10,000 LAKES CHAPTER
INTERNATIONAL CODE COUNCIL

ICC
INTERNATIONAL CODE COUNCIL®

SIGNIFICANT CHANGES to the 2015 Minnesota Residential Codes (MR 1303, 1309 and 1322)

The following information contains simplified explanations of significant changes to the 2015 Requirements for Radon Control Systems (Minnesota Provisions to the Minnesota State Building Code, MR 1303).

1303.2401 Gas permeable material (definition). Changed Item #3 for other materials, systems or floor designs to require the system to be professionally engineered to provide depressurization under the entire soil gas membrane.
1303.2402 Single vent pipe, Subp. 5. Added requirement for minimum R-4 insulation on vent pipe routed through unconditioned space. Applies to both passive and active systems.
1303.2403 Radon gas vent pipe fan. When an active system (i.e. using a fan) is installed, the radon fan shall be rated for continuous operation and provide a minimum 50 cfm at ½ inch w.c. In addition, a system monitoring device (audible alarm, manometer etc.) and switch-controlled luminaire and receptacle outlet near the fan shall be installed.

The following information contains simplified explanations of significant changes to the 2015 Minnesota Residential Code (2012 International Residential Code adopted with Minnesota Amendments, MR 1309).

1300.0120 Permits, Subp. 4. (1) Changed floor area for when permits are required for detached accessory structures from 120 s.f. to 200 s.f. (2) Changed fence height for when permits are required from 6 ft. to 7 ft.
1300.0120 Permits, Subp. 13. Added MS 15.41 requiring the permit to specify the name and address of the applicant, and the general contractor. Also requires the construction permits to be posted in a conspicuous and accessible place at the premises or site of construction.
R302.1 Exterior walls. Added new table **Table R302.1(2): Exterior Walls–Dwellings with Fire Sprinklers** for reduced separation distances.
R302.2 Townhouses. Restructured requirements, including new **Table R302.6: Dwelling/Garage Separation.**
R308.4.6 Glazing adjacent stairs and ramps. Restructured requirements changed the maximum height of a hazardous location to 36 inches vertically above the plane of the adjacent walking surface of stairs and ramps.
R308.4.7 Glazing adjacent to the bottom stair landing. Restructured requirements changed the maximum height of a hazardous location to 36 inches vertically above the bottom stair landing.
R310.1 Emergency escape and rescue required. Added exception for basements that are protected with an automatic sprinkler system.
R312.2 Window fall protection. Window fall protection is required in dwelling units where the lowest part of the opening is located more than 72 inches above finished grade/floor. Operable sections of windows shall not permit openings that allow passage of a 4 inch diameter sphere where such openings are located within 36 inches of the finished floor.
R313.2 Automatic fire systems. Fire sprinkler systems are required in one-family dwellings 4,500 s.f. and larger (excluding garage) and all multi-family dwellings.
R314 Smoke Alarms. Listed wireless alarms are allowed in lieu of hardwired interconnected alarms.
R315 Carbon monoxide alarms. Carbon monoxide alarms are required in dwelling units that have attached garages or when fuel-fired appliances are installed. They shall be installed outside of and not more than 10 feet from each separate sleeping area or bedroom and on each level containing sleeping areas or bedrooms.

R319 Site address. Address numbers shall be minimum 4 inches high, with stroke width of ½ inch and contrast with the background.
R402.2 Concrete. Added provision in Table R402.2 specifying footings have to meet a compressive strength of 5000 psi under all weathering potentials. Footnote "g" on the table allows the use of 2500 psi with an approved admixture that provides a water and vapor resistance at least equivalent to 5000 psi concrete.
R404.1 Concrete and masonry foundation walls. Section was rewritten for clarity on concrete and masonry foundation walls, including changes to **Table R404.1(1): Maximum Anchor Bolt and Blocking Spacing for Supported Foundation Wall**. Added a column indicating spacing of blocking perpendicular to floor joists in inches.
R405 Foundation drainage. A filter membrane is required for perforated pipe foundation drains.
R406.2 Waterproofing. Exterior foundation walls that retain earth and enclose below grade interior spaces, floors, and crawl spaces shall be waterproofed. Dampproofing is no longer allowed.
R501.3 Fire protection of floors. New requirement for floor assemblies to be provided with a ½ inch gypsum wallboard membrane or equivalent on the underside of the floor, unless it is constructed of dimensional lumber of 2 inch x 10 inch nominal dimension or greater.
R502.1.3 End-jointed lumber. Requires end-jointed lumber used in an assembly required elsewhere in the code to have a fire-resistive rating to have designation of "Heat-Resistant Adhesive" or "HRA" included in its grade mark.
R502.1.7 Structural composite lumber. Added requirement for structural composite lumber to be established and monitored to ASTM D 5456.
R502.6 Bearing. Added requirement for ends of joist, beam or girder to bear on masonry or concrete directly, or have a sill plate of 2 inch minimum nominal thickness under the joist, beam or girder. The sill plate shall provide a minimum nominal bearing area of 48 square inches.
R507.2 Deck ledger connection to band joist, R507.2.1 Placement of lag screws or bolts in deck ledgers and band joists. These sections contain new prescriptive requirements for deck ledgers and band joists, including corresponding tables and figures.
R507.2.2 Alternate deck ledger connections. New alternate to prescriptive requirements based on accepted engineering practices.
R507.2.3 Deck lateral load connection. New prescriptive provision for the lateral load required in R507.1 to be permitted to be installed per Figure R507.2.3 with hold-down tension devices installed in not less than 2 locations per deck.
R602.3 Design and construction. Table 602.3(1): Fastener Schedule for Structural Members. The fastening requirements for solid sawn lumber framing members have been reorganized into three categories related to roof, walls and floors. New requirements added for nailing roof trusses to plates (5), abutting studs at intersecting wall corners (8), connection of rim board to sill plates (26) and ledger strip supporting joists or rafters (31). Common nails have been removed as approved gypsum sheathing attachment method. Minimum thickness of wood structural panels recognized is now 3/8 inch. Clarifies that table 602.3(1) does not apply to exterior wood structural sheathing. Fastening requirements for exterior sheathing are in table 602.3(3).
R602.3 Design and construction. Table R602.3(3): Requirements for Wood Structural Panel Wall Sheathing Used to Resist Wind Pressure. New table now establishes minimum requirements for fastening, panel thickness, span ratings and stud spacing based on wind speed and exposure.
R602.3 Design and construction. Table R602.3(5): Size, Height and Spacing of Wood Studs. A habitable attic is treated the same as a typical roof and ceiling forming an attic in determining wood stud size and spacing.
R602.6.1 Drilling and notching of top plate. When a metal tie is required across the opening of a notched or drilled top plate, the tie must now extend at least 6 inches beyond each side of the opening. The length of the nails used in the tie has been reduced to 1.5 inches similar to joist hanger nails.
R602.7.1 Single member headers. Table 602.7.1: Spans for Minimum No. 2 Grade Single Header. Includes prescriptive provisions for single member headers under limited conditions.
R602.10.1 Braced wall lines, R602.10.2 Braced wall panels, R602.10.3 Required length of bracing, R602.10.4 Construction methods and Table R602.10.3(1) Bracing Requirements Based on Wind Speed. These sections have been restructured and new definitions have been added for clarity. The requirements for wind speeds less than or equal to 90 mph shall be used in Minnesota.

