

Office of the Revisor of Statutes

Administrative Rules



TITLE: Adopted Permanent Rules Adopting Changes to the International Residential Code

AGENCY: Department of Labor and Industry

REVISOR ID: R-4510

MINNESOTA RULES: Chapter 1309

INCORPORATION BY REFERENCE: Part 1309.0010: The 2018 edition of the International Residential Code as promulgated by the International Code Council, Inc., Washington, D.C., is available in the office of the commissioner of labor and industry.

The attached rules are approved for
filing with the Secretary of State

A handwritten signature in red ink that reads "Sheree Speer".

Sheree Speer
Assistant Deputy Revisor

1.1 **Department of Labor and Industry**

1.2 **Adopted Permanent Rules Adopting Changes to the International Residential Code**

1.3 **1309.0010 ADOPTION OF INTERNATIONAL RESIDENTIAL CODE (IRC) BY**
1.4 **REFERENCE.**

1.5 Subpart 1. **Generally.** The 2018 edition of the International Residential Code ("IRC")
1.6 as promulgated by the International Code Council, Inc. ("ICC"), Washington, D.C., is
1.7 incorporated by reference and made part of the Minnesota State Building Code except as
1.8 qualified by the applicable provisions in Minnesota Rules, chapter 1300, and as amended
1.9 in this chapter. Portions of this publication reproduce excerpts from the 2018 IRC,
1.10 International Code Council, Inc., Washington, D.C., copyright 2017, reproduced with
1.11 permission, all rights reserved. The IRC is not subject to frequent change and a copy of the
1.12 IRC, with amendments for use in Minnesota, is available in the office of the commissioner
1.13 of labor and industry.

1.14 Subp. 1a. **Deleted appendices.** All of the IRC appendices are deleted except Appendix
1.15 K and Appendix Q.

1.16 Subp. 2. **Mandatory chapters.** The 2018 IRC chapters 2 to 10, 44, section P2904 of
1.17 chapter 29, Appendix K, and Appendix Q shall be administered by any municipality that
1.18 has adopted the Minnesota State Building Code, except as qualified by the applicable
1.19 provisions in Minnesota Rules, chapter 1300, and as amended by this chapter.

1.20 Subp. 3. **Replacement chapters.** The following 2018 IRC chapters are being deleted
1.21 and replaced with the provisions in items A to E:

1.22 A. Chapter 1 of the 2018 IRC is deleted and replaced as provided in part
1.23 1309.0100, subpart 1.

1.24 B. Chapter 11 of the 2018 IRC and any references to residential or commercial
1.25 energy in this code are deleted and replaced with Minnesota Rules, chapters 1322 and 1323,
1.26 Minnesota Energy Code.

2.1 C. Chapters 12 to 24 of the 2018 IRC and any references to mechanical matters
2.2 in this code are deleted and replaced with Minnesota Rules, chapter 1346, Minnesota
2.3 Mechanical Code.

2.4 D. Chapters 25 to 33 of the 2018 IRC and any references to plumbing in this code
2.5 are deleted and replaced with Minnesota Rules, chapter 4714, Minnesota Plumbing Code,
2.6 except that section P2904 of IRC chapter 29 is not deleted.

2.7 E. Chapters 34 to 43 of the 2018 IRC and references to electrical matters in this
2.8 code, other than sections R314 Smoke Alarms and R315 Carbon Monoxide Alarms, are
2.9 deleted and replaced with Minnesota Rules, chapter 1315, Minnesota Electrical Code.

2.10 Subp. 4. [Repealed, 39 SR 91]

2.11 *[For text of subparts 5 and 6, see Minnesota Rules]*

2.12 **1309.0020 REFERENCES TO OTHER ICC CODES.**

2.13 Subpart 1. **Generally.** References to other codes and standards promulgated by the
2.14 ICC in the 2018 IRC are modified in subparts 2 to 11.

2.15 *[For text of subparts 2 to 6, see Minnesota Rules]*

2.16 Subp. 7. **Plumbing code.** References to the International Plumbing code in this code
2.17 mean the Minnesota Plumbing Code, Minnesota Rules, chapter 4714, adopted under
2.18 Minnesota Statutes, section 326B.435.

2.19 *[For text of subparts 8 to 11, see Minnesota Rules]*

2.20 **1309.0100 CHAPTER 1, ADMINISTRATION.**

2.21 *[For text of subparts 1 and 2, see Minnesota Rules]*

2.22 Subp. 3. **Transient use.** Buildings constructed for transient use and required to be
2.23 licensed by any Minnesota state agency shall be constructed in accordance with the
2.24 requirements for Group R occupancies located in Minnesota Rules, chapter 1305.

3.1 **1309.0202 SECTION R202, DEFINITIONS.**

3.2 *[For text of subpart 1, see Minnesota Rules]*

3.3 Subp. 2. **Additional definitions.** IRC section R202 is amended by adding the following
3.4 definitions:

3.5 **APPROVED.** "Approved" means approval by the building official, pursuant to the Minnesota
3.6 State Building Code, by reason of:

3.7 a. inspection, investigation, or testing;

3.8 b. accepted principles;

3.9 c. computer simulations;

3.10 d. research reports; or

3.11 e. testing performed by either a licensed engineer or by a locally or nationally recognized
3.12 testing laboratory.

3.13 **CODE.** For purposes of this chapter, "the code" or "this code" means the Minnesota
3.14 Residential Code, Minnesota Rules, chapter 1309.

3.15 **CRAWL SPACE.** Areas or rooms with less than 6 feet 4 inches (1931 mm) ceiling height
3.16 measured to the finished floor or grade below.

3.17 **FLASHING.** Approved corrosion-resistive material provided in such a manner as to deflect
3.18 and resist entry of water into the construction assembly.

3.19 **FLOOR AREA.** The calculated square footage of the floor within the inside perimeter of
3.20 the exterior walls of the building under consideration without deduction for hallways,
3.21 stairways, closets, the thickness of interior walls, columns, or other features.

3.22 **KICK-OUT FLASHING.** Flashing used to divert water where the lower portion of a sloped
3.23 roof stops within the plane of an intersecting wall cladding.

3.24 **OCCUPANCY CLASSIFICATIONS**

3.25 **IRC-1** - Single-family dwelling

4.1 **IRC-2** - Two-family dwellings

4.2 **IRC-3** - Townhouses

4.3 **IRC-4** - Accessory structures:

4.4 a. Garages;

4.5 b. Storage sheds; and

4.6 c. Similar structures.

4.7 **SILL HEIGHT.** The lowest part of the window opening of an operable window measured
 4.8 from the finished floor.

4.9 **TRANSIENT.** Occupancy of a dwelling unit or sleeping unit for not more than 30 days.

4.10 **WATERPROOFING.** Treatment of a surface or structure located below grade to resist
 4.11 the passage of water in liquid form, under hydrostatic pressure that bridges nonstructural
 4.12 cracks.

4.13 **1309.0301 SECTION R301, DESIGN CRITERIA.**

4.14 Subpart 1. [Repealed, 39 SR 91]

4.15 Subp. 2. **IRC Table R301.2(1).** Table R301.2(1) is amended to read as follows:

4.16 **TABLE R301.2(1) CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

	ROOF SNOW	WIND DESIGN		SEISMIC DESIGN
	LOAD ^f			CATEGORY ¹
		Speed ^d (mph)	Topographic effects ^k	
4.20	$p_f = 0.7 * p_g$	115	YES	A

5.1	SUBJECT TO DAMAGE FROM		WINTER DESIGN	
5.2			TEMP ^e	
5.3	Weathering ^a	Frost line depth ^b	Termite ^c	
5.4		See MR part		
5.5	Severe	1303.1600	See Footnote "c"	See MR chapter 1322
5.6	ICE BARRIER	FLOOD	AIR FREEZING	MEAN ANNUAL
5.7	UNDERLAYMENT	HAZARDS ^g	INDEX ⁱ	TEMP
5.8	REQUIRED ^h			
5.9		See MR chapter		
5.10	Yes	1335	See Table R403.3(2)	See Footnote "j"

5.11 For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

5.12 ^a Weathering may require a higher strength concrete or grade of masonry than necessary to
 5.13 satisfy the structural requirements of this code. The weathering column shall be filled in
 5.14 with the weathering index, such as "negligible," "moderate," or "severe," for concrete as
 5.15 determined from the Weathering Probability Map Figure R301.2(4). The grade of masonry
 5.16 units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216,
 5.17 or C 652.

5.18 ^b See Minnesota Rules, part 1303.1600 -- Footing Depth for Frost Protection to verify
 5.19 whether the county requires Zone I or Zone II frost protection.

5.20 ^c The jurisdiction shall fill in this part of the table to indicate the need for protection
 5.21 depending on whether there has been a history of local subterranean termite damage.

5.22 ^d See wind speed map Figure R301.2(5)A. Wind exposure category shall be determined on
 5.23 a site-specific basis in accordance with Section R301.2.1.4.

5.24 ^e See Minnesota Rules, chapter 1322, Climate Data Design Conditions to verify by city.

5.25 ^f The ground snow loads to be used in determining the design snow loads for buildings and
 5.26 other structures are given in Minnesota Rules, part 1303.1700 - Ground Snow Load to verify
 5.27 by county. The roof snow load is a uniform load on the horizontal projection of the roof.

6.1 ^g See Minnesota Rules, chapter 1335, Flood Proofing Regulations.

