South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Mike Smith
Representative: self
Title: Building Official
Address: 513 Bradfield Ct, Lexington, SC 29072
Phone: (803) 730-7552
E-mail: smithmi@rcgov.us

Signature: [Signature]
Date: 1 April 2015

Code: International Residential Code
Edition: 2015
Section: Chapter 1

Check One: [ ] Delete and substitute the following  [ ] Delete without substitution  [X] Add the following  [] Modify the following
Type or print proposed modification. Use additional pages if necessary. Underline New language. Line-Through-Deleted-Language.

Adopt Chapter 1 — Scope and Administration excepting those sections that concern the qualification, removal, dismissal, duties, responsibilities of, and the administrative procedures for all building officials, deputy building officials, chief inspectors, other inspectors, and assistants.

Reason: [ ] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

Adopt the general provisions of the administration chapters, as necessary, to provide uniform application of the building codes throughout the state.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Structural Engineers' Association of South Carolina (SEASC)

Representative: Michelle Motchos, PE
Title: Member – Code Advisory Committee

Address: 1501 Main St, Suite 730, Columbia SC 29201

Phone: 803-765-0320
E-mail: mmotchos@stevens-wilkinson.com

Signature: [Signature]
Date: 04.01.2016

Code: International Residential Code
Edition: 2015
Section: Chapter 1

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [X] Add the following [] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New Language, Line Through Deleted Language.

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Reason: [ ] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
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Adopt the general provisions of the administration chapters, as necessary, to provide uniform application of the building codes throughout the state.
South Carolina Building Codes Council  
PO Box 11329  
Columbia, SC 29211-1329  

Request for Statewide Code Modification  

Jurisdiction or Organization:  Home Builders Association of South Carolina  
Representative: Mark Nix  Title: Executive Director  
Address: 625 Taylor Street / Columbia, SC 29201  
Phone: 803-771-7408  E-mail: mnix@hbaofsc.com  
Signature:  
Date: February 2, 2015  

Code: International Residential Code  Edition: 2015  Section: R301.2 (4)B- Regions where wind design is required  
Check One: [] Delete and substitute the following [x] Delete without substitution [ ] Add the following [ ] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.  

Buildings shall be assigned a wind design category in accordance with figure R301.2(4) B. until probabilistic hazard maps, funded by the S.C. General Assembly, can be presented by its author, Dr. Timothy Mayes, and the findings reviewed, addressed and, if justified, adopted as a modification by the by the S.C. Building Code Council.  

Reason:  [ ] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety  
Type or print the reason for the proposed modification. Use additional pages if necessary.  

A serious and related concern for homeowners in South Carolina is the recent news that the United States Geological Survey (USGS) has completed its study titled Documentation for the 2014 Update of the United States National Seismic Hazard Maps and found that seismic hazard in South Carolina, particularly in the Low Country, is going to go up once again. Justification for the increase in seismic demand is related to the inclusion of new fault sources and new characteristics of existing fault sources as compared to the previous maps developed in 2008. In addition, models and assumptions associated with the Charleston seismic zone have also been modified. According to the USGS:  
“The 2008 USGS NSHMP maps included four fault-based sources in the CEUS: the Meers (Okla.) and Cheraw (Colo.) faults, and the New Madrid (Missouri [Mo.]) and Charleston (South Carolina [S.C.]) seismic zones. The 2014 model updates these sources and includes an additional six fault-based characteristic or repeating large magnitude earthquake (RLME) sources from the CEUS–SSCn (2012): the Wabash Valley (Ill.–Ind.), Commerce Geophysical Lineament (Ark.–Ind.), Eastern Rift Margin (western Tennessee), Marianna (east-central Arkansas), and Charlevoix (eastern Canada) areal source zones and New Madrid (Ark.–Ky.) fault source. These new sources have characteristic magnitudes ranging from 6.7 to 7.9 and effective return periods from less than 400 years in New Madrid to nearly 10,000 years for the Commerce Geophysical Lineament and the northern extent of the Eastern Rift Margin. The New Madrid, Charleston, Charlevoix, and Meers faults are the main contributors to ground motion hazard, when considering a 2-percent chance of exceeding defined levels of ground motion in a 50-year time window. Other fault sources contribute to ground motion hazard at longer return periods (greater than 2,475 years).” (USGS Open-File Report 2014–1091)  

Although the theory behind the new sources and source modifications considered in the 2014 Update of the United States National Seismic Hazard Maps is not only sound and fully vetted, the mapped accelerations do not consider actual soil conditions in South Carolina, which research and design practice in South Carolina has consistently shown to result in decreased seismic demand at the ground surface (i.e., the condition on which seismic design categories are actually based). It is important to note that the 2014 USGS and 2015 IRC approaches to seismicity determination assume rock 100 ft below the surface which is not typical in much of South
Homeowners wanting to take advantage of lower seismic design categories using the full 2015 IBC procedure or local soil consideration must pay a significant engineering fee to have a licensed engineer modify the IRC classification as defined. As part of an unrelated project, The Citadel is currently collecting local soil data for a related study that is aimed at determining a more accurate and reduced estimate of seismicity for structural design in the tri-county area of Charleston, SC.

