

Owner/Client:

Lower Colorado River
Authority
3701 Lake Austin Blvd.
Austin, Texas 78703

Contact:

Lee Turner, P.E.
512.473.3544

Role:

Prime Consultant

Construction Cost:

N/A

Completion Date:

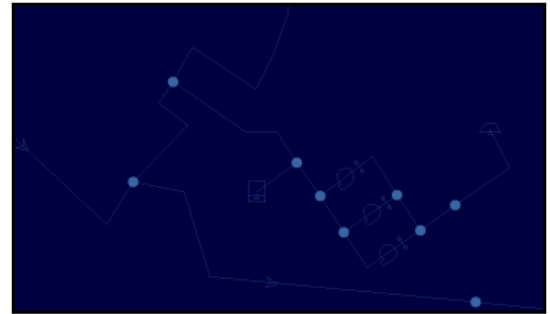
November 2003

Nature of the Work:

- + Water Planning
- + Water Modeling

Services Provided

K Friese & Associates, Inc. developed a hydraulic water system model using EPANET Version 2.0 to serve as a planning tool for a proposed water distribution system in the existing Homestead



subdivision. The model was used to determine pressure zone boundaries, pressure reducing station locations, and pipe sizes.

The Homestead subdivision lies within the 1280' pressure zone boundary of LCRA's West Travis County Regional Water System (WTCRWS). Homes in the subdivision are currently served by individual wells however; expansion of supply, transmission and distribution facilities in the WTCRWS will afford individual homeowners the opportunity to connect to the regional system.

The distribution system modeled consists of over 36,000 linear feet of 6-inch through 12-inch diameter pipe. A systematic node and pipe numbering system was developed and the system evaluated based on existing and future conditions in the WTCRWS. The subdivision has over 240-feet of elevation change and detailed analysis was required to meet LCRA design criteria for service pressure (minimum and maximum), distribution system pressures, and fire flow. System conditions evaluated include existing (temporary hydropneumatic pump station service at 1265' hydraulic grade line) and future (elevated storage tank service at 1280' hydraulic grade line).