6.2 ^h In accordance with Sections R905.1.2, R905.2.7, R905.4.3.1, R905.5.3.1, R905.6.3.1,
6.3 R905.7.3.1, and R905.8.3.1, where there has been a history of local damage from the effects
6.4 of ice damming.

6.5 ⁱ The jurisdiction shall fill in this part of the table with the 100-year return period air freezing
6.6 index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the
6.7 National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32° F)"
6.8 at [www.ncdc.noaa.gov/sites/default/files/attachments/Air-](http://www.ncdc.noaa.gov/sites/default/files/attachments/Air-Freezing-Index-Return-Periods-and-Associated-Probabilities.pdf)
6.9 [Freezing-Index-Return-Periods-and-Associated-Probabilities.pdf](http://www.ncdc.noaa.gov/sites/default/files/attachments/Air-Freezing-Index-Return-Periods-and-Associated-Probabilities.pdf).

6.10 ^j The jurisdiction shall fill in this part of the table with the mean annual temperature from
6.11 the National Climatic Data Center data table "Average Mean Temperature Index" at
6.12 [www.ncdc.noaa.gov/sites/default/files/attachments/Air-Freezing-Index-Return-Periods-](http://www.ncdc.noaa.gov/sites/default/files/attachments/Air-Freezing-Index-Return-Periods-and-Associated-Probabilities.pdf)
6.13 [and-Associated-Probabilities.pdf](http://www.ncdc.noaa.gov/sites/default/files/attachments/Air-Freezing-Index-Return-Periods-and-Associated-Probabilities.pdf).

6.14 ^k In accordance with Section R301.2.1.5.

6.15 ^l Assigned to allow the application of the least restrictive topographic provisions of the code.

6.16 Subp. 3. **IRC Figure R301.2(6).** Figure R301.2(6), Ground Snow Loads, Pg, for the
6.17 United States (lb/ft²), is deleted in its entirety.

6.18 Subp. 4. [Repealed, 39 SR 91]

6.19 **1309.0302 SECTION R302, FIRE-RESISTANT CONSTRUCTION.**

6.20 Subpart 1. **IRC Tables R302.1(1) and R302.1(2).** Table R302.1(1) and Table
6.21 R302.1(2) are amended to read as follows:

6.22 **TABLE R302.1(1)**

6.23 **EXTERIOR WALLS**

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EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour - tested in accordance with ASTM E 119, UL 263, or Section 703.3 of the International Building Code with exposure from both sides	0 feet
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Not allowed	NA	< 2 feet
	Fire-resistance rated	1 hour on the underside, or heavy timber, or fire-retardant-treated wood ^{a,b,c}	≥ 2 feet to < 5 feet
	Not fire-resistance rated	0 hours	≥ 5 feet
Openings in walls	Not allowed	NA	< 3 feet
	25% Maximum of Wall Area	0 hours	3 feet
	Unlimited	0 hours	5 feet
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feet

7.24 For SI: 1 foot = 304.8 mm.

7.25 NA = Not Applicable.

7.26 ^a The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of
7.27 the eave overhang if fireblocking is provided from the wall top plate to the underside of the
7.28 roof sheathing.

7.29 ^b The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of
7.30 the rake overhang where gable vent openings are not installed.

- 8.1 ° One hour on the underside equates to one layer of 5/8-inch type X gypsum sheathing.
 8.2 Openings are not allowed.

8.3 **TABLE R302.1(2)**

8.4 **EXTERIOR WALLS - DWELLINGS WITH FIRE SPRINKLERS**

EXTERIOR WALL ELEMENT		MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour - tested in accordance with ASTM E 119, UL 263, or Section 703.3 of the International Building Code with exposure from the outside	0 feet
	Not fire-resistance rated	0 hours	3 feet ^a
Projections	Not allowed	NA	< 2 feet
	Fire-resistance rated	1 hour on the underside, or heavy timber, or fire-retardant-treated wood ^{b,c,d}	2 feet ^a
	Not fire-resistance rated	0 hours	3 feet
Openings in walls	Not allowed	N/A	< 3 feet
	Unlimited	0 hours	3 feet ^a
Penetrations	All	Comply with Section R302.4	< 3 feet
		None required	3 feet ^a

8.27 For SI: 1 foot = 304.8 mm.

8.28 NA = Not Applicable.

8.29 ^a For residential subdivisions where all dwellings are equipped throughout with an automatic
 8.30 sprinkler system installed in accordance with Section P2904, the fire separation distance

9.1 for exterior walls not fire-resistance rated and for fire-resistance-rated projections shall be
9.2 permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall
9.3 be permitted, where the adjoining lot provides an open setback yard that is 6 feet or more
9.4 in width on the opposite side of the property line.

9.5 ^b The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of
9.6 the eave overhang if fireblocking is provided from the wall top plate to the underside of the
9.7 roof sheathing.

9.8 ^c The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of
9.9 the rake overhang where gable vent openings are not installed.

9.10 ^d One hour on the underside equates to one layer of 5/8-inch type X gypsum sheathing.
9.11 Openings are not allowed.

9.12 Subp. 2. **IRC section R302.2.3, Continuity.** Section R302.2.3 is amended to read as
9.13 follows:

9.14 **R302.2.3 Continuity.** The fire-resistance-rated wall or assembly separating
9.15 townhouses shall be continuous from the foundation to the underside of the roof
9.16 sheathing, roof deck, or roof slab. The fire-resistance rating shall extend the full
9.17 length of the wall or assembly, including wall extensions through and separating
9.18 attached enclosed accessory structures. The separation shall extend through enclosed
9.19 soffits, overhangs, and similar projections.

9.20 Subp. 2a. **IRC section R302.2.7.** Section R302.2 is amended by adding a subsection
9.21 to read as follows:

9.22 **R302.2.7 Sound transmission.** Townhouses constructed in accordance with
9.23 Section R302.2 shall comply with the sound transmission requirements of IRC
9.24 Appendix K.

10.1 Subp. 3. **IRC section R302.3, Two-family dwellings.** Section R302.3 is amended
 10.2 by adding a subsection to the end of the section to read as follows:

10.3 **R302.3.2 Sound transmission.** Two-family dwellings constructed in accordance
 10.4 with Section R302.3 shall comply with the sound transmission requirements of
 10.5 IRC Appendix K.

10.6 Subp. 4. **IRC section R302.5.1, Opening protection.** Section R305.5.1 is amended
 10.7 to read as follows:

10.8 **R302.5.1 Opening protection.** Openings from a private garage directly into a
 10.9 room used for sleeping purposes shall not be permitted. Other openings between
 10.10 the garage and residence shall be equipped with solid wood doors not less than
 10.11 1-3/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less
 10.12 than 1-3/8 inches (35 mm) thick, or 20-minute fire-rated doors.

10.13 Subp. 5. **IRC section R302.6.** Section R302.6 and Table R302.6 are amended to read
 10.14 as follows:

10.15 **R302.6 Dwelling/garage fire separation.** The garage shall be separated as required
 10.16 by Table R302.6. Openings in garage walls shall comply with Section R302.5.

10.17 **TABLE R302.6^a**

10.18 **DWELLING/GARAGE SEPARATION MATERIAL**

10.19	SEPARATION	MATERIAL
10.20	From the residence and attics	Not less than 1/2-inch gypsum board or equivalent
10.21		applied to the garage side. Vertical separation
10.22		between the garage and the residence attic shall
10.23		extend to the roof sheathing or rafter blocking.
10.24	From all habitable rooms above	Not less than 5/8-inch type X gypsum board or
10.25	the garage	equivalent.
10.26	Structural members supporting	Not less than 1/2-inch gypsum board or equivalent
10.27	floor/ceiling assemblies or garage	applied to the garage side of structural members

- 11.1 ceiling used for separation required supporting the floor/ceiling assemblies or garage
 11.2 by this section ceiling. Structural members include, but are not
 11.3 limited to: walls, columns, beams, girders, and
 11.4 trusses.
- 11.5 Garages located less than 3 feet Not less than 1/2-inch gypsum board or equivalent
 11.6 from a dwelling unit on the same applied to the interior side of exterior walls that are
 11.7 lot within this area. This provision does not apply to
 11.8 garage walls that are perpendicular to the adjacent
 11.9 dwelling unit wall.
- 11.10 For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.
- 11.11 ^a Attachment of gypsum board shall comply with Table R702.3.5.

11.12 **1309.0303 SECTION R303, LIGHT, VENTILATION, AND HEATING.**

11.13 Section R303.4 is amended to read as follows:

11.14 **R303.4 Mechanical ventilation.** Mechanical ventilation of a dwelling unit shall comply
 11.15 with either Minnesota Rules, chapter 1322, or ASHRAE 62.2, as incorporated by
 11.16 reference in Minnesota Rules, chapter 1346.

11.17 **1309.0310 SECTION R310, EMERGENCY ESCAPE AND RESCUE OPENINGS.**

11.18 Subpart 1. **IRC section R310.1, Emergency escape and rescue opening**
 11.19 **required.** Section R310.1 is amended to read as follows:

11.20 **R310.1 Emergency escape and rescue opening required.** Basements, habitable attics,
 11.21 and every sleeping room shall have not less than one operable emergency escape and
 11.22 rescue opening. Where basements contain one or more sleeping rooms, an emergency
 11.23 egress and rescue opening shall be required in each sleeping room, but not be required
 11.24 in adjoining areas of the basement. Emergency escape and rescue openings shall open
 11.25 directly into a public way, or to a yard or court that opens to a public way.