If not addressed soon, the impact of the 2014 USGS elevated seismic hazard on residential structures in South Carolina could include higher seismic design categories and increased construction costs. A separate, significant, yet unrelated concern with the 2015 IRC is the updated wind map which would have a significant impact in certain SC counties by requiring wind design where wind design requirements in the 2012 IRC were less stringent. According to the proposal that made the 2015 change take place:

“The region in revised Figure R301.2(4)B where the use of alternate prescriptive high-wind standards or engineered design is required is defined using the 130mph contour along the Gulf Coast and along the southern portions of the Atlantic coast from Florida up to North Carolina. The 140mph contour is used for the northern portions of the Atlantic coast from Virginia up to Maine, and for Alaska. A 130mph trigger is also used for the assorted Caribbean and Pacific islands that are also considered part of the “hurricane-prone” region. This creates a region that approximately equals the region defined by the 110mph contour under the wind map used in the 2000 through 2009 IRC, maintains areas of Florida and the Gulf Coast traditionally outside of the prescriptive limits of the IRC, and maintains areas of New England traditionally included within the prescriptive limits of the IRC.” The change was approved based on the following: “Cost Impact: The code change proposal will not increase the cost of construction.” This is not true for a few counties in SC.

Scope of Work
The scope of work for The Citadel is to:
Task I – Perform a detailed literature review focusing on the seismic provisions contained in the 2015 IRC. To the extent possible, this review will identify the motivation and rationale for the included seismic provisions. Additionally, where applicable, the underlying research for these provisions will be located. One must recognize that such information may not be readily identified and obtained due to the process of code committees. However, a summary of findings will be provided. With the deadline established of October 1, 2015, Dr. Mays will reach out to local builders and building officials in an attempt to ensure the concerns raised prior to October 1, 2015 are addressed as part of this study. Dr. Mays will present, in written form, recommended changes raised through this process.
Task II – In anticipation of the extremely likely inclusion of the 2014 USGS Maps in the 2018 IRC, the Citadel research team will develop a simplified map (by county) of recommended SDCs in SC that is based on the 2014 USGS Seismic Hazard Maps but reduced to include the effect of local soil conditions and the full IBC procedure as permitted by provisions in the code. This map can be used by the South Carolina Department of Labor, Licensing and Regulation (LLR) to develop statewide seismic enforcement maps for residential structures and will be simple to construct, since it will fall on county lines. The map can be used in conjunction with both the 2015 IRC and the 2018 IRC, so the adoption of the 2018 IRC will have no impact in regards to seismic design category classifications.

In current U.S. design practice, the effect of local soil conditions on seismic site response is often accounted for based upon values derived from the seismic hazard maps produced by the USGS and National Earthquake Hazard Reduction Program (NEHRP) developed site factors. The NEHRP site factors are based upon the shear wave velocity over the top 100 ft of the site. The appropriateness of the site factor approach in Charleston, South Carolina, which sits on deep coastal plain sediments, and has soil profiles that do not conform to the profile used to develop the NEHRP site factors, will be investigated. Because the strongest ground motions are generally de-amplified by thick sediments for shorter periods, the ground motions in the Charleston hazard maps are most likely less than those in the national maps for PGA and 0.2 second period motions.

The characterization of the sediment structure, shear wave velocity and dynamic soil properties will involve collecting a substantial amount of data from several sources. Data will be collected from the geotechnical consulting community and SCDOT in order to properly cover the study area. Data layers needed include surface geology, shear wave (Vs) measurements and profiles, geotechnical information (including soil types, layer boundaries, density, modulus and damping curves, etc.), and water table data. Representative soil profiles will be generated and appropriate time histories will be propagated from bedrock up to a Cooper Marl surface.

Probabilistic hazard maps will be generated using the equivalent linear and nonlinear site response with the effects of dynamic pore-pressure changes, and the 2014 USGS NSHMP source and attenuation models (Petersen et al., 2014).

Task III – Justification for the changes made in the wind maps of the 2015 IRC will be researched and summarized. If justified, arguments for keeping the 2012 IRC wind map in place will be made and formally submitted to the SC Building Code Council as a proposed change to the 2015 IRC.
Buildings shall be assigned a seismic design category in accordance with figure R301.2(2)-, until probabilistic hazard maps, funded by the S.C. General Assembly, can be presented by its author, Dr. Timothy Mayes, and the findings reviewed, addressed and, if justified, adopted as a modification by the by the S.C. Building Code Council.

Reason:  [ ] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
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Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix
Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408
E-mail: mnix@hbaofsc.com

Signature: [Signature]
Date: February 2, 2015

Code: International Residential Code
Edition: 2015
Section: 302.2 Townhomes (previous modification)

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [X] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

Delete prior modification. Previously listed at R313.1 in the 2012 IRC.

Reason: [ ] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

The 2012 IRC modification is no longer necessary. The exception has been added to the 2015 IRC 302.2.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix
Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408
E-mail: mnx@hbaofsc.com

Signature: ____________________________ Date: February 2, 2015

Code: International Residential Code

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [ X] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language. Line Through Deleted Language.

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 fuel fired appliances.
3. Portions of floor assemblies shall be unprotected where complying with the following:

Reason: [ ] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

The S.C. General Assembly has passed legislation that temporarily stopped the enforcement of this section of code until the latest adoption process is complete based on the support of the HBASC, BOASC and the State Fire Marshal. All parties agreed that the requirements within the 2012 IRC in section R501.3 and now the 2015 IRC section 302.13 are unwarranted and unnecessary (there are no additional fire protection requirements if a fuel burning appliance resides in an attic or any other location). Requiring the under floor framing to be protected as prescribed in this code section would be a financial burden on homeowners with very little benefit. The inclusion of this section of code will add thousands of dollars to the cost of the home with absolutely no benefit and may also lead to other unintended consequences; mold, mildew and excessive moisture.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization:  Home Builders Association of South Carolina

Representative: Mark Nix  Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408  E-mail: mnix@hbaofsc.com

Signature:  Date: February 2, 2015

Code: International Residential Code  Edition: 2015  Section: R311.7.5.1 Risers

Check One:  [ ] Delete and substitute the following  [ ] Delete without substitution  [X] Add the following  [ ] Modify the following
Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

Exceptions:

3. The first and last riser in a flight of stairs shall be permitted to have a maximum vertical rise of 8 ¼” (210 mm) where immediately adjacent risers are no less than 7 ¾” (196 mm).