R602.10.5 and Table R602.10.5 Minimum length of a braced wall panel. This section consolidates the alternate braced wall panel methods or intermittent and continuously sheathed braced wall lines together.
Figure R602.10.6.3 Method PFG. New figure for portal frame at garage openings.
Table R602.10.6.4 Tension Strap Capacity Required. Now in table form and shows the capacity required for 90 mph wind load in Minnesota.
R602.12 Simplified wall bracing. New section that offers an alternative method to brace wall lines for detached dwellings and townhomes only when all 8 conditions are met. Note that it is limited to two stories with no cripple walls and maximum 10 feet tall walls.
R611 Exterior concrete wall construction. Section has been completely revised to reflect the provisions of the new referenced Portland Cement Association standard PCA 100. Conventionally formed above ground concrete wall provisions have been integrated with the Insulated Concrete Form (ICF) wall requirements.
R703.1.2 Wind Resistance. Added requirement for testing and analysis of wind pressure of all cladding systems.
R703.2 Water resistive barrier (general). Requires a minimum overlap of 2 inches horizontally and 6 inches vertically. Also requires the material to be continuous up to the underside of the rafter/truss top chord.
R703.6.3 Water Resistive Barrier (exterior plaster). Individual layers shall be installed independently such that each layer provides a separate drainage plane.
R703.8 Flashing. Requires flashing at ten specific locations, along with requiring self-adhered membranes to comply with AAMA 711.
R703.9 Exterior Insulation and Finish System (EIFS). Revised to add new requirements and add new ASTM standards for EIFS and EIFS with drainage.
R703.10.1 Panel Siding. Added new ASTM requirements for fiber cement siding.
R703.10.2 Lap Siding. Fiber cement siding with a maximum width of 12 inches shall comply with ASTM requirements.
R703.12.1 Adhered masonry veneer installation clearances. This section has been added to describe clearances of adhered masonry veneer above earth, paved areas, and exterior walking surfaces: • Minimum 4 inches above earth • Minimum 2 inches above paved areas • Minimum ½ inch above exterior walking surfaces
R703.12.2 Flashing at foundation (adhered masonry veneer). A corrosion resistant screed or flashing with a minimum vertical attachment flange of 3 ½ inches shall be installed 1 inch below the foundation plate line on exterior stud walls.
R802.1.2 End-jointed lumber. Requires end-jointed lumber used in an assembly required elsewhere in the code to have a fire-resistive rating to have designation of "Heat-Resistant Adhesive" or "HRA" included in its grade mark.
R802.1.6 Structural composite lumber. Added requirement for structural composite lumber to be established and monitored to ASTM D 5456.
R802.6 Bearing. Added requirement for ends of rafter or ceiling joist to bear on masonry or concrete directly, or have a sill plate of 2 inch minimum nominal thickness under the rafter or ceiling joist. The sill plate shall provide a minimum nominal bearing area of 48 square inches.
R802.7.1 Sawn Lumber. Restructured requirements for cuts, notches and holes on structural roof members to reference R502.8.1 and clarified cantilever portions of rafter notch and ceiling joist taper cut.
R802.10.2.1 Applicability limits (of wood trusses). Applicability limits of wood trusses were changed slightly from previous code.
R802.10.3 Bracing (of wood trusses). Reworded slightly to reference accepted industry practice such as BCSI installation guide for wood trusses.
R802.11.1 Roof tie-down uplift resistance. Section changed roof tie down language and expanded **Table R802.11: Rafter and Truss Uplift Connection Forces from Wind** for different exposures.
R806.2 Minimum vent area (of roof). Section format changed to allow ventilation area of 1/300 of vented space for northern climates according to Exceptions 1 and 2.
R806.4 Installation and weather protection. Requires ventilators to be installed in accordance with manufacturer's installation instructions.