

Qs & As

Smoke Alarm Requirements for Dwelling Units Under Section 2.13 of the Fire Code

Q1

What dwelling units are regulated by Section 2.13 of the Fire Code?

Section 2.13 applies to all detached houses, semi-detached houses and row houses where each house is occupied as a dwelling unit. (A dwelling unit is defined by the Fire Code as meaning “a suite operated as a housekeeping unit, used or intended to be used as a domicile by one or more persons and usually containing cooking, eating, living, sleeping and sanitary facilities”.)

A seasonal home, such as a cabin or cottage, is also considered a dwelling unit for the purpose of this Section. Section 2.13 also captures any other dwelling unit that is not otherwise regulated by Retrofit, Part 9 of the Fire Code. For example, where a building contains a mixed use of occupancies and also contains one or two dwelling units, Section 2.13 would require the dwelling unit(s) to be provided with smoke alarms.

Part 9 regulates houses containing secondary apartment units and most multi-storey, multi-unit residential buildings. Smoke alarm requirements for these buildings are already contained in Part 9 of the Fire Code and Section 2.13 does not apply to these units.

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Q2

Does Section 2.13 apply equally to dwelling units that are owner occupied and rental units?

Yes. Each dwelling unit is regulated regardless of the ownership arrangement.

Q3

Where are smoke alarms required to be located in each dwelling unit?

A smoke alarm is required to be installed between each sleeping area and the remainder of the dwelling unit. Where the sleeping areas are served by hallways, the smoke alarms must be installed in the hallways.

In addition, at least one smoke alarm is required to be installed on each storey that does not contain a sleeping area.

Q4

Where a dwelling unit is of a split-level design, is a smoke alarm required on each separate level?

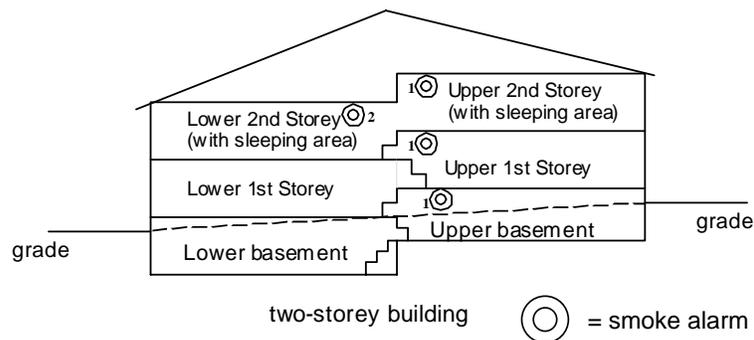
No. A smoke alarm is not required on each level in a split-level dwelling unit because each level does not count as a separate “storey”.

To determine the number of storeys in a dwelling unit, and thus determine the number of smoke alarms required, it is necessary to first identify the “first storey” of the dwelling unit.

The Fire Code defines the “first storey” as meaning the storey with its floor closest to grade and having its ceiling more than 1.8 metres above grade.

Once the first storey has been identified, it is then possible to identify the basement. The Fire Code defines a basement as meaning a storey or storeys of a building located below the first storey. Similarly, once the first storey is identified, it is then possible to identify the second storey and, where applicable, the third storey.

As illustrated below, a storey can consist of more than one level. Only one smoke alarm is required to be installed in each storey (see note 1). However, when a dwelling unit contains multiple sleeping areas, a smoke alarm must be installed to protect each separate sleeping area. This may necessitate additional smoke alarms on some levels of a split-level home (see note 2). The following illustrated example of a split-level dwelling unit is provided for clarification.



Note 1: One smoke alarm required for each of the basement, first and second storeys.

Note 2: An additional smoke alarm is required on the lower level of the second storey due to sleeping rooms.

Q5

When a storey includes two levels, where is the best place to install the smoke alarm?

It is best to install the smoke alarm in the higher ceiling area, as the smoke alarm will react quickest to smoke development in either area in this arrangement. As well, smoke alarms are best installed near the stairs that interconnect the levels or storeys. Always install the smoke alarms on the ceiling or on the upper portion of a wall in accordance with the manufacturer's instructions.

Q6

Many homes have existing smoke alarms that are hardwired to an electrical circuit. Where additional smoke alarms are installed, are these required to be hardwired as well?

No. Any additional smoke alarms required by Section 2.13 of the Fire Code are permitted to be battery powered.

Q7

A dwelling unit has two existing smoke alarms that are hardwired to an electrical circuit and interconnected to each other. When one activates, the second smoke alarm also activates at the same time. If additional smoke alarms are being installed to comply with the Fire Code, do they have to be electrically interconnected to the existing smoke alarms?

No. The additional smoke alarms may be battery powered and need not be interconnected. Additional hardwired smoke alarms would also satisfy the requirements, whether or not they are interconnected. However, interconnected smoke alarms are a good idea for maximum protection.

Q8

Is it permissible to replace existing permanently hardwired individual smoke alarms or electrically interconnected smoke alarms with battery powered smoke alarms?

No. When smoke alarms are being replaced, the installation must not reduce the level of detection required by the Building Code in effect at the time of construction of the dwelling unit, or by municipal by-laws in effect before the Fire Code adopted this requirement. This requirement is contained in Sentence 6.3.3.5.(1) of the Fire Code. In other words, existing permanently wired individual smoke alarms or electrically interconnected smoke alarm installations must be maintained to provide the same level of protection as originally required. Any replacement smoke alarms must be of a type comparable to the original (or better).

Q9

Is a cellar, attic space or crawl space required to have a smoke alarm installed under the changes to Section 2.13 of the Fire Code?

A space without a finished floor is not considered a storey and therefore smoke alarms are not required.

“Attic space” is defined in the Fire Code as a space between the roof and the ceiling of the top “storey” (i.e. cavity within the roof space). As such, it is not designated as a “storey” and a smoke alarm is not required. However, an attic or roof space that has a floor and contains a living space or storage is no longer an “attic space” by definition. Such a space is considered a “storey” and a smoke alarm must be installed.

A “crawl space” is not defined in the Fire Code but generally refers to a cavity space located beneath the house or a portion of the house and typically has a very low overhead. A crawl space without a finished floor is not a storey and does not require a smoke alarm. Where a crawl space has a finished floor and is used for storage or contains an appliance, it is a storey and requires a smoke alarm. A crawl space that extends out from an adjoining basement does not require a separate smoke alarm since a smoke alarm is already required to protect the basement.

“Cellar” is defined in the Fire Code as a basement that is more than 50% below grade. A cellar, like a basement is considered a “storey”. A smoke alarm is required to be installed in a space that falls under the definition of a cellar.

Q10

Is it permissible to install additional smoke alarms beyond the minimum required in Section 2.13?

Yes. The regulation does not prohibit the installation of additional smoke alarms beyond the minimum number that are required. In larger homes, in homes where there are room and ceiling configurations that may interfere with the movement of smoke, or in homes where people sleep with bedroom doors closed, it is recommended to install additional smoke alarms to enhance early detection of smoke and warning of fire.