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Document No. 5074

**DEPARTMENT OF LABOR, LICENSING AND REGULATION**

**BUILDING CODES COUNCIL**

CHAPTER8

Statutory Authority: 1976 Code Sections 6‑9‑40, 6‑9‑50, and 6‑9‑55

8‑1200 – 8-1244. International Residential Code.

**Synopsis:**

The South Carolina Building Codes Council proposes to amend Chapter 8, Article 12, to reflect modifications to the 2021 South Carolina Building Codes, the International Residential Code.

A Notice of Drafting was published in the *State Register* on July 23, 2021.

**Instructions:**

Replace regulation as shown below. All other items and sections remain unchanged.

**Text:**

ARTICLE 12

International Residential Code

2021 International Residential Code Modification Summary

(Statutory Authority: 1976 Code Section 6‑9‑40)

8‑1200. International Residential Code.

NOTE‑This article is based upon the International Residential Code, 2021 Edition, in accordance with the statutory amendments to acts governing the Building Codes Council, except for the modifications referenced below.

This code is identical to the 2021 Edition of the International Residential Code except for the following modifications:

8‑1201. IRC Section R202 Definitions

 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.

 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.

8‑1202. IRC Section R301.2.1 Wind Design criteria.

 Buildings and portions thereof shall be constructed in accordance with the previously published maps by the South Carolina Building Codes Council. The local building official may delineate the wind design category within their jurisdiction provided that it does not surpass those provided on the Applied Technology Council (ATC) website. The structural provisions of this code for wind loads are not permitted where wind design is required as specified in Section R301.2.1.1. Where different construction methods and structural materials are used for various portions of a building, the applicable requirements of this section for each portion shall apply. Where not otherwise specified the wind loads listed in Table R301.2.1(1) adjusted for height and exposure using Table R301.2.1(2)2 shall be used to determine design load performance requirements for wall coverings, curtain walls, roof coverings, exterior windows, skylights, garage doors and exterior doors. Asphalt shingles shall be designed for wind speeds in accordance with Section R905.2.4. Metal roof shingles shall be designed for wind speeds in accordance with Section R905.4.4. A continuous load path shall be provided to transmit the applicable uplift forces in Section R802.11 from the roof assembly to the foundation. Where ultimate design wind speeds in Figure 301.2(2) are less than the lowest wind speed indicated in the prescriptive provisions of this code, the lowest wind speed indicated in the prescriptive provisions of this code shall be used.

8‑1203. IRC Section 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 S.C. Building Codes Council. The local building official may delineate the seismic design category within their jurisdiction, as long as it does not surpass those provided on the Applied Technology Council (ATC) website.

8‑1204. IRC Figure R302.1 Exterior walls.

 Exception 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 IRC 2012 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.

 b. The minimum fire separation distance for improvements constructed on a lot where the local governing authority has prior to the implementation of IRC 2012: [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.

 Exception 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 projection does not damage the integrity of the fire rated assembly, the projection is completely supported by the common wall, the projection is protected by the one‑hour construction or fire retardant‑treated wood, and the projection is limited to 18‑inches. 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.

8‑1205. IRC Section R302.4.1 Through penetrations.

 Through penetrations of fire‑resistance‑rated wall or floor assemblies shall comply with Section 302.4.1.1 or R302.4.1.2. No penetrations shall pass 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) as 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.

8‑1206. IRC Section 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 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.

8‑1207. Section R.302.13 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.

 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.

8‑1208. IRC Section R303.4 Mechanical ventilation.

 The Building Codes Council does not adopt IRC Section R303.4.

8‑1209. IRC Figure R307.1 Minimum Fixture Clearances.

 

8‑1210. IRC Section R311.7.5.1 Risers.

 The maximum riser height shall be 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. Open risers are permitted provided that the opening between treads does not permit the passage of a 4‑inch‑diameter (102 mm) sphere.

 Exceptions:

 1. The opening between adjacent treads is not limited on stairs with a total rise of 30 inches (762 mm) or less.

 2. The *riser* height of *spiral stairways* shall be in accordance with Section R311.7.10.1.

8‑1211. IRC Section R312.1.1 Where required.

 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 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.

8‑1212. IRC Section R312.2 Window Fall Protection

 The Building Codes Council does not adopt IRC Section R312.2.

 The Building Codes Council does not adopt IRC Section R312.2.1.

 The Building Codes Council does not adopt IRC Section R312.2.2.

8‑1213. IRC Section R313 Automatic Fire Sprinkler Systems.

 R313.1 Townhouse automatic fire sprinkler systems. An automatic residential fire sprinkler system shall not be required to be installed in townhouses when constructed in accordance with R302.2.

