

2014 Alberta Building Code

Part 9 changes relating to
Smoke and CO Alarms

9.32.3.9 Carbon Monoxide Alarms

What has not changed:

4) & 6) In a residential occupancy containing a fuel burning appliance or an attached garage a CO alarm is required

- Inside each bedroom or
- Outside each bedroom (within 5 m)

9.32.3.9 Carbon Monoxide Alarms

- What has Changed - sub-rule 7 added.
- (7) Where CO alarms are installed in a house with a secondary suite including their common spaces, the CO alarms shall be wired so that the activation of any one CO alarm causes all CO alarms within the house with a secondary suite including their common spaces to sound.

9.10.19 SMOKE ALARMS

- What has not changed
- No smoke or CO alarm may be on an AFCI or GFCI protected circuit.
- However in the CE Code 2015 arc-fault protection for receptacle circuits has been greatly expanded so circuit layouts will need to be adapted. In force January 2016

9.10.19 SMOKE ALARMS

- Not changed
- Smoke alarms to conform to CAN/ULC S531 standard for smoke alarms. The device must be marked indicating it is built to this standard and have a label showing expiry date.

9.10.19 SMOKE ALARMS

Smoke Alarm Markings

CAN/ULC S-531 Requirements

- A smoke alarm shall be permanently marked in English and French
- Also include the year of expiry with a label. “Replace in XXXX” (year) that can be read when the alarm is installed



9.10.19 SMOKE ALARMS

- Not changed
- Smoke alarms still need interconnection. “Smoke alarms shall be wired so that the activation of one alarm will cause all the alarms within the dwelling unit to sound”.
- This applies to required smoke alarms
- No provision has been added to allow wireless interconnection of smoke alarms.

9.10.19 SMOKE ALARMS

- Note this is specific to the ABC and is not in the NBC 2010
- ABC has wording in 9.10.19.5 (3) which provides a relaxation for interconnection of smoke alarms in certain cases.

9.10.19.5 SMOKE ALARMS

(3) “A (120v) smoke alarm required to be installed in an existing dwelling unit as a result of developing space for sleeping need not be interconnected with existing smoke alarms in the dwelling unit, but if more than one new smoke alarm is required all new smoke alarms shall be interconnected”.

- What's changed?

9.10.19 SMOKE ALARMS

- Smoke alarms are now required to be provided with a battery as an alternative power supply capable of providing power.

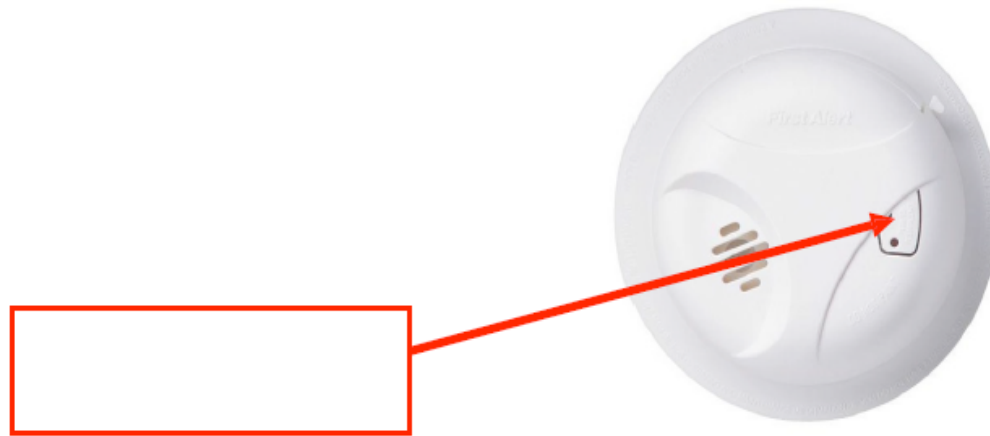


9.10.19 SMOKE ALARMS

- 9.10.19.6 (1) Smoke alarms require a silencing “hush” feature.

Smoke alarm shall

- minimize potential tampering with smoke alarm (silencing)



9.10.19 SMOKE ALARMS

- 9.10.19.2 Sound patterns of smoke alarms
- The sound patterns of smoke alarms are now required to meet the temporal patterns of alarm signals, or be a combination of temporal pattern and voice relay.

