

**Minutes of the North Carolina Building Code Council**  
**December 14<sup>th</sup>, 2010**  
**Raleigh, NC**

All members of the North Carolina Building Code Council were present for the Public Hearing. All members were present for the Council Meeting with the exception of Al Bass.

The following are summary minutes. The official minutes of this meeting are recorded on CD. Anyone desiring verbatim CDs or excerpts from these CDs should contact the Engineering Division of the NC Department of Insurance for information and reproduction costs. The next scheduled NC Building Code Council meeting will be held March 7-8, 2011 at the NCSU McKimmon Center, 1101 Gorman Street, Raleigh, North Carolina, 27606.

**Part A – Administrative Items**

**Item A – 1 Ethics Statement: Inquire upon conflicts of interest or appearance of conflicts of interest that exist within the Council.**

There were no actual or potential conflicts of interest noted.

**Item A – 2 Approval of minutes of the September 14, 2010 NC Building Code Council Meeting.**

The motion to accept the September 14<sup>th</sup> meeting minutes were made and approved.

**Item A – 3 Approval of minutes of the October 5, 2010 NC Building Code Council Meeting.**

The chairman asked that detail regarding the board attorney's presentation to the board be included in the minutes. The minutes will be brought forward at the March meeting.

**Item A – 4 Town of Apex Fire Code Ordinance**

Alan Perdue made a motion to approve this petition, seconded by Lon McSwain. The council voted unanimously to accept the motion and the petition is approved.

The petition addresses the prohibition of pine straw within 10 feet of combustible exterior construction in commercial buildings and townhouses. Detached one and two-family dwellings are exempt.

### **Item A – 5 City of Goldsboro Fire Code Ordinance**

Alan Perdue made a motion to approve this petition, seconded by Lon McSwain. The council voted unanimously to accept the motion and the petition is approved.

[This petition is an ordinance to regulate open burning allowed by the Fire code and North Carolina open burning laws.]

### **Item A – 6 Rules Review Commission Meeting Report**

Barry Gupton reported that the regular amendment D-items from September, were approved. All of the technical amendments requested by RRC Staff have been made. The RRC objections can be addressed without further BCC action.

### **Item A – 7 Public Comments**

There were no comments from the public.

### **Part B – New Petitions for Rulemaking**

The following Petitions for Rulemaking have been received since the last Council meeting. The Council will vote either to deny or grant these Petitions. The Council will give no further consideration to Petitions that are denied. Petitions that are granted may proceed through the Rulemaking process. The Council may send any Petition to the appropriate committee. The hearing will take place during or after the March 2011 meeting.

### **Item B – 1 Request by Andy Davis, with The Marwin Company, Inc., to amend the 2012 NC Residential Code, Section N1102.2.3. The proposed amendment is as follows:**

#### **N1102.2.3 Access hatches and doors.**

#### **Exceptions:**

1. Pull down stair systems shall be weatherstripped and insulated to ~~an R-5 insulation~~ a maximum U-factor of U-0.17 with a minimum of R-5 insulation value. Non-rigid insulation materials are not allowed. Additional insulation systems that enclose the stair system from above are allowed. Exposed foam plastic ~~must~~ shall meet the provisions of the North Carolina Residential Code.

Motion – Cindy Browning/Second – Ralph Euchner/Passed – The request was granted unanimously and was referred to the Residential Committee for review.

**Item B – 2 Request by Johnny C. Clark, PE, with the North Carolina Department of Public Instruction, to amend the 2012 NC Mechanical Code, Table 403.3. The proposed amendment is as follows:**

**TABLE 403.3**  
**REQUIRED OUTDOOR VENTILATION AIR**  
**Education; Delete** footnote “g” from Art Classroom and Science Laboratories.

Motion – John Hitch/Second – Kim Reitterer/Passed – The request was granted unanimously.

**Item B – 3 Request by Johnny C. Clark, PE, with the North Carolina Department of Public Instruction, to amend the 2012 NC Mechanical Code, Section 403.3.1.3. The proposed amendment is as follows:**

**Add the following to paragraph 403.3.1.3:**  
**Exception:** K-12 schools shall be exempt from use of this effectiveness factor ( $V_{oz}=V_{bz}$ )

Motion – John Hitch/Second – Kim Reitterer/Passed – The request was granted unanimously.

**Item B – 4 Request by Johnny C. Clark, PE, with the North Carolina Department of Public Instruction, to amend the 2012 NC Mechanical Code, Section 403.3.2.3.4. The proposed amendment is as follows:**

**Add the following to paragraph 403.3.2.3.4:**  
**Exception:** K-12 schools shall be exempt from use of this efficiency factor ( $V_{ot}=V_{ou}$ )

Motion – John Hitch/Second – Kim Reitterer/Passed – The request was granted unanimously.

**Item B – 5 Request by David Smith, NC Building Code Council, to amend the 2009 NC Residential Code, Section R313.2 and the 2012 NC Residential Code, Section R314.3. The proposed amendment is as follows:**

**2009 NC Residential Code**

**R313.2 Location.** Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics (finished) but not including crawl spaces, or uninhabitable (unfinished) attic stories and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

#### **2012 NC Residential Code**

**R314.3 Location.** Smoke alarms shall be installed in the following locations:

1. In each sleeping room.
2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.
3. On each additional story of the dwelling, including basements and habitable attics (finished) but not including crawl spaces, or uninhabitable (unfinished) attic stories and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit.