 Exception: An automatic residential fire 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.

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

 R313.2 One‑ and two‑family dwellings automatic fire systems. An automatic residential fire sprinkler system shall not be required to be installed in one‑ and two‑family dwellings.

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

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

8‑1214. IRC Section R317.1.1 Field treatment.

 Field‑cut ends, notches and drilled holes of preservative‑treated wood shall be treated in the field in accordance with AWPA M4 or in accordance with the preservative‑treated wood product manufacturer’s recommendations.

8‑1215. IRC Section 318.1 Subterranean termite control methods.

 A seventh item is added which reads:

 7. Treatments may be conducted as outlined in Section 27‑1085 of the Rules and Regulations for the Enforcement of the SC Pesticide Control Act and enforced by the Clemson University Department of Pesticide Regulation.

8‑1216. IRC Section R318.4 Foam Plastic Protection.

 In areas where the probability of termite infestation is “very heavy” as indicated in Figure R318.4, 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 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. On the interior side of basement walls.

8‑1217. IRC Section 318.5 Termite Inspection Strip.

Where foam plastic is applied in accordance with R318.4, a continuous 6 inch strip centered along the sill plate shall be left open for termite activity inspection.

8‑1218. IRC Section R322.1 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(1), and substantial improvement and repair of substantial damage of buildings and structures 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 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 and a locally adopted flood ordinance, the more restrictive provision shall apply.

8‑1219. IRC Section R326.3 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 not greater than three‑fourths of the floor area of the story below.

 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, the dwelling unit or townhouse unit shall be equipped with a fire sprinkler system in accordance with Section P2904.

8‑1220. IRC Section 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 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 the 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.

8‑1221. IRC Section 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 vapor retarder meeting ASTME 1745 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 is 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 (4.7 m2) 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 of this code.

 2.2. Conditioned air supply sized to deliver at a rate equal to 1 cubic foot per minute (0.47L/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 the S.C. Energy Codes.

 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 the manufacturer’s specifications.

8‑1222. IRC Section 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. See Section M1305.1.4 for access requirements where mechanical equipment located under floors.

8‑1223. IRC Section R408.8 Under‑floor vapor retarder.

Section R408.8 is deleted without substitution.

8‑1224. IRC Section R502.11.4 Truss design drawings.

 Truss design drawings. Truss design drawings, prepared in compliance with Section R502.11.1, shall be provided to the building official at the time of 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:

 1. Slope or depth, span and spacing.

 2. Location of all joints.

 3. Required bearing widths.

 4. Design loads as applicable:

 4.1. Top chord live load.

 4.2. Top chord dead load.

 4.3. Bottom chord live load.

 4.4. Bottom chord dead load.

 4.5. Concentrated loads and their points of application.

 4.6. Controlling wind and earthquake loads.

 5. Adjustments to lumber and joint connector design values for conditions of use.

 6. Each reaction force and direction.

 7. Joint connector type and description, e.g., size, thickness or gauge, and the dimensioned location of each joint connector except where symmetrically located relative to the joint interface.

 8. Lumber size, species and grade for each member.

 9. Connection requirements for:

 9.1. Truss‑to‑girder‑truss;

 9.2. Truss ply‑to‑ply; and

 9.3. Field splices.

 10. Calculated deflection ratio and/or maximum description for live and total load.

 11. Maximum axial compression forces in the truss members to enable the building designer to design the size, connections and anchorage of the permanent continuous lateral bracing. Forces shall be shown on the truss drawing or on supplemental documents.

 12. Required permanent truss member bracing location.

8‑1225. IRC Section R506.2.3 Vapor Retarder.

 A minimum 10-mil (0.010 inch; 0.254 mm) 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 no base course exists.

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

 1. Utility buildings and other unheated accessory structures.

 2. For unheated storage rooms having an area of less than 70 square feet (6.5 m2) 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.

8‑1226. IRC Section 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 mortar, the allowable compressive stress shall be permitted to be increased as provided in Table R606.9.

8‑1227. IRC Section R802.10.1 Wood Truss Design.

 Truss design drawings, prepared in conformance to Section R802.10 shall be provided to the building official 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:

 1. Slope or depth, span and spacing.

 2. Location of all joints.

 3. Required bearing widths.

 4. Design loads as applicable.

 4.1. Top chord live load (as determined from Section R301.6).

 4.2. Top chord dead load.

 4.3. Bottom chord live load.

 4.4. Bottom chord dead load.

 4.5. Concentrated loads and their points of application.

 4.6. Controlling wind and earthquake loads.

 5. Adjustments to lumber and joint connector design values for conditions of use.

 6. Each reaction force and direction.

 7. Joint connector type and description such as size, thickness or gage and the dimensioned location of each joint connector except where symmetrically located relative to the joint interface.

