

South Carolina Building Codes Council Proposed Modification Continuations from 2021

IRC CODE SECTION	NEW/CONTINUATION	COMMITTEE RECOMMENDATION
R202 Definitions – Accepted Engineering Practice	Continuation	
R202 Definitions – Crawl Space	Continuation	
R301.2.2.1 Determination of seismic	Continuation	
design category		
R302.1 Exterior Walls	Continuation	
R302.1 Exterior Walls (adds to IRC 2021-06)	Continuation	
R302.4.1 Through penetrations	Continuation	
R302.5.1 Opening protection	Continuation	
R302.13 Fire protection of floors	Continuation	
R304.1.1 Field treatment	Continuation	
305.1 Subterranean termite control methods	Continuation	
R305.4 Foam Plastic Protection	Continuation	
R305.5 Termite inspection strip	Continuation	
R306.1 General	Continuation	
R309 Automatic Sprinkler Systems	Continuation	
R316.3 Story above grade plane	Continuation	
R318.7.5.1 Risers	Continuation	
R321.1.1 Where required	Continuation	
R325.3 Mechanical ventilation	Continuation	
Figure R327.1 Minimum Fixture Clearances	Continuation	
R404.1.9.2 Masonry piers supporting floor girders	Continuation	
R408.3 Unvented crawl space	Continuation	
R408.3 Unvented crawl space (adds to IRC 2021-32)	Continuation	
R408.4 Access	Continuation	
R408.8 Under floor vapor retarder	Continuation	
R502.12.4 Truss design drawings	Continuation	
R506.3.3 Vapor retarder	Continuation	
R606.7 Piers	Continuation	
R802.10.1 Truss design drawings	Continuation	
R905.2.8.5 Drip Edge	Continuation	
Chapter 11 Energy Efficiency	Continuation	
M1411.12 Insulation of refrigerant piping	Continuation	
M1411.15 Locking access port caps	Continuation	
M1502.3 Duct termination	Continuation	

M1502.4.2 Duct Installation	Continuation	
M1502.4.6 Duct length	Continuation	
M1503.6 Makeup air	Continuation	
M1504.3 Exhaust Openings	Continuation	
M1601.4.1 Joints, Seams and	Continuation	
Connections		
G2418.2 Design and installation	Continuation	
P2503.6 Shower liner test	Continuation	
P2503.6 Shower liner test (add to	Continuation	
IRC 2021-51)		
P2603.2.1 Protection against	Continuation	
physical damage		
P2603.5 Freezing	Continuation	
P2603.5 Freezing (adds to IRC 2021-	Continuation	
54)		
P2705.1(3) General (adds to IRC	Continuation	
2021-14 in (5))		
P2708.4 Shower control valves	Continuation	
P2713.3 Bathtub and whirlpool	Continuation	
bathtub valves		
P2903.11 Hose bibb	Continuation	
P2904.2.4.2.1 Additional	Continuation	
requirements for pendant sprinklers		
E3606.5 Surge protection	Continuation	
E3802.4 In unfinished basements	Continuation	
E3901.4.2 Island and peninsular	Continuation	
countertops and work surfaces		
E3902 Arc-Fault Circuit-Interrupter	Continuation	
Protection		
E3902.5 Basement receptacles	Continuation	
E3902.21 Arc-fault circuit-	Continuation	
interrupter protection	Continuation	
E4002.14 Tamper-resistant	Continuation	
receptacles Chapter 44 Referenced Standards	Continuation	
Chapter 44 Referenced Standards	Continuation Continuation	
Appendix BC Suiting Buildings and		
Appendix BO Existing Buildings and Structures	Continuation	
	Continuation	
Appendix BB Tiny Houses	Continuation	

IBC CODE SECTION	NEW/CONTINUATION	COMMITTEE RECOMMENDATION
[A] 101.4.7 Existing buildings	Continuation	
202 Definitions – Vapor retarder, ground contact & Primitive camp structure	Continuation	
303.4 Assembly Group A-3	Continuation	
312.1 General	Continuation	
706.1 General	Continuation	
1010.2.13 Controlled egress doors in Group I-1, I-2 and I-4 (Adult Day Care Occupancy only)	Continuation	
1016.2 Egress through intervening spaces	Continuation	
1803.2 Investigation required	Continuation	
1907.4 Vapor retarder	Continuation	
2303.2.3 Other means during manufacture	Continuation	
[P] 2902.1.1 Fixture calculations	Continuation	
[P] 2902.2 Separate facilities	Continuation	
Appendix H Signs	Continuation	

IFC CODE SECTION	NEW/CONTINUATION	COMMITTEE RECOMMENDATION
202 General definitions – Primitive camp structure	Continuation	
202 General definitions – Recreational fire	Continuation	
[BG] 203.2.8 Assembly Group A-3	Continuation	
315.3.3 Equipment rooms	Continuation	
503.1.2 Additional access	Continuation	
503.1.2.1 One-or two-family dwelling residential developments having less than 40 units & 503.1.2.2 Future development	Continuation	
503.2.1 Dimensions	Continuation	
507.1 Required water supply	Continuation	
507.5.1 Where required	Continuation	
507.5.1.1 Hydrant for standpipe systems	Continuation	
507.5.4 Obstruction	Continuation	
607.1 General	Continuation	
901.6.3 Records	Continuation	
907.6.5 Access	Continuation	
1010.2.13 Controlled egress doors in Group I-1, I-2 and I-4 (Adult Day Care Occupancy only)	Continuation	
1016.2 Egress through intervening spaces	Continuation	
2303.2.2 Testing	Continuation	
2305.5 Fire extinguishers	Continuation	
2307.4 Location of dispensing operations and equipment	Continuation	
2307.7 Public fueling of motor vehicles	Continuation	
4106.6 Clearance requirements	Continuation	
6101.1 Scope	Continuation	
6106.1 Attendants	Continuation	
6107.4 Protecting containers from vehicles	Continuation	
6109.13 Protection of containers	Continuation	
6110.1 Temporarily out of service	Continuation	
6111.2.1 Near residential, educational and institutional occupancies and other high-risk areas	Continuation	

South Carolina Building Codes Council Proposed Modification Continuations from 2021

IFGC CODE SECTION	NEW/CONTINUATION	COMMITTEE RECOMMENDATION
401.9 Identification	Continuation	
401.10 Piping materials standard	Continuation	
412.4 Listed equipment	Continuation	
412.6 Location	Continuation	
412.8.3 Vehicle impact protection	Continuation	
412.10 Private fueling of motor vehicles	Continuation	
505.1.1 Commercial cooking appliances vented by exhaust hoods	Continuation	

IMC CODE SECTION	NEW/CONTINUATION	COMMITTEE RECOMMENDATION
504.9.2 Duct Installation	Continuation	
Table 1103.1 Refrigerant Classification Amount and OEL	Continuation	
1104.3.1 Air conditioning for human comfort	Continuation	
Chapter 15 Referenced Standards	Continuation	

IPC CODE SECTION	NEW/CONTINUATION	COMMITTEE RECOMMENDATION
202 General Definitions – Drinking	Continuation	
Fountain		
202 General Definitions – Bottle-filling	Continuation	
Station		
202 General Definitions – Water Cooler	Continuation	
202 General Definitions – Water	Continuation	
Dispenser		
Table 403.1 Minimum Number of	Continuation	
Required Plumbing Fixtures		
403.1.1 Fixture calculations	Continuation	
403.2 Separate facilities	Continuation	
410.1 Substitution	Continuation	

NEC CODE SECTION	NEW/CONTINUATION	COMMITTEE RECOMMENDATION
210.8(A) Dwelling Units	Continuation	
210.8(F) Outdoor Outlets	Continuation	
210.12(B) Dwelling Units	Continuation	
230.67 Surge Protection	Continuation	



2024 Code Section: R202 Definitions

A definition of "Accepted Engineering Practice" was added.

The new definition states:

Accepted Engineering Practice. The performance design of structures and/or structural elements that vary from prescriptive design methods of this code. Such design shall be made with accepted design standards by a South Carolina licensed Architect or Engineer as permitted by existing state law.

Reason: To provide a clear definition and uniform interpretation of the phrase.

Proponent: Coastal Code Enforcement Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 01	R202
IRC 2018	IRC 2018 01	R202
IRC 2015	IRC 2015 01	R202
IRC 2012	IRC 2012 01	R202



2024 Code Section: R202 Definitions

Language was added to the definition of "Crawl Space".

[RB] CRAWL SPACE. An underfloor space that is not a *basement*. Spaces under decks and porches that do not contain mechanical equipment are not to be considered crawlspaces.

Reason: Not provided by proponent

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 02	R202



2024 Code Section: R301.2.2.1 Determination of seismic design category

R301.2.2.1 Determination of seismic design category. Buildings shall be assigned a seismic design category in accordance with the previously published maps by the South Carolina Building Codes Council Figures R301.2.2.1(1) through R301.2.2.1(7), except as otherwise required by Section R401.1. The local building official may delineate seismic design category within the jurisdiction, as long as it does not surpass those provided on the Applied Technology Council (ATC) website.

Reason: Provides added consistency and ease.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 05	R301.2.1.1

Staff Comments: Changes made in the 2024 IRC are noted in red. Language was added to reference an exception in Section R401.1. The Committee should consider that the ATC Hazards by Location site ceased operation on December 31, 2024. Users are being encouraged to use the ASCE Hazard Tool in its place, found at https://ascehazardtool.org/.



2024 International Residential Code

South Carolina Building Codes Council Modification Continuations from 2021

2024 Code Section: R302.1 Exterior Walls

Exception 6 was added.

R302.1 Exterior walls. Construction, projections, openings and penetrations of exterior walls of dwellings, townhouses and accessory buildings shall comply with Table R302.1(1) based on fire separation distance; or dwellings and townhouses equipped throughout with an automatic sprinkler system installed in accordance with Section P2904 shall comply with Table R302.1(2) based on fire separation distance. For the purposes of determining fire separation distance, dwellings and townhouses on the same lot shall be assumed to have an imaginary line between them. Where a new dwelling or townhouse is to be erected on the same lot as an existing dwelling or townhouse, the location of the assumed imaginary line with relation to the existing dwelling or townhouse shall be such that the existing dwelling or townhouse meets requirements of this section.

Where a lot line exists between adjacent townhouse units, fire separation distance of exterior walls shall be measured to the lot line. Where a lot line does not exist between adjacent townhouse units, an imaginary line shall be assumed between the adjacent townhouse units and fire separation distance of exterior walls shall be measured to the imaginary line. Fire separation distance and requirements of Section R302.1 shall not apply to walls separating townhouse units that are required by Section R302.2.

Exceptions:

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

a. The minimum *fire separation distance* for improvement constructed on a lot shown on: [i] a recorded bonded or final subdivision plat, or [ii] a sketch plan, site plan, plan of phased development or preliminary plat approved by the local governing authority, which was recorded or *approved* prior to the implementation of 2012 International Residential Code and which shows or describes lesser setbacks than the *fire separation distances* provided in Table R302.1(1), shall be equal to the lesser setbacks, but in no event less than 3 feet (914 mm).

b. The minimum *fire separation distance* for improvements constructed on a lot where the local governing authority has, prior to the implementation of 2012 International Residential Code: [i] accepted exactions or issued conditions, [ii] granted a special exception, [iii] entered into a development agreement, [iv] approved a variance, [v] approved a planned development district, or [vi] otherwise approved a specific development plan which contemplated or provided for setbacks less than the *fire separation distances* provided in Table R302.1(1), shall be equal to the lesser setback, but in no event less than 3 feet (914 mm).

Reason: To provide a clear definition and uniform interpretation of the phrase

Proponent: Coastal Code Enforcement Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 06	R302.1
IRC 2018	IRC 2018 04	R302.1
IRC 2015	IRC 2015 01	R302.1
IRC 2012	IRC 2012 02	R302.1

Staff Comments: Changes made in the 2024 IRC are noted in red. Significant language was added to the main body of the section.



2024 Code Section: R302.1 Exterior Walls

Exception 7 was added. This modification adds to modified language in IRC 2021-06.

R302.1 Exterior walls. Construction, projections, openings and penetrations of exterior walls of dwellings, townhouses and accessory buildings shall comply with Table R302.1(1) based on fire separation distance; or dwellings and townhouses equipped throughout with an automatic sprinkler system installed in accordance with Section P2904 shall comply with Table R302.1(2) based on fire separation distance. For the purposes of determining fire separation distance, dwellings and townhouses on the same lot shall be assumed to have an imaginary line between them. Where a new dwelling or townhouse is to be erected on the same lot as an existing dwelling or townhouse, the location of the assumed imaginary line with relation to the existing dwelling or townhouse shall be such that the existing dwelling or townhouse meets requirements of this section.

Where a lot line exists between adjacent townhouse units, fire separation distance of exterior walls shall be measured to the lot line. Where a lot line does not exist between adjacent townhouse units, an imaginary line shall be assumed between the adjacent townhouse units and fire separation distance of exterior walls shall be measured to the imaginary line. Fire separation distance and requirements of Section R302.1 shall not apply to walls separating townhouse units that are required by Section R302.2.

Exceptions:

- 6. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the fire separation distance.
- 7. Walls of individual dwelling units and their accessory structures located on the same lot.
- 8. Detached tool sheds and storage sheds, playhouses and similar structures exempted from *permits* are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the *lot line*.
- 9. Detached garages accessory to a *dwelling unit* located within 2 feet (610 mm) of a *lot line* are permitted to have roof eave projections not exceeding 4 inches (102 mm).
- 10. Foundation vents installed in compliance with this code are permitted.
- 6. Fire separation distance.
 - a. The minimum *fire separation distance* for improvement constructed on a lot shown on: [i] a recorded bonded or final subdivision plat, or [ii] a sketch plan, site plan, plan of phased development or preliminary plat approved by the local governing authority, which was recorded or *approved* prior to the implementation of 2012 International Residential Code and which shows or describes lesser setbacks than the *fire separation distances* provided in Table R302.1(1), shall be equal to the lesser setbacks, but in no event less than 3 feet (914 mm).
 - b. The minimum *fire separation distance* for improvements constructed on a lot where the local governing authority has, prior to the implementation of 2012 International Residential Code: [i] accepted exactions or issued conditions, [ii] granted a special exception, [iii] entered into a development agreement, [iv] *approved* a variance, [v] *approved* a planned development district, or [vi] otherwise *approved* a specific development plan which contemplated or provided for setbacks less than the *fire separation distances* provided in Table R302.1(1), shall be equal to the lesser setback, but in no event less than 3 feet (914 mm).
- 7. Aesthetic roof and siding projections may extend beyond the common wall of a *townhouse unit* over an adjoining unit's property line as long as the construction of the project does not damage the integrity of the fire-rated assembly, the projection is completely supported by the common wall, the projection is protected by a 1-hour construction or fire retardant-treated wood, and the projection is limited to 18 inches (457 mm). These projections shall not contain any plumbing, electrical or mechanical installations. An easement may be required by the jurisdiction to ensure future access to this projection for repair and maintenance.

Reason: To account for eave projections on townhomes.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 06	R302.1

Staff Comments: Changes made in the 2024 IRC are noted in red. Significant language was added to the main body of the section.



2024 Code Section: R302.4.1 Through penetrations

R302.4.1 Through penetrations. Through penetrations of fire-resistance-rated wall or floor assemblies shall comply with Section R302.4.1.1 or R302.4.1.2. <u>No penetrations shall pass</u> completely through the fire-rated assembly separating townhouse units.

Exceptions:

- 1. Where the penetrating items are steel, ferrous or copper pipes, tubes or conduits, the annular space shall be protected as follows:
 - 1.1. In concrete or masonry wall or floor assemblies, concrete, grout or mortar shall be permitted where installed to the full thickness of the wall or floor assembly or the thickness required to maintain the fire-resistance rating, provided that both of the following are complied with:
 - 1.1.1. The nominal diameter of the penetrating item is not more than 6 inches (152 mm).
 - 1.1.2. The area of the opening through the wall does not exceed 144 square inches (92 900 mm2).
 - 1.2. The material used to fill the annular space shall prevent the passage of flame and hot gases sufficient to ignite cotton waste where subjected to ASTM E119 or UL 263 time temperature fire conditions under a positive pressure differential of not less than 0.01 inch of water (3 Pa) at the location of the penetration for the time period equivalent to the fire-resistance rating of the construction penetrated.
- 2. The annular space created by the penetration of water-filled fire sprinkler piping, provided that the annular space is filled using a material complying with Item 1.2 of Exception 1.

Reason: The common walls between townhouses are essentially property lines between adjacent owners, and utilities or services of any kind should not pass through a property line.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 09	R302.4.1



2024 Code Section: R302.5.1 Opening protection

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

Reason: Lack of supporting documentation proving that self-closing devices contribute to fire or carbon monoxide safety

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 10	R302.5.1
IRC 2018	IRC 2018 05	R302.5.1
IRC 2015	IRC 2015 05	R302.5.1

Staff Comments: Changes made in the 2024 IRC are noted in red. "Residence" was replaced with the defined term "dwelling unit".



2024 Code Section: R302.13 Fire protection of floors

R302.13 Fire protection of floors. Floor assemblies that are 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. Penetrations or openings for ducts, vents, electrical outlets, lighting, devices, luminaires, wires, speakers, drainage, piping and similar openings or penetrations shall be permitted.

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 for the installation of fuel-fired or electric-powered heating *appliances*. Floor assemblies located directly over a *crawl space*.
- 3. Portions of floor assemblies shall be permitted to be unprotected where complying with the following:
 - 3.1. The aggregate area of the unprotected portions does not exceed 80 square feet (7.4 m2) per story.
 - 3.2. Fireblocking in accordance with Section R302.11.1 is 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.
- 5. <u>Wood floor assemblies less than 600 square feet (55.7m²) within detached accessory structures</u> with no *habitable space* above them.

Reason: Requirements are unwarranted and unnecessary

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 11	R302.13
IRC 2018	IRC 2018 06	R302.13
IRC 2015	IRC 2015 06	R302.13

Staff Comments: Changes made in the 2024 IRC are noted in red. Exception 5 was added.



2024 Code Section: R317.1.1 304.1.1 Field treatment

R304.1.1 Field treatment. Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in the field in accordance with AWPA M4 <u>or in accordance with the preservative-treated wood product manufacturer's recommendations.</u>

Reason: To add the preservative-treated wood product manufacturer's field treatment recommendations as a method of compliance.