Motion – David Smith/Second – Tom Turner/Passed – The request was granted unanimously.

**Item B – 6 Request by David Smith, NC Building Code Council, to amend the 2009 and 2012 NC Residential Code, Section R807.1. The proposed amendment is as follows:**

**R807.1 Attic access.** An attic access opening shall be provided to attic areas that exceed 100 square feet (9.29 m<sup>2</sup>) and have a vertical height of 60 inches (1524 mm) or greater. The net clear opening shall not be less than 20 inches by 30 inches (508 mm by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section M1305.1.3 for access requirements where mechanical equipment is located in attics.

**Exceptions:**

1. Concealed areas not located over the main structure including porches, areas behind knee walls, dormers, bay windows, etc. are not required to have access.
2. Pull down stair treads, stringers, handrails, and hardware may protrude into the net clear opening.

Motion – David Smith/Second – Tom Turner/Passed – The request was granted unanimously.

**Item B – 7 Request by the Electrical Standing Committee to adopt the 2011 NEC with NC Amendments.**

The proposed NC amendments to the 2011 NEC are posted at the following link:

[http://www.ncdoi.com/OSFM/Engineering/BCC/engineering\\_bcc\\_ah\\_minutes.asp](http://www.ncdoi.com/OSFM/Engineering/BCC/engineering_bcc_ah_minutes.asp)

Motion – Kim Reitterer/Second – Cindy Browning/Passed – The request was granted unanimously.

**Item B – 8 Request by Roger Ballard representing NC Department of Public Instruction to amend the 2009 NC Building Code, Table 715.4. The proposed amendment is as follows:**

Motion – Steve Knight/Second – Ralph Euchner/Passed – The request was granted unanimously and was referred to the Building Committee for review.

**Item B-8(a) Request by Roger Ballard representing NC Department of Public Instruction to amend the 2012 NC Building Code, Table 715.4. The proposed amendment is as follows:**

Motion – Steve Knight/Second – Ralph Euchner/Passed – The request was granted unanimously and was referred to the Building Committee for review.

**Item B – 9 Request by Roger Ballard representing NC Department of Public Instruction to amend the 2009 NC Building Code, Section 715.4.7. The proposed amendment is as follows:**

Motion – Steve Knight/Second – Ralph Euchner/Passed – The request was granted unanimously and was referred to the Building Committee for review.

**Item B-9(a) Request by Roger Ballard representing NC Department of Public Instruction to amend the 2012 NC Building Code, Section 715.4.7. The proposed amendment is as follows:**

Motion – Steve Knight/Second – Ralph Euchner/Passed – The request was granted unanimously and was referred to the Building Committee for review.

**Item B-10 Request by Ralph Euchner representing the Plumbing Ad-Hoc Committee to adopt the Rainwater Collection and Distribution Systems code language.**

The proposed Appendix C-1, Rainwater Collection and Distribution Systems, is posted at the following link:

[http://www.ncdoi.com/OSFM/Engineering/BCC/engineering\\_bcc\\_minutes.asp](http://www.ncdoi.com/OSFM/Engineering/BCC/engineering_bcc_minutes.asp)

Motion – David Smith/Second – Cindy Browning/Passed – The request was granted unanimously.

[Item B-10 replaces the previous stormwater petitions]

**[Items B-11 through B-32 were identified by the Chairman as being cost offsets to balance the adoption of the 2012 Energy Conservation Code. These code changes were accompanied with a letter from Governor Perdue.]**

Motion/Second – The motion was to accept Items B-11 through B-32 as a packet.

Motion – Hawley Truax/ - The motion was to amend the original motion, to break down the items within the complete package into individual B-items – The motion was passed unanimously.

Motion from Tom Turner to Call for Question – The motion was passed unanimously.

Motion was made to accept Items B-11 through B-32 – The motion was passed unanimously.

**Item B-11 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section 202. The proposed amendment is as follows:**

**202 Definitions**

~~**STORY, ATTIC.** Any story situated wholly or partly in the roof so designated arranged or built as to be used for storage or habitation If an attic which is accessible by a fixed stairway has a 7 foot (2134 mm) clear height for greater than 50 percent of the floor area of the story below then the space shall be considered as a story.~~

**Item B-12 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section 202. The proposed amendment is as follows:**

~~**WIND BORNE DEBRIS REGION.** Areas within hurricane-prone regions defined as that area east of the inland waterway from the NC/SC state line north to Beaufort Inlet and from that point to include the harrier islands to the NC/VA state line within 1500 feet (0.452km) of the mean high water line of the Atlantic Ocean.~~

**Item B-13 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R302.2.5. The proposed amendment is as follows:**

~~**R302.2.5 Townhouse eave protection** In townhouse construction (with three or more attached dwellings) Projections extending into the fire separation distance shall have not less than 1 hour fire resistive construction on the underside. Soffit material beyond the fire separation distance shall be securely attached to framing members. ~~and shall be constructed using either noncombustible soffit material; fire retardant treated soffit material; vinyl soffit installed over 3/4 inch (19 mm) wood sheathing or 5/8 inch (16 mm) gypsum board; or aluminum soffit installed over 3/4 inch (19 mm) wood sheathing or 5/8 inch (16 mm) gypsum board.~~ Venting requirements shall be provided in both soffit and underlayments.~~

~~Vents shall be either nominal 2-inch (51 mm) continuous or equivalent intermittent and shall not exceed the minimum net free air requirements established in Section R806.2 by more than 50 percent.~~

Vents in soffit are not allowed within 4 feet (1219 mm) of fire walls or property lines.

