064. FIRE ALARM SYSTEMS. (7-1-97)

01. Scope: (7-1-97)

02. Definitions: For definitions of terms used in this section, see sub-section 010 of this standard. (7-1-97)

03. General Requirements: (7-1-97)

a. Where fire alarm systems are required, they shall meet the design requirements of the National Fire Protection Association's "National Fire Alarm Code", NFPA No. 72, and the requirements of sub-section 064.01 through 064.11 of this section. (7-1-97)

b. An approved manual, automatic, or combination manual and automatic fire alarm signaling system shall be provided in accordance with this section. (7-1-97)

c. When actuated, alarm initiating devices shall activate an alarm signal which is audible and visible throughout the facility, building, or structure. (7-1-97)

04. Assembly Occupancies: (7-1-97)

a. Any assembly building or portion of a building having an assembly room with a legitimate stage and any building or portion of a building having an assembly room with an occupant load
of three-hundred (300) or more shall also be provided with a manual fire alarm system. EXCEPTION: When the assembly occupancy is part of an educational occupancy, that assembly is allowed to have the alarms as required for the educational occupancy. (7-1-97)

b. Activation of the manual fire alarm system shall immediately initiate an approved prerecorded message announcement using an approved electrically supervised voice communication or public address system which is audible above the ambient noise level of the occupancy. The voice communication and public address systems shall be provided with an approved emergency power supply. EXCEPTION: When approved by the local fire official, the prerecorded announcement is allowed to be manually deactivated for a period not to exceed three (3)-minutes for the purpose of allowing a live voice announcement from an approved, constantly attended station. NOTE: This requirement is required in fire alarm systems installed after April 1, 1992, and is recommended for installations prior to April 1992. (7-1-97)

05. Business Occupancies: (7-1-97)

a. Offices, police and fire stations, print shops, testing and research laboratories, facilities, buildings, structures, or portions thereof having rooms used for educational purposes beyond the twelfth grade having an occupant load of more than three-hundred (300) occupants or more than one-hundred (100) occupants on any level above or below the level of discharge shall be provided with fire alarm systems in accordance with subsection 064.06 of this section. (10-1-06)

b. When required by Chapter 23 of the International Fire Code, high-piled combustible storage areas shall be provided with an approved automatic smoke detector system. (10-1-06)

c. When special egress control devices are installed on exit doors, an automatic smoke detection system shall be installed throughout the building. (7-1-97)

d. When corridors in an office occupancy serve an occupant load of one hundred (100) persons or less and the corridors are not one (1) hour fire resistive construction, an automatic smoke detection system shall be provided in such corridors. Corridor walls and ceilings need not be of fire-resistive construction within office spaces having an occupant load of one hundred (100) or less when the entire story in which the space is located is equipped with an automatic sprinkler system throughout and an automatic smoke-detection system installed within the corridor. (7-1-97)

e. High-rise office occupancies shall be provided with a fire alarm system in accordance with Section 403.5 of the Uniform Building Code. (7-1-97)

f. When required by Article 88 of the Uniform Fire Code, aerosol storage rooms and general purpose warehouses containing aerosols shall be provided with an approved manual fire alarm system. (7-1-97)

06. Educational Occupancies: (7-1-97)
a. Any facility, building, or structure used for educational purposes through the twelfth grade by fifty (50) or more persons for more than twelve (12) hours per week or four (4) hours in any one day or any facility, building, structure, or portion thereof used for day care purposes for fifty (50) or more persons shall be provided with an approved manual fire alarm system. When automatic sprinkler systems or smoke detector systems are installed, such systems or detectors shall be connected to the facility, building, or structure fire alarm system, and the facility, building, or structure fire alarm system shall be both automatic and manual. (7-1-97)

b. Manual fire alarm boxes shall be installed and maintained in accordance with IDAPA 17.10.08.064.10. (7-1-97)

c. Smoke detectors shall be installed when the distance from any point in a room is more than seventy five (75) feet but not more than eighty (90) feet or when any location within the facility, building, or structure is more than one hundred fifty (150) feet but not more than one hundred seventy five (175) feet from an exit corridor, an enclosed stairway, or the exterior of the facility, building, or structure when the facility, building, or structure is not over two (2) stories in height and is unsprinklered. (7-1-97)

d. Smoke detectors shall be installed when interior rooms exit through adjoining or intervening rooms provided the total distance of travel through such rooms is more than seventy five (75) feet but not more than one hundred ten (110) feet provided the exit route is direct, obvious, and unobstructed. Such routes of exit travel shall not pass through kitchens, storerooms, restrooms, closets, laboratories using hazardous materials, industrial shops, or other similar places. (7-1-97)

