

## Featured Project

### Tuzigoot National Monument U.S. National Park Service

Arizona

Crowning a desert hilltop is an ancient pueblo called Tuzigoot, built by an ancient culture known as Sinagua. The pueblo consisted of 110 rooms, including second- and third-story structures. The first buildings were built around 1000 A.D. The Sinagua were agriculturalists with trade connections that spanned hundreds of miles. The people left the area around AD 1400.

ArcSine Engineering prepared two design packages for the Tuzigoot National Monument visitor center building. Design Package 1 consisted of a fire pump/water system upgrade, and Design Package 2 consisted of a HVAC upgrade. Listed below are specific design items for each design package:

#### **Design Package 1 (Fire Pump/Water System Upgrade)**

- Performed field investigation.
- Designed controls for the following:
  - Fire pump (20 hp)
  - Two booster pumps (5 hp each)
  - Well pump (1 hp)
- Prepared load calculations.
- Replaced the service entrance.
- Prepared demolition drawings.
- Prepared power/lighting plans for the well and generator building.
- Designed a new generator.

#### **Design Package 2 (HVAC Upgrade)**

- Performed field investigation.
- Prepared as-built documentation of existing power distribution equipment.
- Prepared load calculations.
- Designed a new service entrance.
- Designed new feeders for two condenser units and two furnace units.

**Electrical  
Controls  
Field Investigation**