11.26 **Exceptions:**

- 12.1 1. Storm shelters and basements used only to house mechanical equipment not
12.2 exceeding a total floor area of 200 square feet (18.58 m²).
- 12.3 2. Basements or basement bedrooms when the building is protected with an
12.4 automatic sprinkler system installed in accordance with IRC Section P2904 or
12.5 NFPA 13D.
- 12.6 3. Basements or basement bedrooms where the entire basement area, including all
12.7 portions of the means of egress to the level of exit discharge, and all areas on the
12.8 level of exit discharge that are open to the means of egress is protected with an
12.9 automatic sprinkler system in accordance with IRC Section P2904 or NFPA 13D.

12.10 (Section R310.1.1 remains unchanged.)

12.11 Subp. 2. **IRC section R310.2, Emergency escape rescue openings.** Section R310.2
12.12 is amended by adding a subsection to read as follows:

12.13 **R310.2.5.1 Licensed facilities.** Windows in rooms used for foster care or day care
12.14 licensed or registered by the state of Minnesota shall comply with the provisions of
12.15 Section ~~R310.1.5~~ R310.2.5, or all of the following conditions, whichever is more
12.16 restrictive:

- 12.17 1. Minimum of 20 inches in clear opening width;
- 12.18 2. Minimum of 20 inches in clear opening height;
- 12.19 3. Minimum of 648 square inches (4.5 square feet) clear opening; and
- 12.20 4. Maximum of 48 inches from the floor to the sill height.

12.21 Subp. 3. **IRC section R310.6, Alterations or repairs of existing basements.** Section
12.22 R310.6 is amended and a subsection added to read as follows:

12.23 **R310.6 Alterations or repairs of existing basements.** An emergency escape and
12.24 rescue opening is not required where existing basements undergo alterations or repairs.

13.1 **R310.6.1 Sleeping rooms in existing basements.** New sleeping rooms created in
13.2 an existing basement shall be provided with emergency escape and rescue openings
13.3 in accordance with Section R310.1.

13.4 **Exception:** Emergency escape and rescue openings are not required to be
13.5 provided where the entire basement area, including all portions of the means
13.6 of egress to the level of exit discharge, and all areas on the level of exit
13.7 discharge that are open to the means of egress are protected with an automatic
13.8 sprinkler system in accordance with IRC Section P2904 or NFPA 13D.

13.9 **1309.0311 SECTION R311, MEANS OF EGRESS.**

13.10 *[For text of subparts 1 and 2, see Minnesota Rules]*

13.11 Subp. 3. **IRC section R311.7.2, Headroom.** Section R311.7.2 is amended to read as
13.12 follows:

13.13 **R311.7.2 Headroom.** The minimum headroom in all parts of the stairway shall
13.14 not be less than 6 feet 8 inches (2032 mm) measured vertically from the sloped
13.15 line adjoining the tread nosing or from the floor surface of the landing or platform
13.16 on that portion of the stairway.

13.17 **Exceptions:**

13.18 1. Where the nosings of treads at the side of a flight extend under the edge of
13.19 a floor opening through which the stair passes, the floor opening shall be
13.20 allowed to project horizontally into the required headroom a maximum of
13.21 4-3/4 inches (121 mm).

13.22 2. The minimum headroom for existing buildings shall be in accordance with
13.23 Section R305.2.2.

14.1 3. The headroom for spiral stairways shall be in accordance with Section
14.2 R311.7.10.1.

14.3 **1309.0312 SECTION R312, GUARDS AND WINDOW FALL PROTECTION.**

14.4 *[For text of subpart 1, see Minnesota Rules]*

14.5 Subp. 2. **IRC section R312.2, Window fall protection.** Section R312.2 is amended
14.6 to read as follows.

14.7 **R312.2 Window fall protection.** Window fall protection shall be provided in accordance
14.8 with Sections R312.2.1 and R312.2.2.

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

14.16 **Exceptions:**

14.17 1. Windows with openings that will not allow a 4-inch diameter (102 mm)
14.18 sphere to pass through the opening when the window is in its largest opened
14.19 position.

14.20 2. Openings that are provided with window fall prevention devices that comply
14.21 with ASTM F 2090.

14.22 3. Windows that are provided with window opening control devices that
14.23 comply with Section R312.2.2.

14.24 4. Replacement windows.

15.1 (Subsection R312.2.2 remains unchanged.)

15.2 **1309.0314 SECTION R314, SMOKE ALARMS.**

15.3 Subpart 1. **IRC section R314.2.2, Alterations, repairs, and additions.** Section
15.4 R314.2.2 is amended to read as follows:

15.5 **R314.2.2 Alterations, repairs, and additions.** An individual dwelling unit shall
15.6 be equipped with smoke alarms located as required for new dwellings when:

15.7 1. alterations, repairs (including installation or replacement of windows or
15.8 doors), or additions requiring a building permit occur; or

15.9 2. one or more sleeping rooms are added or created in existing dwellings.

15.10 **Exceptions:**

15.11 1. Work involving the exterior surfaces of dwellings, such as the replacement
15.12 of roofing or siding, or the addition of an open porch or deck, or chimney
15.13 repairs.

15.14 2. Installation, alteration, or repairs of plumbing, electrical, or mechanical
15.15 systems.

15.16 Subp. 2. **IRC section R314.4, Interconnection.** Section R314.4 is amended by adding
15.17 an exception to read as follows:

15.18 **Exception:** Interconnection of smoke alarms in existing areas shall not be required
15.19 where alterations or repairs do not result in removal of interior wall or ceiling
15.20 finishes exposing the structure.

15.21 Subp. 3. **IRC section R314.6, Power source.** Section R314.6 is amended by modifying
15.22 the second exception to read as follows:

16.1 2. Smoke alarms installed in existing areas shall be permitted to be battery powered
16.2 provided any alterations or repairs do not result in the removal of interior wall or
16.3 ceiling finishes exposing the structure.

16.4 **1309.0315 SECTION R315, CARBON MONOXIDE ALARMS.**

16.5 Subpart 1. **IRC section R315.2, Where required.** Section R315.2 is amended to read
16.6 as follows:

16.7 **R315.2 Where required.** Carbon monoxide alarms shall be provided in accordance
16.8 with Sections R315.2.1 and R315.2.2.

16.9 **R315.2.1 New construction.** For new construction, every one-family dwelling
16.10 unit, each unit in a two-family dwelling unit, and each townhouse dwelling unit
16.11 shall be provided with an approved and operational carbon monoxide alarm where
16.12 one or both of the following conditions exist:

- 16.13 1. The dwelling unit contains a fuel-fired appliance.
- 16.14 2. The dwelling unit has an attached garage with an opening that communicates
16.15 with the dwelling unit.

16.16 **R315.2.2 Alterations, repairs, and additions.** An individual dwelling unit shall
16.17 be equipped with carbon monoxide alarms located as required for new dwellings
16.18 where:

- 16.19 1. alterations, repairs (including installation or replacement of windows or
16.20 doors), or additions requiring a building permit occur; or
- 16.21 2. one or more sleeping rooms are added or created in existing dwellings.

16.22 **Exceptions:**

- 16.23 1. Work involving the exterior surfaces of dwellings, such as the replacement
16.24 of roofing or siding, the addition of an open porch or deck, or chimney repairs.

17.1 2. Installation, alteration, or repairs of plumbing, electrical, or mechanical
17.2 systems.

17.3 Subp. 2. **IRC section R315.3, Location.** Section R315.3 is amended to read as follows:

17.4 **R315.3 Location.** Carbon monoxide alarms in dwelling units shall be installed outside
17.5 of and not more than 10 feet (3048 mm) from each separate sleeping area or bedroom.
17.6 Alarms shall be installed on each level containing sleeping areas or bedrooms. Where
17.7 a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon
17.8 monoxide alarm shall be installed within the bedroom.

17.9 Subp. 3. **IRC section R315.5, Interconnectivity.** Section R315.5 is amended by
17.10 modifying the exception to read as follows:

17.11 **Exception:** Interconnection of carbon monoxide alarms in existing areas shall not
17.12 be required where alterations or repairs do not result in removal of interior wall
17.13 or ceiling finishes exposing the structure.

17.14 Subp. 4. **IRC section R315.6, Power source.** Section R315.6 is amended by modifying
17.15 the second exception to read as follows:

17.16 2. Carbon monoxide alarms installed in existing areas shall be permitted to be
17.17 battery powered provided any alterations or repairs do not result in the removal
17.18 of interior wall or ceiling finishes exposing the structure.

17.19 **1309.0320 SECTION R320, ACCESSIBILITY.**

17.20 IRC sections R320.1 and R320.1.1 are deleted in their entirety and replaced with the
17.21 following:

17.22 **R320.1 Scope.** Where there are four or more IRC-3 dwelling units or sleeping units in
17.23 a single structure, the provisions for Group R-3 occupancies located in Minnesota
17.24 Rules, chapter 1341, Minnesota Accessibility Code, shall apply.

18.1 **1309.0321 SECTION R321, ELEVATORS AND PLATFORM LIFTS.**

18.2 IRC sections R321.1, R321.2, and R321.3 are deleted and replaced with the following:

18.3 **R321.1 Elevators, platform lifts.** For elevator and platform lift requirements, see
 18.4 Minnesota Rules, chapter 1307, Elevators and Related Devices.

