SMOKE/HEAT & CARBON MONOXIDE DETECTOR REQUIREMENTS, 780 CMR 8TH EDITION
MASSACHUSETTS STATE RESIDENTIAL CODE FOR ONE & TWO FAMILY DWELLINGS

EXISTING BUILDINGS:

Existing Buildings: - Alterations, repairs and additions: When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings.

Smoke detection and notification: All smoke alarms shall be photoelectric type smoke alarms listed in accordance with UL 217 or UL 268 and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.

   Exception: Where smoke alarms are provided meeting the requirements of Section R314.4.

Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings 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. Near the base of all stairs where such stairs lead to another occupied floor.
5. For each 1,200 square feet of area or part thereof

When 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 unit.

Power source: Smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for over current protection. Smoke alarms shall be interconnected.
Exceptions:

1. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power.
2. Interconnection and hard-wiring of smoke alarms in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard wiring and interconnection without the removal of interior finishes.

**Heat Detector:** A single heat detector listed for the ambient environment shall be installed in:

1. Any integral garage (“garage under”) or attached garage to the main house (detached garages do not require a heat detector).

2. A new addition attached garage to an existing dwelling. If the existing house contains a fire detection system that is compatible with the garage heat detector, then the detector shall be interconnected to the existing system. Where the existing fire detection system is not compatible with the garage heat detector, the garage heat detector shall be connected to a sounder (occupant notification appliance) or compatible heat detector containing a sounding device, located in the dwelling and within 20 feet (6096 mm) of the nearest door to the garage from the dwelling. The required garage heat detector is neither required to incorporate audible alarm notification nor is any audible notification device required in the garage.

**Heat Detector Placement:** For flat-finished ceilings, the single heat detector shall be placed on or near the center of the garage ceiling. For sloped ceilings having a rise to run of greater than one foot in eight feet (305 mm in 2438 mm), the single heat detector shall be placed in the approximate center of the vaulted ceiling but no closer than four inches (102 mm) to any wall.

**CARBON MONOXIDE ALARMS:**

**Governing Regulations:** Carbon monoxide alarms (alarms) for new construction and existing dwellings shall be furnished, installed and maintained by the owner in accordance with this section, M.G.L. c. 148, § 26F½, 527 CMR 31.00: Carbon Monoxide Alarms, 248 CMR, NFPA 720 and the manufacturer’s instructions.

**Alarm requirements:** Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

**Installation Locations:** One alarm shall be installed on each story of a dwelling unit, including basements and cellars (but not including crawl spaces and uninhabitable attics). When mounting a carbon monoxide alarm on a story with a bedroom, the alarm, shall be located outside of bedrooms but no further than 10 feet of any bedroom door. If a combination smoke/carbon monoxide alarm is used, its location must comply with this section.

**Power Source:** Alarms shall either be an interconnected 120V or part of a low voltage combination system or wireless system. Alarms shall have secondary (standby) power from monitored batteries in accordance with NFPA 72. For fire alarm control units (panels) and wireless systems, the panel battery shall serve as the source of secondary power. Alarms shall be UL 2034 or UL 2075 listed, as applicable. Alarms may be interconnected with fire alarms providing they are compatible and the fire alarms take precedence.

**PROPERLY LOCATED AND WORKING SMOKE/CARBON MONOXIDE DETECTORS SAVES LIVES**