



FIRE PREVENTION MANUAL

FIRE ALARM SYSTEMS

407.004 HVAC SHUTOFF FOR FIRE ALARMS

EFFECTIVE: AUGUST 2013

SCOPE

This policy clarifies the Fresno Fire Department (FFD or Department) requirements for heating ventilation & air conditioning (HVAC) system shutoff for fire alarm installations. These requirements apply to both required and voluntary building fire alarm systems.

PURPOSE

This policy has been established to provide direction for the Department's policy related to HVAC shutdown and fire alarm interconnection.

BACKGROUND

The *California Mechanical Code (CMC)*, Section 609.0, requires an HVAC automatic shutoff where air moving systems supply air in excess of 2000 cfm (944L/s). Where these systems are interconnected to the fire alarm system, the fire detection or alarm system must supervise these systems.

The *CMC* however, does not provide requirements as to the whether individual units supplying air in excess of 2000 cfm (944L/s) must all shut off, or if all HVAC units must shut off in the event of an alarm or supervisory signal.

Standard engineering guidelines note that HVAC systems may move smoke from one location in a building to another and potentially supply combustion air to a fire. It can also aid in detection, especially in an unoccupied area.

REQUIREMENTS

Based upon the identified risks, the Department has determined that:

Where a fire alarm system is installed and the HVAC system has a cumulative total volume of supply air in excess of 2000 cfm (944L/s) (regardless of the number of actual units) it shall be interconnected to the fire alarm system.

Where an HVAC system has a cumulative total volume of supply air in excess of 2000 cfm (944L/s) (regardless of the number of actual units) and duct detector initiates an alarm or supervisory signal, every HVAC unit for the building must shutdown simultaneously (global shutoff) and the fire alarm system shall transmit the appropriate signal as necessary.

Exception 1: Where total coverage smoke detection is provided, global HVAC shutoff is not required.

Exception 2: Dedicated function fire alarm systems used solely for the purpose of waterflow supervision, valve supervision, fire pump supervision, HVLS fan shut off, elevator recall or commercial cooking, extinguishing system supervision are not required to be interconnected to, or provide HVAC supervision or shutoff.

In an instance where no single HVAC unit is equipped with a smoke detector (i.e., no one HVAC unit flows in excess of 2000 cfm of supply air) the largest single unit shall be fitted with a smoke detector to initiate HVAC shutoff.