

# NC 2012 Residential Code Changes

(Highlights on Building Code Council changes to the 2012 NC Residential Code that become effective **JANUARY 1, 2015**)

Chapters 1 and 2: Administration and Definitions		
Code Section	Section Title	Change
R101.2.2	Accessory structures	Added a new Section that requires detached masonry chimneys less than 10' from other buildings and detached carports meet the provisions of the Residential Code. A new exception exempts portable lightweight aluminum or canvas type carports not exceeding 400 sq. ft. or 12' mean roof height and tree houses supported solely by a tree.
R202	Definitions	<p>New definition modifications;</p> <ul style="list-style-type: none"> <li>• ACCESSORY BUILDING – Adds language to further define an accessory building as a building that is roofed over and more than 50% of its exterior walls are enclosed and gives examples in the definition.</li> <li>• ACCESSORY STRUCTURES- adds language to reflect changes to Section R101.2.2 (above)</li> </ul>
Chapter 3: Building Planning		
R301.2.1.2	Protection of Openings Exceptions	Wood structural panels provided for wind borne debris protection no longer required to be predrilled and mounting hardware permanently attached to the building. The prescriptive methods for attaching wood structural panels returned to 2009 NC Residential Building Code Requirements (additional anchors with greater embedment depth & resistance no longer required)
R302.1.1	Soffit protection	Moved language from R703.11.2, created new section and amended language. <b>Soffit assemblies</b> closer than 10' to the property line from the building face must have fire retardant, 23/32" wood sheathing or 5/8 gypsum underlayment material for vinyl or aluminum soffit material. No longer reads <i>One-and Two –Family Dwellings</i> . Eliminates the requirement that all soffits require this

		protection if closer to 10' from the property line
Table R302.1	EXTERIOR WALLS	Minimum fire separation distances have been changed from 5' back to 3' (<3' requires 1-hour fire-resistance rated construction). Projections, Openings and Penetrations distances also changed. (Effective date June 1, 2013)
R302.5.1	Opening protection	Disappearing/pull-down stairway to in garages to uninhabited attic space with minimum 3/8-inch (nominal) fire retardant-treated structural panel is deemed to meet Table R302.6 Dwelling/Garage Separation of not less than 1/2-inch gypsum board or equivalent applied to garage side.
R308.4	Hazardous locations	<ul style="list-style-type: none"> <li>• Changed #2 to require tempered glazing in an individual fixed or operable panel <u>in the same plane</u> as door rather than adjacent to door.</li> <li>• Deleted Exception #3 for #2</li> <li>• Changed #8 to require tempered lazing adjacent to stairways within 60 inches horizontally of the bottom tread of a stairway <u>in the direction of travel</u> when the exposed surface of the glazing is less than 60 inches above the nose of the tread.</li> <li>• Exceptions for #8 Deleted.</li> </ul>
R311.2	Egress door	Requires that all interior egress doors and only the required exterior egress door to be readily operable from the side which egress is made without the use of a key or special knowledge (allows all exterior egress doors except the required egress door to have double cylinder dead bolts). (Effective date January 1, 2012)

R310.1.1	Minimum opening area	Removed redundant language in the Exception for minimum net clear opening of 5 square feet for glazing in grade floor openings.
R313.1	Townhouse Automatic Fire Sprinkler Systems	Allows <b>two</b> 1-hour fire-resistance-rated wall assemblies that comply with Table R302.1 in lieu of a common 2-hour fire-resistance-rated wall assembly.
R314.3	Location	Amended to also require smoke alarms in habitable attics (finished) but not uninhabitable (unfinished) attics, and uninhabitable (unfinished) attic stories (Effective date January 1, 2012)
R315.1	Carbon monoxide alarms	Exceptions provided for exterior renovations, door and window replacement and deck and porch additions that do not require installation of CO alarms.
R315.3	Alarm requirements	CO alarms that are battery powered, plug-in, or hard-wired are acceptable for use.
R322.2.1	Elevation requirements	Removed the 1' freeboard requirements
R322.3.2	Elevation requirements	Removed the 1' freeboard requirements