Reason:  [X] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

Add exception to allow for varying floor coverings from level to level and beginning and end of stair runs.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

<table>
<thead>
<tr>
<th>Jurisdiction or Organization:</th>
<th>Home Builders Association of South Carolina</th>
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<tbody>
<tr>
<td>Representative:</td>
<td>Mark Nix</td>
</tr>
<tr>
<td>Title:</td>
<td>Executive Director</td>
</tr>
<tr>
<td>Address:</td>
<td>625 Taylor Street / Columbia, SC 29201</td>
</tr>
<tr>
<td>Phone:</td>
<td>803-771-7408</td>
</tr>
<tr>
<td>E-mail:</td>
<td><a href="mailto:mnix@hbaofsc.com">mnix@hbaofsc.com</a></td>
</tr>
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Check One: [ ] Delete and substitute the following [X] Delete without substitution [ ] Add the following [ ] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language. Line Through Deleted Language.

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

R312.2.1 Window sills. In dwelling units, where the top of the sill of an operable window opening is located less than 24 inches (610 mm) above the finished floor and greater than 72 inches (1829 mm) above the finished grade or other surface below on the exterior of the building, the operable window shall comply with one of the following:
1. Operable windows with openings that will not allow a 4-inch diameter (102-mm) sphere to pass through the opening where the opening is in its largest opened position.
2. Operable windows that are provided with window fall prevention devices that comply with ASTM F 2090.
3. Operable windows that are provided with window opening control devices that comply with Section R312.2.2.

R312.2.2 Window opening control devices. Window opening control devices shall comply with ASTM F 2090. The window opening control device, after operation to release the control device allowing the window to fully open, shall not reduce the net clear opening area of the window unit to less than the area required by Section R310.2.1.

Reason: [X] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

During the 2007/2008 code development cycle and the ICC Code Technology Committee (CTC) meetings, the Window and Door Manufacturers Association (WDMA) presented credible information that raised questions and concerns regarding the established minimum window sill heights. Despite the Consumer Product Safety Commission reports indicating a decrease in the number of injuries and deaths from children falling from windows, WDMA had discovered that in Denver, one of the few areas in the country that has had a minimum sill height requirement for the past decade, the number of child injuries and deaths were increasing. One of the many concerns is that there is the potential for the occupant to place furniture or other objects under the window that a child could climb upon. It is our opinion that the CTC needs to earnestly review the information presented by the WDMA and reconsider its position on minimum window sill heights. Furthermore, the recommendation to require window opening limiting devices contradicts conclusions of the CTC Work Study Group. It was clear to many in the group that public education was the most effective means of reducing the number of falls by children through windows. The window opening control devices were limited in use in the last code cycle and unforeseeably created conflict as to the enforcement. These devices also are in direct conflict with the rule that emergency egress windows do not need any special tools or knowledge to operate.
South Carolina Building Codes Council  
PO Box 11329  
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix  
Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408  
E-mail: mnix@hbaofsc.com

Signature:  
Date: February 2, 2015

Code: International Residential Code  
Edition: 2015  
Section: R313 Automatic Fire Sprinkler Systems  
(Previous modification)

Check One: [X] Delete and substitute the following  
[ ] Delete without substitution  
[ ] Add the following  
[ ] Modify the following  
Type or print proposed modification. Use additional pages if necessary. 

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.

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 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.

Reason: [X] Unusually Restrictive  
[ ] Impractical  
[ ] Threat to Human Injury or Life Safety  
Type or print the reason for the proposed modification. Use additional pages if necessary.

Since the inclusion of the mandatory requirement for residential sprinklers in the 2009 IRC, more than 42 states have amended or passed legislation prohibiting communities from mandating residential sprinklers in new one- and two-family dwellings. Many others have removed the mandate through the modification process. The HBASC opposes mandatory requirement and continues to support the voluntary installation of residential sprinklers as the buyer’s choice. The IRC clearly states, “The purpose of this code is to provide minimum requirements to safeguard life or limb, health and public welfare.” The IRC Commentary states that the IRC is intended to provide reasonable minimum standards that reduce the factors of hazardous and substandard conditions that would otherwise put the public at risk to damaging their health, safety or welfare. Any imposition of a mandated sprinkler requirement is excessive and is not a reasonable minimum standard for meeting the “purpose” of the code. It is important to remember that the code is composed of many
life-safety standards that have been proven to meet the “purpose” of the code. Proposals to mandate sprinklers as a requirement in the body of the IRC rather than an adoptable appendix exceed this “purpose” and should not approved.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization:  Home Builders Association of South Carolina
Representative: Mark Nix  Title: Executive Director
Address: 625 Taylor Street / Columbia, SC 29201
Phone: 803-771-7408  E-mail: mnix@hbaofsc.com
Signature:  [Signature]
Date: February 2, 2015

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [X] Modify the following
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R319.1 Address identification.
Buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) in height with a stroke width of not less than 0.5 inch (12.7 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building address cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

Reason: [ ] Unusually Restrictive  [x] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

Identification methods are clearly presented in this section. Adding another layer of authority can and will likely cause confusion in overlapping jurisdictions. If additional locations are required then those changes can be provided by ordinance to maintain uniformity.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix  Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408  E-mail: mnix@hbaofsc.com

Signature: ___________________________ Date: February 3, 2015


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Adoption of Section 322 Flood Resistant Construction is dependent on FEMA purchasing an ASCE 24 book for every jurisdiction required to comply with this section.