Proponent: Structural Engineers Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 22	R317.1.1
IRC 2018	IRC 2018 14	R317.1.1
IRC 2015	IRC 2015 13	R317.1.1
IRC 2012	IRC 2012 12	R317.1.1

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed.



2024 Code Section: R318.1 305.1 Subterranean termite control methods

R305.1 Subterranean termite control methods. In areas subject to damage from termites as indicated by Table R301.2, protection shall be by one, or a combination, of the following methods:

- 1. Chemical termiticide treatment in accordance with Section R305.2.
- 2. Termite-baiting system installed and maintained in accordance with the label.
- 3. Pressure-preservative-treated wood in accordance with the provisions of Section R304.1.
- 4. Naturally durable termite-resistant wood.
- 5. Physical barriers in accordance with Section R305.3 and used in locations as specified in Section R304.1.
- 6. Cold-formed steel framing in accordance with Sections R505.2.1 and R603.2.1.
- 7. <u>Treatments may be conducted as outlined in Section 27-1085 of the Rules and Regulations for the Enforcement of the South Carolina Pesticide Control Act and enforced by the Clemson University Department of Pesticide Regulation</u>.

Reason: Provides clarification that additional treatment methods are permissible if it adheres to Section 27-1085 of the Rules and Regulations for the Enforcement of the South Carolina Pesticide Control Act and enforced by the Clemson University Department of Pesticide Regulations.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 23	318.1
IRC 2018	IRC 2018 15	318.1

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed, and within the body of the text, referenced section numbers were also changed.



2024 Code Section: R318.4 305.4 Foam Plastic Protection

R305.4 Foam plastic protection. In areas where the probability of termite infestation is "very heavy" as indicated in Figure R305.4, extruded and expanded polystyrene, polyisocyanurate and other foam plastics shall not be installed on the exterior face or under interior or exterior foundation walls or slab foundations located below *grade*. The clearance between foam plastics installed above *grade* and exposed earth shall be not less than 6 inches (152 mm). For crawl space applications, foam plastic shall be installed so as to provide a termite inspection gap of no less than 6 inches (152 mm) along the top of the foundation wall and foundation sill plate.

Exceptions:

- 1. Buildings where the structural members of walls, floors, ceilings and roofs are entirely of *noncombustible materials* or pressure-preservative-treated wood.
- 2. Where in addition to the requirements of Section R318.1, an approved method of protecting the foam plastic and structure from subterranean termite damage is used.
- 3.2. On the interior side of basement walls.

Reason: Provided language establishes a best management practice in order to inspect for termites and other wood-destroying organisms. The exception should be deleted due to a lack of rigorous experimental investigation and robust data to indicate a foam insulation product can be treated or produced in a way to make the product 100% effective against subterranean termite damage or an effective barrier to prevent termites a route into a structure.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 24	R318.4
IRC 2018	IRC 2018 16	R318.4

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed, and within the body of the text, a referenced section number was also changed.



2024 Code Section: R318.5 305.5 Termite inspection strip

R305.5 Termite inspection strip. Where foam plastic is applied in accordance with Section R318.4, a continuous 6-inch (152 mm) strip centered along the sill plate shall be left open for termite activity inspection.

Reason: Provides added consistency and ease for inspections

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 25	R318.5

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed.



2024 Code Section: R322.1 306.1 General

R306.1 General. Buildings and structures constructed in whole or in part in flood hazard areas, including A or V Zones and Coastal A Zones, as established in Table R301.2, and substantial improvement and repair of substantial damage of buildings and structures located in whole or in part in flood hazard areas, shall be designed and constructed in accordance with the provisions contained in this section. Buildings and structures that are located in more than one flood hazard area, including A Zones, Coastal A Zones and V Zones, shall comply with the provisions associated with the most restrictive flood hazard area. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24. Where there is a conflict with this code section and a locally adopted flood ordinance, the more restrictive provision shall apply.

Reason: Jurisdictions can impose additional regulations within their communities to leverage better NFIP ratings. This modification would give the jurisdiction guidelines where nothing is adopted locally, and give flexibility to those who do have local regulations.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 28	R322.1
IRC 2018	IRC 2018 18	R322.1

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed, and some language in the section was reorganized, but appears to be the same in substance.



2024 International Residential Code South Carolina Building Codes Council

Modification Continuations from 2021

2024 Code Section: R313 309 Automatic Fire Sprinkler Systems

SECTION R313 309

AUTOMATIC FIRE SPRINKLER SYSTEMS

R309.1 Townhouse automatic fire sprinkler systems. An automatic <u>residential fire</u> sprinkler system shall <u>not be required to</u> be installed in *townhouses* <u>when constructed in accordance with</u> Section R302.2.

Exception: An automatic <u>residential fire</u> sprinkler system shall not be required where *additions* or *alterations* are made to existing *townhouses* that do not have an automatic residential fire sprinkler system installed.

R309.1.1 Design and installation. Automatic <u>residential fire</u> sprinkler systems for *townhouses* <u>when</u> installed shall be designed and installed in accordance with Section P2904 or NFPA 13D.

R309.2 One- and two-family dwellings automatic sprinkler systems. An automatic <u>residential fire</u> sprinkler system <u>shall be installed</u> <u>shall not be required to be installed</u> in one- and two-family *dwellings*.

Exception: An automatic <u>residential fire</u> sprinkler system shall not be required for *additions* or *alterations* to existing buildings that are not already provided with <u>an automatic residential fire</u> sprinkler system.

R309.2.1 Design and installation. Automatic <u>residential fire</u> sprinkler systems <u>when installed</u> shall be designed and installed in accordance with Section P2904 or NFPA 13D.

Reason: Unusually restrictive

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 18	R313
IRC 2018	IRC 2018 12	R313
IRC 2015	IRC 2015 12	R313
IRC 2012	IRC 2012 10	R313.1
IRC 2012	IRC 2012 11	R313.2

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed, and the word "fire" was removed from the section titles where indicated.



2024 Code Section: R326.3 316.3 Story above grade plane

R316.3 Story above grade plane. A *habitable attic* shall be considered a *story above grade plane*.

Exceptions: A *habitable attic* shall not be considered to be a *story above grade plane* provided that the *habitable attic*

meets all the following:

- 1. The aggregate area of the *habitable attic* is either of the following:
 - 1.1. Not greater than one-third three-fourths of the floor area of the story below.
- 1.2. Not greater than one-half of the floor area of the *story* below where the *habitable attic* is located within a *dwelling unit* equipped with an automatic fire sprinkler system in accordance with Section P2904.
- 2. The occupiable space is enclosed by the *roof assembly* above, knee walls, if applicable, on the sides and the floor- ceiling assembly below.
- 3. The floor of the *habitable attic* does not extend beyond the exterior walls of the *story* below.
- 4. Where a *habitable attic* is located above a third *story*, an automatic sprinkler system in accordance with Section P2904 shall be installed in the *habitable attic* and remaining portion of the *dwelling unit* or *townhouse unit* or *dwelling unit* or units located beneath the *habitable attic*. shall be equipped with a fire sprinkler system in accordance with Section P2904.

Reason: The deletion of these exceptions brings the definition of the habitable attic in line with the 2018 IRC.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 29	R326.3

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed, and language was modified under number 4.



2024 Code Section: R311.7.5.1 318.7.5.1 Risers

R318.7.5.1 Risers. The maximum riser height shall be not more than 73/4 inches (196 mm). The maximum riser height for masonry stairs shall be 8 inches (203 mm). The riser height shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. At open risers, openings located more than 30 inches (762 mm), as measured vertically, to the floor or grade below shall not permit the passage of a 4- inch-diameter (102 mm) sphere.

Exceptions:

- 1. The opening between adjacent treads is not limited on *spiral stairways*.
- 2. The *riser* height of *spiral stairways* shall be in accordance with Section 318.7.11.1.
- 3. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or less.

Reason: To establish a maximum height for masonry risers

Proponent: Structural Engineers Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 15	R311.7.5.1
IRC 2018	IRC 2018 09	R311.7.5.1
IRC 2015	IRC 2015 09	R311.7.5.1
IRC 2012	IRC 2012 07	R311.7.5.1

Staff Comments: Changes made in the 2024 IRC are noted in red. The code section was changed, and within the body of the text, under Exception 2, Section R311.7.10.1 was changed to Section R318.7.11.1.



2024 Code Section: R312.1.1 321.1.1 Where required

R321.1.1 Where required. *Guards* shall be provided for those portions of open-sided walking surfaces, including floors, stairs, *ramps* and landings that are located more than 30 inches (762 mm) measured vertically to the floor or *grade* below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a *guard*.

Guards shall be located along open-sided walking surfaces of all decks, porches, balconies, floors, stairs, ramps and landings that are located more than 30 inches (762 mm) measured vertically to the floor or grade below and at any point where a downward slope exceeds 3V:12H within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.

Reason: No technical justification to substantiate a 36-inch measurement away from the leading edge of the walking surface or tread to determine when a guard should be required

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 16	R312.1.1
IRC 2018	IRC 2018 10	R312.1.1
IRC 2015	IRC 2015 10	R312.1.1
IRC 2012	IRC 2012 08	R312.1.1

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed.



2024 Code Section: R303.4 325.3 Mechanical ventilation

This section was deleted without substitution.

R303.4 Mechanical ventilation. Buildings and *dwelling units* complying with Section 1102.5.1 shall be provided with mechanical ventilation in accordance with Section M1505, or with other *approved* means of ventilation.

Reason: The blower door test is not required with the current State Energy Standard (2009 International Energy Conservation Code) and is not applicable.

Proponent: Coastal Code Enforcement Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 12	R303.4
IRC 2018	IRC 2018 07	R303.4
IRC 2015	IRC 2015 07	R303.4
IRC 2012	IRC 2012 05	R303.4

Staff Comments: Changes made in the 2024 IRC are noted in red. The code section was changed, and within the body of the text, Section 1102.4.1 was changed to Section 1102.5.1.



2024 Code Section: Figure R307.1 327.1 Minimum Fixture Clearances

Change the minimum dimension for the side clearance between bathtubs and water closets and bidets from 15 inches to 12 inches.

The Figure from the 2024 IRC, with the change noted, is found on the next page.

Reason: No valid reason exists to justify a minimum clearance of 15 inches

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 13	R307.1
IRC 2018	IRC 2018 08	R307.1
IRC 2015	IRC 2015 08	R307.1
IRC 2012	IRC 2012 06	R307.2
IRC 2006	IRC 2006 09	R307.2
IRC 2003	IRC 2003 05	R307.2

Staff Comments: Changes made in the 2024 IRC are noted in red. The code section was changed.

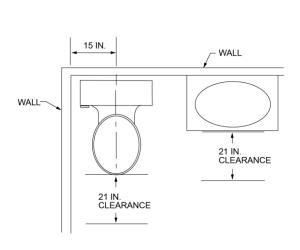


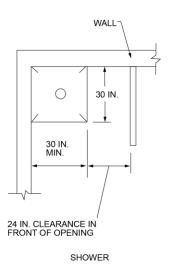
2024 International Residential Code

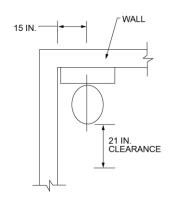
South Carolina Building Codes Council Modification Continuations from 2021

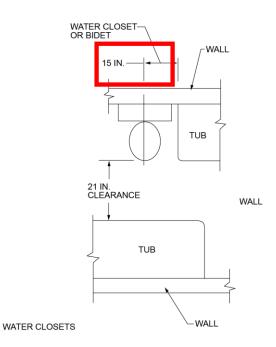
R327.1 Continued

FIGURE R307.1 MINIMUM FIXTURE CLEARANCES











2024 Code Section: R404.1.9.2 Masonry piers supporting floor girders

R404.1.9.2 Masonry piers supporting floor girders. Masonry piers supporting wood girders sized in accordance with Tables R602.7(1) and R602.7(2) shall be permitted in accordance with this section. Piers supporting girders for interior bearing walls shall have a minimum nominal dimension of 12 inches (305 mm) and a maximum height of 10 feet (3048 mm) be filled solidly with grout or type M or S mortar and shall have a minimum nominal dimension of 8 inches (203 mm) and a maximum height not exceeding 10 times the nominal thickness from top of footing to bottom of sill plate or girder. Piers supporting girders for exterior bearing walls shall have a minimum nominal dimension of 12 inches (305 mm) and a maximum height of 4 feet (1220 mm) from top of footing to bottom of sill plate or girder. Piers supporting beams and girders for exterior bearing walls shall be filled solidly with grout or type M or S mortar, shall contain a minimum of one #4 (13 mm) dowel mid-depth, and shall have a minimum nominal dimension of 8 inches (203 mm) and a maximum height of 4 times the nominal thickness from top of footing to bottom of sill plate or girder unless it can be shown by accepted engineering practice that there is sufficient foundation wall along the foundation line to resist the imposed lateral loads, in which case the maximum height shall not exceed 10 times the nominal thickness. Girders and sill plates shall be anchored to the pier or footing in accordance with Section R403.1.6 or Figure R404.1.5.3. Floor girder bearing shall be in accordance with Section R502.6.

Reason: Unusually restrictive

Proponent: Home Builders Association of South Carolina and Structural Engineers

Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 31	R404.1.9.2
IRC 2018	IRC 2018 20	R404.1.9.2
IRC 2015	IRC 2015 16	R404.1.9.2
IRC 2012	IRC 2012 13	R404.1.9.2



2024 Code Section: R408.3 Unvented Crawl Space

R408.3 Unvented crawl space. For unvented under-floor spaces, the following items shall be provided:

- 1. Exposed earth shall be covered with a continuous Class I vapor retarder meeting ASTM E1745 Class A. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend not less than 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall or insulation.
- 2. One of the following shall be provided for the under-floor space:
- 2.1. Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7m2) of *crawl space* floor area, including an air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.11.1 of this code.
- 2.2. Conditioned air supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m²) of under-floor area, including a return air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.11.1 of this code.
- 2.3. Plenum in existing structures complying with Section M1601.5, if under-floor space is used as a plenum.
- 2.4. Dehumidification sized in accordance with manufacturer's specifications.

Reason: ASTM E1745 is the industry standard for plastic vapor retarders used under concrete slabs or in contact with soil. It is also the main standards for evaluating plastic films that will be used in this application. Three performance classes are outlined A, B and C (with Class A being the strongest). Performance levels are the same for each class, less than 0.1 perms. Tensile strength and puncture resistance change with each class. ASTM E1745 refers to ASTM E154 "Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, On Walls or as Ground Cover", which describes test methods for testing the performance of a plastic film after it is subjected to certain elements. These standards outline the methodology whereby plastic vapor retarders are tested. Simply having a low perm rating is not enough when it comes to real-life conditions. Vapor retarders/barriers must also be tough enough to endure the rigors of construction, since this will determine their true long-term ability to protect against water vapor intrusion.

Proponent: Structural Engineers Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 32	R408.3
IRC 2018	IRC 2018 21	R408.3

Staff Comments: Changes made in the 2024 IRC are noted in red. Section numbers imbedded in the text were updated, and unnecessary language was removed.



2024 International Residential Code South Carolina Building Codes Council

Modification Continuations from 2021

2024 Code Section: R408.3 Unvented Crawl Space

This modification adds to modified language in IRC 2021-32.

R408.3 Unvented crawl space. For unvented under-floor spaces, the following items shall be provided:

- 1. Exposed earth shall be covered with a continuous Class I vapor retarder meeting ASTM E1745 Class A. Joints of the vapor retarder shall overlap by 6 inches (152 mm) and shall be sealed or taped. The edges of the vapor retarder shall extend not less than 6 inches (152 mm) up the stem wall and shall be attached and sealed to the stem wall or insulation.
- 2. One of the following shall be provided for the under-floor space:
- 2.1. Continuously operated mechanical exhaust ventilation at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7m2) of *crawl space* floor area, including an air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.11.1 of this code.
- 2.2. Conditioned air supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47 L/s) for each 50 square feet (4.7 m²) of under-floor area, including a return air pathway to the common area (such as a duct or transfer grille), and perimeter walls insulated in accordance with Section N1102.2.11.1 of this code the South Carolina Energy Code.
- 2.3. Plenum in existing structures complying with Section M1601.5, if under-floor space is used as a plenum.
- 2.4. Dehumidification sized in accordance with manufacturer's specifications.

Reason: Provides added clarity and consistency of codes between regulation and statute.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 33	R408.3
IRC 2018	IRC 2018 21	R408.3

Staff Comments: Changes made in the 2024 IRC are noted in red. Section numbers imbedded in the text were updated, and unnecessary language was removed. This modification adds to modified language in IRC 2021-32, by changing the language in number 2.2.



2024 Code Section: R408.4 Access

R408.4 Access. Access shall be provided to all under-floor spaces. Access openings through the floor shall be not smaller than 18 inches by 24 inches (457 mm by 610 mm). Openings through a perimeter wall shall be not less than 16 inches by 24 inches (407 mm by 610 mm). Where any portion of the through-wall access is below *grade*, an areaway not less than 16 inches by 24 inches (407 mm by 610 mm) shall be provided. The bottom of the areaway shall be below the threshold of the access opening. Through wall access openings shall not be located under a door to the residence. See Section M1305.1.3 for access requirements where mechanical *equipment* is located under floors.

Reason: To allow access openings under a doorway

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 34	R408.4
IRC 2018	IRC 2018 22	R408.4
IRC 2015	IRC 2015 17	R408.4



2024 Code Section: R408.8 Under floor vapor retarder

Section deleted without substitution

R408.8 Under-floor vapor retarder. In Climate Zones 1A, 2A and 3A below the warm humid line, a continuous Class I or II vapor retarder shall be provided on the exposed face of air-permeable insulation installed between the floor joists and exposed to the grade in the under-floor space. The vapor retarder shall have a maximum water vapor permeance of 1.5 perms when tested in accordance with Procedure B of ASTM E96.

Exception: The vapor retarder shall not be required in unvented *crawl spaces* constructed in accordance with Section R408.3.