 8. Lumber size, species and grade for each member.

 9. Connection requirements for:

 9.1. Truss to girder‑truss.

 9.2. Truss ply to ply.

 9.3. Field splices.

 10. Calculated deflection ratio and/or maximum description for live and total load.

 11. Maximum axial compression forces in the truss members to enable the building designer to design the size, connections and anchorage of the permanent continuous lateral bracing. Forces shall be shown on the truss design drawing or on supplemental documents.

 12. Required permanent truss member bracing location.

8‑1228. IRC Section R905.2.8.5 Drip Edge.

 A drip edge shall be provided at eaves and rake edges of asphalt shingle roofs where required by the manufacturer.

8‑1229. IRC Section M1411.6 Insulation of refrigerant piping.

 Pipings and fittings for refrigerant vapor (suction) lines shall be insulated with insulation having a thermal resistivity of at least R2.5 hr. ft2 F/Btu and having external surface permeance not exceeding 0.05 perm [2.87ng/(s x m2 x Pa)] when tested in accordance with ASTM E96.

8‑1230. IRC Chapter 11 Energy Efficiency.

 The Building Codes Council does not adopt IRC Chapter 11.

8‑1231. IRC Section M1411.9 Locking access port caps.

 IRC Section M1411.9 is deleted without substitution.

8‑1232. IRC Section 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. Exhaust duct terminations shall be equipped with a backdraft damper. Screens shall not be installed at the duct termination.

8‑1233. IRC Section M1502.4.2 Duct Installation.

 Exhaust ducts shall be supported at intervals not to exceed 8 feet and within 16 inches of each side of a joint that is not installed in a vertical orientation, secured in place, making rigid contact with the duct at not less than 4 equally spaced points or 2/3rds 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 shall be sealed in accordance with Section M1601.4.1. Where dryer ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation 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.

8‑1234. IRC Section M1502.4.6 Duct length.

 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.

8‑1235. IRC Section M1503.6 Makeup air required.

 Exhaust hood systems capable of exhausting more than 400 cubic feet per minute (0.19m3/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 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.

8‑1236. IRC Section 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.

 3. Not less than 10 feet (3048 mm) from mechanical air intake openings except where the exhaust opening is located not less than 3 feet (914 mm) above the air intake opening. Openings shall comply with Sections R303.5.2 and R303.6.

 Exception: Bathrooms, water closets shower spaces.

8‑1237. IRC Section 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.

8‑1238. IRC Section G2418.2 Design and Installation.

 Piping shall be supported with pipe hooks, pipe straps, bands, brackets, 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.

8‑1239. IRC Section P2503.6 Shower Liner Test.

 Where shower floors and receptors are made water tight by the application of materials required by Section P2709.2, the completed liner installation shall be tested. Shower liner shall be tested to the lesser of the depth of threshold or 2” and shall be operated at normal pressure for a test period of not less than 15 minutes, and there shall be no evidence of leakage. The shower liner test shall be performed at the final plumbing inspection.

8‑1240. IRC Section 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 ¼ 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.

8‑1241. IRC Section 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 temperatures 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.

8‑1242. IRC Section 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. 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 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 R322.1.6.

 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.

8‑1243. IRC Section 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 and tub/shower combination valves required by this section shall be equipped with a means to limit the maximum setting of the valve to 120⁰F (49⁰C), which shall be field adjusted in accordance with the manufacturer’s instructions to provide water at a temperature not to exceed 120⁰ (49⁰C). In‑line thermostatic valves shall not be utilized for compliance with this section.

8‑1244. IRC Section P2713.3 Bathtub and whirlpool bathtub valves.

 Hot water supplied to bathtubs and whirlpool bathtubs shall be limited to a temperature of not greater than 120⁰F (49⁰C) 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.

8‑1245. IRC Section P2903.10 Hose Bibb.

 This section is deleted without substitution.

8‑1246. IRC Section 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: Pendent 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 does not exceed more than 50% of the plan area view.

8‑1247. IRC Section E3606.5 Surge protection.

 This section is deleted without substitution.

8‑1248. IRC Section E3802.4 In unfinished basements.