18.5 **1309.0326 SECTION R326, SWIMMING POOLS, SPAS, AND HOT TUBS.**

18.6 IRC section R326 is deleted in its entirety.

18.7 **1309.0402 SECTION R402, MATERIALS.**

18.8 IRC Table R402.2 is amended to read as follows:

18.9 **TABLE R402.2 MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF**
 18.10 **CONCRETE**

TYPE OR LOCATION OF CONCRETE CONSTRUCTION	MINIMUM SPECIFIED COMPRESSIVE STRENGTH ^a (<i>f'</i>)		
	Weathering Potential ^b		
	Negligible	Moderate	Severe
Footings ^{g,h}	5,000	5,000	5,000
Basement walls, foundations, and other concrete not exposed to the weather	2,500	2,500	2,500 ^c
Basement slabs and interior slabs on grade, except garage floor slabs	2,500	2,500	2,500 ^c
Basement walls, foundation walls, exterior walls, and other vertical concrete work exposed to the weather	2,500	3,000 ^d	3,000 ^d
Porches, carport slabs, and steps exposed to the weather, and garage floor slabs	2,500	3,000 ^{d, e, f}	3,500 ^{d, e, f}

18.29 For SI: 1 pound per square inch = 6.895 kPa.

19.1 ^a Strength at 28 days psi.

19.2 ^b See Table R301.2(1) for weathering potential.

19.3 ^c Concrete in these locations that may be subject to freezing and thawing during construction
19.4 shall be air-entrained concrete in accordance with Footnote d.

19.5 ^d Concrete shall be air-entrained. Total air content (percent by volume of concrete) shall be
19.6 not less than 5 percent or more than 7 percent.

19.7 ^e See Section R402.2 for maximum cementitious materials content.

19.8 ^f For garage floors with a steel-troweled finish, reduction of the total air content (percent
19.9 by volume of concrete) to not less than 3 percent is permitted if the specified compressive
19.10 strength of the concrete is increased to not less than 4,000 psi.

19.11 ^g Compressive strength (f'_c) of 2,500 psi, with an approved admixture that provides a water
19.12 and vapor resistance at least equivalent to 5,000 psi concrete.

19.13 ^h Compressive strength (f'_c) of 5,000 psi, is not required for post footings for decks or
19.14 porches, wood foundations, slab-on-grade foundation walls, and footings for floating slabs.

19.15 **1309.0403 SECTION R403, FOOTINGS.**

19.16 Subpart 1. **IRC section R403.1.4.1.** Section R403.1.4.1 is amended to read as follows:

19.17 **R403.1.4.1 Frost protection.** Footings shall not bear on frozen soil.
19.18 Foundation walls, piers, and other permanent supports of buildings and
19.19 structures not otherwise protected from frost shall be protected by one or more
19.20 of the following methods:

19.21 1. Extended below the frost line specified in Table R301.2(1);

19.22 2. Constructing in accordance with Section R403.3;

19.23 3. Constructing in accordance with ASCE 32;

20.1 4. Erected on solid rock; or

20.2 5. Constructing in accordance with Minnesota Rules, chapter 1303.

20.3 Subp. 2. **IRC section R403.1.6.** IRC Section R403.1.6 is amended to read as follows:

20.4 **R403.1.6 Foundation anchorage.** Sill plates and walls supported directly on
20.5 continuous foundations shall be anchored to the foundation in accordance with
20.6 this section.

20.7 Wood sole plates at all exterior walls on monolithic slabs, wood sole plates of
20.8 braced wall panels at building interiors on monolithic slabs, and all wood sill plates
20.9 shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet
20.10 (1829 mm) on center. Bolts shall be at least 1/2-inch (12.7 mm) in diameter and
20.11 shall extend a minimum of 7 inches (178 mm) into concrete or grouted cells of
20.12 concrete masonry units. A nut and washer shall be tightened on each bolt. There
20.13 shall be a minimum of two bolts per plate section with one bolt located not more
20.14 than 12 inches (305 mm) or less than 7 bolt diameters from each end of the plate
20.15 section. Interior bearing wall sole plates on monolithic slab foundation that are
20.16 not part of a braced wall panel shall be positively anchored with approved fasteners.
20.17 Sill plates and sole plates shall be protected against decay and termites where
20.18 required by Sections R317 and R318. Cold-formed steel framing systems shall be
20.19 fastened to the wood sill plates or anchored directly to the foundation as required
20.20 in Section R505.3.1 or R603.1.1. When vertical reinforcing is required by other
20.21 sections of this code, the foundation anchor bolts shall be within 8 inches (203
20.22 mm) of the vertical reinforcing. All anchor bolts installed in masonry shall be
20.23 grouted in place with at least 1-inch (25 mm) of grout measured from the inside
20.24 face of the masonry and the anchor bolt.

20.25 **Exceptions:**

21.1 1. Foundation anchor straps spaced as required to provide equivalent anchorage
21.2 to 1/2-inch diameter (12.7 mm) anchor bolts. When vertical reinforcing is
21.3 required by other sections of this code, the foundation anchor straps shall
21.4 align with the reinforcing.

21.5 2. Walls 24 inches (609.6 mm) total length or shorter connecting offset braced
21.6 wall panels shall be anchored to the foundation with a minimum of one anchor
21.7 bolt located in the center third of the plate section and shall be attached to
21.8 adjacent braced wall panels according to Figure R602.10.5 at corners.

21.9 3. Walls 12 inches (304.8 mm) total length or shorter connecting offset braced
21.10 wall panels shall be permitted to be connected to the foundation without anchor
21.11 bolts. The wall shall be attached to adjacent braced wall panels according to
21.12 Figure R602.10.5 at corners.

21.13 **1309.0404 SECTION R404, FOUNDATION AND RETAINING WALLS.**

21.14 Subpart 1. **IRC section R404.1.** Section R404.1 is amended to read as follows:

21.15 **R404.1 Concrete and masonry foundation walls.** Concrete foundation walls shall
21.16 be selected and constructed in accordance with the provisions of Section R404.1.2.
21.17 Masonry foundation walls shall be selected and constructed in accordance with the
21.18 provisions of Section R404.1.1. Concrete and masonry foundation walls shall be laterally
21.19 supported at the top and bottom. Foundation walls that meet all of the following shall
21.20 be considered laterally supported:

21.21 1. Full basement floor shall be 3.5 inches (89 mm) thick concrete slab poured tight
21.22 against the bottom of the foundation wall.

21.23 2. Floor joists and blocking shall be connected to the sill plate at the top of wall
21.24 with an approved connector with listed capacity meeting the top of wall reaction

22.1 in Table R404.1(1). Maximum spacing of floor joists shall be 24 inches on center.
 22.2 Spacing of blocking shall be in accordance with Table R404.1(1).

22.3 3. Bolt spacing for the sill plate shall be no greater than the requirements in Table
 22.4 R404.1(1).

22.5 4. The floor shall be blocked perpendicular to the floor joists. Blocking shall be
 22.6 installed in accordance with footnote "e" of Table R404.1(1).

22.7 **Exception:** Cantilevered concrete and masonry foundation walls supporting
 22.8 unbalanced backfill that do not have permanent lateral support at the top of the
 22.9 foundation shall be constructed according to Table R404.1.1(5), Table R404.1.1(6),
 22.10 or Table R404.1.1(7).

22.11 (For subsection R404.1.1, see subpart 9. Subsections R404.1.2 through R404.1.9 and
 22.12 their subsections remain unchanged.)

22.13 Subp. 2. **IRC Table R404.1(1).** Section R404.1 is amended by adding Table R404.1(1)
 22.14 to read as follows:

22.15 TABLE R404.1(1)

22.16 MAXIMUM ANCHOR BOLT AND BLOCKING SPACING FOR SUPPORTED
 22.17 FOUNDATION WALL

22.18	22.19	22.20	22.21	22.22	22.23	22.24	22.25	22.26
Max. Wall Height	Max. Un-balanced Backfill Height	Soil Classes ^a	Soil Load (pcf/ft)	Top of Wall Reaction (plf) ^e	1/2" diameter Anchor Bolt Spacing (inches) ^{b,c,d}	Spacing of Blocking Perpendicular To Floor Joists (inches) ^f		
		GW, GP, SW, & SP	30	260	72	72		
8'-0"	7'-6"	GM, GC, SM, SM-SC, & ML	45	400	72	72		

23.1			SC, MH, ML-CL, &	60	530	48	48
23.2			I-CL				
23.3			GW, GP, SW, & SP	30	340	72	72
23.4	9'-0"	8'-6"	GM, GC, SM,	45	510	48	48
23.5			SM-SC, & ML				
23.6			SC, MH, ML-CL, &	60	680	32	32
23.7			I-CL				
23.8			GW, GP, SW, & SP	30	430	64	64
23.9	10'-0"	9'-6"	GM, GC, SM,	45	640	40	40
23.10			SM-SC, & ML				
23.11			SC, MH, ML-CL, &	60	860	24	24
23.12			I-CL				

23.13 For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

23.14 ^a Soil classes are in accordance with the Unified Soil Classification System. Refer to table
23.15 R405.1.

23.16 ^b Anchor bolts shall be cast-in-place with a minimum 7-inch embed. Where vertical
23.17 reinforcing is required by other sections of this code, the anchor bolts shall be within 8
23.18 inches of the vertical reinforcing and are to be spaced as required by this table. Anchor bolts
23.19 installed in masonry shall be grouted in place with not less than 1 inch of grout measured
23.20 from the inside face of the masonry and the anchor bolt.

23.21 ^c The sill plate shall be 2 x 6 minimum. Anchor bolts shall be placed at least 2-1/2 inches
23.22 from the edge of the sill plate and the edge of the foundation wall.