**Item B-14 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R314.3.1. The proposed amendment is as follows:**

**R314.3.1 Alterations, repairs and additions.** When alterations, repairs and additions requiring a building permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms. ~~located as required for new dwellings; the smoke alarms shall be interconnected and hard-wired.~~ which may be battery powered and shall be designed to emit a recurring signal when batteries are low and need to be replaced.

**Item B-15 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R404.4. The proposed amendment is as follows:**

**R404.4 Retaining walls** Retaining walls that are ~~not laterally supported at the top and that retain in excess of 48~~ of unbalanced fill support buildings and their accessory structures shall be designed to ensure stability against overturning, sliding, excessive foundation pressure and water uplift. ~~In addition any retaining wall which meets the following:~~

- ~~1. Any retaining wall systems on a residential site that cross over adjacent property lines regardless of vertical height, and~~
- ~~2. Retaining walls that support buildings and their accessory structures.~~

~~Retaining walls shall be designed for a safety factor of 1.5 against lateral sliding and overturning~~



**Item B-16 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R4403.1. The proposed amendment is as follows:**

**R4403.1 Foundation Wall Footings.** Foundation wall footings in the 120 and 130 mph wind zones shall be a minimum of 8" x ~~24"~~ 15" for houses 2-1/2 stories and less. The footing for a three story building shall be 10" x ~~24"~~ 18". ~~Footings shall be reinforced with three #4 (or two #5 bars) at 3 inches above the bottom of the footing. The bars shall be continuous or lapped 25 inches at all splices.~~

**Item B-17 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R311.2. The proposed amendment is as follows:**

**R311.2 Egress door.** At least one exterior egress door shall be provided for each *dwelling* unit. The egress door shall be side-hinged, and shall provide a minimum clear width of 32 inches (813mm) when measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The minimum clear height of the door opening shall not be less than 78 inches (1981 mm) in height measured from the top of the threshold to the bottom of the stop. Other exterior doors shall not be required to comply with these minimum dimensions. All interior ~~and~~ egress doors and a minimum of one exterior egress doors shall be readily openable from the side from which egress is to be made without the use of a key or special knowledge or effort.

**Item B-18 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Section R313.1.1. The proposed amendment is as follows:**

**R313.1.1 Carbon monoxide alarms.** In new construction, dwelling units within which fuel-fired appliances are installed or have attached garages shall be provided with an approved carbon monoxide alarm installed outside of each separate sleeping area in the immediate vicinity of the bedroom(s) as directed by the alarm manufacturer

**Item B-19 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R403. The proposed amendment is as follows:**

**TABLE R403.  
MINIMUM WIDTH OF CONCRETE OR MASONRY FOOTINGS  
(inches)<sup>a</sup>**

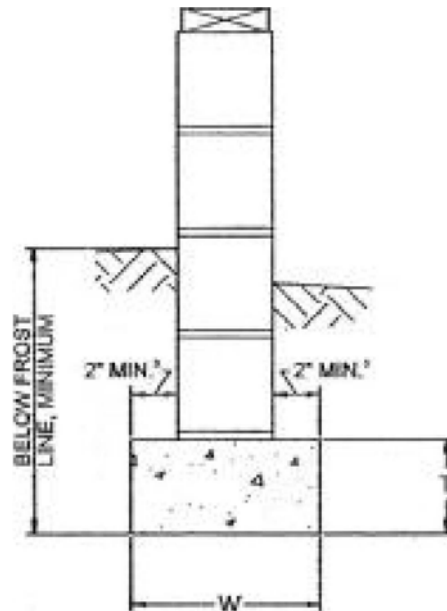
	<b>LOAD BEARING VALUE OF SOIL (psf)</b>			
	1,500	2,000	3,000	4,000
<b>Conventional Wood Frame Construction</b>				
1-story	<del>16</del> 12 <sup>b</sup>	<del>16</del> 12 <sup>b</sup>	12	12
2-story	<del>16</del> 15 <sup>b</sup>	<del>16</del> 15 <sup>b</sup>	12	12
3-story	23	17	12	12
<b>4-Inch Brick Veneer Over Wood Frame or 8-Inch Hollow Concrete Masonry</b>				
1-story	<del>16</del> 12 <sup>b</sup>	<del>16</del> 12 <sup>b</sup>	12	12
2-story	<del>16</del> 15 <sup>b</sup>	<del>16</del> 15 <sup>b</sup>	12	12
3-story	32	24	16	12
<b>8-Inch Solid or Fully Grouted Masonry</b>				
1-story	16	16	12	12
2-story	29	21	14	12
3-story	42	32	21	16

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

- a. Where minimum footing width is 12 inches, use a single with of solid or fully grouted 12-inch nominal concrete masonry units is permitted.
- b. A minimum footing width of 12" is acceptable for monolithic slab foundations.

