Smoke alarms must be audible in all parts of the house and installed per manufacturer’s instructions.

**New Houses**
Smoke alarms and carbon monoxide detectors are required and must be connected to the main electrical system with battery backup.

Combination detectors, a single smoke/carbon monoxide detector, located in each of the required locations is permitted.

**Existing Houses (IRC R314.3.1)**
Smoke alarms are required for any addition or repair work requiring a building permit, except exterior surface work such as re-roofing. Alarms must be interconnected and hard wired. Exception: Alarms will not be required to be interconnected and hard wired where the permit work does not require the removal of interior wall or ceiling finishes unless there is an attic, crawlspace, or basement available where access is provided.

Carbon Monoxide detectors are required in all existing homes, apartments, condominiums, and other multi-family units.

Exception: Owner occupied single-family residences except upon sale. At time of sale, seller must equip the residence with carbon monoxide alarms before the buyer or any other person may legally occupy the residence.

**Required Locations**
- Each sleeping room and outside each sleeping area in the immediate vicinity of the bedrooms.
- Every floor level including basements, but not including crawlspace and uninhabitable attics.
- In split level floor plans, at the upper level, provided there is no intervening door between adjacent levels and the lower level is less than a full story below the upper level.

![Diagram of smoke alarm placement](image)

**General Information:**
- Obtain a building permit before starting construction.
- The intent of this tip sheet is to address the basics of private residential smoke alarms only and does not address the subject in great detail. Additional information can be found at your local building department, home improvement store, or library.
Avoid these locations for alarms:

Near combustible sources, fireplaces, furnaces, hot water heaters, space heaters, kitchens, garages with vehicle exhaust. Place alarms at least 20’ away from such sources.

In air streams passing by kitchens, see page 1.

In damp areas such as bathrooms with showers. Place alarms at least 10’ away from such sources.

In very cold or hot areas such as unheated or outdoor rooms where the temperature will fall out of the alarm operating range.

In very dusty or dirty areas where the vents of the alarm could become clogged.

Near fresh air vents or drafty areas such as air conditioners, heaters, floor and ceiling fans...

In dead air spaces. See this page for dead air at enclosed stairs and page 1 for other locations.

In insect-infested areas. Install bug screens.

Near fluorescent lights. Place alarms at least 5 feet away from such sources.