9.10.19 SMOKE ALARMS

- Smoke alarms for dwelling units - rules have been expanded to include not just inside dwelling units but also to:
 - “sleeping rooms not within a dwelling unit” and for
 - “ancillary spaces and common spaces not in dwelling units in a house with a secondary suite”.

9.10.19 SMOKE ALARMS

- Removed are requirements for smoke alarms within 5 m of bedroom doors and that no point on the floor could be > 15 m from a smoke alarm.
- This was done to harmonize with Part 3 which referenced CAN/ULC S553-02 Installation of Smoke Alarms. (more on that later)

9.10.19 SMOKE ALARMS

- Removed is wording from 9.10.19.2. which used to read – “one smoke alarm on each floor level including basements that is 900 mm or more above or below an adjacent floor level”.

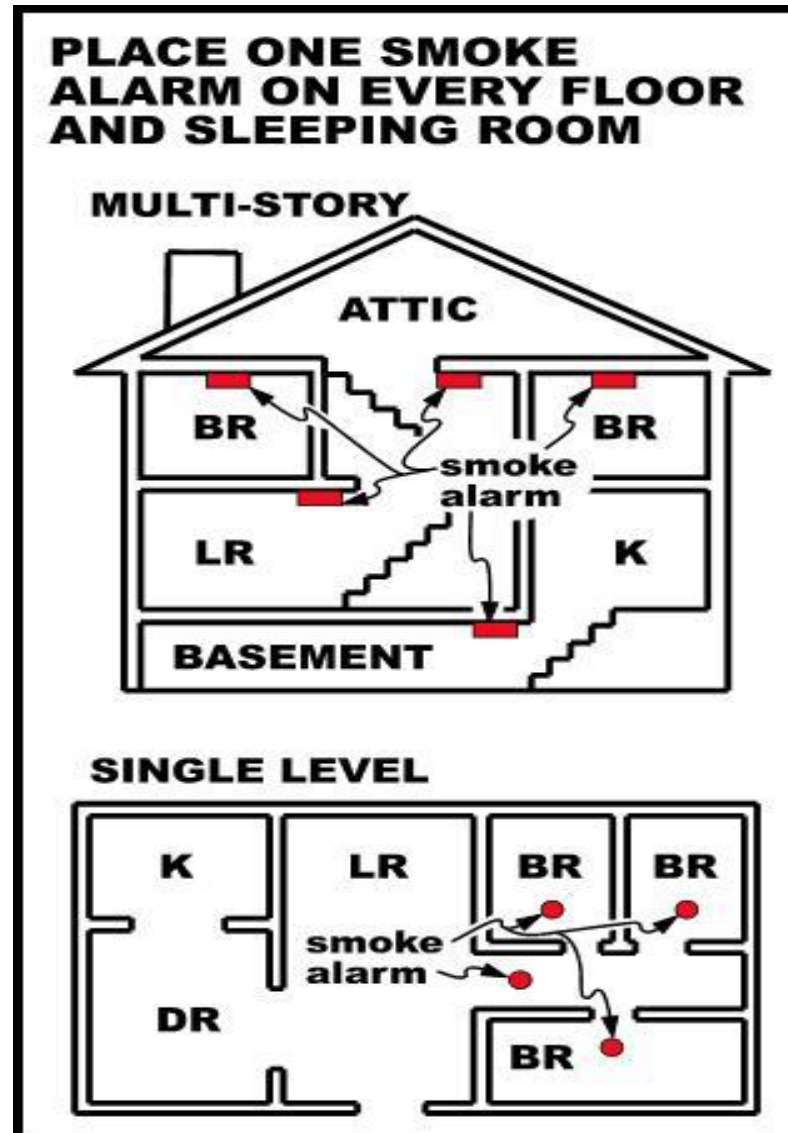
9.10.19 SMOKE ALARMS

- One smoke alarm on each storey (including basements).
- A smoke alarm is required to be installed between each sleeping room and the remainder of the storey.
- Where sleeping rooms are served by hallways, the smoke alarms must be installed in the hallways
- One smoke alarm can meet all of this