**Chapter 4: Foundations**

Code Section	Section Title	Change																																																																						
TABLE R403	MINIMUM WIDTH OF CONCRETE OR MASONRY FOOTINGS	<p align="center"><b>TABLE R403.1</b>  <b>MINIMUM WIDTH OF CONCRETE OR MASONRY FOOTINGS</b>  (inches)<sup>a</sup></p> <table border="1"> <thead> <tr> <th></th> <th colspan="4"><b>LOAD BEARING VALUE OF SOIL (psf)</b></th> </tr> <tr> <th></th> <th>1,500</th> <th>2,000</th> <th>3,000</th> <th>4,000</th> </tr> </thead> <tbody> <tr> <td align="center" colspan="5"><b>Conventional Wood Frame Construction</b></td> </tr> <tr> <td>1-story</td> <td>12<sup>b</sup></td> <td>12<sup>b</sup></td> <td>12</td> <td>12</td> </tr> <tr> <td>2-story</td> <td>15<sup>b</sup></td> <td>12<sup>b</sup></td> <td>12</td> <td>12</td> </tr> <tr> <td>3-story</td> <td>23</td> <td>17</td> <td>12</td> <td>12</td> </tr> <tr> <td align="center" colspan="5"><b>4-Inch Brick Veneer Over Wood Frame or 8-Inch Hollow Concrete Masonry</b></td> </tr> <tr> <td>1-story</td> <td>12<sup>b</sup></td> <td>12<sup>b</sup></td> <td>12</td> <td>12</td> </tr> <tr> <td>2-story</td> <td>15<sup>b</sup></td> <td>15<sup>b</sup></td> <td>12</td> <td>12</td> </tr> <tr> <td>3-story</td> <td>32</td> <td>24</td> <td>16</td> <td>12</td> </tr> <tr> <td align="center" colspan="5"><b>8-Inch Solid or Fully Grouted Masonry</b></td> </tr> <tr> <td>1-story</td> <td>16</td> <td>12<sup>b</sup></td> <td>12</td> <td>12</td> </tr> <tr> <td>2-story</td> <td>29</td> <td>21</td> <td>14</td> <td>12</td> </tr> <tr> <td>3-story</td> <td>42</td> <td>32</td> <td>21</td> <td>16</td> </tr> </tbody> </table> <p>For SI: 1 inch = 25.4 mm, 1 pound per square foot = 0.0479 kPa.</p> <ol style="list-style-type: none"> <li>Where minimum footing width is 12 inches, use a single width of solid or fully grouted 12-inch nominal concrete masonry units is permitted.</li> <li>A minimum footing width of 12" is acceptable for monolithic slab foundations.</li> </ol>		<b>LOAD BEARING VALUE OF SOIL (psf)</b>					1,500	2,000	3,000	4,000	<b>Conventional Wood Frame Construction</b>					1-story	12 <sup>b</sup>	12 <sup>b</sup>	12	12	2-story	15 <sup>b</sup>	12 <sup>b</sup>	12	12	3-story	23	17	12	12	<b>4-Inch Brick Veneer Over Wood Frame or 8-Inch Hollow Concrete Masonry</b>					1-story	12 <sup>b</sup>	12 <sup>b</sup>	12	12	2-story	15 <sup>b</sup>	15 <sup>b</sup>	12	12	3-story	32	24	16	12	<b>8-Inch Solid or Fully Grouted Masonry</b>					1-story	16	12 <sup>b</sup>	12	12	2-story	29	21	14	12	3-story	42	32	21	16
	<b>LOAD BEARING VALUE OF SOIL (psf)</b>																																																																							
	1,500	2,000	3,000	4,000																																																																				
<b>Conventional Wood Frame Construction</b>																																																																								
1-story	12 <sup>b</sup>	12 <sup>b</sup>	12	12																																																																				
2-story	15 <sup>b</sup>	12 <sup>b</sup>	12	12																																																																				
3-story	23	17	12	12																																																																				
<b>4-Inch Brick Veneer Over Wood Frame or 8-Inch Hollow Concrete Masonry</b>																																																																								
1-story	12 <sup>b</sup>	12 <sup>b</sup>	12	12																																																																				
2-story	15 <sup>b</sup>	15 <sup>b</sup>	12	12																																																																				
3-story	32	24	16	12																																																																				
<b>8-Inch Solid or Fully Grouted Masonry</b>																																																																								
1-story	16	12 <sup>b</sup>	12	12																																																																				
2-story	29	21	14	12																																																																				
3-story	42	32	21	16																																																																				
R403.1.4	Minimum depth	Has been revised to read that footing bottom shall extend not less than 12 inches below finished grade (in addition to being below frost line depth).																																																																						
R408.1.1	Foundation Vent Sizing	Change re-establishes a provision found in the 2003 NCRC for reducing the require net area of ventilation openings to 1/1500 of the underfloor area where the ground is covered with a vapor retarder.																																																																						
R408.2	Ground vapor retarder	Section has be revised to begin with "When required by Section R408.1.1". Eliminates conflict in language in Section R408.1.1 and R408.2.																																																																						

