



To: Residential New Home Contractors

From: Cottage Grove Building Division

Date: January 8, 2015

Subject: 2015 Minnesota Residential Code

The 2015 Minnesota Residential Code will be adopted on January 24, 2015, any plans submitted after that date will be reviewed under the new code. This memo identifies a number of changes from the 2007 Residential Code to the 2015 Residential Code.

Summary of changes:

2015 Minnesota Residential Code

R312.2 Window fall protection. Window fall protection shall be provided in accordance with Section R312.2.1 and R312.2.2.

R312.2.1 Window sills. In dwelling units, where the lowest part of the opening of an operable window is located more than 72 inches (1829 mm) above the finished grade or surface below, the lowest part of the window opening shall be a minimum of 36 inches (914 mm) above the finished floor of the room in which the window is located. Operable sections of windows shall not permit openings that allow passage of a 4-inch-diameter (102 mm) sphere where such openings are located within 36 inches (914 mm) of the finished floor.

Exceptions:

1. Windows whose openings will not allow a 4-inch-diameter (102 mm) sphere to pass through the opening when the opening is in its largest opened position.
2. Openings that are provided with window fall prevention devices that comply with ASTM F 2090.
3. Windows that are provided with window opening control devices that comply with Section R312.2.2.
4. Replacement windows.

R313.1 Townhouse automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in townhouses.

Exception:

An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic residential fire sprinkler system installed.

R313.1.1 Design and installation. Automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with *Section P2904* or NFPA 13D.

R313.2 One- and two-family dwellings automatic fire systems. An automatic residential fire sprinkler system shall be installed in one- and two-family dwellings.

Exceptions:

1. Detached one-family dwelling, less than 4500 square feet of floor area. Floor area shall include all floors and basements, excluding garages.
2. An automatic residential fire sprinkler system shall not be required if additions, alterations, or repairs are made to existing buildings that do not have an automatic residential sprinkler system installed.

R313.2.1 Design and installation. Automatic residential fire sprinkler systems shall be designed and installed in accordance with IRC *section P2904* or NFPA 13D.

R402.2 Footings. 5000 psi minimum specified compressive strength - see table 402.2, **a copy of the batch ticket will be required to be submitted to the City of Cottage Grove Building Division.**

R406.2 Concrete and masonry foundation waterproofing. Exterior foundation walls that retain earth and enclose below grade interior spaces, and floors, and crawl spaces below grade shall be waterproofed. Waterproofing shall be installed at a minimum from the top of the footing to the finished grade or in accordance with the manufacturer's installation instructions. Walls shall be waterproofed in accordance with one of the following:

1. 2-ply hot-mopped felts.
2. 55 pound (25 kg) roll roofing.
3. 6-mil (0.15 mm) polyvinyl chloride.
4. 6-mil (0.15 mm) polyethylene.
5. 40-mil (1 mm) polymer-modified asphalt.
6. 60-mil (1.5 mm) flexible polymer cement.
7. 1/8 inch cement-based, fiber-reinforced, waterproof coating.
8. 60-mil (1.5 mm) solvent-free liquid-applied synthetic rubber.

Exception:

Organic-solvent-based products such as hydrocarbons, chlorinated hydrocarbons, ketones and esters shall not be used for ICF walls with expanded polystyrene form material. Use of plastic roofing cements, acrylic coatings, latex coatings, mortars and parings to seal ICF walls is permitted. Cold-setting asphalt or hot asphalt shall conform to Type C of ASTM D 449. Hot asphalt shall be applied at a temperature of less than 200°F (93°C).

All joints in membrane waterproofing shall be lapped and sealed with an adhesive compatible with the membrane.

R501.3 Fire protection of floors. Floor assemblies, not required elsewhere in this code to be fire-resistance rated, shall be provided with a 1/2-inch (12.7 mm) gypsum wallboard membrane, 5/8-inch (16 mm) wood structural panel membrane, or equivalent on the underside of the floor framing member.