Reason:  [X] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

FEMA has circumvented the national code adoption process by mandating flood resistant construction is included in the IRC codes in accordance with ASCE 24. FEMA appears to be driving book sales of ASCE 24, which is not provided in the public domain. The purchase of ASCE 24 would cost each jurisdiction $110 per book which could provide a financial hardship on the jurisdictions and those required to abide by the regulation.
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Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408
E-mail: mnix@hbaofsc.com

Signature: ____________________________ Date: February 2, 2015

Code: International Residential Code
Edition: 2015
Section: R322.3.5.1 Protection of building envelope

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [ ] Modify the following
Type or print proposed modification. Use additional pages if necessary. Underline New language, Line-Through-Deleted Language.

R322.3.5.1 Protection of building envelope. An exterior door that meets the requirements of Section R609 shall be installed at the top of stairs that provide access to the building and that are enclosed with walls designed to break away in accordance with Section R322.3.4.

Reason: [ ] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

This amendment deletes the requirement added in the 2015 IRC that an exterior door be provided at the top of a stairway enclosed by breakaway walls and providing access to a dwelling located in a Coastal A Zone or Zone V special flood hazard area and elevated on piers or piles. While having a door at the top of such a stair may be good practice, the additional requirements associated with it being an exterior door are overly conservative, particularly if the door at the bottom of the enclosed stair is also an exterior door. By requiring compliance with all of the requirements of Section R609, the specified door would need to have a design pressure rating consistent with the design wind speed for the site, the door frame would need to be stiffened to resist the loads from such a door, proper anchorage of the door to the frame would need to be provided, and the door opening would need head, jamb, and sill flashing. The minimum added cost to provide a standard exterior door with flashing in lieu of a standard interior door is around $300; a hurricane wind-rated door would add an additional $200-$300 to the minimum costs. It is noted that this requirement does not appear in the basic construction requirements of the National Flood Insurance Program in accordance with 44 CFR 60.3. It is also not specified as a practice that a community would earn credit for mandating and enforcing under FEMA’s Community Rating Service, and would not lead to discounted flood insurance premiums.
Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix                     Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408                     E-mail: mnix@hbaofsc.com

Signature: ___________________________ Date: February 2, 2015


Check One: [ ] Delete and substitute the following [X] Delete without substitution [ ] Add the following [ ] Modify the following Type or print proposed modification. Use additional pages if necessary. __Underline New language__, __Line Through Deleted Language__.

SECTION-R326
SWIMMING POOLS, SPAS AND HOT TUBS

R326.1 General.
The design and construction of pools and spas shall comply with the International Swimming Pool and Spa Code.

Reason: [ ] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

The adoption of this section would circumvent the right of local jurisdictions to adopt and or reference the approved permissive codes.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix
Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408
E-mail: mnix@hbaofsc.com

Signature: [Signature]
Date: February 2, 2015

Code: International Residential Code
Edition: 2015
Section: R404.1.9.2 Masonry Piers
supporting floor girders (previous modification)

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [X] Modify the following
Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

R404.1.9.2 Masonry Piers Supporting Floor girders. Masonry piers supporting wood beams and 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 12-inches (305 mm) 8 inches (203 mm) and a maximum height of not exceeding 10 feet (3048 mm) times the nominal thickness 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 12-inches (305 mm) 8 inches (203 mm) and a maximum height of 4 feet (1220 mm) 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(1). Floor girder bearing shall be in accordance with Section R502.6.

Reason: [X] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

Edits existing modification IRC 2012 13 for clarity The Masonry Code (ACI 530/ASCE 5/TMS 402) allows foundation walls and foundation piers to have a minimum thickness of 8 inches. These modifications also bring this section into closer agreement with Section R606.7 Piers.

Since the exterior walls typically resist most of the lateral loading (wind & seismic) in one and two-family residential structures, if it is shown by accepted engineering practice that sufficient foundation wall is present in a braced wall line to resist the lateral loads, is there any sound reason why intermediate piers cannot have the same height limitations as interior foundation piers?

The reasoning for inclusion of a requirement for minimum reinforcing – minimum of one #4 dowel – is threefold: a) The required anchors for girders and sill plates are of little to no value if what they are embedded into is not anchored to the footing; b) ACI 530
limits foundation pier height to 4 times its thickness, but requires no reinforcement. This helps prevent the possibility of buckling. Adding some reinforcement also helps prevent this while allowing additional height; c) ACI 530 requires the resultant load be applied within the middle third of the pier (minimal eccentricity). For perimeter piers on one & two-family residential structures this is unrealistic unless the piers are left protruding out roughly 2 inches beyond the face of the sheathing. Addition of a minimal amount of reinforcing properly installed helps counter the effect of the eccentricity by resisting the induced tension.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Structural Engineers' Association of South Carolina (SEASC)
Representative: Michelle Motchos, PE
Title: Member - Code Advisory Committee
Address: 1501 Main St, Suite 730, Columbia SC 29201
Phone: 803-765-0320
E-mail: mmotchos@stevens-wilkinson.com
Signature: [Signature]
Date: 04.01.2015

Code: International Residential Code
Edition: 2015
Section: R404.1.9.2

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [X] Modify the following
Type or print proposed modification. Use additional pages if necessary. Underline New language. Line Through Deleted Language.

Delete prior modification from previous code series and replace with the following:

R404.1.9.2 Masonry Piers Supporting Floor girders. Masonry piers supporting wood beams and 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 42 inches (1066 mm) 8 inches (203 mm) and a maximum height of not exceeding 10 feet (3048 mm) times the nominal thickness 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 12 inches (300 mm) 8 inches (203 mm) and a maximum height of 4 feet (1220 mm) 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(1). Floor girder bearing shall be in accordance with Section R502.6.