9.10.19 SMOKE ALARMS

- One smoke alarm in each sleeping room

9.10.19 SMOKE ALARMS

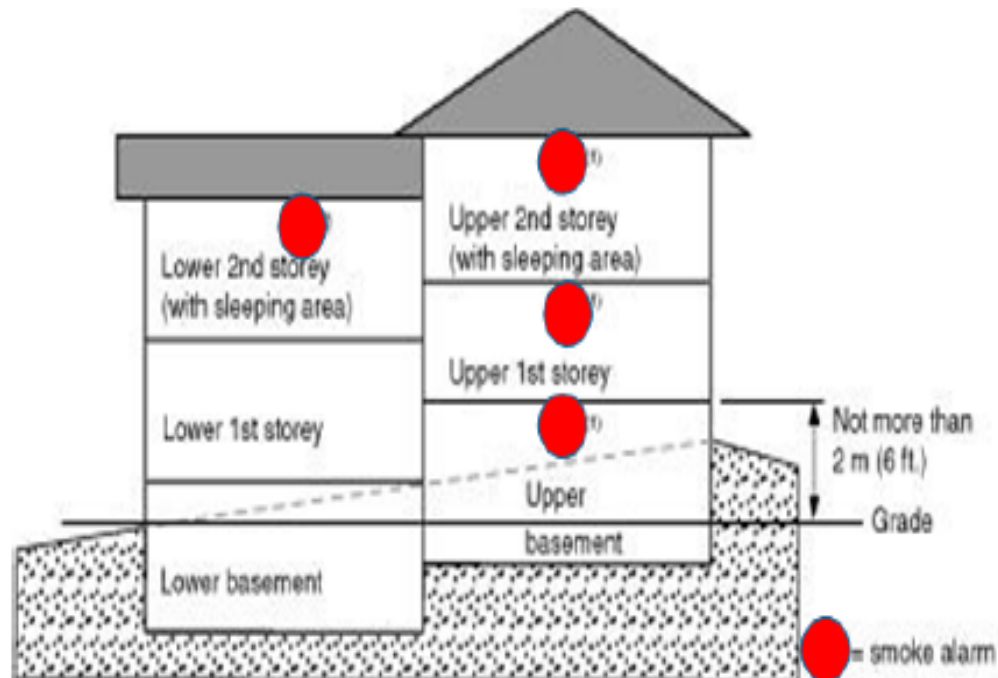


9.10.19 SMOKE ALARMS

- Note ABC definition for first storey:
“the uppermost storey having its floor level not more than 2 m above grade”
- see ABC Apx A for how to determine this.
- The new alarm placement requirement may be confusing with split level designs.

9.10.19 SMOKE ALARMS

- Appendix A- 9.10.19.3(1) Location of Smoke Alarms
- Split level home now only required on upper level of each floor



9.10.19 SMOKE ALARMS

- Installation of smoke alarms are also now required to be installed in conformance with CAN/ULC S553-02 Installation of Smoke Alarms.
- This standard contains installation and testing requirements.
- Some of the details in this standard are:

9.10.19 SMOKE ALARMS

- Interconnected alarms must be compatible. They are to be of the same type from the same manufacturer or listed and marked as compatible
- The number of interconnected smoke alarms must not exceed the number of alarms specified by the manufacturer.

9.10.19 SMOKE ALARMS

- Installation must be in accordance with the manufacturers' installation instructions
- these match the S553 standard

9.10.19 SMOKE ALARMS

- Placement of smoke alarms has several restrictions to ensure correct function and to avoid dead air space.
- Some examples are:

9.10.19 SMOKE ALARMS

- Smoke alarms can be located on the ceiling but must be at least 100 mm from any wall
- Smoke alarms can be located on a wall with the top edge of the alarm 100 to 300 mm from the ceiling.

9.10.19 SMOKE ALARMS

- Basement smoke alarms shall be located in close proximity to the stairs leading to the level above

9.10.19 SMOKE ALARMS

- Smoke alarms installed in a bedroom or in a hallway near the bedrooms to be located as close as possible to the room while avoiding nuisance alarms due to excess water vapour from a bathroom, cooking vapours from a kitchen or smoke from a solid fuel appliance

9.10.19 SMOKE ALARMS

- Smoke alarms in the vicinity of a doorway to a bathroom, laundry room or kitchens shall be located not less than 1 m from the centre of the doorway header.

9.10.19 SMOKE ALARMS

- In areas provided with forced air outlets (heat or air conditioning) smoke alarms shall not be mounted near supply air outlets.
- It is intended that any airflow at the alarm location be towards return air or an exhaust outlet.

9.10.19 SMOKE ALARMS

- Upon completion of the installation all installed smoke alarms shall be tested in accordance with CAN/ULC-S552-02, Standard for Maintenance and Testing of Smoke Alarms.

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QUESTIONS ?