

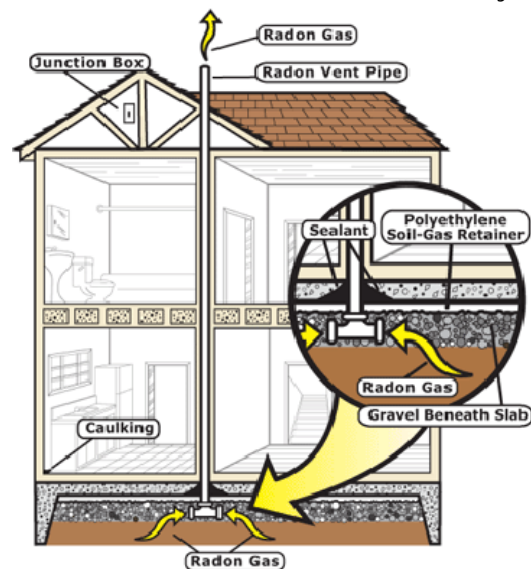
Basic Radon-Resistant New Construction Techniques for Your Home

While the techniques may vary for different house foundations and building site requirements, the five basic features that all builders should include to prevent radon from entering your home are:

Gravel: A 4-inch layer of clean, coarse gravel below the “slab,” also called the foundation. This layer of gravel allows the soil gases—including radon—that occur naturally in the soil to move freely underneath the house. Builders call this the “air flow layer or gas permeable layer” because the loose gravel allows the gases to circulate.

NOTE: In some regions of the country, gravel may be too expensive or unnecessary. Alternatives are allowed, such as a perforated pipe or a collection mat. All homes should be tested for radon.

Plastic Sheetting or Vapor Retarder: Heavy duty plastic sheeting (6 mil. polyethylene) or a vapor retarder is placed on top of the gravel to prevent the soil gases from entering the house. The sheeting also keeps the concrete from clogging the gravel layer when the slab is poured.



Vent Pipe: A plumbing tee or other approved connection shall be inserted horizontally beneath the sheeting with one 10-foot section of a perforated pipe connected to each side of the "T" fitting and then connected to a 3- or 4-inch diameter (76 mm or 102 mm) fitting with a vertical vent pipe installed through the sheeting. The vent pipe shall be of solid piping material and shall be extended up through the building floors, terminated at least 12 inches (305 mm) above the roof in a location at least 10 feet (3,048 mm) away from any window or other opening into the conditioned spaces of the building that is less than 2 feet (610 mm) below the exhaust point, and 10 feet (3,048 mm) from any window or other opening in adjoining or adjacent buildings. This pipe shall be labeled "Radon Reduction System" at least one label on each floor and in attics. **Clearance:** Radon vent pipes shall provide space for future installation of a fan system in the attic. This space shall be a minimum of 24 inches in diameter, centered on the axis of the vent stack and shall extend for a minimum vertical distance of 3 feet. Your plumber or a certified radon professional can do this.

Sealing and Caulking: All openings, cracks, and crevices in the concrete foundation floor (including the slab perimeter crack) and walls are sealed with polyurethane caulk to prevent radon and other soil gases from entering the home.

Junction Box: Install an electrical junction box (outlet) in the attic for use with a vent fan, should, after testing for radon, a more robust system be needed.