Reason: Recommend replacing the entire Section 408 with IRC 2018 language as the new language is horrible and just a bad idea in hot-humid locations, and virtually impossible to construct. The new language is so intertwined it's hard to modify, therefore inserting the existing language is much easier.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 35	R408.4



2024 Code Section: R502.11.4 502.12.4 Truss design drawings

R502.12.4 Truss design drawings. *Truss design drawings*, prepared in compliance with Section R502.12.1, shall be submitted to the *building official* and *approved* prior to installation at the time of their inspection. *Truss design drawings* shall be provided with the shipment of trusses delivered to the job site. *Truss design drawings* shall include, at a minimum, the information specified as follows:

(No changes to items 1-12)

Reason: The section was modified to allow the approval of truss design drawings by local building officials to occur at the time of the framing inspection, rather than at an undefined time prior to installation.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 36	R502.11.4
IRC 2018	IRC 2018 23	R502.11.4
IRC 2015	IRC 2015 18	R502.11.4
IRC 2012	IRC 2012 14	R502.11.4
IRC 2006	IRC 2006 21	R502.11.4
IRC 2003	IRC 2003 17	R502.11.4

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number, as well as a referenced section number within the text, were changed.



2024 Code Section: R506.2.3 506.3.3 Vapor retarder

R506.3.3 Vapor retarder. A minimum 10-mil (0.010 inch; 0.254 mm) 6-mil (0.006 inch; 152um) polyethylene or *approved* vapor retarder conforming to ASTM E1745 Class A requirements with joints lapped not less than 6 inches (152 mm) shall be placed between the concrete floor slab and the base course or the prepared subgrade where a base course does not exist.

Exception: The vapor retarder is not required for the following:

- 1. Garages, utility buildings and other unheated accessory structures.
- 2. For unheated storage rooms having an area of less than 70 square feet (6.5 m^2) and carports.
- 3. Driveways, walks, patios and other flatwork not likely to be enclosed and heated at a later date.
- 4. Where *approved* by the *building official*, based on local site conditions.

Reason: It is a fairly common practice for garages to be transformed into conditioned space at which time having a vapor retarder becomes necessary, or to be converted to storage space (over 70 sq. ft.) at which time a vapor barrier is required.

Proponent: Structural Engineers' Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 37	R506.2.3
IRC 2018	IRC 2018 24	R506.2.3
IRC 2015	IRC 2015 19	R506.2.3

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number changed, 10-mil polyethylene was changed to 6-mil polyethylene, and the reference to ASTM E1745 Class A requirements was removed.



2024 Code Section: R606.7 Piers

R606.7 Piers. The unsupported height of masonry piers shall not exceed 10 times their least dimension. Where structural clay tile or hollow *concrete masonry units* are used for isolated piers to support beams and girders, the cellular spaces shall be filled solidly with grout or Type M or S mortar, except that unfilled hollow piers shall be permitted to be used if their unsupported height is not more than four times their least dimension. Where *hollow masonry units* are solidly filled with grout or Type M or S or N mortar, the allowable compressive stress shall be permitted to be increased as provided in Table R606.9.

Reason: To allow the use of only type M or S mortar to comply with ACI 530 which disallows the use of type N mortar in foundation walls.

Proponent: Structural Engineers' Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 38	R606.7
IRC 2018	IRC 2018 25	R606.7
IRC 2015	IRC 2015 20	R606.7



2024 Code Section: R802.10.1 Truss design drawings

R802.10.1 Truss design drawings. *Truss design drawings*, prepared in conformance to Section R802.10.1, shall be provided to the *building official* and *approved* prior to installation at the time of their inspection. *Truss design drawings* shall be provided with the shipment of trusses delivered to the job site. *Truss design drawings* shall include, at a minimum, the following information:

(No changes to items 1-12)

Reason: The section was modified to allow the approval of truss design drawings by local building officials to occur at the time of the framing inspection, rather than at an undefined time prior to installation.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 39	R802.10.1
IRC 2018	IRC 2018 26	R802.10.1
IRC 2015	IRC 2015 21	R802.10.1



2024 Code Section: R905.2.8.5 Drip Edge

R905.2.8.5 Drip edge. A drip edge shall be provided at eaves and rake edges of shingle roofs. Adjacent segments of drip edge shall be overlapped not less than 2 inches (51 mm). Drip edges shall extend not less than 1/4 inch (6.4 mm) below the roof sheathing and extend up back onto the roof deck not less than 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at not more than 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the drip edge along rake edges. A drip edge shall be provided at eaves and rake edges of asphalt shingle roofs where required by the manufacturer.

Reason: Impractical—this process is very time intensive and is difficult to produce and enforce any conformity. It is counterproductive and is trying to solve a non-issue. Jurisdictions have had to insert a stand alone inspection for this one phase of construction in many cases.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 40	R905.2.8.5
IRC 2018	IRC 2018 27	R905.2.8.5
IRC 2015	IRC 2015 22	R905.2.8.5



2024 Code Section: Chapter 11 [RE] Energy Efficiency

Chapter deleted without substitution.

CHAPTER 11 [RE] ENERGY EFFICIENCY

The State of South Carolina has specific energy standards in statutory form (Re: Title 6, Chapter 9, Building Codes and Title 6, Chapter 10, Building Energy Efficiency Standard Act). To eliminate any possible conflicts concerning the insulation requirements for single and two family residential buildings between the International Residential Code and state law, Chapter 11 was deleted.*

*All references to Chapter 11 in the Referenced Standards chapter and Index must also removed.

Reason: The State of South Carolina has specific energy standards in statutory form (Re: Title 6, Chapter 9, Building Codes and Title 6, Chapter 10, Building Energy Efficiency Standard Act.). To eliminate any possible conflicts concerning the insulation requirements for single and two family residential buildings between the International Residential Code and state law, Chapter 11 was deleted.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 41	Chapter 11
IRC 2018	IRC 2018 28	Chapter 11
IRC 2015	IRC 2015 22	Chapter 11
IRC 2012	IRC 2012 16	Chapter 11
IRC 2006	IRC 2006 27	Chapter 11
IRC 2003	IRC 2003 21	Chapter 11



2024 Code Section: M1411.6 1411.12 Insulation of refrigerant piping

M1411.12 Insulation of refrigerant piping. Piping and fittings for refrigerant vapor (suction) lines shall be insulated with insulation having a thermal resistivity of not less than R-3 at least R 2.5 hr. ft 2 F/Btu and having external surface permeance not exceeding 0.05 perm [2.87 ng/(s \times m² \times Pa)] when tested in accordance with ASTM E96.

Reason: Section M1411.4 requires insulation of refrigerant lines to R 4. Further research is needed to determine if this insulating product is commercially available. To qualify for R 4 additional insulation may be required, which could limit the spaces in which refrigerant lines could be installed.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 42	M1411.6
IRC 2018	IRC 2018 29	M1411.6
IRC 2015	IRC 2015 24	M1411.6
IRC 2012	IRC 2012 18	M1411.6
IRC 2006	IRC 2006 28	M1411.5
IRC 2003	IRC 2003 22	M1411.4

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed.



2024 Code Section: M1411.9 1411.15 Locking access port caps

Section deleted without substitution.

M1411.15 Locking access port caps. Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise secured to prevent unauthorized access.

Reason: The section appears to solve a non-issue at an added cost to the consumer.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 43	M1411.9
IRC 2018	IRC 2018 30	M1411.8
IRC 2015	IRC 2015 25	M1411.6
IRC 2012	IRC 2012 18	M1411.6

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number was changed.



2024 Code Section: M1502.3 Duct termination

M1502.3 Duct termination. Exhaust ducts shall terminate on the outside of the building. Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. If the manufacturer's instructions do not specify a termination location, the exhaust duct shall terminate not less than 3 feet (914 mm) in any direction from openings into buildings, including openings in ventilated soffits. Exhaust duct terminations shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination.

Reason: The three feet dimension is arbitrary and restrictive; the dimension is not a requirement of the dryer manufacturers.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 44	M1502.3
IRC 2018	IRC 2018 31	M1502.3
IRC 2015	IRC 2015 26	M1502.3
IRC 2012	IRC 2012 19	M1502.3
IRC 2006	IRC 2006 29	M1502.2



2024 Code Section: M1502.4.2 Duct Installation

M1502.4.2 Duct installation. Exhaust ducts shall be supported at intervals not to exceed 8 feet (2438 mm) and within 16 inches (406 mm) of each side of a joint that is not installed in a vertical orientation, 12 feet (3658 mm) and shall be secured in place, making rigid contact with the duct at not less than 4 equally spaced points or two-thirds contact if strap is used. All brackets or strapping must be noncombustible. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. The overlap shall comply with Section M1601.4.2. Ducts shall not be joined with screws or similar devices that protrude into the inside of the duct. Exhaust ducts joints shall be sealed in accordance with Section M1601.4.1. and shall be mechanically fastened. Ducts shall not be joined with screws or similar fasteners that protrude more than 1/8 inch (3.2 mm) into the inside of the duct. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation. The duct work may be ovalized as long as it terminates in an approved duct box. Minor imperfections located on the duct, in areas other than along the seam, do not constitute a violation.

Reason: Due to the amount of dryer fires in the US every year, 15,000 according to the US Consumer Product Safety Division, I believe the requirement for adding three screws per joint to the exhaust vent of clothes dryers to be overly restrictive, impractical, and a threat to life safety for the following reasons:

- 1. The requirement is for no more than 1/8 inch to protrude into the inside of the duct, 1/4-inch sheet metal screws are as short as available, leaving more than 1/8-inch protrusion inside of the duct. ¼ inch=0.250-inch, 1/8 inch = 0.125 inch, .28 gage metal =0.0157 inch, times two layers equals 0.0314 inch, 0.250 minus 0.0.14=02186. Even if you allow for the curvature of the metal 0.2186 will be greater penetration than the 0.125 that is allowed.
- 2. Screw lengths on a dryer vent are not able to be inspected from the outside. This leaves the inspector to have to remove each screw to ensure the length, and the inspector to replace the screws after the fact (if they do not drop one and just leave the hole in the exhaust). Many of the screws are not within the reach of the inspector, leaving them to try to assume all screws are the same length by taking out only the reachable ones. Rivets are worse, due to the fact that they cannot be checked without drilling them out and replacing them on your own, rendering them as complete unable to be inspected.
- 3. There amount of dryer fires in the US has not been proven to be due to failure of the joints on vents, but has been proven to be due to an accumulation of lint. Adding protrusions to any length into the dryer exhaust will not decrease the probability of more accumulation. However, securing, scaling and supporting each side of the joint of a no-vertical-exhaust will prevent the separation of joints.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 45	M1502.4.2
IRC 2018	IRC 2018 32	M1502.4.2



2024 Code Section: M1502.4.6 Duct length

M1502.4.6 Duct length. The maximum allowable exhaust duct length shall be determined by one of the methods specified in Sections M1502.4.6.1 through M1502.4.6.3. The maximum length of a clothes dryer exhaust duct shall not exceed 35 feet (10668 mm) from the dryer location to the wall or roof termination.

Reason: To coincide with the maximum duct length specified by most clothes dryer manufacturers

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 46	M1502.4.6
IRC 2018	IRC 2018 33	M1502.4.5
IRC 2015	IRC 2015 27	M1502.4.4
IRC 2012	IRC 2012 20	M1502.4.4
IRC 2006	IRC 2006 30	M1502.6



2024 Code Section: M1503.6 Makeup air

M1503.6 Makeup air required. Where one or more gas, liquid or solid fuel burning appliance that is neither direct-vent nor uses a mechanical draft venting system is located within a dwelling unit's air barrier, each exhaust system capable of exhausting in excess of 400 cubic feet per minute (0.19 m³/s) shall be mechanically or passively provided with makeup air at a rate approximately equal to the exhaust air rate. Such makeup air systems shall be equipped with not fewer than one outdoor air duct and damper complying with Section M1503.6.2.

Exception: Makeup air is not required for exhaust systems installed for the exclusive purpose of space cooling and intended to be operated only when windows or other air inlets are open.

Exhaust hood systems capable of exhausting more than 400 cubic feet per minute (0.1 9 m3/s) shall be mechanically or naturally provided with makeup air at a rate approximately equal to the exhaust air rate more than 400 cubic feet (0.19 m3/s) per minute. Such makeup air systems shall be equipped with not less than one damper. Each damper shall be a gravity damper or an electrically operated damper that automatically opens when the exhaust system operates. Dampers shall be accessible for inspection, service, repair and replacement without removing permanent construction or any other ducts not connected to the damper being inspected, serviced, repaired or replaced.

Reason: Makeup air is not required for installations less than 400 cfm.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 47	M1503.6
IRC 2018	IRC 2018 34	M1503.6
IRC 2015	IRC 2015 28	M1503.4

Staff Comments: Changes made in the 2021 IRC are noted in red. The phrase "outdoor air duct and" was added to the section of language removed by modification.



2024 Code Section: M1504.3 Exhaust Openings

M1504.3 Exhaust openings. Air exhaust openings shall terminate as follows:

- 1. Not less than 3 feet (914 mm) from property lines.
- 2. Not less than 3 feet (914 mm) from gravity air intake openings, operable windows and doors except where the exhaust opening is located not less than 1 foot (305 mm) above the gravity air intake opening, operable windows and doors.
- 3. Not less than 10 feet (3048 mm) from mechanical air intake openings except where either of the following apply:
 - 3.1. The exhaust opening is located not less than 3 feet (914 mm) above the air intake opening.
 - 3.2. The exhaust opining is part of a factory-built intake/exhaust combination termination fitting installed in accordance with the fan manufacturer's instructions, and the exhaust air is drawn from a living space.
- 4. In accordance with Section R303.5.2 and R303.6.

Exception: Bathrooms, water closets and shower spaces.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 48	M1504.3
IRC 2018	IRC 2018 35	M1504.3

Staff Comments: Changes made in the 2021 IRC are noted in red. Language was added to number 2, and number 3 was reorganized, with the addition of new language under item 3.2.



2024 Code Section: M1601.4.1 Joints, Seams and Connections

M1601.4.1 Joints, seams and connections. Longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in SMACNA HVAC Duct Construction Standards --Metal and Flexible and NAIMA Fibrous Glass Duct Construction Standards. Joints, longitudinal and transverse seams, and connections in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric systems, liquid sealants or tapes. Tapes and mastics used to seal fibrous glass ductwork shall be listed and labeled in accordance with UL 181A and shall be marked "181A-P" for pressure-sensitive tape, "181 A-M" for mastic or "181 A-H" for heat-sensitive tape.

Tapes and mastics used to seal metallic and flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181 B-FX" for pressure-sensitive tape or "181 BM" for mastic. Duct connections to flanges of air distribution system *equipment* shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply with UL 181B and shall be marked 181B-C. Crimp joints for round metallic ducts shall have a contact lap of not less than 1 inch (25 mm) and shall be mechanically fastened by means of not less than three sheet-metal screws or rivets equally spaced around the joint. Closure systems used to seal all ductwork shall be installed in accordance with the manufacturers' instructions.

Exceptions:

- 1. Spray polyurethane foam shall be permitted to be applied without additional joint seals.
- 2. Where a duct connection is made that is partially without access, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.
- 3. For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams. This exception shall not apply to snap-lock and button-lock type joints and seams that are located outside of conditioned spaces.

Reason: The requirement to seal longitudinal duct joints and seams for commercial applications with static pressure of 2 inches water column and greater. However, this should not apply to residential applicants which operate at a much lower pressure, closer to 0.2 inches water column. One argument to seal all seams and joints is so the duct system functions efficiently. However, whether the longitudinal joints and seams are sealed or not on a low-pressure system has very little effect on system efficiency. To a much greater degree, system efficiency is affected by factors outside of the installer's influence. For example, the duct system can be perfectly balanced at the time of the inspection, but the occupants set furniture in front of registers, change the settings on the registers open and close doors, etc. Sealing the longitudinal joints and seams will not make a noticeable difference in either the efficiency or the energy saved, making the added time and cost unnecessary.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 49	M1601.4.1
IRC 2018	IRC 2018 36	M1601.4.1
IRC 2015	IRC 2015 29	M1601.4.1



2024 Code Section: G2418.2 Design and installation

G2418.2 (407.2) Design and installation. *Piping* shall be supported with metal pipe hooks, metal pipe straps, metal bands, metal brackets, metal hangers or building structural components suitable for the size of *piping*, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration. *Piping* shall be anchored to prevent undue strains on connected *appliances* and shall not be supported by other *piping*. Pipe hangers and supports shall conform to the requirements of MSS SP-58 and shall be spaced in accordance with Section G2424. Supports, hangers and anchors shall be installed so as not to interfere with the free expansion and contraction of the *piping* between anchors. The components of the supporting *equipment* shall be designed and installed so that they will not be disengaged by movement of the supported *piping*.

Reason: To allow other support materials that have been used successfully for years.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 50	G2418.2
IRC 2018	IRC 2018 37	G2418.2
IRC 2015	IRC 2015 30	G2418.2
IRC 2012	IRC 2012 21	G2418.2



2024 Code Section: P2503.6 Shower liner test

P2503.6 Shower liner test. Where shower floors and receptors are made watertight by the application of materials required by Section P2709.2, the completed liner installation shall be tested. The pipe from the shower drain shall be plugged watertight for the test. The floor and receptor area shall be filled with potable water to a depth of not less than 2 inches (51 mm) measured at the threshold. Where a threshold of not less than 2 inches (51 mm) in height does not exist, a temporary threshold shall be constructed to retain the test water in the lined floor or receptor area to a level not less than 2 inches (51 mm) in depth measured at the threshold. The water shall be retained The shower liner shall be tested to the lesser of the depth of threshold or 2 inches (51 mm) and shall be operated at normal pressure for a test period of not less than 15 minutes and there shall not be evidence of leakage.

Reason: To allow a simple test performed under typical conditions

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 51	P2503.6
IRC 2018	IRC 2018 38	P2503.6
IRC 2015	IRC 2015 31	P2503.6
IRC 2012	IRC 2012 22	P2503.6



2024 Code Section: P2503.6 Shower liner test

This modification adds to the language in IRC 2021-51.

P2503.6 Shower liner test. Where shower floors and receptors are made watertight by the application of materials required by Section P2709.2, the completed liner installation shall be tested. The shower liner shall be tested to the lesser of the depth of threshold or 2 inches (51 mm) and shall be operated at normal pressure for a test period of not less than 15 minutes and there shall not be evidence of leakage. The shower liner test shall be performed at the final plumbing inspection.

