

## Featured Project

### City of Brentwood City-Wide SCADA System

Brentwood, California

ArcSine Engineering designed electrical, instrumentation, controls, and a City-wide water Supervisory Control and Data Acquisition (SCADA) system for the City of Brentwood. Projects included a \$45-million wastewater treatment plant expansion, and the City's 28-site water system including wells, booster pumping stations, reservoirs, valves, monitoring stations, and metering stations.

In this rapidly growing area, needs for water and wastewater infrastructure and staffing were outpacing the systems in place. ArcSine, working closely with City personnel, planned and designed expandable systems.

ArcSine's work included:

- Field investigations to determine the extent and condition of existing equipment.
- Assessments of the need for instrumentation, controls, and SCADA systems. Development of a function-driven master plan, element-by-element costing to allow for project optimization (by the City) within budget limits.
- Addressed short-term and long-term staffing requirements.
- Complete wastewater treatment plant electrical and instrumentation/controls design.
- Water system designs for comprehensive rehabilitations to 22 sites, plus design of 3 new pumping stations and 3 new reservoirs.
- Radio path surveys to determine the feasibility of radio communications.
- Design of radio communication and data acquisition equipment.
- Interface with GIS and other City systems.
- Design of analytical water quality monitoring stations.
- Design of on-site chlorine generation facilities to be used for disinfection. These designs include the design of fiberglass buildings to house chlorine generation and feed equipment and chlorine residual analyzers.
- Development of O&M documentation.
- Development of test procedures.
- Preparation of project plans and specifications.

Electrical  
Lighting  
Water/Wastewater  
Instrumentation  
Controls