 Where type NM or SE cable is run at angles with joists in unfinished basements, 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 running boards. 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 at the point where the cable enters the raceway. The sheath of the Type NM or SE cable shall extend through the conduit or tubing and into the outlet or device 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 E3908.13. [334.15(C)]

8‑1249. IRC Section R3901.4.2.1 Islands and peninsular countertops and work spaces

 Receptacle outlets shall be installed in accordance with the following: [210.52(C)(2)]

 1. At least one receptacle outlet shall be provided for the first 6 feet (0.84m2), or fraction thereof, of the countertop or work surface. A minimum of two receptacle outlets shall be provided for any island over 6 feet 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)].

8‑1250. IRC Section E3902 Ground‑Fault and Arc‑Fault Circuit‑Interrupter Protection.

 Remove all references to “through 250 volt” from all parts of Section E3902.

8‑1251. IRC Section 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.

8‑1252. IRC Section R3902.17 Arc Fault Circuit Interrupted Protection.

 In areas other than kitchen and laundry areas, branch circuits that supply 120‑volt single‑phase, 15‑ and 20‑ampere outlets installed in family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreations rooms, closets, hallways, and similar rooms or areas shall be protected by any of the following: [210.12(A)]

 1. A listed combination‑type arc‑fault circuit‑interrupter, installed to provide protection of the entire branch circuit. [210.12(A)(1)]

 2. A listed branch/feeder‑type AFCI installed at the origin of the branch‑circuit in combination with a listed outlet branch‑circuit‑type arc‑fault circuit‑interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit. [210.12(A)(2)]

 3. A listed supplemental arc‑protection circuit breaker installed at the origin of the branch circuit in combination with a listed outlet branch‑circuit‑type arc‑fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:

 3.1. The branch‑circuit wiring shall be continuous from the branch‑circuit overcurrent device to the outlet branch‑circuit arc‑fault circuit‑interrupter.

 3.2. The maximum length of the branch‑circuit wiring from the branch‑circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3 m) for 12 AWG conductors.

 3.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit. [210.12(A)(3)].

 4. A listed outlet branch‑circuit type arc‑fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch‑circuit overcurrent protective device where all of the following conditions are met:

 4.1. The branch‑circuit wiring shall be continuous from the branch‑circuit overcurrent device to the outlet branch‑circuit arc‑fault circuit‑interrupter.

 4.2. The maximum length of the branch‑circuit wiring from the branch‑circuit overcurrent device to the first outlet shall not exceed 50 feet (15.2 m) for 14 AWG conductors and 70 feet (21.3m) for 12 AWG conductors.

 4.3. The first outlet box on the branch circuit shall be marked to indicate that it is the first outlet on the circuit.

 4.4. The combination of the branch‑circuit overcurrent device and outlet branch‑circuit AFCI shall be identified as meeting the requirements for a system combination‑type AFCI and shall be listed as such.

8‑1253. IRC Section E4002.14. Tamper‑resistant receptacles.

 In areas specified in Section E3901.1, 15‑ and 20‑ampere, 125‑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 for a single appliance or a duplex receptacle for two appliances where such receptacles are located in spaces dedicated 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].

8‑1254. IRC Chapter 44 Referenced Standards.

 Delete from Referenced Standards the following:

ANCE: NMX‑J‑521/2‑40‑ANCE—2014/CAN/CSA‑22.2 No. 60335‑2‑40—12/UL 60335‑2‑40: Safety of Household and Similar Electric Appliances, Part 2‑40: Particular Requirements for Heat Pumps, Air‑Conditioners and Dehumidifiers.

 Update the Referenced Standards as follows:

CSA: CSA/C22.2 No. 60335‑2‑40—2019: Safety of Household and Similar Electrical Appliances, Part 2‑40: Particular Requirements for Electrical Heat Pumps, Air‑Conditioners and Dehumidifiers, 3rd Edition M1402.1, M1403.1, M1412.1, M1413.1, M2006.1.

UL:UL/CSA 60335‑2‑40—2019: Standard for Household and Similar Electrical Appliances, Part 2‑40: Particular Requirements for Electrical Heat Pumps Air‑Conditioners and Dehumidifiers M1402.1, M1403.1, M1412.1, M1413.1, M2006.1.

8‑1255. IRC Section Appendix AH Patio Covers.

 The Building Codes Council does adopt IRC Section Appendix AH.

8‑1256. IRC Section Appendix AJ Existing Buildings.

 The Building Codes Council does adopt IRC Section Appendix AJ.

8‑1257. IRC Section Appendix AQ Tiny Houses.

 The Building Codes Council does adopt IRC Section Appendix AQ.

**Fiscal Impact Statement:**

There will be no cost incurred by the State or any of its political subdivisions for these regulations.

**Statement of Rationale:**

The South Carolina Building Codes Council proposes to amend Chapter 8, Article 12, to reflect modifications to the 2021 South Carolina Building Codes, the International Residential Code.