Reason: To allow a simple test performed under typical conditions

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 52	P2503.6



2024 Code Section: P2603.2.1 Protection against physical damage

P2603.2.1 Protection against physical damage. In concealed locations, where piping, other than cast-iron or galvanized steel, is installed through holes or notches in studs, joists, rafters or similar members less than 1 1/4 inches (31.8 mm) from the nearest edge of the member, the pipe shall be protected by steel shield plates. Such shield plates shall have a thickness of not less than 0.0575 inch (1.463 mm) (No. 16 Gage). Such plates shall cover the area of the pipe where the member is notched or bored, and shall extend not less than 2 inches (51 mm) above sole plates and below top plates. Steel shield plates shall not be secured with nails or screws, unless required by the manufacturer.

P2603.2.1.1. Shield Plates. Shield plates shall be of steel material having a thickness of not less than 0.0575 inch (1.463 mm) (No. 16 gage).

Reason: Clarification

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 53	P2603.2.1

Staff Comments: Changes made in the 2021 IRC are noted in red. The sentence in Section P2603.2.1 was moved to subsection P2603.2.1.1. No apparent substantive changes.



2024 Code Section: P2603.5 Freezing

P2603.5 Freezing. In localities having a winter design temperature of 32°F (0°C) or lower as shown in Table R301.2 of this code, a water, soil or waste pipe shall not be installed outside of a building, in exterior walls, in *attics* or crawl spaces, or in any other place subjected to freezing temperature unless adequate provision is made to protect it from freezing by insulation or heat or both. Water service pipe shall be installed not less than 12 inches (305 mm) deep and not less than 6 inches (152 mm) below the frost line.

Reason: Unusually restrictive

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 54	P2603.5
IRC 2018	IRC 2018 39	P2603.5
IRC 2015	IRC 2015 32	P2603.5



2024 Code Section: P2603.5 Freezing

This modification adds to the language in IRC 2021-54.

P2603.5 Freezing. In localities having a winter design temperature of 32°F (0°C) or lower as shown in Table R301.2 of this code, a water pipe shall not be installed outside of a building, in exterior walls, in *attics* or crawl spaces, or in any other place subjected to freezing temperature unless adequate provision is made to protect it from freezing by insulation or heat or both. Water service pipe shall be installed not less than 12 inches (305 mm) deep and not less than 6 inches (152 mm) below the frost line.

Exception: Water pipes that are installed on the warm in winter side of the building envelope, i.e., above the insulation line in a floor system or below the insulation line in an attic, do not need additional pipe insulation.

Reason: Unusually restrictive

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 55	P2603.5



2024 Code Section: P2705.1(3) General

This modification adds to the language in IRC 2021-14 in (5).

P2705.1 General. The installation of fixtures shall conform to the following:

- 1. Floor-outlet or floor-mounted fixtures shall be secured to the drainage connection and to the floor, where so designed, by screws, bolts, washers, nuts and similar fasteners of copper, copper alloy or other corrosion-resistant material.
- 2. Wall-hung fixtures shall be rigidly supported so that strain is not transmitted to the plumbing system.
- 3. Where fixtures come in contact with walls and floors, the contact area shall be watertight. Exception: Water closets and/or bidets shall not be required to be caulked to flooring surface.
- 4. Plumbing fixtures shall be usable.
- 5. Water closets, lavatories and bidets. A water closet, lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition or vanity or closer than 30 inches (762 mm) 27 inches center-to-center between adjacent fixtures. There shall be a clearance of not less than 21 inches (533 mm) in front of a water closet, lavatory or bidet to any wall, fixture or door.
- 6. The location of piping, fixtures or equipment shall not interfere with the operation of windows or doors.
- 7.In flood hazard areas as established by Table R301.2, plumbing fixtures shall be located or installed in accordance with Section R306.1.6.
- 8. Integral fixture-fitting mounting surfaces on manufactured plumbing fixtures or plumbing fixtures constructed on site, shall meet the design requirements of ASME A112.19.2/CSA B45.1 or ASME A112.19.3/CSA B45.4.

Reason: It has been decided that sealing a toilet/bidet to the floor would prevent witness to possible seal leaks that may go undetected.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 56	P2705.1(3)

Staff Comments: Changes made in the 2024 IRC are noted in red. An imbedded section number was changed under item 7.



2024 Code Section: P2708.4 Shower control valves

P2708.4 Shower control valves. Individual shower and tub/shower combination valves shall be balanced-pressure, thermostatic or combination balanced-pressure/thermostatic valves that conform to the requirements of ASSE 1016/ASME 112.1016/CSA B125.16 or ASME A112.18.1/CSA B125.1. Shower control valves shall be rated for the flow rate of the installed shower head. Such valves shall be installed at the point of use. Shower and tub/shower combination valves required by this section shall be equipped with a means to limit the maximum setting of the valve to 120°F (49°C), which shall be field adjusted in accordance with the manufacturer's instructions to provide water at a temperature not to exceed 120°F (49°C). In-line thermostatic valves shall not be utilized for compliance with this section.

Reason: Unenforceable and ambiguous

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 57	P2708.4



2024 Code Section: P2713.3 Bathtub and whirlpool bathtub valves

P2713.3 Bathtub and whirlpool bathtub valves. Bathtubs and whirlpool bathtub valves shall have or be supplied by a water-temperature-limiting device that conforms to ASSE 1070/ASME A112.1070/CSA B125.70, except where such valves are combination tub/shower valves in accordance with Section P2708.4. The water-temperature-limiting device required by this section shall be equipped with a means to limit the maximum setting of the device to 120°F (49°C), and, where adjustable, shall be field adjusted in accordance with the manufacturer's instructions to provide hot water at a temperature not to exceed 120°F (49°C). Access shall be provided to water-temperature-limiting devices that conform to ASSE 1070/ASME A112.1070/CSA B125.70.

Exception: Access is not required for nonadjustable water-temperature-limiting devices that conform to ASSE 1070/ASME A112.1070/CSA B125.70 and are integral with a fixture fitting, provided that the fixture fitting itself can be accessed for replacement.

Hot water supplied to bathtubs and whirlpool bathtubs shall be limited to a temperature of not greater than 120°F (49°C) by a water-temperature limiting device that conforms to ASSE 1070/ASME A112.1070/CSA B125.70 or CSA B125.3, except where such protection is otherwise provided by a combination tub/shower valve in accordance with Section P2708.4.

Reason: New language is unenforceable and ambiguous. Reverts language back to 2018 IRC.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 58	P2713.3



2024 Code Section: P2903.10 2903.11 Hose bibb

Section deleted without substitution.

P2903.11 Hose bibb. Hose bibbs subject to freezing, including the "frostproof" type, shall be equipped with an accessible stop-and-waste-type valve inside the building so that they can be controlled and drained during cold periods.

Exception: Frostproof hose bibbs installed such that the stem extends through the building insulation into an open heated or *semiconditioned space* need not be separately valved (see Figure P2903.11).

Reason: Unusually restrictive

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 60	P2903.10
IRC 2018	IRC 2018 40	P2903.10
IRC 2015	IRC 2015 33	P2903.10

Staff Comments: Changes made in the 2024 IRC are noted in red. The section number, as well as an imbedded Figure number, were changed.



2024 Code Section: P2904.2.4.2.1 Additional requirements for pendant sprinklers.

P2904.2.4.2.1 Additional requirements for pendent sprinklers. Pendent sprinklers within 3 feet (915 mm) of the center of a ceiling fan, surface mounted ceiling luminaire or similar object shall be considered to be obstructed, and additional sprinklers shall be installed.

Exception: Pendant sprinklers within 3 feet (915 mm) of the center of a ceiling fan shall not be considered to be obstructed if the total area of the fan blades do not exceed more than 50 percent of the plan area view.

Reason: To reconcile SC IRC P2904.2.4.2.1 to agree with NFPA 13D 8.2.5.1.4 that is considered to be equal to SC IRC P2904.

NFPA 13D-2016, 8.2.5.1.4: Where area of the fan blades encompass more than 50% of the area of the plan view, the sprinkler shall be installed in accordance with 8.2.5.3.

Cost analysis for this modification: the cost of the residential sprinkler protection in the affected fan areas are reduced by as much as 50% with no reduction in the effectiveness of the fire sprinkler performance.

Proponent: South Carolina Master Plumbers Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 62	P2904.2.4.2.1



2024 Code Section: E3606.5 Surge protection.

Section is deleted without substitution.

E3606.5 Surge protection. All services supplying one—and two family dwelling units shall be provided with a surgeprotective device (SPD) installed in accordance with Sections E3606.5.1 through E3606.5.3.

E3606.5.1 Location. The SPD shall be an integral part of the service equipment or shall be located immediately adjacent thereto.

Exception: The SPD shall not be required to be located in the service equipment if located at each next level distribution equipment downstream toward the load.

E3606.5.2 Type. The SPD shall be a Type 1 or Type 2 SPD.

E3606.5.3 Replacement. Where service equipment is replaced, all of the requirements of this section shall apply. [230.67]

E3606.5.4 Ratings. SPDs shall have a nominal discharge current rating (In) of not less than 10 kA. [230.67]

Reason: Delete the entire section as the requirement does not cover low voltage systems, and cannot provide complete coverage from surges outside of the incoming service line. This language would also foster an unreasonable and unenforceable implied warranty. The additional costs do not justify any potential benefits.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 66	P2904.2.4.2.1

Staff Comments: Changes made in the 2024 IRC are noted in red. Sections E3606.5 through E3606.5.3 were deleted by prior modification, but a new subsection, E3606.5.4 Ratings, was added to the 2024 IRC.



2024 Code Section: E3802.4 In unfinished basements

E3802.4 In unfinished basements and crawl spaces. Where Type NM or SE cable is run at angles with joists in unfinished basements and crawl spaces, cable assemblies containing two or more conductors of sizes 6 AWG and larger and assemblies containing three or more conductors of sizes 8 AWG and larger shall not require additional protection where attached directly to the bottom of the joists. Smaller cables shall be run either through bored holes in joists or on runningboards. Type NM or SE cable installed on the wall of an unfinished basement shall be permitted to be installed in a *listed* conduit or tubing or shall be protected in accordance with Table E3802.1. Conduit or tubing shall be provided with a suitable insulating bushing or adapter that provides protection from abrasion at the point where the cable enters and exits the raceway. The sheather of the Type NM or SE cable shall extend through the conduit or tubing and into the outlet, device or junction box not less than 1/4 inch (6.4 mm). The cable shall be secured within 12 inches (305 mm) of the point where the cable enters the conduit or tubing. Metal conduit, tubing, and metal outlet boxes shall be connected to an equipment grounding conductor complying with Section E3908.14. [334.15(C)]

Reason: Unusually restrictive

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 67	E3802.4
IRC 2018	IRC 2018 42	E3802.4
IRC 2015	IRC 2015 35	E3802.4

Staff Comments: Changes made to the language in the 2024 IRC are noted in red.



2024 International Residential Code

South Carolina Building Codes Council Modification Continuations from 2021

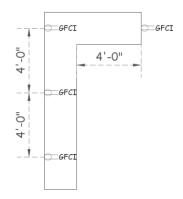
2024 Code Section: E3901.4.2 Island and peninsular countertops and work spaces surfaces.

E3901.4.2 Island and peninsular countertops and work spaces surfaces. Receptacle outlets shall be, if installed to serve an island or peninsular countertop or work surface, shall be installed in accordance with the following: [210.52(C)(2)] Section E3901.4.3. If a receptacle outlet is not provided to serve an island or peninsular countertop or work surface, provisions shall be provided at the island or peninsula for future addition of a receptacle outlet to serve the island or peninsular countertop or work surface.

- 1. At least one receptacle outlet shall be provided for the first 9 square feet <u>6 feet (1829 mm) of length</u> (0.84 m2), or fraction thereof, of the countertop or work surface. A receptacle outlet shall be provided for every additional 18 square feet (1.7 m2), or fraction thereof, of the countertop or work surface. [210.52(C)(2)(a)] <u>A minimum of two receptacle outlets</u> shall be provided for any island over 6 feet (1829 mm) long.
- 2.At least one receptacle outlet shall be located within 2 feet (600 mm) of the outer end of a peninsular countertop or work surface. Additional receptacle outlets shall be permitted to be located as determined by the installer, designer or building owner. The location of the receptacle outlets shall be in accordance with Section E3901.4.3.

 [210.52(C)(2)(b)]

Reason: The requirement for peninsular countertops of 24 inches (610 mm) is too restrictive, as corded appliances would be within 48 inches of the connecting wall and outlet. The 2015 IRC noted the countertop was to be measured from the connecting edge and was drawn (Figure 3901.4) as such. The 2018 IRC changed the language, however did not change the drawing. The language should be changed to that of the 2015 IRC to follow Figure 3901.4. The picture below should be used as a guide for an approved peninsular countertop space and positioning of outlets.



Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 69	E3901.4.2
IRC 2018	IRC 2018 43	E3901.4.3

Staff Comments: Changes made in the 2024 IRC are noted in red above. The title was changed, language was added to the main body, and items 1 and 2 were deleted. The original modification language submitted by the HBASC is below, but the section has been reworded in both the 2021 and 2024 editions of the IRC, and requires review to determine if the modification is still necessary or meets the original intent.



2024 Code Section: E3902 Ground-fault and Arc-fault Circuit Interrupted Protection

Entire section E3902.1 - E3902.18 modified to remove "through 250 volt" from text.

SECTION E3902

GROUND-FAULT AND ARC-FAULT CIRCUIT-INTERRUPTER PROTECTION

Section E3902 now extends from E3902.1 to E3902.22.

Reason: The amendment removes the requirements for AFCI devices for residential dwelling units, including one- and two-family homes. Reasoning includes cost savings, citing that families who cannot qualify to purchase homes due to the increased costs from mandatory code requirements, such as AFCIs, will have to live in housing that is less safe, because that housing was built to less stringent code requirements. The total cost to homebuyers to install AFCIs is over \$430,000,000 per year—24 times the cost of damage per year, and it is clear that requiring AFCIs in new construction will not prevent all damage. This is due to the fact that AFCIs cannot prevent all fires and, more importantly, that electrical fires occur overwhelmingly in older houses. From 1980 to 2015, there has been a significant drop in the number of reported fires, injuries and fatalities in the US. Both the number of fires and fatalities have dropped by approximately 50%, even as the population increased. The decline was sharpest during the 1980s, before AFCIs were introduced. This further supports the importance of encouraging homeowners to move up to newer homes without the added burden of increased regulation.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 70	E3902

Staff Comments: Changes made to the 2024 IRC are noted in red above. Section E3902 now has 22 subsections, where the previous modification references only 18 subsections.



2024 Code Section: E3902.5 Basement receptacles

This modification adds to the modified language in IRC 2021-70.

E3902.5 Basement receptacles. 125-volt receptacles installed in basements and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel. [210.8(A)(5)]

Exceptions:

- 1. A receptacle supplying only a permanently installed fire alarm or burglar alarm system. A receptacle installed in accordance with this exception shall not be considered as meeting the requirement of Section E3901.9. Receptacles installed in accordance with this exception shall not be considered as meeting the requirement of Section E3901.9. [210.8(A)(5) Exception]
- 2. Receptacles in walk-out basements are excluded from this requirement.

Reason: A finished basement is not noted as a wet areas and their addition is not needed or required.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 71	E3902.5

Staff Comments: Changes made to the 2024 IRC are noted in red above. Item 1 was deleted.



2024 Code Section: E3902.17 3902.21 Arc-fault circuit interrupter protection.

E3902.21 Arc-fault circuit interrupter protection. In areas other than kitchen and laundry areas, Bbranch circuits that supply 120-volt, single-phase, 15- and 20- ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreations rooms, closets, hallways, laundry areas and similar rooms or areas shall be protected by any of the following: [210.12(A)]

(language in items 1 - 6 unchanged)

Reason: No accurate SC-specific data substantiates a need for AFCI. Data collected over a 12-year period (2002-2023) shows that there was an estimated average of 0.6 civilian deaths per year in fires caused by electrical arcing in one- and two-family homes, and an estimated total of five civilian injuries. An average of 19 fires were caused annually by electrical arcing, and the average annual total damage from fires caused by electrical arcing in both property and contents adjust to 2013 dollars was \$438, 349. The costs association with AFCI don't even take into account the added expense of nuisance trips. Due to these and other findings, 29 states have either removed or made amendments to AFCI and GFCI provisions. Mandating costly incremental increases in safety will not only protect those who can afford them, and will often decrease safety for those who cannot.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 71	E3902.17
IRC 2018	IRC 2018 44	E3902.16

Staff Comments: Changes made to the 2024 IRC are noted in red above. The section number was changed, and minor language changes were made to items 1-6 (note included in the original modification), but none affect the content.



2024 Code Section: E4002.14 Tamper-resistant receptacles.

E4002.14 Tamper-resistant receptacles. In areas specified in Section E3901.1, 15- and 20-ampere, 125- and 250-volt nonlocking-type receptacles shall be *listed* tamper-resistant receptacles. [406.12]

Exception: Receptacles in the following locations shall not be required to be tamper resistant:

- 1. Receptacles located more than 5.5 feet (1676 mm) above the floor.
- 2. Receptacles that are part of a luminaire or appliance.
- 3. A single receptacle that is not readily accessible that supplies a single appliance or a duplex receptacle that is not readily accessible and supplies two appliances where such receptacles are located in spaced occupied by or designated for the appliances served and, under conditions of normal use, the appliances are not easily moved from one place to another. The appliances shall be cord-and-plug-connected to such receptacles in accordance with Section E3909.4 [406.12 Exception]

Reason: This amendment retains the provisions of the 2017 NEC. It was added in the 2008 NEC and is not based on sound technical information which adequately substantiates that it will result in protecting small children from burns or injury. Concerns were raised over the comprehensiveness of the studies used to substantiate this amendment, as well as how the elderly community would be able to use the tamper-resistant receptacles due to the amount of force required to be applied to insert the plugs.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 75	E4002.14

Staff Comments: Changes made to the 2024 IRC are noted in red above. Exceptions 1-3 were added.



2024 Code Section: Chapter 44 Referenced Standards

With the removal of the ANCE reference, and the changes to the CSA and UL standards, both the CSA and UL references now read as below.

