
FIRE ALARM SYSTEM CHANGES IN EXISTING BUILDINGS

Disciplines: Fire and Life Safety**History:** Revised 08/20/24
Original Issue 04/27/10

Division of the State Architect (DSA) documents referenced within this publication are available on the [DSA Forms](#) or [DSA Publications](#) webpages.

PURPOSE

This Interpretation of Regulations (IR) describes the DSA requirements for the complete or partial change of a fire alarm (F/A) system in an existing building due to obsolescence, catastrophic failure, voluntary upgrading, or as part of an alteration or modernization project.

BACKGROUND

Submittals for fire alarm system projects consist of detailed drawings, manufacturer's installation, testing, and maintenance documentation, listing documentation from a nationally recognized testing laboratory (NRTL) and the California State Fire Marshal (SFM), and specifications for the various components and devices intended for installation. Fire alarm system submittals related to existing buildings may consist of total replacement, partial alteration affecting only a portion of an existing system, or work necessary to effect emergency repair.

1. PROCESS

Other than routine maintenance or emergency repairs, all work on an existing fire alarm system requires submittal to DSA for review and approval prior to performing the work. Upon completion of the work, that portion of the fire alarm system in the scope of work shall be inspected and subjected to reacceptance testing as outlined in Section 14.4 of NFPA 72 as adopted and amended. Upon successful completion of the acceptance or reacceptance inspection and testing, an NFPA 72 Record of Completion form shall be completed by the fire alarm system contractor and a copy of the completed and signed form given to the architect or engineer of record (EOR), the project inspector (PI), and the owner (school or community college district).

1.1 Total Fire Alarm System Replacement

Fire alarm systems in existing buildings that are replaced in their entirety due to inability to be repaired or obsolescence must be designed and installed compliant with current codes and standards in effect at the time of submittal as adopted and amended, and include extension into any previously unprotected areas.

1.2 Partial System Alteration

It is not required to upgrade an entire existing building or campus fire alarm system when not totally replacing the system, but the plan submittal package must include assurance in the form of a letter from the fire alarm system design professional certifying that all components and or devices of the system are listed and compatible. All new or added components or devices must meet current codes and standards as adopted and amended, including California Building Code (CBC) accessibility requirements for approach (forward or parallel), reach range, and audible and visual occupant notification in compliance with CBC Chapter 11B.

1.3 Emergency Repair

As systems and components age, fault conditions or component failure can occur. As a life safety system, continued operation of the fire alarm system is critical in maintaining the level of

FIRE ALARM SYSTEM CHANGES IN EXISTING BUILDINGS

protection for building occupants, and in these situations the school district shall take such actions as necessary to effect immediate repair to return the system to a normal operating state.

Emergency repair work does not require prior plan submittal or approval, but the design professional shall submit to the DSA plans and associated documentation reflecting the nature and extent of the repair work prior to performing required reacceptance testing.

2. DESIGN REQUIREMENTS

All areas undergoing alteration or modernization where the project scope affects the design of existing fire protection and life safety systems shall maintain or enhance the level of protection provided and are required to meet current code requirements with additional devices added to those areas as necessary to maintain compliance with current adopted and amended codes and standards.

2.1 Systems shall be designed in accordance with California Fire Code (CFC) Section 907, and be installed in accordance with NFPA Standard 72, National Fire Alarm and Signaling Code, as adopted and amended in CFC Chapter 80, and the manufacturer's listing, installation, and testing instructions.

2.2 Project submittals shall include complete information on drawings, floor plans, detail sections, reflected ceiling plans (RCP), and site plans as necessary to clearly reflect the project scope of work and the existing building configuration, current and complete manufacturer's product (cut) sheets, copies of listing documentation from a nationally recognized testing laboratory (NRTL), and current California State Fire Marshal (CSFM) listing sheets. For additional guidance refer to Guideline (GL) 2: *Fire Alarm and Detection Systems*.

2.3 Where manufacturer's product (data) sheets include multiple models and or reflect multiple operating voltages, the criteria for the specific model being installed shall be clearly identified.

3. VISUAL ALARMS

3.1 Visual alarm notification appliances shall be provided in accordance with CFC Sections 907.5.2.3.1 through 907.5.2.3.4.

3.2 Visual alarm notification appliances shall be provided as necessary to provide a level of notification as required by those adopted codes and standards in effect at the time of project submittal.

4. CHANGES TO SUBMITTED AND DSA APPROVED DOCUMENTS

Where construction plans and documents have been submitted and approved by DSA, but the accepted fire alarm bid package includes a different manufacturer and or product model for the fire alarm control unit (FACU), power extenders, notification appliances, initiating devices, etc., then the following shall apply:

4.1 Where the system design has not changed with respect to locations of appliances, routing of wire, extension of circuits, etc., and the voltage demands of the substituted appliances and devices are the same as or less than those approved, a construction change document (CCD-A) shall be prepared in accordance with *IR A-6: Construction Change Document Submittal and Approval Process* and submitted to DSA.

The architect or engineer in general responsible charge shall provide:

4.1.1 A letter from the fire alarm system design professional (subject to DSA review and acceptance) certifying that the design and system requirements have not changed, and the notification appliances and initiating devices have equal to or less voltage demands than those originally submitted.

4.1.2 New component or device manufacturer's product data sheets (cut sheets) and

FIRE ALARM SYSTEM CHANGES IN EXISTING BUILDINGS

associated CSFM listing sheets for each type and model of notification appliance, device, etc.

4.2 Where substantial changes are made to the design, or the voltage demands of the new manufacturer's equipment are higher than those originally approved, then a "revision" or an "addendum" must be submitted to DSA for review and approval.

5. REPAIR AND MAINTENANCE

5.1 Repair is considered the replacement in kind of a defective component or device necessary to maintain the level of protection and design operability. Replacement components or devices must be CSFM listed and approved, and compatible with the existing FACU. Those components previously having a CSFM listing for which a current listing is not available are acceptable.

5.2 Repair of an existing inoperative fire alarm system is considered emergency work and does not require submittal of plans, specifications, or other documents to DSA prior to performing the work. Plans prepared as outlined in Section 2 above, shall be submitted to DSA as soon as possible, and prior to performing reacceptance testing.

5.3 All repair work is subject to inspection and testing.

RESOURCES

The following resource documents are available on the DSA Publications webpage.

Project Submittal Guideline:

- GL 2: Fire Alarm and Detection Systems

DSA Interpretation of Regulations:

- *IR A-6: Construction Change Document Submittal and Approval Process*
- *IR A-18: Use of Construction Documents Prepared by Other Professionals*

REFERENCES:

2022 California Administrative Code (CAC), Section 4-215
California Building Code (CBC), Section 907
California Fire Code (CFC), Section 907
2022 NFPA Standard 72, as adopted and amended.

This IR is intended for use by DSA staff and by design professionals to promote statewide consistency for review and approval of plans and specifications as well as construction oversight of projects within the jurisdiction of DSA, which includes State of California public schools (K–12), community colleges and state-owned or state-leased essential services buildings. This IR indicates an acceptable method for achieving compliance with applicable codes and regulations, although other methods proposed by design professionals may be considered by DSA.

This IR is subject to revision at any time. Please check DSA's website for currently effective IRs. Only IRs listed on the webpage at www.dgs.ca.gov/dsa/publications at the time of project application submittal to DSA are considered applicable.