**Item B-20 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R403.3(1). The proposed amendment is as follows:**

**FIGURE R403.3 (1)  
CONCRETE AND MASONRY FOUNDATION DETAILS**



1. Foundations shall extend not less than 12 inches below the natural grade or engineered fill finished grade and in no case less than the frost line depth.  
REMAINING NOTES TO REMAIN THE SAME

**Item B-21 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R408.1.1. The proposed amendment is as follows:**

**R408.1.1 Foundation vent sizing.** The minimum net area of ventilation openings shall be not less than 1 square foot (0.0929 m<sup>2</sup>) for each 150 square feet (13.9 m<sup>2</sup>) of crawl space ground area

**Exception:** The total area of ventilation openings may be reduced to 1/1,500 of the of the ~~crawl space ground area~~ under-floor area where the ground surface is treated with an approved vapor retarder material and the required openings are placed so as to provide cross-ventilation of the space. The installation of operable louvers shall not be prohibited.

**Item B-22 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R408.2. The proposed amendment is as follows:**

~~**R408.2 Ground vapor retarder.** Requires full coverage ground vapor retarders for all wall vented ground spaces. Wall vented crawl spaces shall be protected from water entry by the evaporation of water from the ground surface. A minimum 6 mil (0.15 mm) polyethylene vapor retarder or equivalent shall be installed to nominally cover all exposed earth in the crawl space with joints lapped not less than 12 inches (305 mm). Where there is no evidence that the ground water table can rise to within 6 inches (152 mm) of the floor of the crawl space it is acceptable to puncture the ground vapor retarder at low spots to prevent water puddles from forming on top of the vapor retarder due to condensation. The floor of the crawl space shall be graded so that it drains to one or more low spots. Install a drain to daylight or sump pump at each low spot. Crawl space drains shall be kept separate from roof gutter drain systems and foundation perimeter drains.~~

**Item B-23 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R703.2. The proposed amendment is as follows:**

~~**R703.2 Water-resistive barrier Weather-resistant sheathing paper.** One layer of No. 15 asphalt felt, free from holes and breaks, complying with ASTM D 226 for Type 1 felt or other approved water-resistive barrier shall be applied over studs or sheathing of all exterior walls as required by Table 703.4. Such felt or material shall be applied horizontally, with the upper layer lapped over the lower layer not less than 2 inches (51 mm). Where joints occur, felt shall be lapped not less than 6 inches (152 mm). The felt or other approved material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1.~~

**Exception:** Omission of the water-resistive barrier is permitted in the following situations:

1. In detached accessory buildings.
2. Under exterior wall finish materials as permitted in Table R703.4.

3. Under paperbacked stucco lath when the paper backing is an approved weather-resistive sheathing paper.
4. Under panel siding with shiplap joints or battens.