UL/CSA/ANCE 60335-2-40 --2022 2019: Standard for Household and Similar Electrical Appliances-Safety-Part 2-40: Particular Requirements for Motor-compressors Electrical Heat Pumps, Air-Conditioners and Dehumidifiers

M1402.1, M1403.1, M1412.1, M1413.1, M2006.1

Reason: Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for most new products because UL 1995 was made obsolete effective 1/1/2024. The newest 3rd edition of UL 60335-2-40 [at the time of the original modification], published November 2019, has many new requirements for electrical and refrigerant safety. It includes requirements for UV-C germicidal lamp systems, CO2 systems, photovoltaic systems, new marking requirements, water ingress rating systems, as well as allowance for Low Global Warming Potential (GWP) Group A2L refrigerants. Nationally Recognized Testing Laboratories (or NRTLs) will use the latest version of the UL 60335-2-40 for certification testing. There references to ANCE as a sponsor of this UL/CSA 60335-2-40 standards has been removed, as ANCE in Mexico withdrew from the 3rd edition, and is no longer associated with this standard after the 2nd edition. The titles shown in Chapter 44 for UL/CSA 60335-2-40 have been updated to reflect the current title of the standards.

Proponent: Air-Conditioning, Heating and Refrigeration Institute

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 76	Chapter 44

Staff Comments: Changes made to the 2024 IRC are noted in red above. The ANCE reference was removed, and the CSA and UL standards were updated to match.



2024 Code Section: Appendix AH BF Patio Covers

Appendix BF, Patio Covers, is adopted for use statewide.

Reason: To provide minimum requirements for patio covers for the protection of people

and property

Proponent: Structural Engineers Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 77	Appendix AH
IRC 2018	IRC 2018 45	Appendix H
IRC 2015	IRC 2015 36	Appendix H
IRC 2012	IRC 2012 25	Appendix H

Staff Comments: Changes made in the 2024 IRC are noted in red. Appendix "AH" was changed to "BF".



2024 Code Section: Appendix AJ BO Existing Buildings and Structures

Appendix **BO** is adopted for use statewide.

Reason: To provide guidance for renovating, modifying or updating residential structures in applying the IRC and to help with uniform enforcement of the IRC on renovation projects across the state.

Proponent: Structural Engineers Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 78	Appendix AJ
IRC 2018	IRC 2018 46	Appendix J
IRC 2015	IRC 2015 37	Appendix J

Staff Comments: Changes made in the 2024 IRC are noted in red. Appendix "AJ" was changed to "BO".



2024 Code Section: Appendix AQ BB Tiny Houses

Appendix BB is adopted for use statewide.

Reason: Jurisdictions will have more options and flexibility to approve small home

construction.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 79	Appendix AQ
IRC 2018	IRC 2018 47	Appendix Q

Staff Comments: Changes made in the 2024 IRC are noted in red. Appendix "AQ" was changed to "BB".



2024 International Building Code South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: [A] 101.4.7 Existing Buildings

[A] 101.4.7 Existing buildings. The provisions of the International Existing Building Code shall apply to matters governing the repair, alternation, change of occupancy, addition to and relocation of existing buildings.

<u>101.4.7.1 Structural concrete.</u> In addition, assessment, repairs, and restoration of structural concrete in accordance with ACI 562 shall be permitted.

Exception:

ACI 562 shall not be used for the evaluation or design of repairs or rehabilitation of elements of seismic force-resisting system that result in strength, stiffness, or ductility of those elements different from the pre-damage condition.

Add new referenced standard to Chapter 35 as follows:

ACI American Concrete

Institute 38800

Country Club Drive

Farmington Hills, MI

48331

Standard reference number Title Referenced in code section number

<u>562-19 Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures</u>

101.4.7.1

Reason: To establish minimum requirements for the evaluation, design, construction, repair and rehabilitation of concrete structural elements in existing buildings.

Proponent: American Concrete Institute (ACI)

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 01	[A] 101.4.7



2024 International Building Code South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 202 Definitions

Vapor Retarder, Ground Contact: Ground contact vapor retarder class shall be defined using the requirements of ASTM E1745, Class A, B, or C-Standard specification for water vapor retarders used in contact with soil or granular fill under concrete slabs.

Primitive Camp Structure: Shall include any structure permanent or temporary in nature, used for outdoor camping (transient), open on at least one side with no fully enclosed habitable spaces, less than 400 square feet under roof, and not classified as a residential occupancy due to lack of electrical, plumbing, mechanical and sprinkler systems.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 02	202
IBC 2018	IBC 2018 01	202



2024 International Building Code

South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 303.4 Assembly Group A-3

Add to the listing of A-3 occupancies the following use: Structures, without a commercial kitchen, used in agritourism activity as defined by S.C. Code Ann. 46-53-10(1).

303.4 Assembly Group A-3. Group A-3 occupancy includes assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A including, but not limited to:

Amusement arcades

Art galleries

Bowling alleys

Community halls

Courtrooms

Dance halls (not including food or drink consumption)

Exhibition halls

Funeral parlors

Greenhouses for the conservation and exhibition of plants that provide public

access

Gymnasiums (without spectator seating)

Indoor swimming pools (without spectator seating)

Indoor tennis courts (without spectator seating)

Lecture halls

Libraries

Museums

Places of religious worship

Pool and billiard parlors

Structures, without a commercial kitchen, used in agritourism activity as defined by S.C. Code Ann. 46-53-10(1)

Waiting areas in transportation terminals

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 04	303.4
IBC 2018	IBC 2018 02	303.4



2024 International Building Code

South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 312.1 General

The term "Primitive Camp Structure" is added to the list of examples in this section for Group U.

312.1 General. Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

Agricultural buildings

Aircraft hangars, accessory to a one- or two-family residence (see Section 412.4)

Barns

Carports

Communication equipment structures with a gross floor area of less than 1,500 square feet (139 m2)

Fences more than 7 feet (2134 mm) in height

Grain silos, accessory to a residential occupancy

Livestock shelters

Primitive Camp Structures

Private garages

Retaining walls

Sheds

Stables

Tanks

Towers

Reason: "Structures primarily used or associated with outdoor camping activities" include, but are not limited to, shelters, tree stands, sheds, rustic cabins, campfire shelters, shelters, tents, tepees, or other indigenous huts used only for campers or program participants, or used in conjunction with outdoor camping activities such as hiking, fishing, hunting, or nature appreciation, regardless of material used for construction. These structures are not to include utilities such as mechanical, electrical or plumbing. Requiring that at least one side of the building be open will provide ventilation for any outside hearing source or propane lighting that may be used within the structure, and provide a clear path of egress travel to the outside. Limiting the size to 400 square feet will require larger buildings to be classified as a residential structure. Not allowing electrical, plumbing or mechanical systems will maintain the integrity of a primitive structure.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 05	312.1
IBC 2018	IBC 2018 03	312.1



2024 International Building Code South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 706.1 General

706.1 General. Fire walls shall be constructed in accordance with Sections 706.2 through 706.11. Each portion of a building separated by one or more firewalls may be considered a separate building. The extent and location of such fire walls shall provide a complete separation. Where a fire wall separates occupancies that are required to be separated by a fire barrier wall, the most restrictive requirements of each separation shall apply.

Reason: N/A

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 07	706.1
IBC 2018	IBC 2018 05	706.1



2024 International Building Code

South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 1010.2.14 1010.2.13 Controlled egress doors in Group I-1, I-2 and I-4 (Adult Day Care Occupancy only)

1010.2.13 Controlled egress doors in Groups I-1, I-2, and I-4 (Adult Day Care Occupancy only).

Controlled egress electrical locking systems where egress is controlled by authorized personnel, including electromechanical locking systems and electromagnetic locking systems, shall be permitted to be locked on doors in the means of egress in Group I-1, I-2, and I-4 (Adult Day Care occupancy only) occupancies where the clinical needs of persons receiving care require their containment. Controlled egress doors shall be permitted in such occupancies where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved automatic smoke detection system* installed in accordance with Section 907, provided that the doors are installed and operate in accordance with all of the following:

- 1. The door's electric locks shall unlock on actuation of the *automatic sprinkler system* or *automatic smoke detection system*.
- 2. The door's electric locks shall unlock on loss of power to the electrical locking system or to the electric lock mechanism allowing immediate free egress controlling the lock or lock mechanism.
- 3. The door electric locking system shall be installed to have the capability of being unlocking the electric locks by a switch located at the *fire command center*, a nursing station or other *approved* location. The switch shall directly break power to the electric lock.
- 4. A *building* occupant shall not be required to pass through more than one door equipped with a controlled egress locking system before entering an exit.
- 5. The procedures for unlocking the doors shall be described and *approved* as part of the emergency planning and preparedness required by Chapter 4 of the *International Fire Code*.
- 6. All clinical staff shall have the keys, codes or other means necessary to operate the controlled egress electrical locking systems
- 7. Emergency lighting shall be provided at the door.
- 8. The door electromechanical or electromagnetic device locking system units shall be *listed* in accordance with either UL 294 or UL 1034.

Exceptions:

- 1. Items 1 through 4 shall not apply to doors to areas occupied by *persons* who, because of clinical needs, require restraint or containment as part of the function of a psychiatric or cognitive treatment area.
- 2. Items 1 through 4 shall not apply to doors to areas where a *listed* egress control system is utilized to reduce the risk of child abduction from nursery and obstetric areas of a Group I-2 *hospital*.

Reason: To prevent nuisance alarms and reduce elopement issues when serving clients with Dementia or Alzheimer's, or similar health care issues.

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 10	1010.2.14

Staff Comments: Changes made in the 2024 IBC are noted in red. The section number was changed, and language was added to account for electric locks and locking systems.



2024 International Building Code

South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 1016.2 Egress through intervening spaces

1016.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section.

- 1. Exit access through an enclosed elevator lobby is permitted. Where access to two or more exits or exit access doorways is required in Section 1006.2.1, access to not less than one of the required exits shall be provided without travel through the enclosed elevator lobbies required by Section 3006 of the South Carolina Building Code. Where the path of exit access travel passes through an enclosed elevator lobby, the level of protection required for the enclosed elevator lobby is not required to be extended to the exit unless direct access to an exit is required by other sections of this code.
- 2. In other than Group H occupancies, egress from a room or space shall not is allowed to pass through adjoining or intervening rooms or areas, except where provided that such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an exit.
- 3. In Group H occupancies, egress from a room or space is allowed to pass through adjoining or intervening rooms or areas provided that such adjoining rooms or areas are the same or lesser hazard occupancy group and provide a discernible path of egress travel to an *exit*.

Exception: Means of egress are not prohibited through adjoining or intervening rooms or spaces in a Group H, S or F occupancy where the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

4. An exit access shall not pass through a room that can be locked to prevent egress.

Exception: An electrically locked exit access door providing egress from an elevator lobby shall be permitted in accordance with Section 1010.2.14.

5. Means of egress from dwelling units or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms.

Exception: Dwelling units or sleeping areas in R-1 and R-2 occupancies shall be permitted to egress through other sleeping areas serving adjoining rooms that are part of the same dwelling unit or guest room.

6. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes.

Exceptions:

- 1. *Means of egress* are not prohibited through a kitchen area serving adjoining rooms constituting part of the same *dwelling unit* or *sleeping unit*.
- Means of egress are not prohibited through stockrooms in Group M occupancies where all of the following are met:
 - 2.1. The stock is of the same hazard classification as that found in the main retail area.
 - 2.2. Not more than 50 percent of the exit access is through the stockroom.
 - 2.3. The stockroom is not subject to locking from the egress side.
 - 2.4. There is a demarcated, minimum 44-inch-wide (1118 mm) aisle defined by full- or partial-height fixed walls a wall not less than 42 inches (1067 mm) high or similar construction that will maintain the required width and lead directly from the retail area to the exit without obstructions.

Continued



2024 International Building Code

South Carolina Building Codes Council Proposed Modification Continuations from 2021

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 11	1016.2
IBC 2018	IBC 2018 10	1016.2

Staff Comments: Changes made in the 2024 IBC are noted in red. Number 2 was reworded, number 3 was added with an exception, and an exception was added to number 4.



2024 Code Section: 1803.2 Investigation required

1803.2 Investigations required. Geotechnical investigations shall be conducted in accordance with Sections 1803.3 through 1803.5.

Exceptions:

- 1. The *building official* shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data from adjacent areas is available that demonstrates an investigation is not necessary for any of the conditions in Sections 1803.5.1 through 1803.5.6 and Sections 1803.5.10 and 1803.5.11.
- 2. For single story buildings not more than 5,000 sq ft and not more than 30ft in height, a site specification investigation report is not required if the seismic design category is determined by the design professional in accordance with Chapter 20 of ASCE 7.

Reason: The IBC requires a geotechnical investigation for all projects regardless of size. The only exception which allows the building official to waive the requirements puts unnecessary liability on the building official to determine if adequate information can be gathered from adjacent sites. In areas that must account for seismic activity, the conditions may vary in as few as 100 yards. For large commercial projects, the soil conditions may have a drastic effect on the design of the structure; however, for smaller projects the soil condition has significantly less bearing on its design. It is often determined on small projects that the soil conditions do not have an effect on the design of the structure. See ASCE 7-20-3-1, Exception. Each of the equations results in a period of vibration of less than 0.5 seconds and exceeds the size of a typical one-story structure.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 14	1803.2
IBC 2018	IBC 2018 11	1803.2



2024 International Building Code

South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 1907.1 1907.4 General Vapor Retarder

1907.4 Vapor retarder. The thickness of concrete floor slabs supported directly on the ground shall not be less than 3 ½ inches (89mm). A 10-mil (0.010 inch) polyethylene ground contact vapor retarder with joints lapped not less than 6 inches (152 mm) shall be placed between the base course or subgrade and the concrete floor slab, or other approved equivalent methods or materials shall be used to retard vapor transmission through the floor slab.

Exceptions: A vapor retarder is not required:

- 1. For detached *structures* accessory to occupancies in Group R-3, such as garages, utility *buildings* or other unheated *facilities*.
- 2. For unheated storage rooms having an area of less than 70 square feet (6.5 m2) and carports attached

to occupancies in Group R-3.

3. For *buildings* of other occupancies where migration of moisture through the slab from below will

not be detrimental to the intended occupancy of the building.

- 4. For driveways, walks, patios and other flatwork that will not be enclosed at a later date.
- 5. Where approved based on local site conditions.

Reason: Bring into compliance with the American Concrete Institute standards.

Proponent: Structural Engineers' Association of SC

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 16	1907.1
IBC 2018	IBC 2018 12	1907.1

Staff Comments: Changes made in the 2024 IBC are noted in red. The section number and title changed. Sections 1907.1 through 1907.3 were added in the 2024 IBC, but there were no changes to the language modified in the 2021 IBC under Section 1907.1, now moved to Section 1907.4.



2024 Code Section: 2303.2.2 2303.2.3 Other means during manufacture

2303.2.3 Other means during manufacture. For wood products impregnated with chemicals by other means during manufacture, the treatment shall be an integral part of the manufacturing process of the wood product. The treatment shall provide permanent protection to all surfaces of the wood product. The use of paints, coating, stains or other surface treatments is not an approved method of protection as required in this section.

Reason: The language in the 2018 code would prevent the use of methods for the treatment of fire retardant treated wood that have been in use since at least 2009. We're not aware of any issues with products that have been tested in accordance with code requirements.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 17	2303.2.2
IBC 2018	IBC 2018 13	2303.2.2

Comments: Changes made in the 2024 IBC are noted in red. Section number only.



2024 Code Section: [P] 2902.1.1 Fixture calculations

[P] 2902.1.1 Fixture calculations. To determine the occupant load of each sex, the total occupant load shall be divided in half. To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the occupant load of each sex in accordance with Table 403.1. Fractional numbers resulting from applying the fixture ratios of Table 403.1 shall be rounded up to the next whole number. For calculations involving multiple occupancies, such fractional numbers for each occupancy shall first be summed and then rounded up to the next whole number.

Exceptions:

- 1. The total occupant load shall not be required to be divided in half where *approved* statistical data indicate a distribution of the sexes of other than 50 percent of each sex.

 2. Where multiple-user facilities are designed to serve all genders, the minimum fixture count shall be calculated 100 percent, based on total occupant load. In such multiple-user facilities, each fixture type shall be in accordance with ICC A117.1 ["and each urinal that is provided shall be located in a stall" deleted].
- 3. Distribution of the sexes is not required where single-user water closets and bathing room fixtures are provided in accordance with Section 403.1.2.

Reason: Gender-neutral gang-type bathrooms pose a serious threat to the health and safety of all by increasing the incident of sexual violence against women and children, as well as increasing the incident of wrongful accusations of assault, voyeurism, and the like. Gender-neutral gang-type bathrooms also undermine and reduce the "safe spaces" for victims of human trafficking, as well as discriminating against women and children by disproportionately decreasing the available number of bathroom spaces for women and children, while men will have access to both water closet compartments and urinal spaces. In addition, the common use sink space discriminates against women and children by disproportionately decreasing the area available for women to address personal needs, such as menstrual or other medical care, nursing and baby changing activities.

Proponent:

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 19	[P] 2902.1.1

Staff Comments: Changes made in the 2024 IBC are noted in red above. Exception 3 was deleted, but the change does not affect the modification request. Exception 2 was also modified in the 2024 IBC; however, the modification deletes that exception entirely.



2024 International Building Code South Carolina Building Codes Council

Proposed Modification Continuations from 2021

2024 Code Section: [P] 2902.2 Separate facilities

[P] 2902.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

- 1. Separate facilities shall not be required for dwelling units and sleeping units.
- 2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.
- 3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 100 or fewer.
- 4. Separate facilities shall not be required in business occupancies in which the maximum occupant load is 25 or fewer.
- 5. Separate facilities shall not be required to be designated by sex where single-user toilet rooms are provided in accordance with Section 403.1.2.
- 6. Separate facilities shall not be required where rooms having both water closets and lavatory fixtures are designed for use by ["both sexes"-deleted] all persons regardless of sex and privacy is provided for water closets ["is provided"-deleted] in accordance with Section 405.3.4, and for urinals in accordance with Section 405.3.5. ["Urinals shall be located in an area visually separated from the remainder of the facility or each urinal that is provided shall be located in a stall. - deleted"]

Reason: Exception 6 is not necessary, as Exceptions 1-5 provide sufficient guidance and latitude for business, schools, churches and other similar large-capacity spaces, to provide gender-neutral spaces with adequate privacy protections.

Proponent:

Previous Code Cycles	Previous Modification Number	Previous Code Section
IBC 2021	IBC 2021 20	[P] 2902.2

Staff Comments: Changes made in the 2024 IPC are noted in red. Minor changes were made to exception 6 in the 2024 IPC, however, this exception is deleted by SC modification and the changes are irrelevant.



