

## South Elkhorn Pumping Station and Force Main Improvements

project description | pump stations, force mains, and gravity sewers

### location

Lexington, Kentucky

### client

Lexington-Fayette Urban County Government  
Mr. Charles Martin  
(859) 425-2255

### period of service

2004 - Current

### construction cost estimate

\$15,000,000



The project includes construction of approximately 7 miles of 36-inch force main and replacing 4 existing dry-pit pumps with new Variable Frequency Drive (VFD) submersible pumps. The purpose of the project was to correct deficiencies in the existing pumps and to increase capacity of the existing pump station and force main. Also, the project will redirect the existing termination point of the force main to directly discharge into the West Hickman Wastewater Treatment Plant. This project will not only improve the hydraulics of the pump station, but also create more capacity in the undersized West Hickman Trunk Line.

This project included the submittal and negotiation of a railroad permit and agreement with Norfolk Southern of the crossing of the 36-inch force main. The crossing proposed involved a bore and jack type crossing with steel encasement pipe.

### project components

- Field surveys of the project corridor, combined with photogrammetric mapping.
- A preliminary design to evaluate different alternatives, including configurations of pumps/wet well and pipe materials and sizes.
- Hydraulic analysis for sizing the pumps and force main including future projections.
- Preparation of all construction documents.
- Design of pump station upgrades, including new odor control and generator.
- Easement descriptions and assistance in acquiring easements.
- Coordination with LFUCG for KDOW and KDOH permits and approvals.
- Preparation of bid documents, construction cost estimates and bidding services.