Carbon Monoxide Alarms, a New Code Requirement

Carbon monoxide (CO) alarms will now be required to be installed in accordance with section R315 of the 2015 Michigan Residential Code (MRC). This is a new section in this code cycle. Section R315 of the 2015 MRC contains 3 sub-sections that provide the code requirements for the installation of these alarms. The 3 sub-sections state the following information:

R315.1 Alarm requirements. Single station carbon monoxide alarms shall be listed as complying with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.

R315.2 Carbon monoxide alarms. For new construction, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units an opening that communicates with the dwelling unit.

R315.2.2 alterations Repairs and additions. Where work requiring a building permit occurs in existing dwellings, or where one or more sleeping areas are added or created in existing the individual dwelling unit shall be equipped with CO alarms located as required for new dwellings. Exception to this section include work involving the exterior surfaces only of dwellings such as roofing, siding, replacement windows or doors, addition of porch or deck, and installations, alterations, or repairs of electrical, mechanical, or plumbing systems.

R315.5 Power Source. CO alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for over current protection. Two exceptions to this section are CO alarms shall be permitted to be battery operated where installed in buildings without commercial power; and CO alarms installed in projects that are alternations, in accordance with Section R315.2.2 shall be permitted to be battery powered.

R315.6 Carbon monoxide detection systems. Co detection systems shall be permitted to be used in lieu of CO alarms and shall comply with R315.6.1 through R 315.6.4.

Carbon Monoxide alarms have a lifespan of about 10 years. Date of manufacture can typically be found on the back of the unit. IF you have older carbon monoxide alarms in your home, consider replacement if more than 10 years old.

So where are these alarms supposed to be located? The CO alarms are to be located outside of, but in the immediate area of the bedrooms. Typically, immediate vicinity is considered within 20 feet of the bedroom area. Depending on the layout of the sleeping areas of the building, multiple alarms may be required. Here are some examples of different house layouts where single or multiple CO alarms could be required. In a single-story home, with all of the bedrooms located at one end, the code will require just one CO alarm at the bedroom end of the building. A single-story home with bedrooms located at both ends will

typically need at least 2 CO alarms. A two-story home, with a bedroom on the main floor, and others on the second floor, will require at least 2 CO alarms.

CO alarms come in a variety of types. There are wall and ceiling mounted units that look similar to a smoke alarm. These units can be battery powered or hardwired electric with a battery backup There is also an electric type, some with a battery backup, that plug directly into an electrical outlet, The only requirement of the code is that the CO alarm comply with UL 2034. Look for the UL listed label on the alarm to verify its compliance with the UL 2034 standard.

While these alarms will add to the cost of construction, that cost is very minimal, especially when compared to the life that it could save in the event of a CO leak in a building. A plug in the outlet unit can be purchased for as little as $25 at local hardware and building supply stores. That is a low price to pay for the life it can save.

The codes provide us with the minimum requirements for construction. These requirements are put in place to provide a minimum standard of safety in the buildings that we live in, work in and play in. Working together, contractors, homeowners, permit holders and inspectors can ensure code compliant construction projects in our communities. Feel free to contact your local building code office with any code questions. Your local building code department is your best source of building code information available.