



## Fire Alarm (system) Final Inspection

The City of Oklahoma City Fire Department

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To request a Fire Alarm Final of your building fire alarm system, the General Contractor will call in all fire permits together. The Fire Alarm permit will start with FIRA-2015-0000. The parent permit will start with BLDC-2015-00000. The Fire Sprinkler Permit (if applicable) will start with FIRS-2015-0000. The Kitchen Hood Final (if applicable) will start with FIRH-2015-0000.

Fire inspection request shall be called in after all work is completed and a **pretest** conducted of the respected fire system.

**Exception: 50% Inspection or Temp Power**

**Person familiar with installation must be present to perform any tests required.**

**A high-rise building requires:**

- 1) Fire alarm system
- 2) Emergency voice/alarm signaling system
- 3) Fire department communication system

### Operational Testing **Pretest Check Off Form**

- ✓ Approved plans are on site.
- ✓ Fire alarm control unit (FACU) and remote annunciator (RA) are installed consistent with approved plans, 10.16.1.
- ✓ A zone and legend map is provided at the RA or an approved location.
- ✓ Fire alarm zones are properly identified on the FACU and RA panels.
- ✓ The fire alarm system power supply is a dedicated 120 AC branch circuit, which is labeled and locked .
- ✓ Type and gauge of wire or cable(s) for each circuit are consistent with the plans.
- ✓ Device location and installation are consistent with the plans.
- ✓ Pull stations are installed at the proper height and location, 42 in. to 48 in. and within the 200 ft. maximum travel distance.
- ✓ A Contractor Sound Pressure Level (dBA) Pretest Room Log is provided and verified with the use of a sound meter during a sound pressure test.
- ✓ Fire alarm audible notification devices sound throughout the occupancy providing a sound pressure level at least a minimum of 15 dBA above the average ambient noise level or 5 dBA above the maximum noise level. For bedrooms with closed door provide at least 75 dBA at the pillow.
- ✓ Fire alarm audibles are a three-pulse temporal pattern unless they were permitted to match existing audible devices.



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- ✓ Fire alarm visual notification device intensity (cd) ratings and settings, mounting height (80 in. to 96 in.), and location, are consistent with the plans. Audible devices mounted at least 90 in. and combination audible/visual devices 80 in. to 96 in.
- ✓ Fire alarm voice notification is tested and documentation provided to verify it is distinguishable and understandable.
- ✓ Fire alarm notification devices will activate by operation of the sprinkler flow alarm.
- ✓ HVAC duct detectors are supervised by the fire alarm system, detectors are all tested to verify if they can sample the air stream, and that fans shut down and visual and audible status alarm functions.
- ✓ 24-hour monitoring service agency received various signals during system tests.
- ✓ Verify that the correct and distinctive signals are received (alarm, trouble, and supervisory alarms).
- ✓ Two monitoring circuits are provided, both circuits send correct signals to monitoring company within 90 seconds.
- ✓ Verify proper operation of magnetic door-releasing hardware and/or ventilation shutdown.
- ✓ Sprinkler tamper switch causes trouble light and buzzer indication at the annunciator panel only (tamper and flow alarm are different type signals).
- ✓ Fire alarm emergency phone jacks, if provided, are operational.
- ✓ For air sampling and flame detectors, test the device in accordance with the manufacturer's instructions.
- ✓ Resettable heat and smoke detectors, and pull stations are tested (5 to 10 percent sample of the total).
- ✓ Trouble condition is created for each circuit and the FACU responses appropriately.
- ✓ Remote annunciator receives the correct information.
- ✓ Battery load test: the system is switched to battery operation 24 hours before the test and in the presence of the inspector the notification devices are activated and operate for 5 to 8 minutes or 15 minutes for emergency voice alarms.
- ✓ Check battery charger, measure load voltage, and open circuit voltage.
- ✓ Test ground-fault monitoring circuit, if provided.
- ✓ Under primary and secondary power, perform these tests:
  - ✓ Power light on and in normal condition, trouble signal when on secondary power
  - ✓ Supervisory signals: fire pump power loss or phase reversal, water level/temp, pressure switches, control valves, etc.



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- ✓ A 2<sup>nd</sup> alarm initiating zone overrides silence switch
  - ✓ Trouble signals and FACU panel lights operate for each circuit tested; disconnect wires from devices and primary power supply to simulate trouble conditions on secondary power, measure standby and alarm current demand
  - ✓ Trouble and alarm reset switches operate
  - ✓ Emergency voice alarms: the message is clear and distinct
  - ✓ Initiating devices tested, audible sound pressure levels, and visuals operate
  - ✓ Panel lamp test switch operates: if provided
  - ✓ Field zones and device address signals corresponded with panel zones and addresses
  - ✓ Elevator(s) recall to designated floor and alternate floor in accordance with the Elevator Code. **Oklahoma City elevator inspector shall conduct this test.**
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- ✓ Other systems activate fire alarm: kitchen hood suppression system, clean agent, HVAC duct detectors, etc.
  - ✓ As-builts are required when system installation is not consistent with the plans.
  - ✓ Circuit loop resistance is within specifications and a test may be required if the system wiring has changed from the plans.
  - ✓ Time from activating an initiating device to activation of a safety function or notification shall not exceed 10 seconds.
  - ✓ Heat and spot smoke detectors are between 4 in. and 12 inches of the sidewall, or if on the sidewall, the detector is within 12 in. from the ceiling.
  - ✓ Visual devices in a room or adjacent space with more than 2 devices within the field of view the flash are synchronized.
  - ✓ Devices in a corridor with more than 2 devices within the field of view and a maximum spacing of 100 ft., are synchronized.
  - ✓ Visual devices are wall mounted 80 in. to 96 in. above the floor level unless otherwise permitted by the approved plans and AHJ..
  - ✓ Supplemental (extra) visual devices are permitted to be mounted less than 80 in. above the floor.
  - ✓ Ceiling-mounted devices are listed for use and spaced in accordance with and the approved plans.