Reason: [X] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

The Masonry Code (ACI 530/ASCE 5/TMS 402) allows foundation walls and foundation piers to have a minimum thickness of 8 inches. These modifications also bring this section into closer agreement with Section R608.7 Piers.

Since the exterior walls typically resist most of the lateral loading (wind & seismic) in one and two-family residential structures, if it is shown by accepted engineering practice that sufficient foundation wall is present in a braced wall line to resist the lateral loads, is there any sound reason why intermediate piers cannot have the same height limitations as interior foundation piers?

The reasoning for inclusion of a requirement for minimum reinforcing – minimum of one #4 dowel – is threefold: a) The required anchors for girders and sill plates are of little to no value if what they are embedded into is not anchored to the footing; b) ACI 530 limits foundation pier height to 4 times its thickness, but requires no reinforcement. This helps prevent
the possibility of buckling. Adding some reinforcement also helps prevent this while allowing additional height; c) ACI 530 requires the resultant load be applied within the middle third of the pier (minimal eccentricity). For perimeter piers on one & two-family residential structures this is unrealistic unless the piers are left protruding out roughly 2 inches beyond the face of the sheathing. Addition of a minimal amount of reinforcing properly installed helps counter the effect of the eccentricity by resisting the induced tension.
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<td>Date: February 2, 2015</td>
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**Code:** International Residential Code  
**Edition:** 2015  
**Section:** R408.4 Access

**Check One:**  
[ ] Delete and substitute the following  
[ ] Delete without substitution  
[ ] Add the following  
[ ] Modify the following  
Type or print proposed modification. Use additional pages if necessary. **Underline New language. Line Through Deleted Language.**

R408.4 Access. Access shall be provided to all under-floor spaces. Access openings through the floor shall be a minimum of 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-walls access openings shall not be located under a door to the residence. See Section M1305.1.4 for access requirements where mechanical equipment is located under floors.

**Reason:**  
[ ] Unusually Restrictive  
[ ] Impractical  
[ ] Threat to Human Injury or Life Safety  
Type or print the reason for the proposed modification. Use additional pages if necessary.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix
Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408
E-mail: mnx@hbaofsc.com

Signature: ___________________________ Date: February 2, 2015

Code: International Residential Code
Edition: 2015
Section: R502.11.4 Truss Design Drawings

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [X] Modify the following
Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

R502.11.4 Truss design drawings. Truss design drawings, prepared in compliance with Section R502.11.1, shall be submitted to the
building official and approved prior to installation. 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 information specified below:

Reason: [ ] Unusually Restrictive [X] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

*Prior modification explanation states “roof” in language and explanation, but is set in floor section. Modification was amended to
include both floors and roofs. Similar language should be included for roof design drawings in R802.10.1.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Structural Engineers' Association of South Carolina (SEASC)

Representative: Michelle Motchos, PE  
Title: Member – Code Advisory Committee

Address: 1501 Main St, Suite 730, Columbia SC 29201

Phone: 803-765-0320  
E-mail: mmotchos@stevens-wilkinson.com

Signature: ____________________________  Date: 04.01.2015

Code: International Residential Code  
Edition: 2015  
Section: R506.2.3

Check One: [ ] Delete and substitute the following  [ ] Delete without substitution  [ ] Add the following  [X] Modify the following
Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

R506.2.3 Vapor retarder. A 6-mil polyethylene or approved vapor retarder meeting ASTM E-1745, class C or better, with joints lapped 6 inches....

Reason: [ ] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

While ASTM E-96 sets the permeance limits and is covered under definitions in chapter 2, ASTM E-1745 sets toughness requirements such as resistance to puncture, tensile strength, etc. and is included along with E-96 in the recommendations of ACI 302.1R Guide for Concrete Floor and Slab Construction.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Structural Engineers' Association of South Carolina (SEASC)

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Title: Member – Code Advisory Committee

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E-mail: mmotchos@stevens-wilkinson.com

Signature: [Signature]
Date: 04.01.2015

Code: International Residential Code
Edition: 2015
Section: R506.2.3

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [ ] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language. Line Through Deleted Language.

Under Section R506.2.3 - Vapor Retarders: Exception – Delete "Garages" from exception 1

Exception: The vapor retarder is not required for the following:
1. Garages, Utility buildings and other unheated accessory structures.

Reason: [ ] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

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.
South Carolina Building Codes Council  
PO Box 11329  
Columbia, SC 29211-1329

Request for Statewide Code Modification

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Address: 1501 Main St, Suite 730, Columbia SC 29201
Phone: 803-765-0320  
E-mail: mmotchos@stevens-wilkinson.com

Signature: [Signature]  
Date: 04.01.2015

Code: International Residential Code  
Edition: 2015  
Section: R606.7

Check One: [ ] Delete and substitute the following  [ ] Delete without substitution  [ ] Add the following  [X] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

R606.7 Piers. .... Where hollow masonry units are solidly filled with grout or Type M, S, or N M or S mortar, the allowable....

Reason: [X] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety  
Type or print the reason for the proposed modification. Use additional pages if necessary.

As originally written, the inclusion of Type N mortar in the third sentence contradicts the prior sentence where it list only "grout or Type M or S mortar". Also, since the most common use for piers is in foundation systems, it should be noted that ACI 530 disallows the use of type N mortar in foundation walls.
## South Carolina Building Codes Council

**PO Box 11329**  
**Columbia, SC 29211-1329**

### Request for Statewide Code Modification

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Delete Modification IRC 2012 15.

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Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408 E-mail: mnix@hbaofsc.com

Signature: [Signature] Date: February 2, 2015


Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [X] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language. Line-Through Deleted Language.