23.23 ^d Anchor bolts shall have a 2 inch by 1/8 inch thick round or square washer tightened and
23.24 countersunk 1/4 inch into the top of the sill plate. Use of standard and noncountersunk
23.25 washers is permitted where anchor bolt spacing is half the spacing required by this table.

23.26 ^e Minimum load to be used for the sizing of accepted anchors or fasteners if anchor bolts
23.27 are not used.

24.1 ^f Perpendicular blocking shall be 2-by the full depth joists or an approved alternative full
 24.2 depth joist material that is installed in the first three joists spaces adjacent to the foundation
 24.3 wall. The blocking shall be connected to the sill plate with an approved fastener sized in
 24.4 accordance with Footnote ^e. The floor sheathing shall be nailed to the blocking through the
 24.5 subfloor with a minimum of 8d common (2-1/2 x 0.131) nails at 3 inches on center or an
 24.6 equivalent connector. Blocking shall be installed within 8 inches of an anchor bolt location.

24.7 Subp. 3. [Repealed, 39 SR 91]

24.8 Subp. 4. [Repealed, 39 SR 91]

24.9 Subp. 5. [Repealed, 39 SR 91]

24.10 Subp. 6. **IRC Table R404.1.1(5)**. Section R404 is amended by adding a new table as
 24.11 follows:

24.12 TABLE R404.1.1(5)

24.13 CANTILEVERED CONCRETE AND MASONRY FOUNDATION WALLS

24.14	24.15	24.16	24.17		
24.18	24.19	24.20	24.21		
Maximum	Maximum	Maximum	Minimum Vertical Reinforcement Size and Spacing for 8-Inch		
Wall Height ^j	Unbalanced	Backfill	Nominal Wall Thickness ^{a,b,c,e,f,i,k}		
(feet)	Height ^e	(feet)	Soil Classes ^d		
			GW, GP, SW, and SP	GM, GC, SM, SM-SC, and ML	SC, MH, ML-CL, and inorganic CL
24.22	4	3	None required	None required	None required
24.23		4	None required	None required	No. 4 @ 72 in. o.c.
24.24	5	3	None required	None required	None required
24.25		4	No. 4 @ 72 in. o.c.	No. 4 @ 56 in. o.c. ^h	No. 4 @ 40 in. o.c. ^g
24.26		5	No. 4 @ 72 in. o.c.	No. 4 @ 56 in. o.c. ^h	No. 4 @ 40 in. o.c. ^g

- 25.1 ^a Mortar shall be Type M or S and masonry shall be laid in running bond. Minimum unit
25.2 compressive strength is 1,900 psi.
- 25.3 ^b Alternative reinforcing bar sizes and spacings having an equivalent cross-sectional area
25.4 of reinforcement per lineal foot of wall shall be permitted provided the spacing of the
25.5 reinforcement does not exceed 72 inches.
- 25.6 ^c Vertical reinforcement shall be Grade 60 minimum. The distance from the face of the soil
25.7 side of the wall to the center of vertical reinforcement shall be no greater than 2.5 inches.
- 25.8 ^d Soil classes are in accordance with the Unified Soil Classification System. Refer to Table
25.9 R405.1.
- 25.10 ^e Interior concrete floor slab-on-grade shall be placed tight to the wall. The exterior grade
25.11 level shall be 6 inches minimum below the top of wall. Maximum height from top of
25.12 slab-on-grade to bottom of floor joists is 10 feet, 0 inches. Unbalanced backfill height is
25.13 the difference in height of the exterior finish ground levels and the top of the interior concrete
25.14 slab-on-grade.
- 25.15 ^f Minimum footing size of 20 inches by 8 inches shall be placed on soil with a bearing
25.16 capacity of 2,000 psf. Minimum concrete compressive strength of footing shall be 3,000
25.17 psi.
- 25.18 ^g Provide propped cantilever wall: top of footing shall be 16 inches below the bottom of the
25.19 concrete floor slab minimum.
- 25.20 ^h Provide #5 Grade 60 dowels, 1 foot, 6 inches long, to connect footing to wall. Embed
25.21 dowel 5 inches into footing. Place dowels in center of wall thickness spaced at 32 inches
25.22 on center maximum. No dowels are required where length of the foundation wall between
25.23 perpendicular walls is two times the foundation wall height or less.

26.1 ⁱ This table is applicable where the length of the foundation wall between perpendicular
 26.2 walls is 35 feet or less, or where the length of the foundation laterally supported on only
 26.3 one end by a perpendicular wall is 17 feet or less.

26.4 ^j Maximum wall height is measured from top of the foundation wall to the bottom of the
 26.5 interior concrete slab-on-grade.

26.6 ^k Install foundation anchorage per Section R403.1.6.

26.7 Subp. 7. **IRC Table R404.1.1(6)**. Section R404 is amended by adding a new table as
 26.8 follows:

26.9 TABLE R404.1.1(6)

26.10 CANTILEVERED CONCRETE AND MASONRY FOUNDATION WALLS

26.11	26.12	26.13	26.14	26.15		
	Maximum	Maximum	Height ^j	Minimum Vertical Reinforcement Size and Spacing for 10-Inch		
	Wall	Unbalanced	(feet)	Nominal Wall Thickness ^{a,b,c,e,f,i,k}		
	Height ^j	Backfill	(feet)	Soil Classes ^d		
	(feet)	Height ^e	(feet)	GW, GP, SW, and SP	GM, GC, SM, SM-SC, SC, MH, ML-CL, and ML	and inorganic CL
26.16	4	3	3	None required	None required	None required
26.17		4	4	None required	None required	None required
26.18						
26.19	5	3	3	None required	None required	None required
26.20		4	4	None required	No. 4 @ 72 in. o.c.	No. 4 @ 64 in. o.c. ^g
26.21		5	5	No. 4 @ 72 in. o.c.	No. 4 @ 72 in. o.c.	No. 4 @ 56 in. o.c. ^g
26.22	6	3	3	None required	No. 4 @ 72 in. o.c.	No. 4 @ 72 in. o.c.
26.23		4	4	No. 4 @ 72 in. o.c.	No. 4 @ 72 in. o.c.	No. 4 @ 64 in. o.c. ^h
26.24		5	5	No. 4 @ 64 in. o.c. ^h	No. 4 @ 40 in. o.c. ^{g,h}	No. 5 @ 48 in. o.c. ^{g,h}
26.25		6	6	No. 4 @ 64 in. o.c. ^h	No. 4 @ 40 in. o.c. ^{g,h}	No. 5 @ 48 in. o.c. ^{g,h}
26.26						
26.27						
26.28						
26.29						

- 27.1 ^a Mortar shall be Type M or S and masonry shall be laid in running bond. Minimum unit
27.2 compressive strength is 1,900 psi.
- 27.3 ^b Alternative reinforcing bar sizes and spacings having an equivalent cross-sectional area
27.4 of reinforcement per lineal foot of wall shall be permitted provided the spacing of the
27.5 reinforcement does not exceed 72 inches.
- 27.6 ^c Vertical reinforcement shall be Grade 60 minimum. The distance from the face of the soil
27.7 side of the wall to the center of vertical reinforcement shall be no greater than 2.5 inches.
- 27.8 ^d Soil classes are in accordance with the Unified Soil Classification System. Refer to Table
27.9 R405.1.
- 27.10 ^e Interior concrete slab-on-grade shall be placed tight to the wall. The exterior grade level
27.11 shall be 6 inches minimum below the top of wall. Maximum height from top of slab-on-grade
27.12 to bottom of floor joists is 10 feet, 0 inches. Unbalanced backfill height is the difference in
27.13 height of the exterior finish ground levels and the top of the interior concrete slab-on-grade.
- 27.14 ^f Minimum footing size of 20 inches by 8 inches shall be placed on soil with a bearing
27.15 capacity of 2,000 psf. Minimum concrete compressive strength of footing shall be 3,000
27.16 psi.
- 27.17 ^g Provide propped cantilever wall: top of footing shall be 16 inches below the bottom of the
27.18 concrete floor slab minimum.
- 27.19 ^h Provide #5 Grade 60 dowels, 1 foot, 6 inches long, to connect footing to wall. Embed
27.20 dowel 5 inches into footing. Place dowels in center of wall thickness spaced at 32 inches
27.21 on center maximum. No dowels are required where length of the foundation wall between
27.22 perpendicular walls is two times the foundation wall height or less.
- 27.23 ⁱ This table is applicable where the length of the foundation wall between perpendicular
27.24 walls is 35 feet or less, or where the length of the foundation laterally supported on only
27.25 one end by a perpendicular wall is 17 feet or less.

28.1 ^j Maximum wall height is measured from top of the foundation wall to the bottom of the
 28.2 interior concrete slab-on-grade.

28.3 ^k Install foundation anchorage per Section R403.1.6.

