

**THIS DOCUMENT PROVIDES SMOKE DETECTOR
REQUIREMENTS FOR DWELLINGS AS FOLLOWS:**

- 1. GENERAL REQUIREMENTS**
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**1.
GENERAL REQUIREMENTS FOR DWELLING UNIT
SMOKE DETECTORS**

- All smoke detectors must be approved by a Nationally Recognized Testing Laboratory, be manufactured in accordance with UL 217 and be listed and approved for sale, installation, and use in Maryland by the Office of the State fire Marshall.
- All smoke detectors must be installed in accordance with the manufacturer's instructions.
- Unless specifically permitted elsewhere below, all smoke detectors must be hardwired with a battery backup and provide a physical interconnection such that all smoke detectors will sound when any single smoke detector is activated.
- When installing or extending an electrical circuit to install smoke detectors, the circuit must be arc-fault protected in accordance with the National Electrical Code.
- **EFFECTIVE JANUARY 1, 2018:** Battery-only powered smoke detectors that are more than ten (10) years old or are inoperable must be replaced with a ten year sealed battery smoke alarm with a 'hush' operation.
- Low Voltage smoke alarm systems are permissible. Plug connections for such systems are required to be in a locked enclosure. Check with your inspector for location specific requirements.
- The low voltage smoke alarm system must be owned by the homeowner. Rented systems are not permissible.

CARBON MONOXIDE ALARM REQUIREMENTS

House Bill 401

Passed by the Maryland General Assembly requires the installation of a carbon monoxide alarm in a central location outside of each sleeping area or, under specified circumstances, within 25 feet of any carbon monoxide producing fixture and equipment within a dwelling.

This requirement applies only to those homes using fossil fuels such as gas, propane, or oil; homes with gas, pellet, or wood burning fireplaces; and homes with attached garages.

Homes that are all-electric, generally do not require carbon monoxide smoke detectors.

Any bedroom having a fossil fuel burning appliance or fireplace within the bedroom is required to have a carbon monoxide detector installed inside the room.

2. SMOKE DETECTORS IN NEW HOMES

- Smoke detectors are required in every bedroom, in the hallways outside of bedroom areas, and on every level of the dwelling.
- Smoke detectors must be located at least 3' from an air supply register and/or ceiling fan blades. If possible, smoke detectors should be located at least 6' from bathrooms and kitchens.
- All smoke detectors must be hardwired with battery backup.
- All smoke detectors must be physically inter-connected.

3.

SMOKE DETECTOR REQUIREMENTS FOR RESIDENTIAL ALTERATIONS REQUIRING A PERMIT

As a result of Baltimore County adopting the 2015 Edition of the International Residential Code (IRC), the following requirements apply to all alterations, repairs, and additions to existing dwellings requiring an Electrical or Building permit:

- One smoke detector is required in each existing bedroom.
- One smoke detector is required outside each separate sleeping area in the immediate vicinity of the bedrooms
- One smoke detector is required on each additional story of the dwelling, including basement and habitable attics, excluding crawl spaces.
- Smoke detectors must be located at least 3' from an air supply register and/or ceiling fan blades. If possible, smoke detectors should be located at least 6' from bathrooms and kitchens.
- Additions or alterations involving new bedrooms are required to have a smoke detector placed in each new bedroom and in the area outside of the bedroom(s). These are required to be hardwired with a battery backup and physically interconnected.

NOTE: For split level dwellings without an intervening door, a smoke detector on the upper level will suffice if the lower level is less than one full story below the upper level.

Work involving the replacement of roofing, siding, windows, doors, or the addition of a porch or deck, or alterations or repairs of plumbing or mechanical systems is exempt from this requirement. Electrical service changes, replacement of HVAC systems, generator installations, and solar PV installations are exempt from this requirement.

Wiring of Smoke Detectors

All smoke detectors shall be hardwired with a battery backup and are required to be interconnected. Hardwiring of smoke detectors 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 hardwiring without the removal of interior finishes.

Interconnection of Smoke Detectors

1. If more than one smoke detector is required, all smoke detectors must be interconnected such that all alarms will sound whenever any single alarm is activated. Physical interconnection of smoke detectors 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 physical interconnection without the removal of interior finishes.
2. All required smoke detectors must receive their primary power from the building wiring regardless of location. The NEC requires that the manufacturer's installation and operating instructions must be followed.

4. SMOKE DETECTOR REQUIREMENTS FOR RENTAL UNITS

Wireless remote interconnection is acceptable provided the smoke detectors are hardwired and approved by a nationally recognized testing laboratory such as UL and be listed and approved for sale, installation, and use in Maryland by the Office of the State fire Marshall. To ensure interconnection works properly, units must be the same manufacturer.

- **Single family Home**

1. A hardwired smoke detector with a battery backup must be located in the corridor or hallway outside of sleeping areas and on every level of the dwelling unit.
2. If the home has a basement a hardwired smoke detector with a battery backup must also be located in the basement, and must be interconnected with all the other smoke detectors.

1. **Homes with 2 or 3 Apartments**

1. A hardwired smoke detector with a battery backup must be located in the corridor or hallway outside of sleeping areas and on every level of the dwelling unit.
2. If the home has a basement, a hardwired smoke detector with a battery backup must also be located in the basement, and must be interconnected to the smoke detector on the first floor only.

- **Homes with 4-6 Apartments**

1. A hardwired smoke detector with a battery backup must be located in the corridor or hallway outside of sleeping areas in each unit and on every level of the dwelling unit.
2. A hard-wired smoke detector is required in the basement for homes with 4-6 apartments but does not have to be interconnected.

CARBON MONOXIDE DETECTORS

Effective April 1, 2018 carbon monoxide detectors are required on every level of a rental unit having a fireplace or attached garage or which uses fossil fuels such as gas, propane, pellet fuel, oil, etc. Carbon monoxide detectors must be audible in the bedrooms.