R802.10.1 Truss design drawings. Truss design drawings, prepared in compliance with Section R502.11.1, shall be submitted to the building official and approved prior to installation. 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 information specified below:

Reason: [ ] Unusually Restrictive [X] Impractical [ ] Threat to Human Injury or Life Safety Type or print the reason for the proposed modification. Use additional pages if necessary.

*Updates prior modification IRC 2012 14. Similar language is included for floor design drawings in R502.11.4.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix
Title: Executive Director

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E-mail: mnix@hbaofsc.com

Signature: ___________________________ Date: February 2, 2015

Code: International Residential Code
Edition: 2015
Section: R905.2.8.5 Drip edge

Check One: [ ] Delete and substitute the following [X] Delete without substitution [ ] Add the following [ ] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

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.e. with fasteners as specified in Section R905.2.5. Underlayment shall be installed over the drip edge along eaves and under the underlayment along rake edges.

Reason: [ ] Unusually Restrictive [X] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

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 standalone inspection for this one phase of construction in many cases.
South Carolina Building Codes Council  
PO Box 11329  
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization:  Home Builders Association of South Carolina

Representative:  Mark Nix  
Title:  Executive Director

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Signature:  [Signature]  
Date:  February 2, 2015

---

**International Residential Code**  
Edition:  2015  
Section:  M1503.4. Makeup air required

Check One:  [ ] Delete and substitute the following  [ ] Delete without substitution  [ ] Add the following  [X] Modify the following  
Type or print proposed modification. Use additional pages if necessary.  
Underline New language.  
Line Through Deleted Language.

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**M1503.4 Makeup air required.** Exhaust hood systems capable of exhausting in excess of more than 400 cubic feet per minute (0.19 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 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.

**Exception:** Makeup air openings are not required for kitchen exhaust systems capable of exhausting not greater than 600 cubic feet per minute (0.28 m³) provided the floor area within the air barrier of a dwelling unit is at least 1500 square feet, and where all appliances in the house are sealed combustion, power-vent, unvented, or electric.

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Reason:  [X] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety  
Type or print the reason for the proposed modification. Use additional pages if necessary.

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As originally written, this section allows range hoods up to 400 cfm to be installed without makeup air. This amendment aims for consistency by requiring makeup air equaling the amount above and beyond 400 cfm for larger fans. Essentially there would be no difference between the effect a 400 cfm fan has on a house and a 600 cfm fan with 200 cfm of makeup air. This would also improve the feasibility and acceptance of this code section as well as cut down on the amount of wasted energy and potential occupant discomfort caused by needlessly introducing excessive amounts of unconditioned air.

The exception takes into consideration that in many homes there is no danger of backdrafting due to the natural infiltration of outdoor air (which is relative to the size of the home) or the lack of natural draft appliances. The 400 cfm threshold can be raised to 600 cfm in these cases with no added danger.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix
Title: Executive Director

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Signature: [Signature]
Date: February 2, 2015

Code: International Residential Code
Edition: 2015
Section: M 1601.4.1 Joints, seams and connections

Check One: [ ] Delete and substitute the following [X] Delete without substitution [ ] Add the following [ ] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language. Line Through Deleted Language.

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 inaccessible, 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 (500Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams of other than the snap-lock and button-lock types.

Reason: [ ] Unusually Restrictive [X] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

The requirement to seal longitudinal duct joints and seams is fitting for commercial applications with static pressures of 2 inches water column and greater. However, this should not apply to residential applications 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.
South Carolina Building Codes Council
PO Box 11329
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Request for Statewide Code Modification

Jurisdiction or Organization:  Home Builders Association of South Carolina

Representative:  Mark Nix  Title:  Executive Director

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Signature:  [Mark Nix]  Date:  February 2, 2015


Check One:  [ ] Delete and substitute the following  [ ] Delete without substitution  [ ] Add the following  [X] Modify the following
Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

P2503.5.1 Rough plumbing.
DWV systems shall be tested on completion of the rough piping installation by water or, for piping systems other than plastic, by air, without evidence of leakage. Either test shall be applied to the drainage system in its entirety or in sections after rough-in piping has been installed, as follows:
1. Water test. Each section shall be filled with water to a point not less than 5 feet (1524 mm) above the highest fitting connection in that section, or to the highest point in the completed system. Water shall be held in the section under test for a period of 15 minutes. The system shall prove leak free by visual inspection.
2. Air test. The portion under test shall be maintained at a gauge pressure of 5 pounds per square inch (psi) (34 kPa) or 10 inches of mercury column (34 kPa). This pressure shall be held without introduction of additional air for a period of 15 minutes.

Reason:  [X] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.
Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix                                      Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408                                           E-mail: mnix@hbaofsc.com

Signature: [Signature]                                          Date: February 2, 2015

Code: International Residential Code                              Edition: 2015                              Section: P2503.7  Water-supply system testing

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [X] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language. Line Through Deleted Language.

P2503.7 Water-supply system testing.
Upon completion of the water-supply system or a section of it, the system or portion completed shall be tested and proved tight under a water pressure of not less than the working pressure of the system or, for piping systems other than plastic, by an air test of not less than 50 psi (345 kPa). This pressure shall be held for not less than 15 minutes. The water used for tests shall be obtained from a potable water source.