28.4 Subp. 8. **IRC Table R404.1.1(7)**. Section R404 is amended by adding a new table as
 28.5 follows:

28.6 TABLE R404.1.1(7)

28.7 CANTILEVERED CONCRETE AND MASONRY FOUNDATION WALLS

28.8	28.9	28.10	28.11 Minimum Vertical Reinforcement Size and Spacing for 12-Inch		
28.12	28.12	28.12	28.12 Nominal Wall Thickness ^{a,b,c,e,f,i,k}		
	Maximum	Maximum	28.13 Soil Classes ^d		
	Unbalanced	Unbalanced	28.14 GW, GP, SW, and SP		
	Backfill	Backfill	28.15 GM, GC, SM, SM-SC, SC, MH, ML-CL, and inorganic CL		
	Height ^e	Height ^e	28.16		
	(feet)	(feet)	28.17		
28.16	4	3	None required	None required	None required
28.17		4	None required	None required	None required
28.18	5	3	None required	None required	None required
28.19		4	None required	None required	No. 4 @ 72 in. o.c.
28.20		5	No. 4 @ 72 in. o.c.	No. 4 @ 72 in. o.c.	No. 4 @ 72 in. o.c.
28.21	6	3	None required	None required	None required
28.22		4	None required	None required	No. 4 @ 72 in. o.c.
28.23		5	No. 4 @ 72 in. o.c.	No. 4 @ 56 in. o.c. ^h	No. 4 @ 40 in. o.c. ^g
28.24		6	No. 4 @ 72 in. o.c.	No. 4 @ 56 in. o.c. ^g	No. 4 @ 32 in.
28.25					o.c. ^{g,h}
28.26	7	3	None required	None required	None required
28.27		4	None required	No. 4 @ 72 in. o.c.	No. 4 @ 72 in. o.c.
28.28		5	No. 4 @ 72 in. o.c.	No. 4 @ 56 in. o.c. ^h	No. 4 @ 40 in. o.c. ^g

29.1 6 No. 4 @ 48 in. o.c.^h No. 5 @ 48 in. o.c.^{g,h} No. 6 @ 48 in.
 29.2 o.c.^{g,h}

29.3 7 No. 4 @ 48 in. o.c.^h No. 5 @ 40 in. o.c.^{g,h} No. 6 @ 48 in.
 29.4 o.c.^{g,h}

29.5 ^a Mortar shall be Type M or S and masonry shall be laid in running bond. Minimum unit
 29.6 compressive strength is 1,900 psi.

29.7 ^b Alternative reinforcing bar sizes and spacings having an equivalent cross-sectional area
 29.8 of reinforcement per lineal foot of wall shall be permitted provided the spacing of the
 29.9 reinforcement does not exceed 72 inches.

29.10 ^c Vertical reinforcement shall be Grade 60 minimum. The distance from the face of the soil
 29.11 side of the wall to the center of vertical reinforcement shall be no greater than 3 inches.

29.12 ^d Soil classes are in accordance with the Unified Soil Classification System. Refer to Table
 29.13 R405.1.

29.14 ^e Interior concrete slab-on-grade shall be placed tight to the wall. The exterior grade level
 29.15 shall be 6 inches minimum below the top of wall. Maximum height from top of slab-on-grade
 29.16 to bottom of floor joists is 10 feet, 0 inches. Unbalanced backfill height is the difference in
 29.17 height of the exterior finish ground levels and the top of the interior concrete slab-on-grade.

29.18 ^f Minimum footing size of 20 inches by 8 inches shall be placed on soil with a bearing
 29.19 capacity of 2,000 psf. Minimum concrete compressive strength of footing shall be 3,000
 29.20 psi.

29.21 ^g Provide propped cantilever wall: top of footing shall be 16 inches below the bottom of the
 29.22 concrete floor slab minimum.

29.23 ^h Provide #5 Grade 60 dowels, 1 foot, 6 inches long, to connect footing to wall. Embed
 29.24 dowel 5 inches into footing. Place dowels in center of wall thickness spaced at 32 inches
 29.25 on center maximum. No dowels are required where length of the foundation wall between
 29.26 perpendicular walls is two times the foundation wall height or less.

30.1 ⁱ This table is applicable where the length of the foundation wall between perpendicular
 30.2 walls is 35 feet or less, or where the length of the foundation laterally supported on only
 30.3 one end by a perpendicular wall is 17 feet or less.

30.4 ^j Maximum wall height is measured from top of the foundation wall to the bottom of the
 30.5 interior concrete slab-on-grade.

30.6 ^k Install foundation anchorage per Section R403.1.6.

30.7 Subp. 9. **IRC section R404.1.1.** Section R404.1.1 is amended by adding the following
 30.8 exception to condition 2:

30.9 **Exception:** Cantilevered concrete and masonry foundation walls constructed
 30.10 in accordance with Table R404.1.1(5), R404.1.1(6), or R404.1.1(7).

30.11 **1309.0507 SECTION R507, EXTERIOR DECKS.**

30.12 Subpart 1. **IRC Table R507.3.1.** Table R507.3.1 is modified to read as follows:

30.13 **TABLE R507.3.1**

30.14 **MINIMUM FOOTING SIZE FOR DECKS**

		LOAD BEARING VALUE OF SOILS ^{a, c, d} (psf)					
		1500 ^e			2000 ^e		
		Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)
LIVE LOAD ^b (psf)	TRIBUTARY AREA (sq. ft.)						
	20	12	14	6	12	14	6
	40	14	16	6	12	14	6
	60	17	19	6	15	17	6
	80	20	22	7	17	19	6
	100	22	25	8	19	21	6
	120	24	27	9	21	23	7

31.1	140	26	29	10	22	25	8
31.2	160	28	31	11	24	27	9

		LOAD BEARING VALUE OF SOILS ^{a, c, d} (psf)					
		2500 ^e			>3000 ^e		
LIVE LOAD ^b (psf)	TRIBUTARY AREA (sq. ft.)	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)	Side of a square footing (inches)	Diameter of a round footing (inches)	Thickness (inches)
40	20	12	14	6	12	14	6
	40	12	14	6	12	14	6
	60	13	15	6	12	14	6
	80	15	17	6	14	16	6
	100	17	19	6	15	17	6
	120	19	21	6	17	19	6
	140	20	23	7	18	21	6
	160	21	24	8	20	22	7

31.18 For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m², 1 pound per square foot = 0.0479 kPa.

31.19 ^a Interpolation permitted, extrapolation not permitted.

31.20 ^b Live load = 40 psf, dead load = 10 psf.

31.21 ^c Assumes minimum square footing to be 12 inches x 12 inches x 6 inches for a 6 x 6 post.

31.22 ^d If the support is a brick or CMU pier, the footing shall have a minimum 2-inch projection
31.23 on all sides.

31.24 ^e Area, in square feet, of deck surface supported by post and footings.

31.25 Subp. 2. **IRC Table R507.5.** Table R507.5 is amended by modifying footnote "a" to
31.26 read as follows:

32.1 ^a Live load = 40 psf, dead load = 10 psf, $L/\Delta = 360$ at main span, $L/\Delta = 180$ at cantilever
32.2 with a 220-pound load applied at the end.

32.3 Subp. 3. **IRC Table R507.6.** Table R507.6 is amended by modifying footnotes "b"
32.4 and "c" to read as follows:

32.5 ^b Live load = 40 psf, dead load = 10 psf, $L/\Delta = 360$.

32.6 ^c Live load = 40 psf, dead load = 10 psf, $L/\Delta = 360$ at main span, $L/\Delta = 180$ at cantilever
32.7 with a 220-pound point load applied to end.

32.8 Subp. 4. **IRC Table 507.9.1.3(1).** Table R507.9.1.3(1) is modified to read as follows:

32.9 **TABLE R507.9.1.3(1)**

32.10 **DECK LEDGER CONNECTION TO BAND JOIST^a**

32.11 **(Deck live load = 40 psf, deck dead load = 10 psf)**

CONNECTION DETAILS	JOIST SPAN						
	6' and less	6'1" to 8'	8'1" to 10'	10'1" to 12'	12'1" to 14'	14'1" to 16'	16'1" to 18'
	On-center spacing of fasteners						
1/2-inch diameter lag screw with 1/2-inch maximum sheathing ^{b,c}	30	23	18	15	13	11	10
1/2-inch diameter bolt with 1/2-inch maximum sheathing ^c	36	36	34	29	24	21	19
1/2-inch diameter bolt with 1-inch maximum sheathing ^d	36	36	29	24	21	18	16

32.25 For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0479 kPa.

32.26 ^a Ledgers shall be flashed in accordance with Section R703.4 to prevent water from contacting
32.27 the house band joist.

33.1 ^b The tip of the lag screw shall fully extend beyond the inside face of the band joist.

33.2 ^c Sheathing shall be wood structural panel or solid sawn lumber.

33.3 ^d Sheathing shall be permitted to be wood structural panel, gypsum board, fiberboard,
33.4 lumber, or foam sheathing. Up to 1/2-inch thickness of stacked washers shall be permitted
33.5 to substitute for up to 1/2-inch of allowable sheathing thickness where combined with wood
33.6 structural panel or lumber sheathing.

33.7 **1309.0602 SECTION R602, WOOD WALL FRAMING.**

33.8 Subpart 1. **IRC Table R602.3.1.** Table R602.3.1 is amended to read as follows:

33.9 TABLE R602.3.1

33.10 MAXIMUM ALLOWABLE LENGTH OF WOOD WALL STUDS EXPOSED TO

33.11 WIND SPEEDS OF 115 MPH OR LESS^{b,c,d,e,f,g,h,i,j}

33.12 Where conditions are not within the parameters

33.13 of footnotes b, c, d, e, f, g, h, i, and j,

33.14 design is required.

