

Significant Changes from the 2006 IRC to the 2012 IRC

R101.2- Created Live/Work Units-

- **R101.2 Scope.** The provisions of the *International Residential Code for One- and Two-family Dwellings* shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above *grade plane* in height with a separate means of egress and their *accessory structures*.

Exception: Live/work units complying with the requirements of Section 419 of the *International Building Code* shall be permitted to be built as one- and two-family *dwellings* or townhouses.

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R202- Habitable Attic- Created *Habitable Attic* definition-

ATTIC, HABITABLE. A finished or unfinished area, not considered a *story*, complying with all of the following requirements:

1. The occupiable floor area is at least 70 square feet (17 m²), in accordance with [Section R304](#),
2. The occupiable floor area has a ceiling height in accordance with [Section R305](#), and
3. The occupiable space is enclosed by the roof assembly above, knee walls (if applicable) on the sides and the floor-ceiling assembly below.

See also R310.1

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R202- Created *Structural Insulated Panel* definition-

STRUCTURAL INSULATED PANEL (SIP). A structural sandwich panel that consists of a light-weight foam plastic core securely laminated between two thin, rigid wood structural panel facings. (see R613 also)

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R302.1 Exterior walls.

Construction, projections, openings and penetrations of *exterior walls* of *dwellings* and accessory buildings shall comply with Table R302.1(1)

Exceptions:

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the *fire separation distance*.
2. Walls of *dwellings* and *accessory structures* located on the same *lot*.
3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the *lot*. Projections beyond the *exterior wall* shall not extend over the *lot line*.
4. Detached garages accessory to a *dwelling* located within 2 feet (610 mm) of a *lot line* are permitted to have roof eave projections not exceeding 4 inches (102 mm).
5. Foundation vents installed in compliance with this code are permitted.

New Table R301.(1) clarifies requirements for dwellings built five feet or less from the adjacent lot line for fire protection.

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R302.2.2- Parapet Exception-

Allows a town home to be constructed without a parapet through the roof if fire-retardant roof sheathing or approved equivalent is used for a distance of 4 feet either side of the one-hour rated wall. No penetrations are allowed within this area.

This method is also used on a tri-plex or quad-plex structure with the exception of the wall separating the dwelling units must be constructed with a two-hour rating.

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R310.1 Emergency escape and rescue required. *Basements, habitable attics* and every sleeping room shall have at least one operable emergency escape and rescue opening. Where *basements* contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches (1118 mm) above the floor.

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R315.1 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 that have attached garages. Combination Smoke CO detectors may be used. They will be required to be hard-wired together.

R315.3 Alarm requirements. Single station carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

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R401.4 Soil tests. Where quantifiable data created by accepted soil science methodologies indicate expansive, compressible, shifting or other questionable soil characteristics are likely to be present, the *building official* shall determine whether to require a soil test to determine the soil's characteristics at a particular location. This test shall be done by an *approved agency* using an *approved method*.

Note- In the MABCD jurisdiction, soil tests are required by the *Wichita Foundation, Basement and Slab-on-Grade Standards for One and Two Family Dwellings* (August 30, 2011). This Standard was the result year-long study by local structural engineers, architects, building industry professionals & code enforcement personnel following the failure of several structural foundations that happened in 2010. The Standards have thus far prevented any such cases when designed & constructed in accordance with the document. This Standard is available for downloading on the MABCD website.

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R402.3 Precast concrete. Precast concrete foundations shall be designed in accordance with [Section R404.5](#) and shall be installed in accordance with the provisions of this code and the manufacturer's installation instructions.

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R403.4 Footings for precast concrete foundations. Footings for precast concrete foundations shall comply with Section R403.4.

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R404.5.1 Design. Precast concrete foundation walls shall be designed in accordance with accepted engineering practice. The design and manufacture of precast concrete foundation wall panels shall comply with the materials requirements of Section R402.3 or ACI 318. The panel design drawings shall be prepared by a registered design professional where required by the statutes of the *jurisdiction* in which the project is to be constructed in accordance with Section R106.1.

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R405.1.1 Precast concrete foundation. Precast concrete walls that retain earth and enclose habitable or useable space located below-grade that rest on crushed stone footings shall have a perforated drainage pipe installed below the base of the wall on either the interior or exterior side of the wall, at least one foot (305 mm) beyond the edge of the wall. If the exterior drainage pipe is used, an *approved* filter membrane material shall cover the pipe. The drainage system shall discharge into an *approved* sewer system or to daylight.

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R406.4 Precast concrete foundation system dampproofing. Except where required by [Section R406.2](#) to be waterproofed, precast concrete foundation walls enclosing habitable or useable spaces located below *grade* shall be dampproofed in accordance with [Section R406.1](#).

NOTE: Prior to the 2009 IRC, precast concrete methods for residential construction were hardly ever used & would require a structural engineer to design them. The 2009 establishes the minimum requirements for precast concrete construction methods. This is also reflected in **Sections R402.3; R403.4, R404.5; R405.1 & R406.4**. As you may remember, this method of using precast foundations was used on the 'Extreme Makeover' home constructed here in S.W. Wichita in early 2011.

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Note: All requirements for Braced Wall Line in Chapter 6 of the 2012 IRC have been deleted. The City of Wichita Office of Central Inspection, Sedgwick County Code Enforcement Department & Wichita Area Builders Association, with the assistance of local structural engineers, developed the *Standards For Bracing Of Wall Sections In Residential Homes*. It was put in place in February of 2007 for the local jurisdictions in lieu of adopting the IRC requirements based on past practices that had been proven to be successful by local contractors.

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R613.1 General. Structural insulated panel (SIP) walls shall be designed in accordance with the provisions of this section. When the provisions of this section are used to design structural insulated panel walls, project drawings, typical details and specifications are not required to bear the seal of the architect or engineer responsible for design, unless otherwise required by the state law of the *jurisdiction* having authority.

NOTE: Please see **R202** also.

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R802.11 Roof Uplift Resistance-

The provisions for roof connections (trusses to top wall plates) to resist wind uplift have been updated to current standards & simplifies for ease of use.

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R905.2.8.3- Sidewall Flashing-

This section has been revised to allow the use of either **step flashing** (known as metal shingles) or **continuous flashing** at the intersection of a side wall & the sloped roof decking. Previously, the IRC called for only step flashing.

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R905.2.8.5- Roof Drip Edge flashing-

Roof drip edge had not previously been required in the IRC. It is now required at the **rake or gables** (the sloped edge of the roof along a gable end) as well as the **eave** of the roof. Underlayment shall be installed over the drip edge at the eaves & under the drip edge on the rake/gables.

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R905.2 Asphalt shingles. The installation of asphalt shingles shall comply with the provisions of this section.

Revisions to the asphalt shingle provisions define a clear path for determining compliance & bring requirements in line with the appropriate referenced standards (ASTM D 225 or D3462).

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Chapter 11 - Energy Efficiency-

NOTE: This section was deleted in its entirety as it had historically been. It was felt that there were no considerations on the requirements of this chapter in relation to the payback time on the investments.