07. Hazardous Occupancies: (7-1-97)

a. Any facility, building, structure, or portion thereof where materials or processes used present an explosive, accelerated burning, high fire hazard, physical hazard, or health hazard as defined by Section 307 of the Uniform Building Code or Article 80 of the Uniform Fire Code shall be provided with fire alarm systems in accordance with this subsection. (7-1-97)

b. Facilities, buildings, or structures where organic coating processes are used shall also be provided with a manual fire alarm system. (7-1-97)

c. When required by Article 80 of the Uniform Fire Code, rooms or areas used for storage, dispensing, use or handling of highly toxic compressed gases, liquid and solid oxidizers, and class I, II, III, or IV organic peroxides shall be provided with an automatic smoke detection system. (7-1-97)

08. Institutional Occupancies: (7-1-97)

a. Nurseries for the full time care of children under the age of six (6) years; hospitals, sanitariums, nursing homes with non-ambulatory patients and similar buildings; health care centers for ambulatory patients receiving outpatient medical care which may render the patient incapable of unassisted self-preservation; nursing homes for ambulatory patients, homes for children six (6) years of age or older each accommodating more than five (5) persons; and
mental hospitals, mental sanitariums, jails, prisons, reformatories, and facilities, buildings, or structures where personal liberties of inmates are similarly restrained shall additionally be provided with a manual fire alarm system. (7-1-97)

b. Manual fire alarm boxes shall be located in accordance with sub-section 064.10 of this section. (7-1-97)

c. Smoke detectors shall be provided as follows: at automatic closing doors in smoke barriers and one-hour fire-resistive occupancy separations; in ducts penetrating smoke barriers, EXCEPTION: When a duct is located above smoke barrier doors, smoke detectors located as required to actuate the smoke barrier doors are allowed to substitute for duct detectors; and in waiting areas which are open to corridors. (7-1-97)

d. When actuated, alarm initiating devices shall activate an alarm signal which is both audible and visual throughout the facility, building, or structure. EXCEPTION: visual alarm signaling devices are allowed to substitute for audible devices in patient use areas. (7-1-97)

e. Approved single station smoke detectors shall be installed in patient sleeping rooms in hospitals and nursing homes. Such detectors shall receive primary power from the building electrical wiring. When activated, single station detectors shall: cause a visual display in the corridor adjacent to the door to the room in which the detector is located; cause an audible and visual signal at the respective nurses' station, EXCEPTION: In rooms equipped with automatic door closures having integral smoke detectors of the room side of the door, the integral smoke detector is allowed to substitute for the room smoke detector. The door closure detector shall initiate the alerting functions specified in this sub-section; and when single station detectors and related devices are combined with the nursing call system, the system is not required to be electrically supervised. (7-1-97)

09. Residential Occupancies: (7-1-97)

a. Apartment houses three (3) or more stories in height or containing sixteen (16) or more dwelling units, in hotels three (3) or more stories in height or containing twenty (20) or more guest rooms, and in congregate residences three (3) or more stories in height or having an occupant load of twenty (20) or more persons shall be provided with a manual and automatic fire alarm system. EXCEPTIONS: A manual fire alarm system need not be provided in buildings not over two (2)-stories in height when all individual dwelling units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least one (1)-hour fire resistive occupancy separations and each individual dwelling unit or guest room has an exit directly to a public way, exit court, or yard. A separate fire alarm system need not be provided in buildings which are protected throughout by an approved supervised fire sprinkler system conforming with the Uniform Building Code and having a local alarm to notify all occupants. (7-1-97)

b. Manual fire alarm boxes shall be located in accordance with sub-section 064.10 of this section. EXCEPTION: Manual fire alarm boxes are not required for interior corridors having smoke detectors. (7-1-97)
c. In facilities, buildings, or structures, regardless of occupant load, size, or height, a smoke detector shall be installed in each sleeping room and at a point centrally located in the corridor or area giving access to each sleeping room/area. In all common areas and interior corridors serving as a required exit for an occupant load of ten (10) or more shall have smoke detectors. (7-1-97)

d. Heat detectors shall be provided in common areas such as recreation rooms, laundry rooms, furnace rooms, and similar areas in accordance with the Uniform Fire Code Standard 10-3. (7-1-97)

e. When activated, alarm initiating devices shall activate an alarm signal which is audible and visual throughout designated portions of the building. (7-1-97)

f. Single station detectors shall be installed in accordance with the provisions of the Uniform Building Code. (7-1-97)