2024 Code Section: Appendix H Signs

Appendix H is adopted for use statewide.

Reason: To provide minimum requirements for signs for the protection of people and

property.

Proponent: Structural Engineers Association of South Carolina

Previous Code Cycles	Previous Modification	Previous Code Section
	Number	
IBC 2021	IBC 2021 18	Appendix H
IBC 2018	IBC 2018 14	Appendix H
IBC 2015	IBC 2015 07	Appendix H
IBC 2012	IBC 2012 05	Appendix H



2024 Code Section: 202 General definitions

Primitive Camp Structure. Shall include any structure permanent or temporary in nature, used for outdoor camping (transient), open on at least one side with no fully enclosed habitable spaces, less than 400 square feet under roof, and not classified as a residential occupancy due to lack of electrical, plumbing, mechanical, and sprinkler systems.

Reason: "Structures primarily used or associated with outdoor camping activities" include, but are not limited to, shelters, tree stands, sheds, rustic cabins, campfire shelters, shelters, tents, tepees, or other indigenous huts used only for campers or program participants, or used in conjunction with outdoor camping activities such as hiking, fishing, hunting, or nature appreciation, regardless of material used for construction. These structures are not to include utilities such as mechanical, electrical or plumbing.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 02	202
IFC 2018	IFC 2018 02	202



2024 International Fire Code South Carolina Building Codes Council

Proposed Modification Continuations from 2021

2024 Code Section: 202 General definitions

Recreational Fire. An outdoor fire burning materials other than rubbish where the fuel being burned is not contained in an incinerator, outdoor fireplace, portable outdoor fireplace, barbeque grill or barbeque pit and has a total fuel area of 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height for pleasure, religious, ceremonial <u>to include sky lanterns</u>, cooking, warmth or similar purposes.

Reason: The definition of sky lanterns is being proposed to be added to the IFC. The Office of the State Fire Marshal is regularly asked for clarification regarding these devices and how they are being addressed in the IFC. The language in the code for "recreational fire" could be interpreted to exclude sky lanterns. These devices are a serious threat to property and are a life safety hazard. Their use presents a fire hazard caused by their release with no means of control. A sky lantern can achieve great height and distance from its launch area. The final destination is undetermined and these sky lanterns have been known to cause uncontrolled fires.

Proponent: South Carolina Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 04	202
IFC 2018	IFC 2018 01	202
IFC 2015	IFC 2015 01	202
IFC 2012	IFC 2012 01	202



South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 202 General definitions [BG] 203.2.8 Assembly Group A-3.

[BG] 203.2.8 Assembly Group A-3. Group A-3 occupancy includes assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A, including, but not limited to:

Amusement arcades

Art galleries

Bowling alleys

Community halls

Courtrooms

Dance halls (not including food or drink consumption)

Exhibition halls

Funeral parlors

Greenhouses with public access for the conservation and exhibition of plants that provide public

access

Gymnasiums (without spectator seating)

Indoor swimming pools (without spectator seating)

Indoor tennis courts (without spectator seating)

Lecture halls

Libraries

Museums

Places of religious worship

Pool and billiard parlors

Structures without a commercial kitchen, used in agritourism activity as defined by South Carolina

Code Ann. 46-53-10(1)

Waiting areas in transportation terminals

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IRC 2021	IRC 2021 03	202
IFC 2018	IFC 2018 03	202

Staff Comments: Changes made in the 2024 IRC are noted in red. The title and section number changed, and the item for greenhouses was rearranged.



2024 Code Section: 315.3.3 Equipment rooms

315.3.3 Equipment rooms. <u>Combustible</u> material shall not be stored in boiler rooms, mechanical rooms, elevator machine rooms, electrical equipment rooms or in *fire command centers* as specified in Section 508.1.5. <u>Rooms shall be labeled with approved signage</u> "No storage allowed".

Reason: This would permit the authority having jurisdiction to have the owner/occupant label the rooms as "No storage allowed".

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 05	315.3.3



2024 Code Section: 319.11 4106.6 Clearance requirements

4106.6 Clearance Requirements. Mobile cooking operations shall be separated from buildings, structures, canopies, tents, combustible materials, vehicles, and other cooking operations by a minimum of 10 feet (3048 mm). Exhaust shall be directed away from openings, air intakes and away from any means of egress.

Reason: To establish allowable distances between food trucks and similar structures.

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 07	319.11

Staff Comments: Changes made in the 2024 IRC are noted in red. The section was moved to Chapter 41.



2024 Code Section: 503.1.2 Additional access

503.1.2 Additional access. The *fire code official* is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

Exception: Where two fire apparatus access roads are required by Section 503.1.2, the additional fire apparatus access road is permitted to be a driveway, pathway, court or other approved fire lane not accessible to public motor vehicles where designed by a registered design professional to meet the loading requirements and minimum specifications of Section 503, and the surface provides all-weather driving capabilities. Marking or signs shall be provided in accordance with Section 503.3 and Section D103.6.

Reason: To permit fire apparatus access roads to be a driveway, pathway, or other approved surface that creates a fire lane not accessible to motor vehicles.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 08	503.1.2



2024 Code Section: 503.1.2.1 One-or two-family dwelling residential developments having less than 40 units & 503.1.2.2 Future development

503.1.2.1 One- or two-family dwelling residential developments having less than 50 units.

Developments of one- or two-family dwellings where the number of dwelling units does not exceed 50 shall be permitted to have a single approved fire apparatus access road provided all of the following requirements are met.

- 1. The minimum unobstructed width of the single fire apparatus access road shall be 26 feet (7925 mm) and shall otherwise comply with Section 503.
- 2. A minimum of one fire hydrant on each side of the fire apparatus access road in accordance with Section 507.5 shall be provided. The fire code official shall be permitted to require additional hydrants and hydrant spacing based on the length of the fire apparatus access road, fire flow requirements, and the distance from any point on the street or road frontage to a hydrant.
- 3. The development is not located in a wildland-urban interface area as defined in the International Wildland-Urban Interface Code.

503.1.2.2 Future development. The number of dwelling units on a single fire apparatus access road shall not be increased unless fire apparatus access roads will connect with future development, as determined by the *fire code official*.

Reason: To add an exception that raises the trigger for a second fire apparatus access road to 50 dwellings if the width is 26 feet and the development is not in a wildlife-urban interface area.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 09	503.1.2.1 & 503.1.2.2



2024 Code Section: 503.2.1 Dimensions

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm) exclusive of shoulders, except for approved security gates in accordance with Section 503.6 and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

Reason: To retain the current means in which fire apparatus access and road dimensions are measured.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 10	503.2.1
IFC 2018	IFC 2018 05	503.2.1
IFC 2015	IFC 2015 04	503.2.1
IFC 2012	IFC 2012 04	503.2.1



2024 Code Section: 507.1 Required water supply

507.1 Required water supply. An approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises on which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction to meet the necessary fire flow as determined by the fire code official. Where public water supply is inadequate or not available, an approved alternative water source meeting the fire flow requirements shall be provided. Fire flow performance tests shall be witnessed by the fire official or representative prior to final approval.

Exception: One- and two-family dwellings, including attached or detached accessory structures.

Reason: The previous modification attempted to merge multiple sections of the code and caused confusion regarding the specific application. The information regarding the location and spacing of fire hydrants has been removed from the original modification as it is addressed in IFC Section 507.5.1. This modification attempts to provide a more reviewed scope and offers clarify to the exception.

Proponent: Charleston Fire Department

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 11	507.1
IFC 2018	IFC 2018 06	507.1



2024 Code Section: 507.5.1 Where Required

507.5.1 Where required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) 500 feet (152m) from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Location. The location and number of hydrants shall be designated by the fire official, but in no case shall the distance between installed fire hydrants exceed 1000 feet (305 m). Fire hydrants shall be located within 500 feet (152 m) of all fire fighter access points when measured along the normal routes of fire department vehicle access which conforms to the requirements of Section 503. No point of the exterior of a building shall be located more than 500 feet (152 m) from a hydrant accessible to fire department vehicles as provided in Section 503.

Exceptions:

- 1. For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).
- 2. For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

Reason: A previous modification for hydrant spacing merged multiple sections of the code and caused confusion between IFC 507.1 and 507.5.1. This modification attempts to remove some of the confusion, return to the numbering in the base code, and place the modifications within the appropriate sections while providing clear direction.

Proponent: Charleston Fire Department

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 12	507.5.1
IFC 2018	IFC 2018 07	507.5.1



2024 Code Section: 507.5.1.1 Hydrant for standpipe systems

507.5.1.1 Hydrant for standpipe systems. Buildings equipped with a standpipe <u>or fire sprinkler</u> system installed in accordance with Section <u>903 or</u> 905 shall have a fire hydrant within 100 feet (30 480 mm) of the fire department connections.

Exception: The distance shall be permitted to exceed 100 feet (30 480 mm) where *approved* by the *fire code official*.

Reason: Adds to existing requirements for a fire hydrant to be within 100 feet of the fire department connection if there is a standpipe to also require if there is a fire sprinkler system.

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 13	507.5.1.1



2024 Code Section: 507.5.4 Obstruction

507.5.4 Obstruction. Unobstructed access to fire hydrants shall be maintained at all times. The fire department shall not be deterred or hindered from gaining immediate access to fire protection equipment or fire hydrants. No parking shall be allowed within 15 feet (4572 mm) of a fire hydrant.

Reason: This is already a state traffic violation. Allows fire code officials to enforce this violation as well. State traffic law states, SC Title 56-5—3530: Stopping, standing or parking prohibited in specific places; exceptions.

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 14	507.5.4



South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 607.1 General

607.1 General. Storage of cooking oil (grease) in commercial cooking operations utilizing above-ground tanks with a capacity greater than 60 gal (227 L) installed within a building shall comply with Sections 607.2 through 607.7 and NFPA 30. For purposes of this section, cooking oil shall be classified as a Class IIIB liquid unless otherwise determined by testing. These tanks shall have the contents identified as outlined in Section 5703.5.

Reason: These tanks shall have the contents identified as outlined in 5003.5, 5003.5.1 and NFPA 30.

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 16	607.1



2024 Code Section: 901.6.3 Records

901.6.3 Records. Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained in accordance with Section 110.3. Copies of the inspection records shall be sent to the local jurisdiction by the servicing vendor as prescribed by the *fire code official*.

Reason: Fire protection system reports are a critical component of maintaining a life safety system to protect the public and first responders. Receiving, reviewing, and following up on deficient reports is an important element of a comprehensive risk reduction strategy for any community. The current reporting method in the referenced code requires the serving vendor to leave a report with a responsible party on site. These reports are often lost, misplaced, and never followed through to completion. By providing a path for the information to flow to the jurisdiction, as required, we provide the local officials with a way to monitor the operational conditions of these systems and improve the safety of our local communities.

Proponent: Charleston Fire Department

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 19	901.6.3
IFC 2018	IFC 2018 08	901.6.3

Staff Comments: Changes made in the 2021 IFC are noted in red. The reference to standards was replaced with Section 110.3.



2024 International Fire Code South Carolina Building Codes Council

Proposed Modification Continuations from 2021

2024 Code Section: 907.6.5 Access

907.6.5 Access. Access shall be provided to each fire alarm device and notification appliance for periodic inspection, maintenance and testing. <u>Fire alarm notification devices shall be unobstructed and visible at all times.</u>

Reason: Currently, the Fire Code does not address this issue.

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 22	907.6.5



South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 1010.2.14 1010.2.13 Controlled egress doors in Group I-1, I-2 and I-4 (Adult Day Care Occupancy only)

1010.2.13 Controlled egress doors in Groups I-1, I-2, and I-4 (Adult Day Care Occupancy only).

Controlled egress electrical locking systems where egress is controlled by authorized personnel, including electromechanical locking systems and electromagnetic locking systems, shall be permitted to be locked on doors in the means of egress in Group I-1, I-2, and I-4 (Adult Day Care occupancy only) occupancies where the clinical needs of persons receiving care require their containment. Controlled egress doors shall be permitted in such occupancies where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved automatic smoke detection system* installed in accordance with Section 907, provided that the doors are installed and operate in accordance with all of the following:

- 1. The door's electric locks shall unlock on actuation of the *automatic sprinkler system* or *automatic smoke detection system*.
- 2. The door's electric locks shall unlock on loss of power to the electrical locking system or to the electric lock mechanism allowing immediate free egress controlling the lock or lock mechanism.
- 3. The door electric locking system shall be installed to have the capability of being unlocking the electric locks by a switch located at the *fire command center*, a nursing station or other *approved* location. The switch shall directly break power to the electric lock.
- 4. A *building* occupant shall not be required to pass through more than one door equipped with a controlled egress locking system before entering an exit.
- 5. The procedures for unlocking the doors shall be described and *approved* as part of the emergency planning and preparedness required by Chapter 4 of the *International Fire Code*.
- 6. All clinical staff shall have the keys, codes or other means necessary to operate the controlled egress electrical locking systems.
- 7. Emergency lighting shall be provided at the door.
- 8. The door electromechanical or electromagnetic device locking system units shall be *listed* in accordance with either UL 294 or UL 1034.

Exceptions:

- 1. Items 1 through 4 shall not apply to doors to areas occupied by *persons* who, because of clinical needs, require restraint or containment as part of the function of a psychiatric or cognitive treatment area.
- 2. Items 1 through 4 shall not apply to doors to areas where a *listed* egress control system is utilized to reduce the risk of child abduction from nursery and obstetric areas of a Group I-2 *hospital*.

Reason: To prevent nuisance alarms and reduce elopement issues when serving clients with Dementia or Alzheimer's, or similar health care issues.

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 24	1010.2.14

Staff Comments: Changes made in the 2024 IBC are noted in red. The section number was changed, and language was added to account for electric locks and locking systems.



2024 Code Section: 1016.2 Egress through intervening spaces

1016.2 Egress through intervening spaces. Egress through intervening spaces shall comply with this section.

- 1. Exit access through an enclosed elevator lobby is permitted. Where access to two or more exits or exit access doorways is required in Section 1006.2.1, access to not less than one of the required exits shall be provided without travel through the enclosed elevator lobbies required by Section 3006 of the South Carolina Building Code. Where the path of exit access travel passes through an enclosed elevator lobby, the level of protection required for the enclosed elevator lobby is not required to be extended to the exit unless direct access to an exit is required by other sections of this code.
- 2. In other than Group H occupancies, egress from a room or space shall not is allowed to pass through adjoining or intervening rooms or areas, except where provided that such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an exit.
- 3. In Group H occupancies, egress from a room or space is allowed to pass through adjoining or intervening rooms or areas provided that such adjoining rooms or areas are the same or lesser hazard occupancy group and provide a discernible path of egress travel to an *exit*.

Exception: Means of egress are not prohibited through adjoining or intervening rooms or spaces in a Group H, S or F occupancy where the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

4. An *exit access* shall not pass through a room that can be locked to prevent egress.

Exception: An electrically locked exit access door providing egress from an elevator lobby shall be permitted in accordance with Section 1010.2.14.

5. Means of egress from dwelling units or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms.

Exception: Dwelling units or sleeping areas in R-1 and R-2 occupancies shall be permitted to egress through other sleeping areas serving adjoining rooms that are part of the same dwelling unit or guest room.

6. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes.

Exceptions:

- 1. *Means of egress* are not prohibited through a kitchen area serving adjoining rooms constituting part of the same *dwelling unit* or *sleeping unit*.
- 2. *Means of egress* are not prohibited through stockrooms in Group M occupancies where all of the following are met:
 - 2.1. The stock is of the same hazard classification as that found in the main retail area.
 - 2.2. Not more than 50 percent of the *exit access* is through the stockroom.
 - 2.3. The stockroom is not subject to locking from the egress side.
 - 2.4. There is a demarcated, minimum 44-inch-wide (1118 mm) aisle defined by full- or partial height fixed walls a wall not less than 42 inches (1067 mm) high or similar construction that will maintain the required width and lead directly from the retail area to the exit without obstructions.



Reason: N/A

Proponent: Charleston Fire Department

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 25	1016.2
IFC 2018	IFC 2018 11	1016.2

Staff Comments: Changes made in the 2024 IBC are noted in red. Number 2 was reworded, number 3 was added with an exception, and an exception was added to number 4.



2024 Code Section: 2303.2.2 Testing

<u>2303.2.2 Testing.</u> Emergency disconnect switches shall be tested annually by the responsible party to ensure proper operation; records of testing shall be maintained on site for inspection. For any switches determined to be faulty, the fuel pumps they serve shall be taken out of service until the emergency shutoff switch is placed back into service.

Reason: To ensure that emergency shutoff switches operate properly during an emergency.

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2018	IFC 2018 31	2303.2.2



2024 Code Section: 2305.5 Fire extinguishers

2305.5 Fire extinguishers. *Approved* portable fire extinguishers complying with Section 906 with a minimum rating of 2-A:20-B:C shall be provided and located such that an extinguisher is not more than 75 feet (22 860 mm) 50 feet (15 240 mm) from pumps, dispensers or storage tank fill-pipe openings.

Reason: Section 906.3(2) requirements for primary class B hazards states the minimum travel distance for a primary class B fire is 50 feet. Currently, 2305.5 would allow an additional 25 feet of travel distance to the maximum travel distance allowed in Section 906.

Proponent: Midlands Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2018	IFC 2018 33	2305.5



South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 2307.4 Location of dispensing operations and equipment

2307.4 Location of dispensing operations and equipment. The point of transfer for LP-gas dispensing operations shall be separated from buildings and other exposures in accordance with NFPA 58 Table 6.7.2.1 and IFC Section 2306.7. the following:

- 1. Not less than 25 feet (7620 mm) from buildings where the exterior wall is not part of a fire-resistance-rated assembly having a rating of 1 hour or greater.
- 2. Not less than 25 feet (7620 mm) from combustible overhangs on buildings, measured from a vertical line dropped from the face of the overhang at a point nearest the point of transfer.
- 3. Not less than 25 feet (7620 mm) from the lot line of property that can be built on.
- 4. Not less than 25 feet (7620 mm) from the centerline of the nearest mainline railroad track.
- 5. Not less than 10 feet (3048 mm) from public streets, highways, thoroughfares, sidewalks and driveways.
- 6. Not less than 10 feet (3048 mm) from buildings where the exterior wall is part of a fire-resistance rated assembly having a rating of 1 hour or greater.

