



Smoke Alarms – 3.2.4.20.

The Building Standards Department issues Builder Tips as part of our customer service program. They are designed to provide an improved understanding of the Building Code and to reduce the costs associated with correcting infractions. Please contact your area building inspector for further information or call the Building Standards Department at 905.475.4848 extension 2189

3.2.4.20. Smoke Alarms

- (1) Except as provided in Article 3.2.4.21. smoke alarms shall be installed in accordance with this Article.
- (2) Except as permitted by Sentence (10), smoke alarms conforming to CAN/ULC-S531, “Standard for Smoke Alarms,” shall be installed in each dwelling unit and, except for care, care and treatment or detention occupancies required to have a fire alarm system, in each sleeping room not within a dwelling unit.
- (3) At least one smoke alarm shall be installed on each storey and mezzanine of a dwelling unit.
- (4) On any storey of a dwelling unit containing sleeping rooms, a smoke alarm shall be installed
 - (a) in each sleeping room, and
 - (b) a location between the sleeping rooms and the remainder of the storey, and if the sleeping rooms are served by a hallway, the smoke alarm shall be located in the hallway.
- (5) Reserved.
- (6) A smoke alarm shall be installed on or near the ceiling.
- (7) Reserved.
- (8) Reserved.
- (9) Except as permitted by Sentence (10), smoke alarms required by Sentence (2) shall
 - (a) be installed with permanent connections to an electrical circuit
 - (b) have no disconnect switch between the overcurrent device and the smoke alarm, and



(c) in case the regular power supply to the smoke alarm is interrupted, be provided with a battery as an alternative power source that can continue to provide power to the smoke alarm for a period of not less than 7 days in the normal condition, followed by 4 minutes of alarm.

(See Note A-3.2.4.20.(9))

(10) Suites of residential occupancy are permitted to be equipped with smoke detectors in lieu of smoke alarms, provided the smoke detectors

(a) are capable of independently sounding audible signals with a sound pressure level between 75 dBA and 110 dBA within the individual suites, (See also Note A-3.2.4.18.(4))

(b) except as provided by Sentence (11), are installed in conformance with CAN/ULC-S524, "Standard for the Installation of Fire Alarm Systems", and verified in conformance with CAN/ULC-S537, "Standard for the Verification of Fire Alarm Systems",

(c) form part of the fire alarm system, and

(d) are equipped with visual signaling components that meet the requirements of Sentences (17) to (19).

(See Note A-3.2.4.20.(10))

(11) Smoke detectors permitted to be installed in lieu of smoke alarms as stated in Sentence (10) are permitted to sound localized alarms within individual suites, and need not sound an alarm throughout the rest of the building.

(12) If more than one smoke alarm is required in a dwelling unit, the smoke alarms shall be interconnected so that the actuation of one smoke alarm will cause all smoke alarms within the dwelling unit to sound.

(13) A smoke alarm required by Sentence (2) shall be installed in conformance with CAN/ULC-S553, "Standard for Installation of Smoke Alarms."

(14) Except as permitted by Sentence (15), a manually operated silencing device shall be incorporated within the circuitry of a smoke alarm installed in a dwelling unit so that it will silence the signal emitted by the smoke alarm for a period of not more than 10 min, after which the smoke alarm will reset and again sound the alarm if the level of smoke in the vicinity is sufficient to reactuate the smoke alarm.



(15) Suites of residential occupancy equipped with smoke detectors installed in conformance with CAN/ULC-S524, “Standard for Installation of Fire Alarm Systems”, as part of the fire alarm system in lieu of smoke alarms as permitted by Sentence (10), need not incorporate the manually operated silencing device required by Sentence (14). (See Note A-3.2.4.20.(10))

(16) The sound patterns of smoke alarms shall

- (a) meet the temporal patterns of alarm signals, or (See Note A-3.2.4.18.(2))
- (b) be a combination of temporal pattern and voice relay.

(17) Smoke alarms required by Sentence (2) shall have a visual signalling component conforming to the requirements in 18.5.3. (Light, Color and Pulse Characteristics) of NFPA 72, “National Fire Alarm and Signaling Code”. (See Note A-3.2.4.20.(17))