**TABLE R703.4**  
**WEATHER-RESISTANT SIDING ATTACHMENT AND MINIMUM THICKNESS**  
(reprint from 2006 NCRC)

WALL COVERING

**TABLE R703.4**  
**WEATHER-RESISTANT SIDING ATTACHMENT AND MINIMUM THICKNESS**

SIDING MATERIAL		NOMINAL THICKNESS* (inches)	JOINT TREATMENT	SHEATHING PAPER REQUIRED	TYPE OF SUPPORTS FOR THE SIDING MATERIAL AND FASTENERS <sup>b,c,d</sup>					
					Wood or wood structural panel sheathing	Fiberboard sheathing into stud	Gypsum sheathing into stud	Foam plastic sheathing into stud	Direct to studs	Number or spacing of fasteners
Horizontal aluminum <sup>f</sup>	Without insulation	0.019 <sup>f</sup>	Lap	Yes Note m	0.120 nail 1 1/2" long	0.120 nail 2" long	0.120 nail 2" long	0.120 nail <sup>f</sup>	Not allowed	Same as stud spacing
		0.024	Lap	Yes Note m	0.120 nail 1 1/2" long	0.120 nail 2" long	0.120 nail 2" long	0.120 nail <sup>f</sup>	Not allowed	
	With insulation	0.019	Lap	Yes Note m	0.120 nail 1 1/2" long	0.120 nail 2 1/2" long	0.120 nail 2 1/2" long	0.120 nail <sup>f</sup>	0.120 nail 1 1/2" long	
Brick veneer Concrete masonry veneer	2 2	Section R703	Yes	See Section R703 and Figure R703.7 <sup>g</sup>						
Hardboard <sup>i</sup> Panel siding-vertical	7/16	Note r	Yes Note y	Note o	Note o	Note o	Note o	Note o	Note o	6" panel edges 12" inter. sup. <sup>2</sup>
Hardboard <sup>i</sup> Lap-siding-horizontal	7/16	Lap Note r	Yes	Note q	Note q	Note q	Note q	Note q	Note q	Same as stud spacing 2 per bearing
Steel <sup>i</sup>	29 ga.	Lap	Yes	0.113 nail 1 3/4" Staple-1 3/4"	0.113 nail 2 3/4" Staple-2 1/2"	0.113 nail 2 1/2" Staple-2 1/2"	0.113 nail <sup>f</sup> Staple <sup>2</sup>	Not allowed	Same as stud spacing	
Stone veneer	2	Section R703	Yes	See Section R703 and Figure R703.7 <sup>g</sup>						
Particleboard panels	3/8-1/2	Note r	Yes	6d box nail	6d box nail	6d box nail	box nail <sup>f</sup>	6d box nail, 3/8 not allowed	6" panel edge 12" inter. sup.	
	5/8	Note r	Yes	6d box nail	8d box nail	8d box nail	box nail <sup>f</sup>	6d box nail		
Plywood panel <sup>i</sup> (exterior grade)	3/8	Note r	Yes	0.099 nail-2"	0.113 nail-2 1/2"	0.099 nail-2"	0.113 nail <sup>f</sup>	0.099 nail-2"	6" on edges	
Vinyl siding <sup>a</sup>	0.035	Lap	Yes Note m	0.120 nail 1 1/2" Staple-1 3/4"	0.120 nail 2" Staple-2 1/2"	0.120 nail 2" Staple-2 1/2"	0.120 nail <sup>f</sup> Staple <sup>2</sup>	Not allowed	Same as stud spacing	
Wood <sup>d</sup> Rustic, drop Shiplap	3/8 Min 19/32 Average	Lap	Yes	Fastener penetration into stud-1"				0.113 nail-2 1/2" Staple-2"	Face nailing up to 6" widths, 1 nail per bearing; 8" widths and over, 2 nails per bearing	
Bevel	7/16	Lap	Yes							
Butt tip	3/16	Lap	Yes							
Fiber cement panel siding <sup>g</sup>	5/16	Note t	Yes Note y	6d corrosion resistant nail <sup>h</sup>	6d corrosion resistant nail <sup>f</sup>	6d corrosion resistant nail <sup>f</sup>	—	4d corrosion resistant nail <sup>f</sup>	6" oc on edges, 12" oc on intermed. studs	
Fiber cement lap siding <sup>a</sup>	5/16	Lap Note w	Yes Note y	6d corrosion resistant nail <sup>h</sup>	6d corrosion resistant nail <sup>f</sup>	6d corrosion resistant nail <sup>f</sup>	—	6d corrosion resistant nail <sup>x</sup>	Note x	

For SI: 1 inch = 25.4 mm.

- Based on stud spacing of 16 inches on center. Where studs are spaced 24 inches, siding shall be applied to sheathing approved for that spacing.
- Nail is a general description and shall be T-head, modified round head, or round head with smooth or deformed shanks.
- Staples shall have a minimum crown width of 7/16-inch outside diameter and be manufactured of minimum No. 16 gage wire.
- Nails or staples shall be aluminum, galvanized, or rust-preventive coated and shall be driven into the studs for fiberboard or gypsum backing.
- Aluminum nails shall be used to attach aluminum siding.
- Aluminum (0.019 inch) shall be unbacked only when the maximum panel width is 10 inches and the maximum flat area is 8 inches. The tolerance for aluminum siding shall be +0.002 inch of the nominal dimension.
- Deleted.
- All attachments shall be coated with a corrosion-resistant coating.
- Shall be of approved type.
- Three-eighths-inch plywood shall not be applied directly to studs spaced greater than 16 inches on center when long dimension is parallel to studs. One-half-inch plywood shall not be applied directly to studs spaced greater than 24 inches on center. The stud spacing shall not exceed the panel span rating provided by the manufacturer unless the panels are installed with the face grain perpendicular to studs or over sheathing approved for that stud spacing.

(continued)

**Footnotes to Table R703.4—continued**

- k. Woodboard sidings applied vertically shall be nailed to horizontal nailing strips or blocking set 24 inches on center. Nails shall penetrate 1.5 inches into studs, studs and wood sheathing combined, or blocking. A weather-resistant membrane shall be installed weatherboard fashion under the vertical siding unless the siding boards are lapped or battens are used.
- l. Hardboard siding shall comply with AHA A135.6.
- m. A weather-resistant sheathing paper is not required if all of the following conditions are met:
  - 1. Design wind speed is 110 mph (48 m/s) or less.
  - 2. All horizontal sheathing joints are flashed with an approved corrosion-resistive material or draped with a minimum 6 mil polyethylene.
- n. Vinyl siding shall comply with ASTM D 3679.
- o. Minimum shank diameter of 0.092 inch, minimum head diameter of 0.225 inch, and nail length must accommodate sheathing and penetrate framing 1.5 inches.
- p. When used to resist shear forces, the spacing must be 4 inches at panel edges and 8 inches on interior supports.
- q. Minimum shank diameter of 0.099 inch, minimum head diameter of 0.240 inch, and nail length must accommodate sheathing and penetrate framing 1.5 inches.
- r. Vertical end joints shall occur at studs and shall be covered with a joint cover or shall be caulked.
- s. Fiber cement siding shall comply with the requirements of ASTM C 1186.
- t. See Section R703.10.1.
- u. Minimum 0.102 inch smooth shank, 0.255 inch round head.
- v. Minimum 0.099 inch smooth shank, 0.250 inch round head.
- w. See Section R703.10.2.
- x. Face nailing: 2 nails at each stud. Concealed nailing: one 11 gage 1½ galv. roofing nail (0.371 inch head diameter, 0.120 inch shank) or 6d galv. box nail at each stud.
- y. See Section R703.2, Exceptions.
- z. Minimum nail length must accommodate sheathing and penetrate framing 1.5 inches.