33.15 ROOF SPANS UP TO 22' SUPPORTING A ROOF ONLY

33.16 Maximum

33.17 Wall Height

33.18 (feet)

Exposure
Category^{h,i}

On-Center Spacing (inches)

24 16 12 8

33.21 10 B 2x6 2x4 2x4 2x4

33.22 C 2x6 2x6 2x4 2x4

33.23 12 B 2x6 2x6 2x4 2x4

33.24 C 2x6 2x6 2x6 2x4

33.25 14 B 2x6 2x6 2x6 2x4

34.1		C	2x6	2x6	2x6	2x6
34.2	16	B	2x8	2x6	2x6	2x6
34.3		C	2x8	2x6	2x6	2x6
34.4	18	B	2x8	2x8	2x6	2x6
34.5		C	2x8	2x8	2x6	2x6
34.6	20	B	2x8	2x8	2x8	2x6
34.7		C	NA ^a	2x8	2x8	2x6
34.8	24	B	NA ^a	2x8	2x8	2x8
34.9		C	NA ^a	NA ^a	2x8	2x8

34.10

34.11 ROOF SPANS GREATER THAN 22' AND UP TO 26' SUPPORTING A ROOF ONLY

34.12	34.13	34.14	34.15			
Maximum	Exposure		On-Center Spacing (inches)			
Wall Height	Category ^{h,i}		24	16	12	8
(feet)						
34.16						
34.17	10	B	2x6	2x6	2x4	2x4
34.18		C	2x6	2x6	2x6	2x4
34.19	12	B	2x6	2x6	2x6	2x4
34.20		C	2x8	2x6	2x6	2x6
34.21	14	B	2x6	2x6	2x6	2x6
34.22		C	2x8	2x8	2x6	2x6
34.23	16	B	2x8	2x6	2x6	2x6
34.24		C	2x8	2x8	2x6	2x6
34.25	18	B	2x8	2x8	2x6	2x6
34.26		C	NA ^a	2x8	2x8	2x6
34.27	20	B	NA ^a	2x8	2x8	2x6
34.28		C	NA ^a	NA ^a	2x8	2x8

35.1	24	B	NA ^a	NA ^a	2x8	2x8
35.2		C	NA ^a	NA ^a	NA ^a	2x8

35.3

35.4 ROOF SPANS GREATER THAN 26' AND UP TO 30' SUPPORTING A ROOF ONLY

35.5	Maximum					
35.6	Wall Height	Exposure				
35.7	(feet)	Category ^{hi}		On-Center Spacing (inches)		
35.8			24	16	12	8

35.9

35.10	10	B	2x6	2x6	2x4	2x4
35.11		C	2x6	2x6	2x6	2x4
35.12	12	B	2x6	2x6	2x6	2x4
35.13		C	2x8	2x6	2x6	2x6
35.14	14	B	2x8	2x6	2x6	2x6
35.15		C	2x8	2x8	2x6	2x6
35.16	16	B	2x8	2x6	2x6	2x6
35.17		C	2x8	2x8	2x8	2x6
35.18	18	B	2x8	2x8	2x6	2x6
35.19		C	NA ^a	2x8	2x8	2x8
35.20	20	B	NA ^a	2x8	2x8	2x6
35.21		C	NA ^a	NA ^a	2x8	2x8
35.22	24	B	NA ^a	NA ^a	2x8	2x8
35.23		C	NA ^a	NA ^a	NA ^a	2x8

35.24

35.25 ROOF SPANS GREATER THAN 30' AND UP TO 34' SUPPORTING A ROOF ONLY

35.26	Maximum					
35.27	Wall Height	Exposure				
35.28	(feet)	Category ^{hi}		On-Center Spacing (inches)		
35.29			24	16	12	8

36.1						
36.2	10	B	2x6	2x6	2x4	2x4
36.3		C	2x6	2x6	2x6	2x4
36.4	12	B	2x6	2x6	2x6	2x4
36.5		C	2x8	2x6	2x6	2x6
36.6	14	B	2x8	2x6	2x6	2x6
36.7		C	2x8	2x8	2x6	2x6
36.8	16	B	2x8	2x8	2x6	2x6
36.9		C	NA ^a	2x8	2x8	2x6
36.10	18	B	2x8	2x8	2x6	2x6
36.11		C	NA ^a	NA ^a	2x8	2x8
36.12	20	B	NA ^a	2x8	2x8	2x6
36.13		C	NA ^a	NA ^a	2x8	2x8
36.14	24	B	NA ^a	NA ^a	2x8	2x8
36.15		C	NA ^a	NA ^a	NA ^a	2x8

36.16 ^a Design required.

36.17 ^b Applicability of these tables assumes the following: SPF#2 or better, Ground snow = 60
 36.18 psf, Roof snow = 42 psf, Component and Cladding Zone 4 - 50 square feet (Exposure B =
 36.19 14.3 psf, Exposure C = 18.4 psf), eaves not greater than 2.0 feet in dimension.

36.20 ^c The exterior of the wall shall be continuously sheathed in accordance with one of the
 36.21 materials listed in items 30 to 36 in Table R602.3(1), including the prescribed fastening.
 36.22 All wall bracing requirements shall be in accordance with Section R602.10.

36.23 ^d Studs shall be continuous full height. Where studs do not extend full height due to a wall
 36.24 opening, full height studs shall be provided on each side of the opening, equal in number
 36.25 to the spacing of the required full height studs multiplied by half the width of the opening,
 36.26 plus one stud. Where multiple openings occur adjacent to one another, framing between
 36.27 openings shall include the total of all full height studs required for both openings combined.

- 37.1 ^e Full depth blocking is required at 10-foot spacing maximum.
- 37.2 ^f Utility, standard, stud, and No. 3 grade lumber of any species are not permitted.
- 37.3 ^g This table is based on a maximum allowable deflection limit of L/120.
- 37.4 ^h Where the sill plate of the frame wall bears on the supporting foundation and the frame
37.5 wall is less than 12 feet in height, anchor the sill plate to the supporting foundation wall
37.6 with 1/2-inch diameter anchor bolts spaced a maximum of 6 feet on center. For frame walls
37.7 more than 12 feet but not exceeding 24 feet in height, anchor the sill plate to the supporting
37.8 foundation wall with 1/2-inch diameter anchor bolts spaced a maximum of 3 feet on center.
- 37.9 ⁱ Where the sill plate of the frame wall bears on the supporting floor framing, it shall be
37.10 fastened to the rim board through the subfloor using 8d common (3-1/2 by 0.131) nails or
37.11 equivalent fastening spaced at 6 inches on center.
- 37.12 ^j For frame walls up to 20 feet in height, fasten the studs to the top and sole plates in
37.13 accordance with Table R602.3(1). For frame walls that are more than 20 feet in height,
37.14 fasten the studs to the top plate and sole plate using fastening or an approved fastener that
37.15 is capable of supporting at least 450 pounds.

37.16 Subp. 2. [See repealer.]

37.17 **1309.0703 SECTION R703, EXTERIOR COVERING.**

37.18 Subpart 1. [Repealed, 32 SR 12]

37.19 Subp. 2. [Repealed, 32 SR 12]

37.20 Subp. 2a. **IRC Section R703.2 Water-resistive barrier.** Section R703.2 is amended
37.21 to read as follows:

37.22 **R703.2 Water-resistive barrier.** One layer of No. 15 asphalt felt, free from holes and
37.23 breaks, complying with ASTM D 226 for Type 1 felt or other approved water-resistive
37.24 barrier shall be applied over studs or sheathing of all exterior walls. No. 15 asphalt felt

38.1 shall be applied horizontally, with the upper layer lapped over the lower layer not less
38.2 than 2 inches (51 mm). Where joints occur, felt shall be lapped not less than 6 inches
38.3 (152 mm). Other approved materials shall be installed in accordance with the
38.4 water-resistive barrier manufacturer's installation instructions. The No. 15 asphalt felt
38.5 or other approved water-resistive barrier material shall overlap the flashings required
38.6 in Section R703.4 not less than 2 inches (51 mm). The No. 15 asphalt felt or other
38.7 approved water-resistive barrier material shall be continuous up to the underside of the
38.8 rafter or truss top chord and terminated at penetrations and building appendages in a
38.9 manner to meet the requirements of the exterior wall envelope as described in Section
38.10 R703.1.

38.11 Subp. 2b. **IRC Section R703.4 Flashing.** Section R703.4 is amended and a subsection
38.12 is added to read as follows:

38.13 **R703.4 Flashing.** Approved corrosion-resistant flashing shall be applied shingle-fashion
38.14 in such a manner as to prevent entry of water into the wall cavity or penetration of
38.15 water to the building structural framing components. Self-adhered membranes used as
38.16 flashing shall comply with AAMA 711. Fluid-applied membranes used as flashing in
38.17 exterior walls shall comply with AAMA 714. The flashing shall extend to the surface
38.18 of the exterior wall finish. Approved corrosion-resistant flashing shall be installed at
38.19 all of the following locations:

38.20 1. Exterior window and door openings. Flashing shall be installed at the head and
38.21 sides of exterior window and door openings and shall extend to the surface of the
38.22 exterior wall finish or to the water-resistive barrier for subsequent drainage.
38.23 Flashing at exterior window and door openings shall be installed in accordance
38.24 with at least one of the following:

39.1 (a) the fenestration manufacturer's installation and flashing instructions. When
39.2 flashing is not addressed in the fenestration manufacturer's instructions, it
39.3 shall be installed in accordance with the flashing manufacturer's instructions;

39.4 (b) in accordance with the flashing design or method of a registered design
39.5 professional; and

39.6 (c) in accordance with other approved methods.

39.7 2. At the intersection of chimneys or other masonry construction with frame or
39.8 stucco walls, with projecting lips on both sides under stucco copings.

39.9 3. Under and at the ends of masonry, wood, or metal copings and sills.

39.10 4. Continuously above all projecting wood trim.

