

Construction Inspections:

NFPA 72, Fire Alarm and Signaling Systems:

Required to be provided by contractor:

1. Copy of Approved (shop drawing) Plans shall be on job site.
2. Equipment needed to accomplish test. (Smoke cans, magnets, other equipment suggested by manufacturer for testing.)
3. A copy of the manufacturer's design, installation, and maintenance manual.
4. Representative to operate equipment ties into the Control Units.
5. Copy of the Acceptance Test Report. (Copies for AHJ, Customer and Installer at minimum)

NFPA 72 Fire Alarm and Signaling Systems:

1. Approval of Installation (Acceptance / Reacceptance Testing) [72:14.4]

The purpose for initial and reacceptance inspections is to ensure compliance with approved design documents and to ensure installation IAW NFPA 72 and other required installation standards. [72:14.2.1.1*]

The purpose for initial and reacceptance testing for fire alarm and signaling systems is to ensure system operation IAW with the design documents. [72:14.2.1.2*]

- A. All new systems shall be inspected and tested IAW the requirements of NFPA 72, Chapter 14. [72:14.4.1.1]
- B. When an (existing) initiating device, notification appliance or control relay is added, it shall be functionally tested. [72:14.4.2.1] When an (existing) initiating device, notification appliance or control relay is deleted, another device, appliance or control relay on the (same) circuit shall be operated. [72:14.4.2.2]
- C. When modifications or repairs to (existing) control equipment hardware are made, the control equipment shall be tested IAW 72:T.14.4.3.2 items 1(a) and 1 (d). [72:14.4.2.3]
- D. When changes are made to (existing) site specific software, the following shall apply:
 - I. All functions known to be affected by the change, or identified by a means that indicates change shall be 100% tested.
 - II. In addition < 10 percent of initiating devices that are not directly affected by the change, up to a maximum of 50 devices also shall be tested and correct system operation shall be verified.
 - III. A revised record of completion IAW 72:7.5.6 shall be prepared to reflect these changes. [72:14.4.2.4]
- E. Changes to the (existing) system executive software shall require a 10 percent functional test of the system, including a test of at least one device on each input and output circuit to verify critical system functions such as notification appliances, control functions, and off-premises reporting. [72:14.4.2.5]

- F. Circuit and pathway testing of each monitored circuit or pathway shall be conducted with initial acceptance or reacceptance testing to verify signals are indicated at the control unit for each of the abnormal conditions specified in 72:23.5 through 72:23.7. [72:14.4.4.6*]
- I. **Performance of Initiating Device Circuits (IDC's).** The assignment of class designations to IDC's shall be based on their performance capabilities under abnormal (fault) conditions IAW the requirements for Class A or Class B pathways specified in NFPA 72 Chapter 12. [72:23.5]
 - II. **Performance of Signaling Line Circuits (SLC's).** The assignment of class designations to SLC's shall be based on their performance capabilities under abnormal (fault) conditions IAW with the requirements for Class A, Class B, or Class X pathways specified in NFPA 72, Chapter 12. [72:23.6]
A single fault on a pathway connected to the addressable devices shall not cause the loss of more than 50 addressable devices. [72:23.6.1]
 - III. **Performance of Notification Appliance Circuits (NAC's).** The assignment of class designation to NAC's shall be based on their performance capabilities under abnormal (fault) conditions IAW the requirements for Class A, Class B, or Class X pathways specified in NFPA 72, Chapter 12. [72:23.7]
 - a. Class A – See 72:12.3.1*
 - b. Class B – See 72:12.3.2*
 - c. Class X – See 72:12.3.6
- G. If the operation of a device, circuit, fire alarm control unit function or special hazard system interface is simulated, it shall be noted on the inspection / test form that the operation was simulated. [72:14.6.4]

2. Permanent Records:

- A. After successful completion of acceptance tests approved by the AHJ, the requirements of 72:14.6.1.1 through 72:14.6.1.3 shall apply. [72:14.6.1]
- I. A set of reproducible as-built installation drawings, operation and maintenance manuals and a written sequence of operation shall be provided to the building owner or their designated representative. [72:14.6.1.1]
 - II. For software-based systems, a copy of the site-specific software shall be provided to the system owner or owner's designated representative. [72:14.6.1.2.1]
 - III. A copy of the site-specific software shall be stored on-site in nonvolatile, nonerasable, non-rewritable memory. [72:14.6.1.2.2]
 - IV. The system owner shall be responsible for maintaining these records for the life of the system for examination by any AHJ. Paper or electronic media shall be permitted. [27:14.6.1.3]