**Item B-24 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R703.7.4.2. The proposed amendment is as follows:**

**R703.7.4.2 Air space.** The veneer shall be separated from the sheathing by an air space of a minimum of nominal 1 inch (25.4 mm) air space but not more than 4.5 inches (114 mm). The weather-resistant membrane or asphalt saturated felt required by Section R703.2 is not required over water repellant sheathing materials.

**Item B-25 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R802.3. The proposed amendment is as follows:**

**R802.3 Framing details.** Rafters shall be framed to ridge board or to each other with a gusset plate as a tie. Ridge board shall be at least 1-inch (25.4 mm) nominal thickness and not less in depth than the cut end of the rafter. Opposing rafters at the ridge must align within the thickness of the ridge member. Regularly spaced hip and valley rafters need not align. At all valleys and hips there shall be a valley or hip rafter not less than 2-inch (51 mm) nominal thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point. Where the roof pitch is less than three units vertical in 12 units horizontal (25-percent slope), structural

members that support rafters and ceiling joists, such as ridge beams, hips and valleys, shall be designed as beams.

**Item B-26 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Table R807.1. The proposed amendment is as follows:**

**R807.1 Attic access.** An attic access opening shall be provided to attic areas that exceed ~~100~~ 400 square feet (9.29 m<sup>2</sup>) and have a vertical height of 60 inches (1524 mm) or greater. The net clear opening shall not be less than 20 inches by 30 inches (508 mm by 762 mm) and shall be located in a hallway or other readily accessible location. A 30-inch (762 mm) minimum unobstructed headroom in the attic space shall be provided at some point above the access opening. See Section MI305.1.3 for access requirements where mechanical equipment is located in attics.

**Exception:** Concealed areas not located over the main structure including porches areas behind knee walls, dormers, bay windows etc. are not required to have access.

**Item B-27 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Residential Code, Appendix M. The proposed amendment is as follows:**

**Appendix M:**

**Section AM111- Figure AM111**

Rail Posts – Remove bolting requirement

Riser Openings – remove solid riser/opening restrictions

**Item B-28 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Administrative Code and Policies, Section 107.2. The proposed amendment is as follows:**

**107.2 Inspection requests.** It shall be the duty of the permit holder or his or her agent to notify the code enforcement official when work is ready for inspection ~~and to provide access to and means for inspection of the work~~ for any inspections that are required by this code.



**Item B-29 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2008 NC Electrical Code, Section 338.10(B) (4)(a). The proposed amendment is as follows:**

**Section 338.10(B) (4) (a)**

**(4) Installation Methods for Branch Circuits and Feeders.**

**(a) Interior installations.** In addition to the provisions of this article, Type SE service-entrance cable used for interior wiring shall comply with the installation requirements of Part II of Article 334, excluding 334.80.

**Item B-30 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Fire Code, Section 101.2.1. The proposed amendment is as follows:**

**101.2.1 Appendices.** Provisions in the appendices shall not apply unless specifically referenced in the code text adopted by the local governing authority having jurisdiction.

**Item B-31 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Plumbing Code, Section 502.5. The proposed amendment is as follows:**

**502.5 Water heaters installed in garages.** Water heaters having an ignition source shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the garage floor. Appliances shall be located or protected so that they are not subject to physical damage by a moving vehicle.

**Exception(s):**

1. Elevation of the ignition source is not required for appliances that are listed as flammable vapor ignition.
2. Electric water heaters.

**Item B-32 Request by Robert Privott representing NC Home Builders Associations and Governor Beverly Perdue to amend the 2012 NC Building Code, Section 903.2.7. The proposed amendment is as follows:**

**903.2.7 Group R.** An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area.

**Exceptions:**

1. An automatic sprinkler system is not required in new adult and child care facilities in existing Groups R-3 and R-4 occupancies.
2. An automatic sprinkler system is not required throughout all buildings with a Group R-2 fire area where two stories or less in height, including basements, or where having 16 or less dwelling units.

**Part C – Notice of Rulemaking Proceedings and Public Hearing**

The following Petitions for Rulemaking have been granted by the Council. Notice of Rulemaking proceedings has been made. The Public Hearing was held December 13, 2010 and the Final Adoption meeting may take place on or after March 8, 2011. The written public comment period expires on January 14, 2011. Contact the Engineering Division for copies of written public comment or recordings of the Item C testimony.

