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| 2020-05    | Smoke Alarm Device Requirements in Dwellings |             |  | May 1, 2020   |
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## Informational Bulletin 2020-05 Smoke Alarm Device Requirements in Dwellings

**Purpose:** The purpose of this bulletin is to provide information as to the current requirements for smoke alarms in single family dwellings, multi-unit dwellings and rental units.

### Definitions:

Smoke Alarm/Smoke Detection System- means a wall or ceiling mounted assembly containing an ionization chamber or photoelectric type of smoke detector, control equipment, and audible alarm in one unit which detects visible or invisible particles of combustion and which, upon detection of smoke, activates the alarm.

Multi-unit Dwelling - means any structure which contains two or more single units which provide permanent or transient living facilities which may or may not include cooking and eating facilities, for one or more persons. This term shall include but not be limited to: rooming houses, dormitories, motels, hotels, apartment buildings, buildings which contain condominium units, duplexes, and houses; provided, however, that such buildings contain two or more units. **\*For the purposes of this bulletin these requirements shall only apply to those occupancies that do not require a fire alarm system. \***

Rental Unit - means any residential unit which provides permanent or transient living facilities for one or more persons, which is occupied by tenants on a rental basis. This term shall include but not be limited to: hotels, motels, dormitories, apartments, duplex units, rooms rented out of the home of another, and single-family dwellings, so long as they are rented.

Single-Family Dwelling - means any structure which contains one dwelling unit, which is designed to be occupied for living purposes exclusively as a home.

## 1.) SINGLE-FAMILY DWELLINGS

### **When They Are Required:**

Smoke alarms shall be installed in all (new and existing) single-family dwellings, regardless of the original construction date.

### **Locations of Installation:**

Each alarm shall be located on the wall, or ceiling as specified in the manufacturers published instructions that accompany the unit.

### **New Construction:**

Smoke alarms shall be installed as follows:

- (1) In each sleeping room.
- (2) Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
- (3) On each level of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. In dwelling or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
- (4) Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent the placement of a smoke alarm.
- (5) Installations near cooking appliances: smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required above;
  - a) Ionization smoke alarms shall not be installed less than 20 feet horizontally from a permanently installed cooking appliance.
  - b) Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet horizontally from a permanently installed cooking appliance. (1)
  - c) Photoelectric smoke alarms shall not be installed less than 6 feet horizontally from a permanently installed cooking appliance.

### **Existing:**

Smoke alarms shall be installed in the following locations:

- (1) In each sleeping room.
- (2) Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
- (3) On each level of the dwelling unit, including basements. (2)

### **Powering the Alarms:**

#### **New Construction:**

Smoke alarms shall receive their primary power from the building wiring (hardwired) where such wiring is served from a commercial power source and, where the primary power is interrupted, shall receive power from a battery (battery backup). Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power. (1)

#### **Existing:**

Smoke alarms shall be permitted to be battery powered (2)

### **Required Interconnection of the Alarms:**

#### **New Construction:**

Where more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. (1)

#### **Existing:**

Interconnection of smoke alarms in existing construction is generally not required. However, interconnection or interconnection for an area may be required when alterations or renovations are made. See IRC 2015 Edition R314.2.2 and R314.4 for more specific guidance. (1)

## **2.) MULTI-UNIT DWELLINGS**

### **When They Are Required:**

Smoke alarms shall be installed in all multi-unit dwellings, regardless of the original construction date. (3)

### **Locations of Installation:**

Each alarm shall be located on the wall, or ceiling as specified in the manufactures published instructions that accompany the unit.

#### **New and Existing Construction:**

Smoke alarms shall be installed in the following locations:

- (1) In each room used for sleeping purposes.
- (2) Outside of each separate sleeping area in the immediate vicinity of the bedrooms.
- (3) On each level of the dwelling unit, including basements but not including crawl spaces and uninhabitable attics.

- (4) Installations near cooking appliances: smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required above;
- a) Ionization smoke alarms shall not be installed less than 20 feet horizontally from a permanently installed cooking appliance.
  - b) Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet horizontally from a permanently installed cooking appliance. (1)
  - c) Photoelectric smoke alarms shall not be installed less than 6 feet horizontally from a permanently installed cooking appliance.

### **Powering the Alarms:**

#### New Construction:

Smoke alarms shall receive their primary power from the building wiring (hardwired) where such wiring is served from a commercial power source and, where the primary power is interrupted, shall receive power from a battery (battery backup). Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

#### Existing Lodging or Rooming:

Battery-powered smoke alarms, rather than house electric-powered smoke alarms, shall be permitted where the facility has demonstrated to the authority having jurisdiction that the testing, maintenance, and battery replacement programs will ensure reliability of power to the smoke alarms. (5)

#### Existing Apartments, Hotels and Dormitory:

Smoke alarms shall be permitted to be battery powered.

### **Required Interconnection of the Detectors:**

#### New Construction:

When more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with the current adopted codes that alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. (1)

#### Existing:

Interconnection of smoke alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for interconnection without the removal of interior finishes. (1)

### **3.) GENERAL REQUIREMENTS (BOTH SINGLE-FAMILY AND MULTI-FAMILY DWELLINGS)**

#### **Combination Smoke/Carbon Monoxide Devices: (Single, Multi and Rentals)**

Combination smoke and carbon monoxide alarms shall be allowed in lieu of smoke alarms provided that they meet the requirements of UL 217 and UL 2034. <sup>(1)</sup>

#### **Maintenance of Devices Required: (Single-Family, Multi-Unit and Rentals)**

The owner of the rental unit shall be responsible for maintaining the smoke alarms in a suitable condition. <sup>(3)</sup>

#### **References:**

- (1) International Residential Code 2015 Edition, section R 314.
- (2) NFPA 101 Life Safety Code 2015 Edition, Ch. 24.3.4.
- (3) NH Fire Laws Annotated RSA 153:10-a.
- (4) International Building Code 2015 Edition, section 907.2.11.
- (5) NFPA 101 Life Safety Code 2015 Edition, Ch. 26.3.4.5.3, Ch. 29.3.4.5.2, Ch. 31.3.4.5.4