Exception: The point of transfer for LP-gas dispensing operations need not be separated from canopies that are constructed in accordance with the South Carolina Building Code and that provide weather protection for the dispensing equipment.

LP-Gas containers shall be located in accordance with Chapter 61. LP-gas storage and dispensing equipment shall be located outdoors and in accordance with Section 2306.7.

Reason: These changes are made to bring IFC Chapter 23 and NFPA 58 in harmony with respect to distance between point of transfer and exposures. The propane industry has used NFPA 58 as its standard for over 40 years in South Carolina. The modifications made above are in harmony with NFPA 58 Table 6.5.3

Proponent: South Carolina Propane Gas Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 34	2307.4
IFC 2018	IFC 2018 12	2307.4
IFC 2015	IFC 2015 09	2307.4
IFC 2012	IFC 2012 09	2307.4



South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 2307.7 Public fueling of motor vehicles

2307.7 Public fueling of motor vehicles. Self-service LP gas dispensing systems, including key, code and card lock dispensing systems, shall be limited to the filling of permanently mounted containers providing fuel to the LP gas powered vehicle.

The requirements for self-service LP-gas dispensing systems shall be in accordance with the following:

- 1. The arrangement and operation of the transfer of product into a vehicle shall be in accordance with this section and Chapter 61.
- 2. The system shall be provided with an emergency shutoff switch located within 100 feet (30 480 mm) of, but not less than 20 feet (6096 mm) from, dispensers.
- 3. The owner of the LP-gas motor fuel-dispensing facility or the owner's designee shall provide for the safe operation of the system and the training of users.
- 4. The dispenser and hose-end valve shall release not more than 1/8 fluid ounce (4 cc) of liquid to the atmosphere upon breaking the connection with the fill valve on the vehicle.
- 5. Portable fire extinguishers shall be provided in accordance with Section 2305.5.
- 6. Warning signs shall be provided in accordance with Section 2305.6.
- 7. The area around the dispenser shall be maintained in accordance with Section 2305.7.

Reason: To allow portable propane cylinders to be refilled at self service refueling stations.

Proponent: South Carolina Propane Gas Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 35	2307.7
IFC 2018	IFC 2018 13	2307.7
IFC 2015	IFC 2015 11	2307.7
IFC 2012	IFC 2012 11	2307.6



South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 6101.1 Scope

6101.1 Scope. Storage, handling and transportation of liquefied petroleum gas (LP-gas) and the installation of LP-gas equipment pertinent to systems for such uses shall comply with this chapter and NFPA 58. Properties of LP-gases shall be determined in accordance with Appendix Annex B of NFPA 58.

Reason: NFPA uses the word annex not appendix.

Proponent: South Carolina Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 38	6101.1
IFC 2018	IFC 2018 14	6101.1
IFC 2015	IFC 2015 12	6101.1
IFC 2012	IFC 2012 12	6101.1



South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: 6106.1 Attendants

6106.1 Attendants. Dispensing of LP-gas shall be performed by a qualified attendant <u>that meets the requirements of this section and NFPA 58 Section 4.4.</u>

Reason: NFPA 58 Section 4.4 requires documented training every three years

Proponent: South Carolina Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 41	6106.1
IFC 2018	IFC 2018 17	6106.1
IFC 2015	IFC 2015 16	6106.1
IFC 2012	IFC 2012 16	6106.1



2024 Code Section: 6107.4 Protecting containers from vehicles

6107.4 Protecting containers from vehicles. Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be protected in accordance with NFPA 58.

Exception: An alternative method may be used that meets the intent of this section with the approval of the authority having jurisdiction (AHJ).

Reason: To allow the AHJ the ability to accept an alternate method of compliance through a variance.

Proponent: South Carolina Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 42	6107.4
IFC 2018	IFC 2018 18	6107.4
IFC 2015	IFC 2015 18	6107.4
IFC 2012	IFC 2012 18	6107.4



2024 Code Section: 6109.13 Protection of containers

6109.13 Protection of containers. LP-gas containers shall be stored within a suitable enclosure or otherwise protected against tampering. Vehicle impact protection shall be provided as required by Section 6107.4. the *fire code officia*l in accordance with Section 312 or NFPA Section 58 8.4.2.2.

Exception: Vehicle impact protection shall not be required for protection of LP-gas containers where the containers are kept in lockable, ventilated cabinets of metal construction.

Reason: To provide an alternate method of compliance

Proponent: South Carolina Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 43	6109.13
IFC 2018	IFC 2018 20	6109.13
IFC 2015	IFC 2015 22	6109.13
IFC 2012	IFC 2012 22	6109.13



2024 International Fire Code South Carolina Building Codes Council

Proposed Modification Continuations from 2021

2024 Code Section: 6110.1 Temporarily out of service

6110.1 Removed from service Containers not connected for service at customer locations. LP-gas containers at customers' locations that are not connected for service whose use has been discontinued shall comply with both all of the following:

1. Be disconnected from appliance piping.

2.1. Have LP-gas container outlets, except relief valves, closed and or plugged or capped.

3.2. Be positioned with the relief valve in direct communication with the LP-gas container vapor space.

Reason: To reflect the original intent of the section.

Proponent: South Carolina Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 44	6110.1
IFC 2018	IFC 2018 21	6110.1
IFC 2015	IFC 2015 23	6110.1
IFC 2012	IFC 2012 23	6110.1



2024 Code Section: 6111.2.1 Near residential, educational and institutional occupancies and other high-risk areas

6111.2.1 Near residential, educational and institutional occupancies and other high-risk areas. LP-gas tank vehicles shall not be left unattended at any time on residential streets or within 500 feet (152 m) of a residential area, apartment or hotel complex, educational facility, hospital or care facility. Tank vehicles shall not be left unattended at any other place that would, in the opinion of the *fire code official*, pose an extreme life hazard.

Separation distance requirements may be reduced to not less than 50 feet as approved by the fire code official, based upon a completed fire safety analysis and consideration of special features such as topographical conditions, capacity of the LP-gas vehicle and the capabilities of the local fire department. The Office of the State Fire Marshal will provide an approved fire safety analysis to be utilized for this specific requirement.

Reason: To allow the fire code official to authorize a reduction of the 500-foot requirement. Note: Continued modification IFC 2012 24.

Proponent: South Carolina Fire Marshal's Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFC 2021	IFC 2021 45	6111.2.1
IFC 2018	IFC 2018 22	6111.2.1
IFC 2015	IFC 2015 24	6111.2.1
IFC 2012	IFC 2012 24	6111.2.1



2024 Code Section: 401.9 Identification

Section deleted without substitution.

401.9 Identification. Each length of pipe and tubing and each pipe fitting, utilized in a fuel gas system, shall bear the identification of the manufacturer.

Exceptions:

- 1. Steel pipe sections that are 2 feet (610 mm) and less in length and are cut from longer sections of pipe. 2. Steel pipe fittings 2 inches and less in size.
- 3. Where identification is provided on the product packaging or crating. 4. Where other approved documentation is provided.

Reason: The section does nothing to protect health, safety or welfare. Some products are not capable of being marked.

Proponent: South Carolina Propane Gas Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFGC 2021	IFGC 2021 01	401.9
IFGC 2018	IFGC 2018 01	401.9
IFGC 2015	IFGC 2015 01	401.9
IFGC 2012	IFGC 2012 01	401.9



2024 Code Section: 401.10 Piping materials standards

401.10 Piping materials standards. Piping, tubing and fittings shall be manufactured to the applicable referenced standards, specifications and performance criteria listed in Section 403 and shall be identified in accordance with Section 401.9.

Third-party testing and certification. All piping, tubing and fittings shall comply with the applicable referenced standards, specifications and performance criteria of this code, including Section 403 of the South Carolina Fuel Gas Code and corresponding sections.

Reason: The requirement offers little or no protection of health, safety or welfare to the public.

Proponent: South Carolina Propane Gas Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFGC 2021	IFGC 2021 02	401.10
IFGC 2018	IFGC 2018 02	401.10
IFGC 2015	IFGC 2015 02	401.10
IFGC 2012	IFGC 2012 02	401.10



2024 Code Section: 412.4 Listed equipment

[F] 412.4 Listed equipment. Hoses, hose connections, vehicle fuel connections, dispensers, LP-gas pumps and electrical *equipment* used for LP-gas shall <u>comply with the requirements of NFPA 58 be *listed*.</u>

Reason: No listed dispenser packages for LP-gas dispensers are available at this time.

Proponent: South Carolina Propane Gas Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFGC 2021	IFGC 2021 03	412.4
IFGC 2018	IFGC 2018 03	412.4
IFGC 2015	IFGC 2015 03	412.4
IFGC 2012	IFGC 2012 03	412.4

Staff Comments: No changes in the 2024 IFGC. Are dispenser packages for LP-gas dispensers now available?



2024 International Fuel Gas Code South Carolina Building Codes Council

Proposed Modification Continuations from 2021

2024 Code Section: 412.6 Location

(F) 412.6 Location. The point of transfer for LP-gas dispensing operations shall be separated from buildings and other exposures in accordance with the following:

- 1. Not less than 25 feet (7620 mm) from buildings where the exterior wall is not part of a fire-resistance-rated assembly having a rating of 1 hour or greater.
- 2. Not less than 25 feet (7620 mm) from combustible overhangs on buildings, measured from a vertical line dropped from the face of the overhang at a point nearest the point of transfer.
- 3. Not less than 25 feet (7620 mm) from the lot line of property that can be built upon.
- 4. Not less than 25 feet (7620 mm) from the centerline of the nearest mainline railroad track.
- 5. Not less than 10 feet (3048 mm) from public streets, highways, thoroughfares, sidewalks and driveways.
- 6. Not less than 10 feet (3048 mm) from buildings where the exterior wall is part of a fire-resistance-rated assembly having a rating of 1 hour or greater.

In addition to the fuel dispensing requirements of the South Carolina Fire Code, the point of transfer for dispensing operations shall be 25 feet (7620 mm) or more from buildings having combustible exterior wall surfaces, buildings having noncombustible exterior wall surfaces that are not part of a 1-hour fire-resistance-rated assembly or buildings having combustible overhangs, property that could be built on and railroads; at least 10 feet (3048 mm) from public streets or sidewalks and buildings having noncombustible exterior wall surfaces that are part of a fire-resistance-rated assembly having a rating of 1 hour or more; and 5 feet (1524 mm) from driveways.

Exceptions:

- <u>1</u>. The point of transfer for <u>LP-gas</u> dispensing operations need not be separated from canopies <u>providing weather protection for the dispensing equipment</u> that are constructed in accordance with the International Building Code and that provide weather protection for the <u>dispensing equipment</u>. <u>Liquefied petroleum gas containers shall be located in accordance with the International Fire Code</u>.
- <u>2</u> The separation from driveways is not required where the driveway serves the vehicle fuel dispenser.

Liquefied petroleum gas containers shall be located in accordance with the International Fire Code. Liquefied petroleum gas storage and dispensing equipment shall be located outdoors and in accordance with the International South Carolina Fire Code.

Reason: To bring the IFGC in harmony with NFPA 58 with respect to distance between the point of transfer and exposures.

Proponent: South Carolina Propane Gas Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFGC 2021	IFGC 2021 04	412.6
IFGC 2018	IFGC 2018 04	412.6
IFGC 2015	IFGC 2015 04	412.6
IFGC 2012	IFGC 2012 04	412.6



2024 Code Section: 412.8.3 Vehicle impact protection

[F] 412.8.3 Vehicle impact protection. Where installed within 10 feet (3048 mm) of vehicle traffic, LP-gas storage containers, pumps and dispensers shall be protected in accordance with Section 2307.5, Item 2 of the International Fire Code.

Exception: An alternative method may be used that meets the intent of this section with the approval of the authority having jurisdiction (AHJ).

Reason: To allow the AHJ the ability to accept an alternate method of compliance through a variance.

Proponent: South Carolina Propane Gas Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFGC 2021	IFGC 2021 05	412.8.3
IFGC 2018	IFGC 2018 06	412.8.3
IFGC 2015	IFGC 2015 05	412.8.3
IFGC 2012	IFGC 2012 05	412.7.3



2024 Code Section: 412.10 Private fueling of motor vehicles

412.10 Private fueling of motor vehicles. Self-service LP-gas dispensing systems, including key, code and card lock dispensing systems, shall not be open to the public. In addition to the requirements of the South Carolina Fire Code, self-service LP-gas dispensing systems shall be provided with an emergency shutoff switch located within 100 feet (30 480 mm) of, but not less than 20 feet (6096 mm) from, dispensers, and the owner of the dispensing facility shall ensure the safe operation of the system and the training of users.

Reason: The requirement would prohibit vehicles with removable containers from being refilled at self-service refueling stations.

Proponent: South Carolina Propane Gas Association

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFGC 2021	IFGC 2021 06	412.10
IFGC 2018	IFGC 2018 07	412.10
IFGC 2015	IFGC 2015 06	412.10
IFGC 2012	IFGC 2012 06	412.8



2024 Code Section: 505.1.1 Commercial cooking appliances vented by exhaust hoods

505.1.1 Commercial cooking appliances vented by exhaust hoods. Where commercial cooking appliances are vented by means of the Type I or II kitchen exhaust hood system that serves such appliances, the exhaust system shall be fan powered and the appliances shall be interlocked with the exhaust hood system to prevent appliance operation when the exhaust hood system is not operating. The method of interlock between the exhaust hood system and the appliances equipped with standing pilot burner ignition systems shall not cause such pilots to be extinguished. Where a solenoid valve is installed in the gas piping as part of an interlock system, gas piping shall not be installed to bypass such valve. Dampers shall not be installed in the exhaust system.

Exception: An interlock between the cooking appliance(s) and the exhaust hood system shall not be required <u>for appliances that are of the manually operated type</u> and are factory equipped with standing pilot burner ignition systems. where heat sensors or other approved methods automatically activate the exhaust hood system when cooking operations occur.

Reason: Manually operated commercial cooking appliances are in operation only when kitchen staff is present. An inoperative exhaust system, therefore, is apparent to kitchen personnel.

Proponent: Piedmont Natural Gas

Previous Code Cycles	Previous Modification Number	Previous Code Section
IFGC 2021	IFGC 2021 07	505.1.1
IFGC 2018	IFGC 2018 08	505.1.1
IFGC 2015	IFGC 2015 07	505.1.1
IFGC 2012	IFGC 2012 07	505.1.1
IFGC 2006	IFGC 2006 01	505.1.1
IFGC 2003	IFGC 2003 02	505.1.1
IFGC 2000	IFGC 2000 02	505.1.1



2024 Code Section: 504.9.2 Duct Installation

504.9.2 Duct installation. Exhaust ducts shall be supported at <u>intervals not to exceed 8</u> feet and within 16 inches of each side of a joint that is not installed in a vertical <u>orientation, 4 foot (1219 mm) intervals and</u> secured in place, <u>making rigid contact with the duct at not less than 4 equally spaced points or 2/3rds contact if strap is used. All brackets and strapping must be noncombustible.</u> The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protrude more than 1/8 inch (3.2 mm) into the inside of the duct. The overlap shall comply with Section 603.4.2. Ducts shall not be joined with screws or <u>similar devices that protrude into the inside of the duct.</u> Exhaust ducts shall be sealed in accordance with Section 603.9.

Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation. The duct work may be ovalized as long as it terminates in an approved duct box. Minor imperfections located on the duct, in areas other than along the seam, do not constitute a violation of this section.

Reason: This section is unnecessary as the manufacturer recommendations may differ from this section and should take precedence.

Proponent: Building Officials Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
IMC 2021	IMC 2021 01	504.9.2
IMC 2018	IMC 2018 01	504.8.2



2024 Code Section: Table 1103.1 Refrigerant Classification Amount and OEL

Footnote:

c. The ASHRAE Standard 34 flammability classification for this refrigerant is 2L, which is a subclass of Class 2.

Reason: The change to Table 1103.1, footnote c, is to note that A2L is a classification in ASHRAE 34 by itself. It is no longer identified as a subclass of 2. ASHRAE 34 changed the classification of 2Ls in 2018 to a full group resulting in A2L and B2L classification of refrigerants.

Proponent: Air Conditioning, Heating and Refrigeration Institute

Previous Code Cycles	Previous Modification Number	Previous Code Section
IMC 2021	IMC 2021 02	Table 1103.1

Staff Comments: Changes made in the 2024 IMC are noted in red above. The previous modification removed the phrase "which is a subclass of Class 2" from the end of the footnote, and footnote c was since deleted in the 2024 IMC. This modification is no longer necessary. Please review.



2024 Code Section: 1104.3.1 Air conditioning for human comfort

1104.3.1 Air conditioning for human comfort. High probability systems used for human comfort shall use Group A1 or A2L refrigerant. In other than industrial occupancies where the quantity in a single independent circuit does not exceed the amount in Table 1103.1, Group B1, B2 and B3 refrigerants shall not be used in high-probability systems for air conditioning for human comfort.

Exceptions:

- 1. Equipment *listed* for and used in residential *occupancies* containing a maximum of 6.6 pounds (3 kg) of refrigerant.
- 2. Equipment *listed* for and used in commercial *occupancies* containing a maximum of 22 pounds (10 kg) of refrigerant.
- 3. Industrial occupancies.

Reason: The proposed changes to Sections 1104.3.1 and 1104.3.2 have been adopted by ICC for the 2024 IMC. These changes are necessary to fully recognize the use of A2L refrigerants in high probability (direct) air conditioning systems for human comfort. Table 1104.3.2 is deleted in its entirety because the requirements are adequately address in the modified Sections 1104.3.1 and 1104.3.2.

Proponent: Air Conditioning, Heating and Refrigeration Institute

Previous Code Cycles	Previous Modification Number	Previous Code Section
IMC 2021	IMC 2021 03	1104.3

Staff Comments: Changes made in the 2024 IMC are noted in red above. Changes to the 2024 IMC negate the need for the modification. Please review.



