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Unilateral Apprenticeship and Training Committee
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The 2007 Edition of NFPA 72 National Fire Alarm Code becomes effective August 1, 2009 as well as some new requirements to the 2007 California Building Code (CBC) and the 2007 California Fire Code (CFC).

There are a number of substantial changes in the requirements found in the 2007, NFPA 72. Anyone installing a commercial or residential fire alarm system needs a copy of the 2007 NFPA 72. The 2007 NFPA 72 Handbook (862 pages) is more expensive, but has a lot of valuable information that is not in the Codebook (272 pages).

The 2007 edition of NFPA 72 National Fire Alarm Code “Inspection and Testing Form” and “Fire Alarm System Record of Completion” have changed. Forms that can be filled-in may be downloaded at: www.nfpa.org/aboutthecodes/AboutTheCodes.asp?DocNum=72
NFPA allows these forms to be copied for individual use, but not copied for sale or distribution.

Without going into detail, the following are examples of definitions to become familiar with:

- 3.3.43.11 Multi-Criteria Detector**
- 3.3.43.12 Multi-Sensor Detector**
- 3.3.64.1 Master Fire Alarm Control Unit**
- 3.3.64.2 Protected Premises (Local) Control Unit**
- 3.3.64.2.1 Dedicated Function Fire Alarm Control Unit**
- 3.3.67.5.2 Dedicated Function Fire Alarm System**
- 3.3.69 Fire Extinguisher Monitoring Device**
- 3.3.102 Mass Notification System**
- 3.3.113.1.1 Exit Marking Audible Notification Appliance**
- 3.3.181.5 Video Image Smoke Detection (VISD)**
- 3.3.209 Video Image Flame Detection (VIFD)**
- 3.3.214 Wide Area Signaling**

4.4.5* Protection of Fire Alarm System. [Rev] In areas that are not continuously occupied, automatic smoke detection shall be provided at the location of each fire alarm control unit(s), notification appliance circuit power extenders, and supervising station transmitting equipment to provide notification of fire at that location.

Exception No. 1: *Where ambient conditions prohibit installation of automatic smoke detection, automatic heat detection shall be permitted.*

CAUTION: Exception No. 1 permits the use of a heat detector if ambient conditions are not suitable for smoke detection. It is important to also evaluate whether the area is suitable for the control unit.

Exception No. 2: [New] ~~Fully sprinklered buildings shall not require protection in accordance with 4.4.5.~~ (Exception 2 has been deleted by CBC and CFC amendments)

A.4.4.5 [New] The fire alarm control unit(s) that are to be protected are those that provide notification of a fire to the occupants and responders. The term fire alarm control unit does not include equipment such as annunciators and addressable devices. Requiring smoke detection at the transmitting equipment is intended to increase the probability that an alarm signal will be transmitted to a supervising station prior to that transmitting equipment being disabled due to the fire condition. Where the area or room containing the control unit is provided with total smoke-detection coverage, additional smoke detection is not required to protect the control unit. Where total smoke-detection coverage is not provided, the Code intends that only one smoke detector is required at the control unit even when the area of the room would require more than



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one detector if installed according to the spacing rules in Chapter 5. The intent of selective coverage is to address the specific location of the equipment. Location of the required detection should be in accordance with one of the following:

- (1) **[New]** Where the ceiling is 4.6 m (15 ft) in height or less, the smoke detector should be located on the ceiling or the wall within 6.4 m (21 ft) of the centerline of the fire alarm control unit being protected by the detector in accordance with 5.7.3.2.1.
- (2) **[New]** Where the ceiling exceeds 4.6 m (15 ft) in height, the automatic smoke detector should be installed on the wall above and within 1.8 m (6 ft) from the top of the control unit.

6.3.3.2.1 [New] In facilities without a building fire alarm system, a dedicated function fire alarm system shall be permitted and shall not be required to include other functions or features of a building fire alarm system.

6.4.2.1.1 [New] Initiating device circuits (IDC), notification appliance circuits (NAC), and signaling line circuits (SLC) shall be permitted to be designated as either Class A or Class B

6.4.2.2.1 [New] In addition to the requirements shown for Class A or Class B, signaling line circuits shall be permitted to be designated as either Style 4, 6, or 7, depending on their ability to meet the alarm and trouble performance requirements shown in Table 6.6.1.

6.8.5.1.2* [Rev] For fire alarm systems employing automatic fire detectors or waterflow detection devices, at least one fire alarm box shall be provided to initiate a fire alarm signal. This fire alarm box shall be located where required by the authority having jurisdiction.

Exception: Fire alarm systems dedicated to elevator recall control and supervisory service.

6.8.5.5* Alarm Signal Initiation — Sprinkler Systems.

