

Guide to a successful fire alarm test

May 25, 2018

- I. Required materials (to be provided by contractor)
 - a. Hard copy list of all the devices to be tested on 8-1/2 x 11 paper including their digital address and description of location.
 - b. Smoke for testing smoke detectors
 - c. Radio for communication between fire alarm panel and initiating devices if more than 20 initiating devices are going to be tested.
 - d. Access is required to all smoke detectors, including duct smoke detectors (ladder, etc.)
 - e. NFPA 72 completed reflecting the devices to be tested.
 - f. Fire alarm permit
 - g. Approved fire alarm plans
 - h. Manometer
 - i. Fire alarm sequence of operation
- II. Site requirements
 - a. Dust producing activities on site are all completed.
 - b. Air handling units need to be running so that unit shut down on smoke detection is verified.
- III. Required personnel
 - a. Owner representative (or general contractor)
 - b. Construction and electrical inspectors
 - c. Fire alarm contractor representative
 - d. Electrical contractor representative
- IV. System Tests
 - a. Before beginning any testing
 - i. Notify alarm monitoring agency that the system will be tested. Make sure the system is in test mode.
 - ii. Verify that the fire alarm panel does not have any *troubles*.
 - b. Test battery backup
 - i. Turn off fire alarm circuit breaker.
 - ii. Verify that the panel receives a *trouble*.
 - c. Test horn/strobe devices
 - i. Initiate fire alarm.
 - ii. Walk through all areas of the building affected by construction and ensure that all horn/strobe devices are functioning.
 - iii. Verify fire door hold open devices released the door to close and latch.
 - d. Test initiating devices
 - i. System can be in silent mode so that the horns and strobes no longer activate.
 - ii. Test all smoke detectors with smoke. One inspector witnesses the test, the other watches the panel and verifies the name and address of the initiating device.
 - iii. Test all manual pull stations. One inspector witnesses the test, the other watches the panel and verifies the name and address of the initiating device.

- iv. Test duct smoke detectors per manufacturer's recommendations. Typical inspection includes removing the cover to the smoke detector, verifying a pressure differential between the sampling tubes, spraying the detector directly with smoke, and verify that dampers close and air handling units turn off as required.
 - v. Test heat detectors per the manufacturer's recommendation. Typical inspection includes a heat gun.
- V. Test completion
 - a. Receive a signed copy of the NFPA 72.
 - b. Verify that the monitoring company received alarm notifications.
 - c. Ensure system is out of test mode and back in service.
- VI. Sprinklers are outside of the scope of construction inspection fire alarm tests including kitchen hood fire suppression. Smoke detectors which trigger elevator recall are inspected with the elevator inspections. Flow switches and single use heat detectors are outside of construction inspection scope.