Reason: [ ] Unusually Restrictive [X] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

The addition of “for piping systems other than plastic” is unnecessary and impractical. Freezing water in an unheated house under construction can cause undue damage to pipes.
Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix  Title: Executive Director

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Signature: [Signature]  Date: February 2, 2015


Check One: [ ] Delete and substitute the following  [ ] Delete without substitution  [ ] Add the following  [X] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

P2603.5 Freezing. In localities having a winter design temperature of 32 degrees F (0 degrees C) or lower as shown in Table R301.2(1) 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 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: [X] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina
Representative: Mark Nix
Title: Executive Director
Address: 625 Taylor Street / Columbia, SC 29201
Phone: 803-771-7408
E-mail: mnx@hbaofsc.com
Signature: [Signature]
Date: February 2, 2015

Code: International Residential Code
Edition: 2015
Section: P2903.10 Hose bibb.

Check One: [ ] Delete and substitute the following [X] Delete without substitution [ ] Add the following [ ] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language, Line Through Deleted Language.

P2903.10 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 P2903.10).

Reason: [X] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

This practice is unnecessary and expensive.
South Carolina Building Codes Council  
PO Box 11329  
Columbia, SC 29211-1329  

Request for Statewide Code Modification  

Jurisdiction or Organization: Home Builders Association of South Carolina  
Representative: Mark Nix  
Title: Executive Director  
Address: 625 Taylor Street / Columbia, SC 29201  
Phone: 803-771-7408  
E-mail: mnix@hbaofsc.com  
Signature:  

Date: February 2, 2015  

Code: International Residential Code  
Edition: 2015  
Section: E 3802.4 In unfinished basements and crawl spaces  

Check One: [ ] Delete and substitute the following  
[ ] Delete without substitution  
[ ] Add the following  
[X] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language. Line Through Deleted language.  

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 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)]  

Reason:  
[X] Unusually Restrictive  
[ ] Impractical  
[ ] Threat to Human Injury or Life Safety  
Type or print the reason for the proposed modification. Use additional pages if necessary.  

The original intent of this amendment was for unfinished basements that at some point could be made into a living space. Adding crawl spaces is over burdensome and does not accomplish the intent of the application.
# Request for Statewide Code Modification

<table>
<thead>
<tr>
<th>Jurisdiction or Organization:</th>
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<tr>
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<td>Signature:</td>
<td>[Signature]</td>
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**Code:** International Residential Code  
**Edition:** 2015  
**Section:** E3901.12 HVAC outlet

Check One: [ ] Delete and substitute the following  
[ ] Delete without substitution  
[ ] Add the following  
[ ] Modify the following  
Type or print proposed modification. Use additional pages if necessary.  
**Underline New language.**  
**Line Through Deleted Language.**

*Previous modification IRC 2012 24 is no longer needed.*

**Reason:**  
[ ] Unusually Restrictive  
[ ] Impractical  
[ ] Threat to Human Injury or Life Safety  
Type or print the reason for the proposed modification. Use additional pages if necessary.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization:  Home Builders Association of South Carolina

Representative:  Mark Nix  Title:  Executive Director

Address:  625 Taylor Street / Columbia, SC 29201

Phone:  803-771-7408  E-mail:  mnix@hbaofsc.com

Signature:  [Signature]  Date:  February 2, 2015


Check One:  [ ] Delete and substitute the following  [ ] Delete without substitution  [ ] Add the following  [X] Modify the following
Type or print proposed modification.  Use additional pages if necessary.  Underline New language.  Line Through Deleted Language.

E3902.2 Garage and accessory building receptacles.  125- volt, single-phase, 15- or 20 -ampere receptacles installed in garage and grade level portions of unfinished accessory building used for storage or work areas shall have ground-fault circuit-interrupter protection for personnel. [210.8(A)(2)]

Exception: If a receptacle is ceiling mounted and used for garage door openers, or for an appliance a dedicated single use circuit is allowed.

Reason:  [X] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification.  Use additional pages if necessary.
Request for Statewide Code Modification

Jurisdiction or Organization: Home Builders Association of South Carolina

Representative: Mark Nix
Title: Executive Director

Address: 625 Taylor Street / Columbia, SC 29201

Phone: 803-771-7408
E-mail: mnix@hbaofsc.com

Signature: [Signature]
Date: February 2, 2015

Code: International Residential Code
Edition: 2015
Section: E3902.15 Location of arc-fault circuit interrupters; E3902.16 Arc-fault circuit interrupter protection and E3902.17 Arc Fault circuit interrupter protection for branch circuit modifications

Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [X] Modify the following Type or print proposed modification. Use additional pages if necessary. Underline New language. Line Through Deleted Language.

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E3902.16 Arc-fault circuit interrupter protection. Arc-fault circuit interrupters shall be required in Kitchens where G.F.C.I. receptacles are not required and in sleeping rooms. Dedicated single service circuits for appliance are not required to be arc fault protected.

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E3902.16 Arc-fault circuit interrupter protection
Branch 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 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 60 feet (18.2 m) for 14 AWG conductors and 70 feet (21.3 m) 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. [210.12(A)(4)]
5. Where metal outlet boxes and junction boxes and RMC, IMC, EMT, Type MC or steel- armored Type AC cables meeting the requirements of Section E3908.8, metal wireways or metal auxiliary gutters are installed for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(5)]
6. Where a listed metal or nonmetallic conduit or tubing or Type MC cable is enclosed in not less than 2 inches (50.8 mm) of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, a listed outlet branch-circuit type AFCI installed at the first outlet shall be considered as providing protection for the remaining portion of the branch circuit. [210.12(A)(6)]
Exception: AFCI protection is not required for an individual branch circuit supplying only a fire alarm system where the branch circuit is wired with metal outlet and junction boxes and RMC, IMC, EMT or steel-sheathed armored cable Type AC or Type MC meeting the requirements of Section E3908.8.

