

## Computer Modeling & Water System Analysis

### Client / Location

*Richmond Realty Associates /  
Richmond, RI*

### Services Provided

- Transmission and distribution main
- Booster pump station
- Well pump station
- 750,000 gallon elevated storage tank
- Chemical treatment
- Two pressure reducing valve stations between the high and low pressure zones with automatic feed from the high to low pressure zones whenever the low pressure system falls below a pre-set minimum pressure as determined by the operator.

The proposed system was modeled taking into account available supply and pressure, topography, and proposed demands. Utilizing the model, the best location and volume of the storage tank, required pump characteristics of the booster station, and pipeline sizing were determined. By modeling a simulated fire flow over an extended period time frame, any deficiencies in the preliminary design concept would be evident.

The water system components included: approximately 8 miles of pipeline, a 750,000 gallon elevated storage tank, a 500 gpm booster station, and pressure reducing station.

### Project Duration

2005

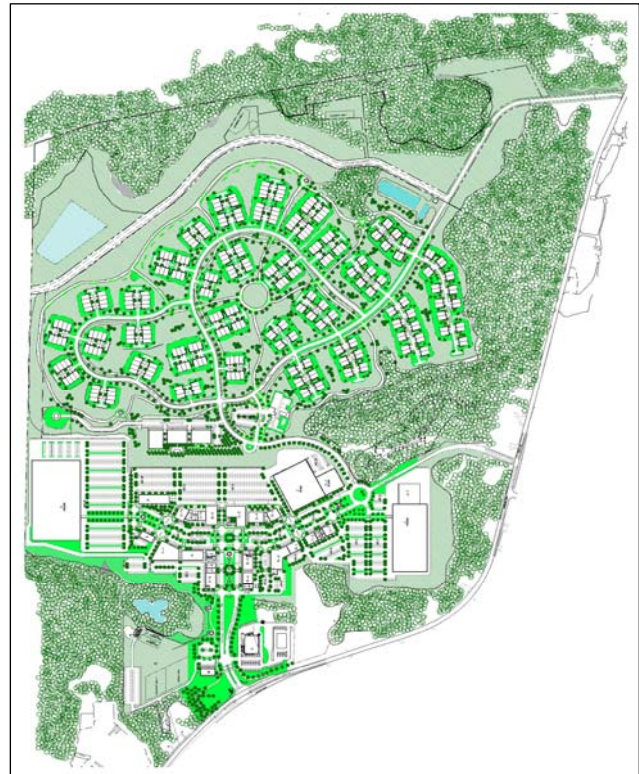
### Project Value

\$2.5 Million

### Reference

Bassam Nader, Project Manager  
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Siegmund and Associates (SA) developed the proposed water system for this project utilizing the industry standard WaterCad® hydraulic computer modeling program. The problem was to initially analyze the impacts upon the Town's existing supply and distribution system of the Richmond Commons project and to utilize the program as a tool in the design of the required infrastructure.



## ENGINEERING. INGENUITY.