(18) The visual signalling component required by Sentence (17) need not

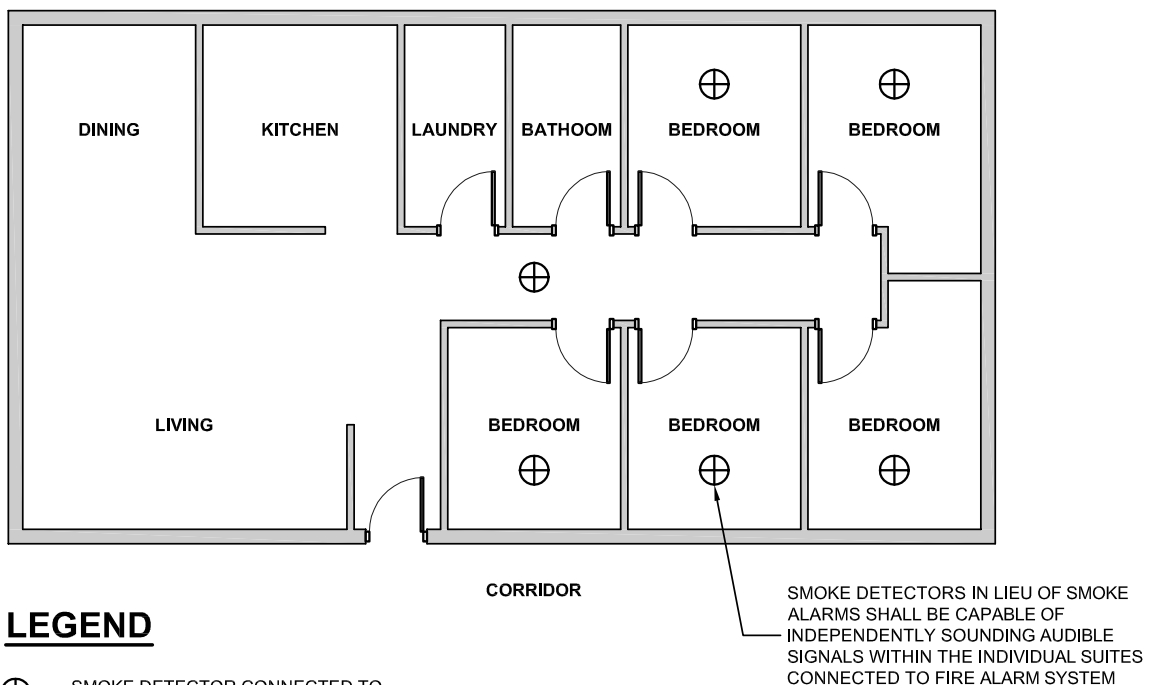
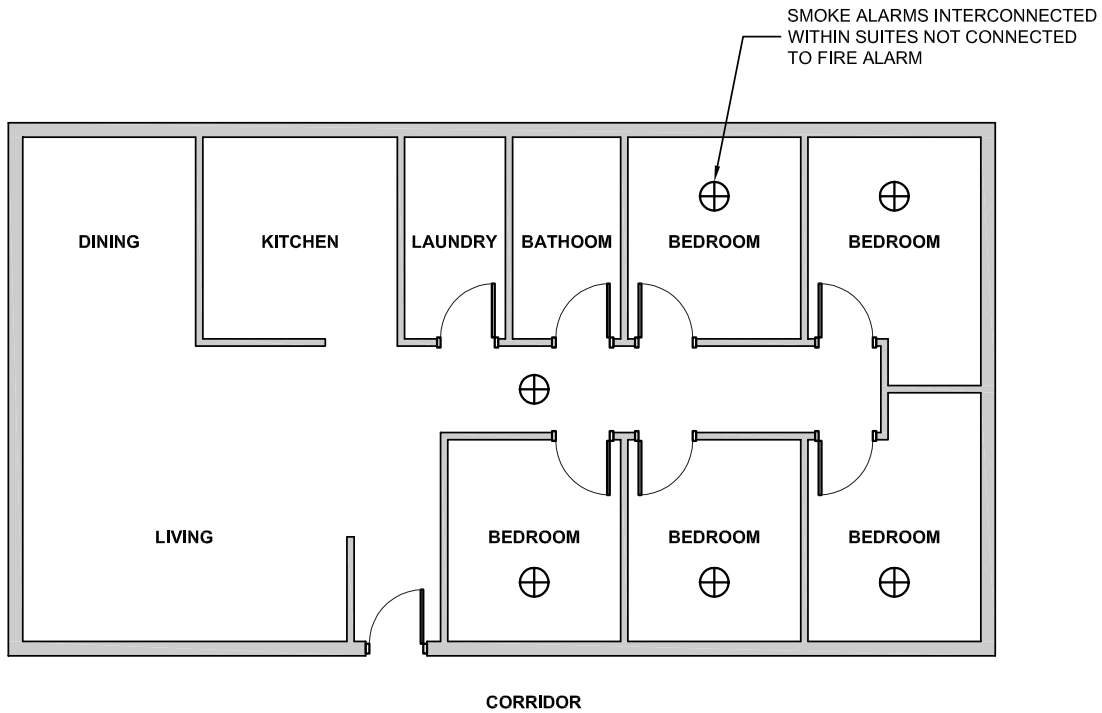
- (a) be integrated with the smoke alarm provided it is interconnected to it,
- (b) be on battery backup, or
- (c) have synchronized flash rates, when installed in a dwelling unit.

(19) The luminous intensity for visual signalling components required by sentence (17) that are installed in sleeping rooms shall be a minimum of 175 cd.

(20) Smoke alarms required in suites in a retirement home or smoke detectors permitted to be installed in lieu of smoke alarms as provided in Sentence (10) shall upon actuation provide an audible and visual signal to staff serving those suites, so that the suite containing the actuated smoke alarm or smoke detector can be easily identified.

OBJECTIVES

To detect the presence of smoke and initiate an audible alarm and visual signal to warn occupants to take the appropriate action to secure their safety. Sentence (10) recognizes certain smoke alarms with sounder base installations (essentially an independent smoke detector functioning as a smoke alarm) that may be the choice of installation in some hotels, motels and dormitories. These detectors, although functioning remotely in the individual suites, would be connected to a fire alarm panel thus providing additional supervision of the detectors in the individual rooms. These devices would be required to follow the inspection frequencies of CAN/ULC-S536, “Inspection and Testing of Fire Alarm Systems,” as per the Fire Code.



LEGEND

⊕ SMOKE DETECTOR CONNECTED TO FIRE ALARM SYSTEM

FLOOR PLANS FROM <http://www.fire.nsw.gov.au/page.php?id=443>