**Item C – 1 Request by Curt Willis and Rusty Styons, to amend the 2009 NC Residential Code, Sections R703.11.2 and R703.11.3. The proposed amendment is as follows:**

**R703.11.2 Soffit.** In One- and Two-Family Dwelling construction using vinyl or aluminum as a soffit material, the soffit material shall be securely attached to framing members and use an underlayment material of either: fire retardant treated wood,  $\frac{3}{4}$  inch wood sheathing or  $\frac{5}{8}$  inch gypsum board. Venting requirements shall apply to both soffit and underlayment and shall be per section R806 of the North Carolina Residential Code. Where the property line is 10 feet or more from the building face, the provisions of this code section shall not apply.

**R703.11.3 Flame Spread.** Vinyl siding and vinyl soffit materials when used in One- and Two-Family Dwelling construction shall have a Flame Spread Index of 25 or less as tested in accordance with ASTM E-84.

Matt Dobson, with the Vinyl Siding Institute, recommends the Council relocate these requirements to Chapter 3.

Curt Willis, with the City of Raleigh, recommends the Council adopt this code change.

Rusty Styons, Raleigh Fire Chief, recommends the Council adopt this code change.

**Item C – 2 Request by David Smith, NC Building Code Council, to amend the 2012 NC Residential Code, Section N1101.5. The proposed amendment is as follows:**

**N1101.5 Fenestration product rating and glass deflection.** U-factors of fenestration products (windows, doors and skylights) shall be determined in accordance with NFRC 100 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled U-factor shall be assigned a default U-factor from Tables N1101.5(1) and N1101.5(2). The solar heat gain coefficient (SHGC) of glazed fenestration products (windows, glazed doors and skylights) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled SHGC shall be assigned a default SHGC from Table N1101.5(3).

Glass collapse/gap width reduction shall not exceed the limits set by the During Plant Inspection Checklist, of the NFRC, Certification and Inspection Agency (IA) Operations Manual (First Edition). Compliance shall be determined by an accredited, independent laboratory, and labeled and certified by the manufacturer.

Jeff Hinks, with the Window and Door Manufacturing Section, opposes this code change.

**Item C – 3 Request by David Smith, NC Building Code Council, to amend the 2012 NC Energy Conservation Code, Section 303.1.3. The proposed amendment is as follows:**

**303.1.3 Fenestration product rating and glass deflection.** U-factors of fenestration products (windows, doors and skylights) shall be determined in accordance with NFRC 100 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled U-factor shall be assigned a default U-factor from Table 303.1.3(1) or 303.1.3(2).

The solar heat gain coefficient (SHGC) of glazed fenestration products (windows, glazed doors and skylights) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled SHGC shall be assigned a default SHGC from Table 303.1.3(3).

Glass collapse/gap width reduction shall not exceed the limits set by the During Plant Inspection Checklist, of the NFRC, Certification and Inspection Agency (IA) Operations Manual (First Edition). Compliance shall be determined by an accredited, independent laboratory, and labeled and certified by the manufacturer.

There were no comments from the public on this item.

#### **Part D – Final Adoption**

The following Petitions for Rulemaking have been granted by the Council. Notice of Rulemaking proceedings and Public Hearing has been made. The Public Hearings were held September 13, 2010. The Final Adoption meeting took place on December 14, 2010. The Council will give no further consideration to Petitions that are disapproved. Petitions that are approved will proceed through the Rulemaking process.

#### **Item D – 1 Request by Robert Kinniburgh, to amend the 2009 NC Fire Prevention Code, Section 2403. The proposed amendment is as follows:**

##### **SECTION 2403 – TEMPORARY TENTS, CANOPIES AND MEMBRANE STRUCTURES**

**2403.5 Use Period.** Temporary tents, air-supported, air inflated or tensioned membrane structures and canopies ~~shall not be erected for period more than 180 days within a 12 month period on a single premise~~ shall be erected for a period of less than 180 consecutive days or a maximum of 179 days in any 12 month period.

**2403.8.2 Location.** Tents and canopies or membrane structures shall not be located within 20 feet (6096 mm) of lot lines, buildings, other tents, canopies or membrane structures, parked vehicles or internal combustion engines. For the purpose of determining required distances, support ropes and guy wires shall be considered part of the temporary membrane structure, tent or canopy.

**Exceptions:**

1. Separation distance between membrane structures, tents and canopies not used for cooking, is not required when the aggregate floor area does not exceed 15,000 square feet (1394 m<sup>2</sup>).
2. Membrane structures, tents and canopies need not be separated from buildings when all of the following conditions are met:
  - 2.1 The aggregate floor area of the membrane structure, tent or canopy shall not exceed 10,000 square feet (929 m<sup>2</sup>).
  - ~~2.2 The aggregate floor area of the building and membrane structure, tent or canopy shall not exceed the allowable floor area including increases as indicated in the *International Building Code*.~~
  - 2.3 Required means of egress provisions are provided for both the building and the membrane structure, tent or canopy, including travel distance.
  - 2.4 Fire apparatus access roads are provided in accordance with Section 503.

Motion – Alan Perdue/Second – Lon McSwain/Disapproved – The motion was disapproved unanimously.

**Item D – 2 Request by Alan Perdue and Lon McSwain to amend the 2012 NC Residential Code, Section R501.3. The proposed amendment is as follows:**

**R501.3 Fire Protection of Floors.** Floor assemblies, not required elsewhere in this code to be fire resistance rated, shall be provided with a ½-inch gypsum wallboard membrane, 5/8-inch wood structural panel membrane, or equivalent on the underside of the floor framing member.

