

## SCOPE OF WORK

### I. Replace obsolete fire alarm equipment

San Joaquin County Juvenile Hall was constructed in early 1982 and expanded in 1999 and again in 2001. The as-built fire alarm drawings of housing units #1, #2, and #3 are dated 1997. There has been a recent failure of the main fire alarm panel with unacceptably long lead time for replacement parts.

The intent of this project is to replace all existing alarm initiating devices, supervisory signal initiating devices and annunciators, alarm notification appliances, power supplies and batteries, local fire alarm panels and main fire alarm panels with new listed equipment to provide a complete networked system utilizing the existing raceway system and conductors where possible

Any additional raceway or conductors required by the new equipment shall be furnished under the base bid.

### II. Reconfigure silence and reset function

The existing fire alarm systems (based on construction date) are not networked together. The replacement equipment shall be fully networked to enable alarm silence and reset functions from all facility devices to occur via the new central control annunciator. This has been identified by the facility as a key requirement for this project.

### III. Integrate existing smoke control panels

The smoke control panels consist of two separate switch panels and two separate relay panels (smoke detector/fan enable override panels). These control exhaust fans, supply fans and exhaust dampers of nine (9) air handling units (AHU's) serving housing units #1, #2, and #3, two corridors; courts; administration; and kitchen/dining. All AHU's have existing "Fenwall" 120 volt duct detectors (supply and return). A series of zone modules have been added to allow the existing system to address the duct detectors.

The smoke purge panel located in security office (room 145) is wired to the relay panel in closet (room 118).

The smoke purge panel mech. #6 and the relay panel mech. #6 are co-located in an outdoor mechanical space between housing units #1 and #2. All smoke purge controls are 120 volts AC. A dry contact on the duct detector provides an enable signal for normal and alarm operation

Multiple hard-wired conductors are connected between the relay panels and the AHU's and duct detectors to allow key switch testing of the fan override system. No as-built information is available for the key switch test circuits. The fire alarm contractor shall trace out the circuits and provide additional relays as required to achieve the key switch test function as part of the base bid. Also refer to attached control drawings dated January 8, 2009.

### IV. Maintain viable fire alarm system function at all occupied housing units during construction

To insure facility security and budget, Juvenile Hall will vacate one housing unit at a time for installation and testing of the new equipment. The fire alarm contractor may bid this project at normal working hour rates (prevailing wage conditions do prevail). Also, see "special conditions" related to the detention environment.

During construction, the facility will have completed work monitored on the new system equipment. The existing system remains in use on housing units yet to be replaced.

At housing units #1, #2, and #3, the County will self perform replacement of each cell's HVAC grilles. Due to the nature of this work, the fire alarm contractor shall cooperate with the owner's forces for access to the cells and anticipate these units may require 30 days of down time before the fire alarm contractor can move to the next unit. For these three units, the fire alarm contractor shall provide dust protection for all detectors.

V. Maintenance Service

Maintenance service shall be provided for two years under base bid. Provide an additive bid alternate for three 1-year extensions of this service. See bid form and specification section 16620.1.11 for specific requirements.