

## RESOLUTION 11-24

**“A RESOLUTION OF THE RAYMORE CITY COUNCIL ENDORSING THE FULL IMPLEMENTATION OF APPENDIX F: RADON CONTROL METHODS OF THE INTERNATIONAL ONE AND TWO-FAMILY DWELLING CODE ADOPTED BY THE CITY OF RAYMORE.”**

**WHEREAS**, the City Council, on March 26, 2007, adopted the 2006 edition of the International One and Two-Family Dwelling Code, including Appendix F: Radon Control Methods; and

**WHEREAS**, Appendix F contains requirements for installation of a passive subslab depressurization system in new construction intended to resist radon entry and prepare the home for post-construction radon mitigation, if necessary ; and

**WHEREAS**, Cass County, Missouri has been identified as a county with high radon potential, thus necessitating the need for preventive measures regarding radon control; and

**WHEREAS**, City staff had implemented enforcement of some of the provisions of Appendix F but had not required the installation of all components of a subslab depressurization system; and

**WHEREAS**, the City Council, after learning of results of radon tests conducted of existing homes in Raymore, has determined it is in the best interest of the residents of the City to require installation of all components of a subslab depressurization system in all new homes constructed to ensure a home is prepared for post-construction radon mitigation, if necessary.

**NOW THEREFORE, BE IT RESOLVED BY THE COUNCIL OF THE CITY OF RAYMORE, MISSOURI, AS FOLLOWS:**

Section 1. That all components of Appendix F: Radon Control Methods of the International One and Two-Family Dwelling Code shall be enforced uniformly beginning with the issuance of any building permit for a one or two-family dwelling home after the date of adoption of this resolution.


Section 2. This Resolution shall become effective on May 1, 2011.

Section 3. Any Resolution or part thereof which conflicts with this Resolution shall be null and void.

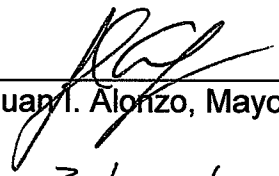
**DULY READ AND PASSED THIS 28TH DAY OF MARCH 2011 BY THE FOLLOWING VOTE:**

Councilmember Adams	Aye
Councilmember Becker	Aye
Councilmember Cox	Aye
Councilmember Hubach	Aye
Councilmember Kellogg	Aye
Councilmember Kerckhoff	Aye
Councilmember Stevens	Aye
Councilmember Wescoat	Aye

ATTEST:

  
\_\_\_\_\_  
Jean Woerner, City Clerk

APPROVE:

  
\_\_\_\_\_  
Juan I. Alonzo, Mayor  
3/29/11  
\_\_\_\_\_  
Date of Signature



## CITY OF RAYMORE Agenda Item Memorandum

**TO:** Mayor and Council

**FROM:** City Staff

**DATE:** 3/28/11

**RE:** Radon Control Methods

**Strategic Plan Applicability:** N/A

**Budget Authority:** N/A

At its March 7, 2011 work session Council discussed amendments to the City Building Code proposed by Councilmember Stevens, including a proposal to require passive radon control methods in new home construction.

As a reminder to Council, a passive radon control system includes five key components:

1. 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.
2. 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 home.
3. 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.
4. 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.

5. Sealing and caulking of all openings in the concrete foundation floor to prevent soil gas from entering the home.

These five components are required under Appendix F (Radon Control Methods) of the International One and Two-Family Dwelling Code. Raymore adopted Appendix F in March of 2007, though staff has not enforced all of the provisions of the appendix. The five components of a passive radon control system are well illustrated in Exhibit 1. Exhibit 2 provides further explanation of building a radon resistant new home. Both exhibits illustrate a passive system that would be in compliance with Appendix F.

According to the EPA one out of every 15 homes in the United States is estimated to have an elevated radon level (4 pCi/L or more). EPA recommends that a homeowner take action to reduce radon levels if the home is tested as having a pCi/L level of 4 or higher. On a local level, according to the results of 40 radon tests completed in the Raymore community, the Missouri Department of Health and Senior Services indicates that of those tests, 55% were above the EPA guidance level of 4 pCi/l, with the average level being 7.4 pCi/l. Air Chek, a private testing agency, reports that 44% of the residential radon tests completed for Cass County are above 4 pCi/l, and that the average for the County is 5.5 pCi/l.

Regarding the costs of installing a radon control method, EPA estimates that installing radon-resistant features in new home construction, as required by Appendix F, typically cost between \$350 and \$500. EPA estimates that retrofitting an existing home with a radon reduction system will typically cost between \$800 and \$2,000.

EPA recommends that all homes built in areas with high radon potential have radon reduction systems. EPA indicates that a passive radon reduction system effectively reduces radon levels by an average of 50%. The National Home Builders Association also recommends using the passive system in homes in high radon potential areas.

City staff recommends that the City retain Appendix F as part of its City Building Code and commence enforcement of all of the provisions of the appendix. A resolution supporting the full implementation of the provisions of Appendix F has been prepared for the Council accordingly.