39.11 5. Where exterior porches, decks, or stairs attach to a wall or floor assembly of
39.12 wood-frame construction.

39.13 6. At wall and roof intersections.

39.14 7. At built-in gutters.

39.15 8. Where exterior material meets in other than a vertical line.

39.16 9. Where the lower portion of a sloped roof stops within the plane of an intersecting
39.17 wall cladding in such a manner as to divert water away from the assembly in
39.18 compliance with Section R903.2.1.

39.19 10. At the intersection of the foundation and rim joist framing when the exterior
39.20 wall covering does not lap the foundation insulation.

39.21 **R703.4.1 Pan flashing of windows and doors.** Pan flashing shall be installed in
39.22 accordance with the fenestration manufacturer's installation and flashing
39.23 instructions. Where flashing instructions or details are not provided, pan flashing

40.1 shall be installed at the sill of exterior window and door openings. Pan flashing
40.2 shall be sealed or sloped in such a manner as to direct water to the surface of the
40.3 exterior wall finish or to the water-resistive barrier for subsequent drainage.

40.4 **Exceptions:**

- 40.5 1. Windows or doors installed in accordance with the manufacturer's
- 40.6 installation instructions which include an alternate flashing method.
- 40.7 2. Windows or doors in detached accessory structures.
- 40.8 3. Skylights, bow or bay windows.
- 40.9 4. Doors required to meet accessibility requirements that would prevent the
- 40.10 installation of pan flashing.
- 40.11 5. Repairs or replacement of existing windows and doors.
- 40.12 6. When a method is provided by a registered design professional.

40.13 Subp. 3. **IRC Section R703.7.** Section R703.7 is amended to read as follows:

40.14 **R703.7 Exterior plaster.** Installation of these materials shall be in compliance with
40.15 ASTM C 926 and ASTM C 1063 and provisions of this code.

40.16 **R703.7.1 Lath.** All lath and lath attachments shall be of corrosion-resistant
40.17 materials. Expanded metal or woven wire lath shall be attached with 11 gage nails
40.18 having a 7/16-inch (11.1 mm) head or 16 gage staples, spaced at no more than 6
40.19 inches (152 mm) or as otherwise approved. Nails or staples shall penetrate wood
40.20 framing support members not less than 3/4-inch (19 mm).

40.21 **R703.7.1.1 Control joints and expansion joints.** Provisions for the control
40.22 of expansion shall be determined by the exterior plaster application designer.
40.23 ASTM C 1063 Sections 7.11.4 - 7.11.4.4 do not apply.

41.1 **R703.7.2 Plaster.** Plastering with portland cement plaster shall be in accordance
41.2 with ASTM C926. Cement materials shall be in accordance with one of the
41.3 following:

- 41.4 1. Masonry cement conforming to ASTM C91 Type M, S, or N.
- 41.5 2. Portland cement conforming to ASTM C150 Type I, II, or III.
- 41.6 3. Blended hydraulic cement conforming to ASTM C595 Type IP, IS (<70),
41.7 IL, or IT (S < 70).
- 41.8 4. Hydraulic cement conforming to ASTM C1157 Type GU, HE, MS, HS,
41.9 or MH.
- 41.10 5. Plastic (stucco) cement conforming to ASTM C1328.

41.11 Plastering with portland cement plaster shall be not less than three coats when
41.12 applied over metal lath or wire lath and shall be not less than two coats when
41.13 applied over masonry, concrete, pressure-preservative treated wood, or
41.14 decay-resistant wood as specified in Section R317.1 or gypsum backing. If the
41.15 plaster surface is completely covered by veneer or other facing material or is
41.16 completely concealed, plaster application need be only two coats, provided the
41.17 total thickness is as set forth in Table R702.1(1).

41.18 On wood-frame construction with an on-grade floor slab system, exterior plaster
41.19 shall be applied to cover, but not extend below, lath, paper, and screed.

41.20 **R703.7.2.1 Weep screeds.** A minimum 0.019-inch (0.5 mm) (No. 26
41.21 galvanized sheet gage), corrosion-resistant weep screed or plastic weep screed,
41.22 with a minimum vertical attachment flange of 3-1/2 inches (89 mm) shall be
41.23 provided at or below the foundation plate line on exterior stud walls in
41.24 accordance with ASTM C 1063. The weep screed shall be placed a minimum
41.25 of 4 inches (102 mm) above the earth or 2 inches (51 mm) above paved areas

42.1 and shall be of a type that will allow trapped water to drain to the exterior of
42.2 the building. The weather-resistant barrier shall lap the attachment flange.
42.3 The exterior lath shall cover and terminate on the attachment flange of the
42.4 weep screed.

42.5 **R703.7.3 Water-resistive barriers.** Water-resistive barriers shall be installed as
42.6 required in Section R703.2 and, where applied over wood-based sheathing, shall
42.7 include two layers of a water-resistive vapor-permeable barrier. Each layer shall
42.8 meet both of the following requirements:

42.9 1. A water resistance of not less than that of 60-minute Grade D paper; or a
42.10 minimum hydrostatic head of 23-31/32 inches (60.9 cm) when tested in
42.11 accordance with hydrostatic pressure test method AATCC 127-2008; or a
42.12 minimum water transudation time of 60 minutes when tested in accordance
42.13 with ASTM D-779.

42.14 2. A water vapor permeance of not less than that of No. 15 felt; or a minimum
42.15 permeance rating of 8.5 gr/h.ft.² in Hg (US perm) (4.9×10^{10} kg/Pa.s.m²) when
42.16 tested in accordance with Procedure B of ASTM E96.

42.17 **Exception:** One layer of water-resistive barrier complying with R703.2
42.18 is permitted when a drainage space that allows bulk water to flow freely
42.19 behind the cladding is provided.

42.20 **R703.7.4 Application.** Each coat shall be kept in a moist condition for at least
42.21 48 hours prior to application of the next coat.

42.22 **Exception:** Applications installed in accordance with ASTM C 926. The
42.23 second coat is permitted to be applied as soon as the first coat has attained
42.24 sufficient rigidity to receive the second coat.

43.1 **R703.7.5 Curing.** The finish coat for two-coat cement plaster shall not be applied
 43.2 sooner than seven days after application of the first coat. For three-coat cement
 43.3 plaster, the second coat shall not be applied sooner than 48 hours after application
 43.4 of the first coat, except as required in Section R703.7.4. The finish coat for
 43.5 three-coat cement plaster shall not be applied sooner than seven days after
 43.6 application of the second coat.

43.7 Subp. 3a. [Repealed, 39 SR 91]

43.8 Subp. 4. [Repealed, 32 SR 12]

43.9 Subp. 5. [Repealed, 32 SR 12]

43.10 Subp. 6. [Repealed, 32 SR 12]

43.11 Subp. 7. [Repealed, 32 SR 12]

43.12 Subp. 8. [Repealed, 32 SR 12]

43.13 Subp. 8a. [See repealer.]

43.14 Subp. 8b. [See repealer.]

43.15 Subp. 9. [See repealer.]

43.16 **1309.0807 SECTION R807, ATTIC ACCESS.**

43.17 IRC Section R807.1 is amended as follows:

43.18 **R807.1 Attic access.** Buildings with combustible ceiling or roof construction shall
 43.19 have an attic access opening to attic areas that exceed 30 square feet (2.8 m²) and have
 43.20 a vertical height of 30 inches (762 mm) or greater. The vertical height shall be measured
 43.21 from the top of the ceiling framing members to the underside of the roof framing
 43.22 members.

44.1 The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by
44.2 762 mm) and shall be located in a hallway or other readily accessible location. Where
44.3 located in a wall, the opening shall be not less than 22 inches wide by 30 inches high
44.4 (59 mm wide by 762 mm high). Where the access is located in a ceiling, minimum
44.5 unobstructed head-room in the attic space shall be 30 inches (762 mm) at some point
44.6 above the access measured vertically from the bottom of ceiling framing members. See
44.7 Minnesota Rules, chapter 1346, the Minnesota Mechanical Code, for access requirements
44.8 where mechanical equipment is located in attics.

44.9 **1309.0903 SECTION R903, WEATHER PROTECTION.**

44.10 IRC Section R903.2.1 is amended as follows:

44.11 **R903.2.1 Locations.** Flashings shall be installed at wall and roof intersections,
44.12 wherever there is a change in roof slope or direction and around roof openings. A
44.13 kick-out flashing shall be installed to divert the water away from where the eave
44.14 of a sloped roof intersects a vertical sidewall. The kick-out flashing on the roof
44.15 shall be a minimum of 2-1/2 inches (63.5 mm) long. Where flashing is of metal,
44.16 the metal shall be corrosion-resistant with a thickness of not less than 0.019 inch
44.17 (0.5 mm) (No. 26 galvanized sheet).

44.18 **R903.2.1.1 Existing buildings and structures.** Kick-out flashings shall be
44.19 required in accordance with Section R903.2.1 when re-siding or simultaneously
44.20 re-siding and re-roofing existing buildings and structures.

44.21 **Exception:** Kick-out flashings are not required when only re-roofing
44.22 existing buildings and structures.

44.23 **REPEALER.** Minnesota Rules, parts 1309.0602, subpart 2; 1309.0612; 1309.0702, subpart
44.24 1; and 1309.0703, subparts 8a, 8b, and 9, are repealed.

- 45.1 **EFFECTIVE DATE.** The amendments to chapter 1309 in this rule are effective March
- 45.2 31, 2020, or five business days after publication of the notice of adoption in the State
- 45.3 Register, whichever is later.