Exceptions:

1. Floor assemblies located directly over a space protected by an automatic sprinkler system in accordance with Section P2904, NFPA 13D, or other approved equivalent sprinkler system.
2. Floor assemblies located directly over a crawl space not intended for storage or fuel-fired appliances.
3. Portions of floor assemblies can be **unprotected** when complying with the following:
 - 3.1. The aggregate area of the unprotected portions shall **not exceed 80 square feet** per story
 - 3.2. **Fire blocking** in accordance with Section R302.11.1 shall be installed along the **perimeter of the unprotected** portion to separate the unprotected portion from the remainder of the floor assembly.
4. Wood floor assemblies using dimension lumber or structural composite lumber equal to or greater than **2-inch by 10-inch** (50.8 mm by 254 mm) nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

R703.2 Water-resistive barrier. One layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D 226 for Type 1 felt or other approved water-resistive barrier shall be applied over studs or sheathing of all exterior walls. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches (51 mm). The water-resistive barrier shall overlap the flashings required in section R703.8 not less than 2 inches (51 mm) Where joints occur in the water-resistive barrier or flashing, the joints shall be lapped not less than 6 inches (152 mm). The felt or other approved material shall be continuous up to the underside of the rafter or truss top chord and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1.

Exception:

Omission of the water-resistive barrier is permitted in the following situations:

1. In detached accessory buildings.
2. Under exterior wall finish materials as permitted in Table R703.4.
3. Under paperbacked stucco lath when the paper backing is an approved water-resistive barrier.

2015 Minnesota Energy Code and 2015 Minnesota Mechanical and Fuel Gas Code

1322.0103 Information on Construction Documents. Level of efficiency used to demonstrate compliance with the code must be clearly identified. A complete set of building plans with efficiency requirements clearly labeled.

Information about the following systems should be included on the plans:

- Building envelope
- Mechanical system
- Lighting system
- Service water heating system

Information can be presented in a number of ways:

- On the drawings.
- On sections and in schedules.
- Through notes and callouts.
- Through supplementary worksheets or calculations.

Table R402.1.1 Insulation Requirements.

R Values.

Attic	R-49
Walls	R-20 or 13+5
Foundation	R-15
Rim	R-15
Crawl space	R-15

Fenestration.

Fenestration	U-factor 0.32
Skylight	U-factor 0.55

R402.4.1.2 Testing. Every new home will need to pass a blower door test to $3ACH_{50}$. ACH_{50} means Air change per hour at a pressure differential of 50 Pascals (Pa)

R403.2.2 Increased duct leakage stringency. Duct Sealing (Mandatory). Tape must be compliant with U.L. 181A or 181B. All ducts are required to be tested for total duct leakage (tightness).

Exception:

The test is not required where the air handler and entire duct system are located within conditioned space.

R403.2.3 Building cavities are no longer allowed for supply or return air.

R 403.4.4 Hot Water Pipe Insulation. Hot water piping will be insulated to at least R-3 as follows:

- Piping is larger than 3/4" in nominal diameter,
- Piping serves more than one dwelling unit,
- Piping runs from water heater to kitchen outlets,
- Piping is located outside of conditioned space,
- Piping runs from water heater to a distribution manifold,
- Piping is located under a floor slab,
- Piping is buried,
- Supply and return piping is in recirculation systems other than demand recirculation systems,
- Piping run exceeds the following maximum run lengths:

Nominal diameter of largest pipe diameter in run	3/8"	1/2"	3/4"	> 3/4"
Max run length	30 ft	20 ft	10 ft	5 ft

R403.5.2 Ventilation Air.

Ventilation System Requirements.

“Balanced Systems” a ventilation system in which the air intake is within 10% of the exhaust output.

-HRV/ERV

-An intake and exhaust fan linked together to operate equally

Exhaust Only Systems (no longer Allowed)

R 403.5.17 Equipment Sizing ACCA Manual ‘J’, Manual ‘S’.

Manual J8th is only used to calculate the residential heating and cooling loads. *Manual J8th* guides HVAC designers to use ACCA *Manual S* to select equipment that is the right size (see§10-4 of *Manual S*).

Manual S sets equipment sizing limits, as summarized in Table 1.

R 404.1 Three of every four fixtures will need to be high-efficiency lamps.

A minimum of 75% of the lamps in permanently installed lighting fixtures shall be high-efficiency lamps.

1346.0501 Make-up Air.

Makeup Air Requirements shall be determined using **Table 501.4.1**
Supplied in accordance with **Table 501.4.2**

1346.0600 Combustion Air.

Use Table 1346.6012 IFGC Appendix E, Worksheet E-1.

While this list highlights several code changes, it may contain code language that has been paraphrased or summarized in order to provide more clarity and is not all inclusive. Please refer to the 2015 Minnesota State Codes for the complete language and other code changes.