Exceptions:

1. Floor assemblies located directly over a space protected by an approved automatic sprinkler system in accordance

- with 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 can be unprotected when complying with the following:
    - 3.1 The aggregate area of unprotected portions shall not exceed 80 square feet per story.
    - 3.2 Fire blocking in accordance with R302.11.1 shall be installed along the perimeter of the unprotected portions 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 nominal dimension, or other approved floor assemblies demonstrating equivalent fire performance.

Motion to send this item back to the Residential Committee – Mack Nixon/Second – Tom Turner/Approved – With a vote of 7/7, the Chair broke the tie for the motion to be sent back to Committee.

**Item D – 3 Request by Alan Perdue to amend the 2012 NC Residential Code, Sections R302.2 and R313.1. The proposed amendment is as follows:**

**R302.2 Townhouses.** Each *townhouse* shall be considered a separate building and shall be separated by fire-resistance-rated wall assemblies meeting the requirements of Section R302.1 for exterior walls.

**Exception:** If an automatic residential fire sprinkler is installed, a common 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E119 or UL263 is permitted for townhouses if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Section R302.4.

**R313.1 Townhouse Automatic Fire Sprinkler Systems.** An automatic residential fire sprinkler system shall be installed in townhomes.

### **Exceptions:**

1. Townhouses constructed with a common 2-hour fire resistance rated wall in accordance with ASTM E119 or UL 263 provided such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be installed in accordance with Chapters 34 through 43. Penetrations for electrical outlet boxes shall be in accordance with Section R302.4.
2. An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing townhouses that do not have an automatic residential fire sprinkler system installed.

Note: This Item was considered following Item D-6(A).

Motion – Alan Perdue/Second – Lon McSwain/Motion to disapprove – The motion failed with a vote of 6/8.

Motion – John Hitch/Second – Motion to approve – The motion was approved with a vote of 10/4.

### **Item D-4 A petition put forward by Tom Turner to adopt Energy Standing Committee amendments to the 2009 ICC Energy Conservation Code for publication as the 2012 NC Energy Conservation Code.**

Motion – Tom Turner/Second – David Smith - To move forward with the entire 30% improvement for Commercial and 15% improvement for Residential. Hawley Truax made a friendly amendment to the original motion to also include the full 30% Energy Code as an Appendix. The motion was passed unanimously.

Motion – Bob Ruffner/Second – To amend the original motion to set an effective date of Chapter 5 (Commercial) to July 1, 2013 with a mandatory effective date of January 1, 2014. The motion was defeated.

Motion – Alan Perdue/Second – Lon McSwain - To amend the original motion for the Council to reconsider the original recommendation of the Energy Standing Committee of 30% improvement for Commercial and 30% improvement for Residential. The motion was defeated.

Motion – Hawley Truax/Second – Lon McSwain – To set an effective date of January 1, 2012 and a mandatory effective date of March 1, 2012. The motion was passed unanimously.

**Item D-5 A petition put forward by Tom Turner to address HVAC verification in parallel to the adoption of the Energy Conservation code. This was taken out of the adoption for the Energy Conservation Code with concern that questions of this section would slow adoption of the overall code.**

Motion – Tom Turner/Second – Hawley Truax/Approved – The motion was approved unanimously.

**Item D-6 2012 Residential Code Amendments (with Townhouse Sprinklers)**

**Item D-6(A)2012 Residential Code Amendments (without Townhouse Sprinklers)**

**2012 Residential Code Amendments (with Townhouse Sprinklers)**

**A petition put forward by David Smith to adopt Standing Committee amendments to the 2009 ICC Residential Code for publication as the 2012 NC Residential Code.**

Motion – Alan Perdue/Second – Motion was approved unanimously.

Motion – David Smith/Second – Mack Nixon – To amend the original motion that would bring forward the language from D-6(A) which would effectively remove the provisions in D-6 that would require Townhouse Sprinklers. The motion failed with a vote of 6/8.

## **Part E – Reports**

### **Chairman’s Report**

There were none.

### **Ad Hoc Committee Reports**

- Lon McSwain reported that the Administrative Code Ad-Hoc Committee has completed their work. They will forward the findings and the final language to the Building Standing Committee and the



## **Standing Committee Reports**

- Kim Reitterer reported that the Electrical Standing and Ad-Hoc Committees met and voted to move the Electrical Code forward.

## **Staff Reports**

- Chris Noles reported that Staff is engaged in creating classes for the 2012 Code. He also reported on the section of Staff that is creating reports so that Inspectors and Designers can understand the complex issues that are involved in the Code that may not have been adequately covered within the Commentary.

- Barry Gupton announced the Council Meeting Dates for 2011 as follows:

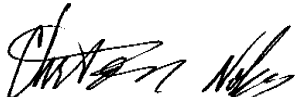
March 7-8, 2011  
June 13-14, 2011  
September 12-13, 2011  
December 12-13, 2011

## **Public Comments**

No comments from the Public

## **Part F – Appeals**

Sincerely,



Christian Noles, P.E.  
Secretary, NC Building Code Council