E3902.17 Arc-fault circuit interrupter protection for branch circuit extensions or modifications.
Where branch-circuit wiring is modified, replaced, or extended in any of the areas specified in Section E3902.16, the branch circuit shall be protected by one of the following:
1. A combination-type AFCI located at the origin of the branch circuit
2. An outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch circuit. [210.12(B)]

Exception: AFCI protection shall not be required where the extension of the existing conductors is not more than 6 feet (1.8 m) in length and does not include any additional outlets or devices. [210.12(B) Exception]

Reason: [X] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

According to the May 2010 Home Electrical Fires Report (John R. Hall, Jr.), annually there are an estimated 15,790 home structure fires were the result of wiring and related equipment. For the past decade NAHB has argued that the mandatory requirement for Arc-fault Circuit Interrupters has been fraught with invalidated research study and testing procedures that has yet been able to justify any effectiveness of these devices preventing fires originated by an arc fault. NAHB has continuously attempted to remove the AFCI requirement from the National Electrical Code, repeatedly showing that these devices do not pass the litmus test when you consider the annual installation cost compared to the estimated direct and societal cost associated with fires in the branch circuit wiring. The Code Panel 2 has continuously dismissed NAHB and other AFCI opponent’s arguments without providing any justified technical or statistical evidence that there have been any fires that were prevented by the inclusion of these devices. The panel continues to stand by the requirements and expanded their use in one- and two- family dwellings, arguing that even though they know these devices may only prevent 50% of fires that are the result of arcing, that they need to remain in the code for fire safety even if they cannot validate that there have been any fires averted by these devices. The purpose of the National Electrical Code is to provide practical safeguarding of persons and property from hazards arising from the use of electricity, not to be used as a tool to promote products that have not been proven to be an effective safeguard against a perceived problem. It’s extremely easy for the committee to continuously reject these proposals and snub off the technical arguments presented by NAHB and others saying “the proposal lacks sufficient data” or “the substantiation presented is unjustified”. The simple fact is there are no statistics that support the effectiveness of AFCI’s, because there are no organizations out there trying to prove they work. Under the new NFIRS version 5.0 which has changed data classification, definitions and rules for reporting, you will see the number of fire reported as being associated with branch wiring is approximately 9,070 fires annually, where the AFCI presumably could prevent the fire. These fires resulted in approximately $293million dollars. In previous versions of the NFIRS and NFPA reports, these types of fires were lumped together, giving larger numbers that were used in previous cost benefit analysis and were showing negligible benefits over cost. Using the same cost benefit formula from the 2003 CPSC cost model analysis and using the numbers from the 2010 NFPA report, the estimated cost to society for these types of residential fires is $913 million dollars, less than half of what was previously estimated by CPSC. There are typically 20 (twenty) 120-volt, single phase, 15- and 20-ampere branch circuits in each one- & two-family dwelling unit, and 10 in
each multifamily dwelling unit. Using these numbers, there will be approximately 33,128,260 AFCI’s in one- and two-
family dwellings and 4,136,640 for multifamily units, for a total of 37,264,900 AFCI’s. Using a wholesale cost of $41.20
per breaker, marked-up the industry standard percentage of 66%, produces a cost per breaker of $68.32 to the home
owner. In all, the average annual total cost to the public for the mandatory installation of AFCI’s will be $2,548,621,040
($1,535,313,880 wholesale). That is 2 BILLION, 548 MILLION, 621 THOUSAND, and 40 DOLLARS. Using current
fire loss data society will be spending $2,548,621,040 per year to cover losses of only $913,000,000. That means spending
2.8 times the amount of money that would be loss if the devices were not installed, and that is if the devices work 100% of
the time. These figures are just the cost for new construction, not taking into account the millions of devices that are now
required to be installed in existing housing stock in accordance with Section 406.3(D)(4).
South Carolina Building Codes Council  
PO Box 11329  
Columbia, SC 29211-1329

Request for Statewide Code Modification

<table>
<thead>
<tr>
<th>Jurisdiction or Organization:</th>
<th>Structural Engineers’ Association of South Carolina (SEASC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Representative:</td>
<td>Michelle Molchos, PE</td>
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<td>1501 Main St, Suite 730, Columbia SC 29201</td>
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<td>Signature:</td>
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Adopt in its entirety **Appendix J – Existing Buildings and Structures**

Reason:  [ ] Unusually Restrictive  [ ] Impractical  [ ] Threat to Human Injury or Life Safety  
Type or print the reason for the proposed modification. Use additional pages if necessary.

With so many residential structures being renovated, modified, & updated, this will provide guidance in some areas where questions now arise as to whether or not certain sections of the IRC should apply, and where exceptions are allowed. It will help with more uniform enforcement of the IRC on renovation projects across the state.
South Carolina Building Codes Council
PO Box 11329
Columbia, SC 29211-1329

Request for Statewide Code Modification

Jurisdiction or Organization: Structural Engineers' Association of South Carolina (SEASC)

Representative: Michelle Motchos, PE Title: Member – Code Advisory Committee

Address: 1501 Main St, Suite 730, Columbia SC 29201

Phone: 803-765-0320 E-mail: mmotchos@stevens-wilkinson.com

Signature: [Signature] Date: 04.01.2015


Check One: [ ] Delete and substitute the following [ ] Delete without substitution [ ] Add the following [X] Modify the following
Type or print proposed modification. Use additional pages if necessary. Underline New language. Line Through Deleted Language.


Reason: [ ] Unusually Restrictive [ ] Impractical [ ] Threat to Human Injury or Life Safety
Type or print the reason for the proposed modification. Use additional pages if necessary.

With the push for "green energy" and solar becoming more viable, and with the increasing demand for photovoltaic panels to be added to buildings, it seems prudent that where they are to be added at a future date, some provisions be made to accommodate a solar system.