



## Swafford Transport Waterline | Greer, South Carolina

### Project Highlights

- Watermain Replacement Project
- SC Department of Transportation (SC DOT) Permitting
- SC Department of Health and Environmental Control (DHEC) Permitting
- Roadway Crossing and Associated Traffic Management
- Trenchless Construction (jack and bore) under South Buncombe Road
- Creation of bid documents (drawings, specifications, bid schedule, and contract)
- Temporary Construction Easement obtained

### Client

Greer Commission of Public Works

### Description

This project involved investigation, preliminary and detailed design, permitting, bidding assistance and construction support services for the installation of a new watermain on behalf of Greer CPW.

Project was initiated to provide adequate fire flow protection to Swafford Transport and Warehouse, located at Old Highway 14 South. It consisted of constructing 1,750 ft. of 8" ductile iron pipe along Old Highway 14 South via open cut trenching along with jack and bore under a major intersection.

Work included field survey, coordination with business owners, SC DOT, and utilities owners affected by this project. Final

watermain route was confirmed which preceded preparation of construction drawings and technical specifications for agency permitting, bidding, and construction.

R&C prepared bid documents and coordinated advertising for bids. During the bid phase, R&C responded to bidder questions, issued addenda as required, received bids, reviewed bids, and issued letters recommending Greer CPW award to the most favorable bidder.

Construction services provided were review of shop drawings, construction observation, monthly contractor pay request review, final inspections with regulatory agencies, issuance of final certificates for agency approval to operate and contract closure.

Pressure testing of the water lines and water sample testing was required prior to certification of the water line by the Engineer for submittal to SC DHEC for an Approval to Place into Operation.

### Unique Aspects

The proposed watermain crossed under the South Buncombe Road and Suber Road intersection via a 16-inch steel casing pipe (0.25" wall thickness) with an 8-inch carrier pipe for approximately 70 ft. which required a SC DOT encroachment permit.

### Lessons Learned

The original construction contract was \$114,039.00, with the final price being \$113,669.00. This slight difference was due to less rock excavation than anticipated. Having a comprehensive bid schedule combined with thorough drawings and specifications helps minimize contractor change orders.

### Challenges and Solutions

**Challenge:** Project required numerous approvals, including: SCDHEC construction permitting, SCDOT encroachment permitting and City of Greer permitting.

**Solution:** By proactively engaging approving agencies early in the design phase, along with open dialog during the review process, permits were approved in a timely manner, without project delay.

### Outcome

The watermain was constructed and is actively in use by local businesses, which has allowed the development of additional areas that previously did not have fire protection capacity.