2024 Code Section: Chapter 15 Referenced Standards

CSA

C22.2 No. 60335-2-40—2022 Household and Similar Electrical Appliances - Safety - Part 2-40:

Particular Requirements for Electrical Heat Pumps, Air-Conditioners

<u>and Dehumidifiers - 3rd Edition</u> <u>908.1, 916.1, 918.2, 1101.2</u>

UL

60335-2-40-17 2022 Household and Similar Electrical Appliances - Safety - Part 2-40:

Particular Requirements for Electrical Heat Pumps, Air-Conditioners

and Dehumidifiers

908.1, 916.1, 918.1, 918.2, 1101.2

Reason: Manufacturers are transitioning away from UL 1995 to UL 60335-2-40 for new products because UL 1995 was made obsolete effective 1/1/2024. The newest 3rd edition of UL 60335-2-40 [at the time of the original modification], published November 2019, has many new requirements for electrical and refrigerant safety. It includes requirements for UV-C germicidal lamp systems, CO2 systems, photovoltaic systems, new marking requirements, water ingress rating systems, as well as allowance for Low Global Warming Potential (GWP) Group A2L refrigerants. Nationally Recognized Testing Laboratories (or NRTLs) will use the latest version of the UL 60335-2-40 for certification testing. The American Innovation and Manufacturing Act of 2020 was signed into law by President Trump. The AIM Act directs EPA to mandate low GWP refrigerants in air conditioning and refrigeration systems. The current lists of refrigerants in the IMC that comply with the low GWP requirements of the AIM Act fall into the classification of Group A2L, B2L, A2 and A3. For high probability systems, manufacturers will be switching to Group A2L refrigerants from the current A1. Therefore, the IMC needs to be updated to address the use of Group A2L refrigerants in high probability (direct) systems. ASHRAE 15-2019 addresses the safety issues regarding the use of Group A2L refrigerants.

Proponent: Air Conditioning, Heating and Refrigeration Institute

Previous Code Cycles	Previous Modification Number	Previous Code Section
IMC 2021	IMC 2021 04	Chapter 15

Staff Comments: Changes made in the 2024 IMC are noted in red above. The editions of the referenced standards were updated.



2024 Code Section: 202 General Definitions

Drinking Fountain. A plumbing fixture that is connected to the potable water distribution system and the drainage system. The fixture allows the user to obtain a drink directly from a stream of flowing water without the use of any accessories. <u>Such fixtures can be separate from or integral to a bottle-filling station.</u>

Reason: Defines modern plumbing fixtures for sanitary drinking water access to the public. The IPC recognized bottle-filling stations as an integrated function of drinking fountains.

Proponent: Carolinas Associated General Contractors

Previous Code Cycles	Previous Modification Number	Previous Code Section
IPC 2021	IPC 2021 01	202



2024 Code Section: 202 General Definitions

BOTTLE-FILLING STATION. A type of water dispenser that is connected to the potable water distribution system and the drainage system. The fixture is designed and intended for automatically or manually filling personal use drinking water bottles or containers not less than 10 inches (254 mm) in height and is in compliance with the Americans with Disabilities Act (42 U.S.C. § 12101 et seq.). Such fixtures can be separate from or integral to a drinking fountain and can incorporate a water filter and a cooling system for chilling the drinking water.

Reason: Filling stations allow for transportable water, encourage water consumption, and are more sanitary than drinking fountains. They have been included in the IPC because they are more hygienic, save up to 50% of wastewater generated as compared to drinking fountains, and reflect market trends.

Proponent: Carolinas Associated General Contractors

Previous Code Cycles	Previous Modification Number	Previous Code Section
IPC 2021	IPC 2021 02	202



2024 Code Section: 202 General Definitions

WATER COOLER. A drinking fountain <u>or bottle-filling station</u> that incorporates a means of reducing the temperature of the water supplied to it from the potable water distribution system.

Reason: Defines modern plumbing fixtures for sanitary drinking water access to the public. The IPC recognized bottle-filling stations as an integrated function of drinking fountains.

Proponent: Carolinas AGC

Previous Code Cycles	Previous Modification Number	Previous Code Section
IPC 2021	IPC 2021 03	202



2024 Code Section: 202 General Definitions

WATER DISPENSER. A plumbing fixture that is <u>automatic or</u> manually controlled by the user for the purpose of dispensing potable drinking water into a receptacle such as a cup, glass or bottle. Such fixture is connected to the potable water distribution system of the premises. <u>This definition includes a free-standing apparatus for the same purpose that is not connected to the potable water distribution system and that is supplied with potable water from a container, bottle or reservoir.</u>

Reason: Defines modern plumbing fixtures for sanitary drinking water access to the public. The IPC recognized bottle-filling stations as an integrated function of drinking fountains.

Proponent: Carolinas AGC

Previous Code Cycles	Previous Modification Number	Previous Code Section
IPC 2021	IPC 2021 04	202



2024 International Plumbing Code

South Carolina Building Codes Council Proposed Modification Continuations from 2021

2024 Code Section: Table 403.1 Minimum Number of Required Plumbing Fixtures

Add column to table titled **BOTTLE FILLING STATION**

Row 3 Educational, under Bottle Filling Station column, add: <u>1 per 200 with placement</u> of 1 on each floor (or wing, or other building section) and 1 in school food service areas

Table 403.1

Minimum Number of Required Plumbing Fixtures^a (See Sections 403.1.1 and 403.2)

No.	Classification	Description	Wate Closet (Urina See Sect 424.2	ts ls: tion	Lava torie	Bathtubs/ Showers	Drinking Fountain (See Section 410)	Other	Bottle Filling Station
3	Educational	Educational Facilities	1 per !	50	1 p€ 50	-	1 per 100	1 service sink	1 per 200 with placement of 1 on each floor (or wing or other building section) and 1 in school food service areas.

Reason: The CDC now encourages staff and students to bring their own water to minimize use and touching of water fountains. This necessitates updates to the plumbing code in educational settings to allow for easy access to drinking water throughout the day for hydration needs. One study found that drinking fountains and manual pencil sharpener handles had more germs than any other surfaces in the classroom. Adequate water intake can positively impact children's cognitive performance, particularly short-term memory. Drinking water can also improve children's visual attention and fine motor skills.

Proponent: Carolinas Associated General Contractors

Previous Code Cycles	Previous Modification Number	Previous Code Section
IPC 2021	IPC 2021 05	Table 403.1



2024 Code Section: 403.1.1 Fixture Calculations

provided shall be located in a stall" - deleted].

403.1.1 Fixture calculations. To determine the occupant load of each sex, the total occupant load shall be divided in half. To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the occupant load of each sex in accordance with Table 403.1. Fractional numbers resulting from applying the fixture ratios of Table 403.1 shall be rounded up to the next whole number. For calculations involving multiple *occupancies*, such fractional numbers for each *occupancy* shall first be summed and then rounded up to the next whole number.

Exceptions:

- 1. The total occupant load shall not be required to be divided in half where *approved* statistical data indicate a distribution of the sexes of other than 50 percent of each sex.

 2. Where multiple-user facilities are designed to serve all genders, the minimum fixture count shall be calculated 100 percent, based on total occupant load. In such multiple-user facilities, each fixture type shall be in accordance with ICC A117.1 ["and each urinal that is
- 3. Distribution of the sexes is not required where single-user water closets and bathing room fixtures are provided in accordance with Section 403.1.2.

Reason: Gender-neutral gang-type bathrooms pose a serious threat to the health and safety of all by increasing the incident of sexual violence against women and children, as well as increasing the incident of wrongful accusations of assault, voyeurism, and the like. Gender-neutral gang-type bathrooms also undermine and reduce the "safe spaces" for victims of human trafficking, as well as discriminating against women and children by disproportionately decreasing the available number of bathroom spaces for women and children, while men will have access to both water closet compartments and urinal spaces. In addition, the common use sink space discriminates against women and children by disproportionately decreasing the area available for women to address personal needs, such as menstrual or other medical care, nursing and baby changing activities.

Proponent:

Previous Code Cycles	Previous Modification Number	Previous Code Section
IPC 2021	IPC 2021 07	403.1.1

Staff Comments: Changes made in the 2024 IPC are noted in red above. Exception 3 was deleted, but the change does not affect the modification request. Exception 2 was also modified in the 2024 IPC; however, the modification deletes that exception entirely.



2024 Code Section: 403.2 Separate Facilities

403.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

- 1. Separate facilities shall not be required for dwelling units and sleeping units.
- 2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.
- 3. Separate facilities shall not be required in mercantile *occupancies* in which the maximum occupant load is 100 or fewer.
- 4. Separate facilities shall not be required in business *occupancies* in which the maximum occupant load is 25 or fewer.
- 5. Separate facilities shall not be required to be designated by sex where single-user toilet rooms are provided in accordance with Section 403.1.2.
- 6. Separate facilities shall not be required where rooms having both water closets and lavatory fixtures are designed for use by ["both sexes"-deleted] all persons regardless of sex and privacy is provided for water closets ["is provided"-deleted] in accordance with Section 405.3.4, and for urinals in accordance with Section 405.3.5. ["Urinals shall be located in an area visually separated from the remainder of the facility or each urinal that is provided shall be located in a stall. deleted"]

Reason: Exception 6 is not necessary, as Exceptions 1-5 provide sufficient guidance and latitude for business, schools, churches and other similar large-capacity spaces, to provide gender-neutral spaces with adequate privacy protections.

Proponent:

Previous Code Cycles	Previous Modification Number	Previous Code Section
IPC 2021	IPC 2021 08	403.2

Staff Comments: Changes made in the 2024 IPC are noted in red. Minor changes were made to exception 6 in the 2024 IPC, however, this exception is deleted by SC modification and the changes are irrelevant.



2024 Code Section: 410.1 Substitution

410.4 Substitution. Where restaurants provide drinking water in a container free of charge, drinking fountains shall not be required in those restaurants. In other *occupancies* where three or more drinking fountains are required, *water dispensers* shall be permitted to be substituted for not more than 50 percent of the required number of drinking fountains. <u>In educational settings</u>, 50 percent of the required number of drinking fountains must incorporate a bottle-filling station.

Reason: The CDC now encourages staff and students to bring their own water to minimize use and touching of water fountains. Bottle filling stations increase access to clean, safe drinking water. This necessitates updates to the plumbing code in educational settings to allow for easy access to drinking water throughout the day for hydration needs. Modification specifies bottle filling station must be substituted or incorporated into at least 50% of required drinking fountains in educational settings.

Proponent: Carolinas AGC

Previous Code Cycles	Previous Modification Number	Previous Code Section
IPC 2021	IPC 2021 06	410.4



2023 Code Section: 210.8(A) Dwelling Units

210.8(A) Dwelling Units. All 125-volt through 250 volt receptacles installed in the following locations specified in 210.8(A)(1) through (A)(11) and supplied by single-phase branch circuits rated 150 volts or less to ground shall have ground-fault circuit-interrupter protection for personnel:

- (1) Bathrooms
- (2) Garages and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use
- (3) Outdoors.

Exception No. 1to (3): Receptacles that are not readily accessible and are supplied by a branch circuit dedicated to electric snow-melting, deicing, or pipeline and vessel heating equipment shall be permitted to be installed in accordance with 426.28 or 427.22, as applicable.

- (4) Crawl spaces at or below grade level
- (5) Basements

Exception No. 2 1 to (5): A receptacle supplying only a permanently installed fire alarm or burglar alarm premises security system shall not be required to have be permitted to omit ground-fault circuit-interrupter protection. Exception No. 1 to (5): Receptacles in walk-out basements are excluded from this requirement.

Receptacles installed under the exception to 210.8(A)(5) shall not be considered as meeting the requirements of 210.52(G).

- (6) Kitchens where the receptacles are installed to serve the countertop surfaces.
- (7) Areas with sinks and permanent provisions for food preparation, beverage preparation, or cooking
- (8) Sinks where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the bowl of the sink
- (9) Boathouses
- (10) Bathtubs or shower stalls where receptacles are installed within 1.8 m (6 ft) of the outside edge of the bathtub or shower stall
- (11)Laundry areas

Exception No. 3 to (1) through (3), (5) through (8), and (10): Listed weight-supporting ceiling locking support and mounting receptacles (WSCR) utilized in combination with compatible weight-supporting attachment fittings (WASF) installed for the purpose of supporting serving a ceiling luminaire or ceiling-suspended fan shall be permitted to omit not be required to be ground-fault circuit-interrupter protection protected. If a general-purpose convenience receptacle is integral to the ceiling luminaire or ceiling-suspended fan, GFCI protection shall be provided.

(12) Indoor damp and wet locations

Exception No. 4: Factory-installed receptacles that are not readily accessible and are mounted internally to bathroom exhaust fan assemblies shall not require GFCI protection unless required by the installation instructions or listing.

Reason: This change will require receptacles serving 250-volt appliances, such as stoves and clothes dryers, to have GFCI protection when located in bathrooms, crawl spaces, basements, laundry areas, or within 6 feet of sinks, bathtubs or showers. This section previously applied to receptacles up to 125 volts only.

Proponent: Home Builders Association of South Carolina.

Previous Code Cycles	Previous Modification Number	Previous Code Section
NEC 2020	NEC 2020 03	210.8(A)

Staff Comments: Changes made in the 2023 NEC are noted in red. Numbers 7, as well as Exception 4, were added, and Exceptions 1-3 were rewritten.



2023 Code Section: 210.8(F) Outdoor Outlets

210.8(F) Outdoor Outlets. For dwellings, all outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception No. 1, to (3), that are including outlets installed in the following locations, and supplied by single-phase branch circuits rated 150 volts or less to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter be provided with GFCI protection for personnel:

- (1) Garages that have floors located at or below grade level
- (2) Accessory buildings
- (3) Boathouses

If equipment supplied by an outlet covered under the requirements of this section is replaced, the outlet shall be supplied with GFCI protection.

Exception No. 1: Ground-fault circuit-interrupter GFCI protection shall not be required on lighting outlets other than those covered in 210.8(C).

Exception No. 2: GFCI protections shall not be required for listed HVAC equipment. This exception shall expire September 1, 2026.

Reason: GFCIs are shown to be effective where a corded product is plugged into a standard "convenience" receptacle in a wet or damp location. However, this requirement is for condenser units, which are hardwired. Data was not provided to support expanding the use of GFCI protection on these circuits. The event used as substantiation was a result of an unqualified individual performing an electrical installation they never should have attempted. The NEC should not mandate GFCI protection for all outdoor outlet based on very specific, unfortunate circumstances. This requirement is extremely broad and will result in many unintended consequences. For example, it has not been determined if all A/C condenser units will operate on a GFCI-protected circuit as sufficient testing has not been conducted. In addition, branch circuit extensions or modifications would require the addition of GFCI protection for old condenser units, and it is not known whether the existing equipment is compatible with GFCI. This requirement also applies to hardwired connections for effluent pumps and other types of lift station pumps with outdoor connections.

Proponent: Home Builders Association of South Carolina.

Previous Code Cycles	Previous Modification Number	Previous Code Section
NEC 2020	NEC 2020 04	210.8(F)

Staff Comments: Changes made in the 2023 NEC are noted in red. Content added to main section, and Exception 2 added.



2023 Code Section: 210.12(A)(B) Dwelling Units

210.12(B) Dwelling Units. All 120-volt, single-phase, 10-, 15- and 20- ampere branch circuits supplying outlets or devices installed in the following locations dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas, or similar rooms or areas shall be protected by any of the means described in 210.12(A)(1) through (A)(6):

- (1) Kitchens
- (2) Family Rooms
- (3) Dining Rooms
- (4) Living Rooms
- (5) Parlors
- (6) Libraries
- (7) Dens
- (8) Bedrooms
- (9) Sunrooms
- (10) Recreation Rooms
- (11) Closets
- (12) Hallways
- (13) Laundry Spaces
- (14) Similar Areas

[Items (1) through (6) and Exception to remain as written, per the original modification request.]

Exception No. 1: AFCI protection shall not be required for an individual branch circuit supplying a fire alarm system installed in accordance with 760.41(B) or 760.121(B). The branch circuit shall be installed in a metal raceway, metal auxiliary gutter, steel-armored cable, or Type MC or Type AC cable meeting the applicable requirements of 250.118, with metal boxes, conduit bodies, and enclosures.

Exception No. 2: AFCI protection shall not be required for the individual branch circuit supplying an outlet for arc welding equipment in a dwelling unit until January 1, 2025.

Reason: This change will require receptacles serving 250-volt appliances, such as stoves and clothes dryers, to have GFCI protection when located in bathrooms, crawl spaces, basements, laundry areas or within 6 feet of sinks, bathtubs or showers. This section previously applied to receptacles up to 125 volts only.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
NEC 2020	NEC 2020 05	210.12(B)

Staff Comments: Changes made in the 2023 NEC are noted in red. The section letter was changed from (A) to (B), and Items 1-6 referenced in the original modification were moved under the new (A) titled "Means of Protection". Content was added to the main body, and Exception 2 was added. The original modification was to remove "250-volt" from the section, which is no longer in this section of the 2023 NEC, and the modification may now be obsolete. Please review.



2023 Code Section: 230.67 Surge Protection

Section is deleted without substitution.

230.67 Surge Protection.

- (A) Surge-Protective Device. All services supplying ["dwelling units" deleted] the following occupancies shall be provided with a surge protective device (SPD):
- (1) Dwelling units
- (2) Dormitory units
- (3) Guest rooms and guest suites of hotels and motels
- (4) Areas of nursing homes and limited care facilities used exclusively as patient sleeping rooms.
- (B) Location. The SPD shall be an integral part of the service equipment or shall be located immediately adjacent thereto.

Exception: The SPD shall not be required to be located at ["in" deleted] the service equipment as required in 230.67(B) if located at each next level distribution equipment downstream toward the load.

- (C) Type. The SPD shall be a Type 1 or Type 2 SPD.
- (D) Replacement. Where service equipment is replaced, all of the requirements of this sections shall apply.

Reason: The code making panel did not provide adequate substantiation to clearly identify a risk to equipment or safety concern to warrant this new requirement. Surge protection is currently permitted by the code and can provide a value to the end user, but it should remain up to the consumer as to whether the benefit is worth the investment. There are also potential issues with mandating currently-available surge-protection products in all cases. The new language does not specify which conductors are to be protected or what the minimum short circuit current rating, the minimum nominal discharge current rating, or the voltage protection rating should be. Market pressures will dictate that the lowest level of protection is installed in most cases, severely limiting the effectiveness of the devices. There is also no guarantee that the devices remain in service, further negating any possible advantages.

Proponent: Home Builders Association of South Carolina

Previous Code Cycles	Previous Modification Number	Previous Code Section
NEC 2020	NEC 2020 06	230.67

Staff Comments: Changes made in the 2023 NEC are noted in red. (A) was reorganized to state explicit uses in the 2023 NEC.