10. Jails And Prisons: (7-1-97)

a. Jails and prisons shall be provided with a fire alarm system. (7-1-97)

b. All required fire alarm systems shall be electrically supervised. EXCEPTION: Existing nonelectrically supervised systems shall be permitted in buildings protected by a complete automatic extinguishing system. (7-1-97)

c. All fire alarm systems and detection systems required by this subsection shall be provided with a secondary power supply, and the installation shall be in accordance with NFPA 72. (7-1-97)

d. Initiation of the required fire alarm system shall be by manual means and by means of any required detection devices or detection systems. EXCEPTIONS: Manual fire alarm boxes shall be permitted to be locked, provided that staff is present within the subject area when occupied and has keys readily available to unlock the boxes. Manual fire alarm boxes shall be permitted to be located in a staff location, provided that the staff location is attended when the building is occupied and that the staff attendant has direct supervision of the sleeping area. (7-1-97)

e. Occupant notification shall be accomplished automatically. Presignal systems are prohibited. A positive alarm sequence is permitted. EXCEPTION: Any smoke detectors required by this subsection shall be permitted to be arranged to alarm at a constantly attended location only and shall not be required to accomplish general alarm notification. (7-1-97)

f. Fire department notification shall be accomplished in accordance with an approved plan. The fire plan shall include provisions for logging of alarms and immediate notification of the fire department. EXCEPTIONS: Any smoke detectors required by this subsection shall not be required to transmit an alarm to the fire department. Where staff is provided at a constantly attended location that has the capability to promptly notify the fire department or has direct communication with a control room having direct access to the fire department then an automatic means of notification is not required. (7-1-97)
g. An approved, automatic smoke detection system shall be installed throughout all resident housing areas. EXCEPTION: Smoke detectors may be arranged to prevent damage or tampering, or for other purposes, provided the function for detecting any fire is not degraded. (7-1-97)

h. Where required facilities shall be protected throughout by an approved, supervised automatic fire sprinkler system. Where this subsection permits exceptions for fully sprinklered jails and prisons the sprinkler system shall be in complete accordance with NFPA 13, electrically connected to the fire alarm system, and fully supervised. (7-1-97)

11. Manual Fire Alarm Boxes: (7-1-97)

a. General. Manual fire alarm boxes shall be listed for the particular application and shall be used only for the fire protective signaling purposes. Combined fire alarm and watchman's signaling boxes are acceptable. (7-1-97)

b. Each box shall be securely mounted. (7-1-97)

c. Manual fire alarm boxes shall be distributed throughout the protected area so that they are unobstructed, readily accessible, and located in the normal path of exit from the area at every exit from every level. Additional boxes shall be provided on each floor to obtain a maximum horizontal travel distance of two hundred (200) feet to the nearest box. (7-1-97)

12. Maintenance: (7-1-97)

a. All fire alarm systems and components shall be inspected and tested at least annually unless otherwise specified. All smoke detectors shall be tested at least annually. Flame detectors and spark/ember detectors shall be inspected and tested at least semiannually. All fire-gas detectors and other fire detectors shall be inspected and tested at least semiannually. All tests shall be in accordance with NFPA 72, Uniform Fire Code Standard 10-4, requirements of the State Fire Marshal's Office, and the manufacturer's instructions. (7-1-97)

b. All detectors suspected of exposure to a fire condition shall be inspected and tested. (7-1-97)

c. Detectors shall be periodically cleaned in accordance with the manufacturer's instructions to remove dust or dirt. The frequency of cleaning will depend on the type of detector and local ambient conditions. (7-1-97)

d. Maintenance on fire alarm systems shall be performed by a trained person who has undergone the training necessary to reliably perform the required inspection, testing, and maintenance procedures. Fire alarm systems maintenance shall be accomplished in accordance with NFPA 72, UFCS 10-2, 10-3, and 10-4, and appropriate manufactures service manuals. (7-1-97)

e. Between the required annual inspection or tests of the fire alarm system, the system shall be inspected visually or otherwise by competent personnel on a monthly schedule. As a minimum, this inspection/quick check shall include the following: manual actuators are unobstructed; tamper indicators and seals are in tact; the maintenance tag or certificate is current; there is no
obvious physical damage or condition existing that could prevent operation. If any deficiencies are found, appropriate corrective action shall be taken immediately. Persons making inspections/quick checks shall maintain a record to include the date and initials of the person performing the inspection/quick check. (7-1-97)