the city. The Huguenot Road Pump Station is a good example of how this cooperation works for the good of the entire community. In this case, the actual pump station is located in Richmond, yet all the water will be going to Chesterfield County residents and businesses.

Water demand in Chesterfield has been growing steadily. The municipality estimates there are 343,000 drinking water customers. The average daily flow for the county is 38 million gallons per day. There are currently 24 water storage tanks in the county, containing 40 million gallons. There are a total of 14 pump stations throughout the county. This region of the county has been experiencing rapid development growth and this new pump station will provide the capacity for an additional 5 million gallons per day. Additionally, it will ensure compliance with the Safe Drinking Water Act.

Waco has performed many projects for both the city and county, so our familiarity with the engineers and owners has been beneficial in completing this pump station. It was not without its challenges, as the project took place during the post pandemic era in which we were still navigating the ever-changing supply chain issues and materials shortages. These delays forced Waco and our subcontractors to look outside of conventional design requirements and find alternate materials and methods to complete the project.





- Contract Amount  
\$5.64 million
- Duration  
480 Days
- Design Engineer  
Whitman, Requardt & Associates
- Project Manager  
Dan Coon
- Project Superintendent  
Rich Foster

#### Project Stats:

- Installation of 500 feet of 24" diameter restrained joint ductile iron pipe
- Two 250 HP electric pumps
- Back-up generator and associated electrical switchgear
- New two-million gallon steel storage tank

#### Project Details:

The new 3,000 square foot pump building was a complex structure. The foundation consisted of a thickened slab, concrete walls and an elevated first floor slab. The lower base slabs were sloped from the front of the building to the back, while the upper slab incorporated floor drains, allowing the entire structure to drain if necessary. The main exterior walls were structural concrete masonry units, with a split face veneer. The structural masonry walls with columns supported a full width elevated gantry crane, allowing future modifications and repairs to the facility, with easy and safe access for equipment removal. The roof structure consisted of precast hollow core panels, which provided a platform for the light gauge steel truss system and standing seam metal roof.

Waco self-performed all the concrete work, which included the storage tank foundation ring wall, control valve vault, city flow meter vault, pump station foundation and retaining wall for the sediment pond. The large storage tank which is located adjacent to Larus Park was painted green providing a less obtrusive view for those people who enjoy the park and surrounding area. The pump station shared an entrance with the adjacent Richmond Fire Station. This made coordinating all deliveries of materials and equipment even more critical, so that it would not interfere with the operations of the fire station.

The station was turned over to the county and put into operation in February, 2023.