6.8.5.5.1 [New] Where required to be electronically monitored, waterflow alarm-initiating devices shall be connected to a dedicated function fire alarm control unit designated as “sprinkler waterflow and supervisory system,” and permanently identified on the control unit and record drawings.

Exception: [New] Where the waterflow alarm-initiating devices are connected to a building fire alarm system, a dedicated function fire alarm control unit shall not be required.

7.1.7 [New] Notification appliances shall be permitted to be used within buildings or outdoors and to target the general building, area, or space, or only specific parts of a building, area, or space designated in specific zones and sub-zones.

7.3.3.2* [New] Notification appliances used for signaling other than fire shall not have the word FIRE, or any fire symbol, in any form (i.e., stamped, imprinted, etc.) on the appliance visible to the public. Notification appliances with multiple visible elements shall be permitted to have fire markings only on those visible elements used for fire signaling.

7.5.2.6* [New] The strobe synchronization requirements of this chapter shall not apply where the visible notification appliances located inside the building are viewed from outside of the building.

7.5.4.2 [New] Where low ceiling heights do not permit mounting at a minimum of 2030 mm (80 in.), visible appliances shall be mounted within 150 mm (6 in.) of the ceiling.

10.2.2.5* [New] Service Personnel Qualifications and Experience. *(There are many changes)*



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11.8.2.2* The interconnection of smoke or heat alarms shall comply with the following:

(4) [New] Smoke or heat alarms shall not be interconnected with alarms from other manufacturers

unless listed as being compatible with the specific model.

Annex E Mass Notification Systems *(This will be included in the body of the 2010 NFPA 72)*

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only. NFPA 72 contains requirements that can impact the application of mass notification systems. Coordination of the functions of a mass notification system with those of a fire alarm system is essential in order to provide effective communication in an emergency situation.

NOTE: For the purposes of this annex, a mass notification system is considered to be a system used to provide information and instructions to people in a building, area, site, or other space using intelligible voice communications and possibly including visible signals, text, graphics, tactile, or other communications methods.

NFPA 72® 2007 Edition, National Fire Alarm Code®

NFPA 72®, 2007 Edition, California Amended Sections as shown in the 2007 California Building Code Chapter 35 and the 2007 California Fire Code Chapter 45 is as shown below:
(NFPA 72®, 2007 Edition is adopted in California effective August 1, 2009)

4.4.4.3 Transient Protection: To reduce the possibility of damage by induced transients, circuits and equipment shall be properly protected in accordance with the requirements of *California Electrical Code*, Article 800.

4.4.4.4 Wiring. The installation of all wiring, cable and equipment shall be in accordance with *California Electrical Code*, and specifically with Article 760, 770 and 800 where applicable. Optical fiber cables shall be protected against mechanical injury in accordance with Article 760.

4.4.5 Protection of Fire Alarm Systems.

Exception No. 2: [New] ~~Fully sprinklered buildings shall not require protection in accordance with 4.4.5.~~ (Exception 2 has been deleted by CBC and CFC amendments)

5.13.4. The operable part of each manual fire alarm box shall be not less than 1.1 m (3½ feet) and not more than 1.22 m (4 feet) above floor level.

5.13.8. Additional fire alarm boxes shall be provided so that the travel distance to the nearest fire alarm box shall not be in excess of 61m (200 feet) measured horizontally on the same floor. *Exception: When individual dwelling units are served by a single exit stairway, additional boxes at other than the ground floor may be omitted.*

5.14 Fire Extinguisher Monitoring Device.

A fire extinguisher monitoring device shall indicate those conditions for a specific fire extinguisher

Required by *California Code of Regulations*, Title 19, Chapter 1, – Section FE and California Fire Code *to a fire alarm control unit or other control unit.*



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6.4.2.2.2 Exception (4). Where the vertically run conductors are contained in a 2-hour rated cable assembly, or enclosed (installed) in a 2-hour rated enclosure or a listed circuit integrity (C.I.) cable, which meets or exceeds a 2-hour fire resistive rating.

6.8.5.1.2. (Manual Fire Alarm Boxes)

Exception: Fire alarm systems dedicated to elevator recall control, supervisory service and fire sprinkler monitoring only.

6.8.5.4.1 (2). A smoke detector that is continually subjected to a smoke concentration above alarm threshold does not delay the system within functions of 4.4.3, 6.8.1.1, or 6.16.2.1 by more than *30_seconds*.

6.8.5.4.1 (5). Operation of a patient room smoke detector in Group I-1 and I -2 Occupancies shall not include an alarm verification feature.

11.7.2.1 *The alarm verification feature shall not be used for household fire warning equipment.*

11.7.5.7.1 *The alarm verification feature shall not be used for household fire warning equipment.*