



**RAYMORE**  
development services

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# RADON CONTROL SYSTEMS

## WHY IS A RADON CONTROL SYSTEM NEEDED?

Cass County has a high, naturally occurring radon level. Testing completed by the State of Missouri and private testing companies have indicated that as high as 55% of the homes tested have radon levels that exceed the EPA threshold level of four or more picocuries per liter of air.

Radon is a radioactive gas that originates naturally from uranium and radium deposits found in soil and bedrock everywhere. Uranium breaks down to radium, which then decays into radon gas that can easily move up through the soil and into the atmosphere. According to the Surgeon General, prolonged exposure to radon can lead to lung cancer and is the second leading cause of the disease behind smoking in the U.S.

Passive, sub-slab depressurization systems effectively reduce radon levels by an average of 50% and, in most cases, to levels below the EPA's action level. An upgraded or active system utilizes an in-line fan to provide further radon reductions.

## WHO IS REQUIRED TO INSTALL A RADON CONTROL SYSTEM?

Installation of a passive radon control system is required in all single family and two-family dwelling unit permits issued for new structures after May 1, 2011. The radon control system shall be installed in accordance with Appendix F of the 2012 International One and Two Family Dwelling Code.

## HOW DO I TEST FOR RADON?

Passive radon control systems feature five key components required under Appendix F of the IRC:

- A gas permeable layer typically comprised of a 4 inch layer of coarse gravel beneath the slab to allow the soil gas to move freely underneath the house.
- A minimum 6-mil polyethylene sheeting material that is placed on top of the gas permeable layer to help prevent the soil gas from entering the house.
- A minimum 3 inch PVC or equivalent gas-tight pipe that runs from the gas permeable layer up through the house in a straight line to safely vent radon and other soil gases above the house.
- An electrical junction box typically located in the attic space in case an electric venting fan (part of an active system) is needed later to activate the system.
- Sealing and caulking of all openings in the concrete foundation floor to prevent soil gas from entering the home.

**Radon is a colorless, odorless and tasteless gas occurring naturally as the decay product of uranium. It is considered to be a health hazard due to its radioactivity.**

There are generally two methods for testing a home for the presence of radon gas: short term or long term. **Short-term tests** may sample conditions over 2 to 30 days, whereas sampling for **long-term tests** include a period of at least 90 days. There are also digital monitors that can be purchased that perform continuous radon gas checks.

Radon testing kits may be available from the Missouri Department of Health and Senior Services. Visit the website at [health.mo.gov/living/environment/radon](http://health.mo.gov/living/environment/radon) to complete the online form for a test kit to be mailed to you. Radon testing kits are available to purchase. For the most accurate readings, the user must adhere to the conditions necessary in the house, such as keeping windows and doors closed during the testing period.