### Chapter 5: Floors

Code Section	Section Title	Change
Tables: R502.3.1(1) R502.3.1(2) R502.3.3(1) R502.3.3(2), R502.5(1) R502.5(2)	<ul style="list-style-type: none"> <li>• Floor Joist Spans</li> <li>• Cantilever Spans</li> <li>• Girder Spans and Header Spans</li> </ul>	Span Tables have been revised based upon new design values for visually graded Southern Pine dimension lumber. Tables can be downloaded at this link: <a href="http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/130910%20B3%20RCh5,%20RCh8%20Wood%20Tables%20SP1.pdf">http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/130910%20B3%20RCh5,%20RCh8%20Wood%20Tables%20SP1.pdf</a>
R506.2.3	Vapor retarder	Added exception for vapor barrier requirement for concrete slabs for attached garages where floor space at parking level is unheated.

### Chapter 6: Walls

Code Section	Section Title	Change
R602.10	Wall Bracing	Replaced the 2012 NC Residential Code Sections R602.10 through R602.12 with the amended "R602.10 Code and Commentary 2012 NC Residential Code. Can be downloaded at this link: <a href="http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/R602.10%20Code%20and%20Commentary%20for%202012%20NC%20Residential%20Code%20-%20final%2003-06-13.pdf">http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/R602.10%20Code%20and%20Commentary%20for%202012%20NC%20Residential%20Code%20-%20final%2003-06-13.pdf</a>

**Chapters 8: Roof-Ceiling Construction**

<b>Code Section</b>	<b>Section Title</b>	<b>Change</b>
Tables R802.4(1), R802.4(2), R802.5.1(1)R80 2.5.1(2) R802.5.1(3) R802.5.1(4) R802.5.1(5) R802.5.1(6) R802.5.1(7) R802.5.1(8)	<ul style="list-style-type: none"> <li>• Ceiling Joist Spans</li> <li>• Rafter Spans</li> </ul>	Span Tables have been revised based upon new design values for visually graded Southern Pine dimension lumber. Tables can be downloaded at this link: <a href="http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildi">http://www.ncdoi.com/OSFM/Engineering and Codes/Documents/2012_NCBuildi</a>

**Chapter 9: Roof Assemblies**

<b>Code Section</b>	<b>Section Title</b>	<b>Change</b>
R905.2.6.1	Attachment	Added exception that asphalt strip shingles have a minimum of six fasteners per shingle when the roof is in one of 3 categories: <ol style="list-style-type: none"> <li>1. The basic wind speed is 110 miles per hour or greater and the eave is 20 feet (6096 mm) or higher above grade.</li> <li>2. The basic wind speed is 120 miles per hour or greater.</li> <li>3. Special mountain regions that meet exceptions 1 or 2 above.</li> </ol>

## Chapters 11: Energy Efficiency

Amend the 2012 NC Energy Conservation Code, Chapter 4 and 2012 NC Residential Code, Chapter 11 with the attached revisions. The current energy provisions require duct testing to be verified and identify one method of doing so. The proposed language provides an alternative testing method for leakage to the outside.

The amended "2012 NCECC, 2012 NCRC, Duct Leakage to the Outside" is published separately at the following link.

[http://www.ncdoi.com/OSFM/Engineering\\_and\\_Codes/Documents/2012\\_NCBuildingCode\\_amendments/2012%20NCECC,%202012%20NCRC,%20Duct%20Leakage%20to%20the%20Outside%20120910%20B3.pdf](http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/2012%20NCECC,%202012%20NCRC,%20Duct%20Leakage%20to%20the%20Outside%20120910%20B3.pdf)

### Appendix

Code Section	Section Title	Change
AM104.1	All structures except brick veneer structures	<b>APPENDIX M WOOD DECKS</b> Self-drilling screw fastener are allowed for fastening deck band to the structure