

North Carolina Building Code Council

Staffed by the NC Department of Insurance

Mike Causey, Commissioner of Insurance Carl Martin, RA, Secretary

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325 N. Salisbury Street Raleigh, NC 27603

Building Code Council

Chair:

Bridget Herring - 23 (Public Representative)

Vice Chairman: Daniel S. Priest, RA - 22 (Architect)

Members:

Michael Ali, PE - 23 (State Agency)

Robert Axford - 25 (Electrical Contractor)

Chris Berg, PE - 27 (Structural Engineer)

Charles A. Conner, AIA - 22 (Architect)

Gary Embler - 23 (Home Builder)

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Mark Matheny - 27 (Building Inspector)

Gloria Shealey - 27 (General Contractor)

Deborah Shearin - 25 (Plumbing & Heating Contractor)

Jason B. Shepherd - 27 (Fire Services)

David L. Smith - 22 (Coastal Contractor)

Victoria Watlington, PE - 22 (Municipal Government Rep)

Kim Wooten, PE - 25 (Electrical Engineer)

Robert Zapple - 22 (County Gov't Rep) May 13, 2022

Bridget Herring P.O. Box 7148 Asheville, NC 28802

RE: Agenda for the June 14, 2022 NC Building Code Council Meeting

Ms. Herring:

This is officially to notify you and other interested parties of a regularly scheduled meeting of the NC Building Code Council. Persons requiring auxiliary services should notify the Council at least ten business days prior to the meeting.

- 1. The NC Building Code Council Meeting will begin at 9:00AM on Tuesday, June 14, 2022 (Albemarle Building). The meeting can be accessed remotely via Facebook Live https://www.facebook.com/NCOSFMEngineering) Remote access does not provide capability to address the council.
- 2. Standing Committees will meet in the afternoon on Monday, June 13th. Schedule to be set by the Council Chair.
- 3. The Agenda is printed as follows:
 - A-Items- Administrative items that require Council action but are not subject to Rule-Making.
 - B-Items- New amendment petitions introduced at this meeting.
 - C-Items- Amendments that have been granted by the Council and advertised in the NC Register for public hearing.
 - D-Items- Adoption of amendments by the Council prior to approval by the Rules Review Commission.
 - E-Items- Reports from Committees and Staff.
 - F-Items- Notice of Appeal Hearings.

Part A - Administrative Items

- Item A 1 Ethics Statement: Inquire upon conflicts of interest or appearance of conflicts that exist within the Council.
- Item A 2 Approval of minutes of the March 15, 2022 NC Building Code Council Meeting.
- Item A 3 Rules Review Commission Meeting Report
- Item A 4 Public Comments

Part B - New Petition 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 15, 2022 meeting.

There will be no B items received from the floor.

Item B - 1 Request by Charlie Johnson representing NCDOI/OSFM to amend the 2018 NC Fire Code, Section D107.1 as follows:

D107.1 One- or two-family dwelling residential developments.

Developments of one- or two-family dwellings where the number of *dwelling* units exceeds $\underline{100}$ 30 shall be provided with two separate and *approved* fire apparatus access roads.

Exceptions:

- 1. Where there are more than 100 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 of the International Fire Code, access from two directions shall not be required.
- Item B 2 Request by Charlie Johnson representing NCDOI/OSFM to amend the 2018 NC Fire Code, Section D107.2 as follows:

D107.2 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses.

Exception: For developments where compliance is technically infeasible because of road connectivity limitations, real property dimensions or limitations, real property acquisition constraints, or environmental constraints, as determined by the property owner or developer, the *fire code official* shall either not require two fire apparatus access roads or allow for alterations that provide for fire apparatus access road remoteness to the maximum extent technically feasible.

- Item B 3 Request by Colin Triming representing the NC Fire Code Revision Committee to amend the 2018 NC Fire Code Sections 510.4.2, 510.5, 510.5.4, and Chapter 80 as follows:
 - **510.4.2 System design**. The in-building 2- way emergency responder communication coverage system shall be designed in accordance with Sections 510.4.2.1 through 510.4.2.8 and NFPA 1221.1225
 - **510.5 Installation requirements**. The installation of the in-building 2- way emergency responder communication coverage system shall be in accordance with NFPA 1221 1225 and Sections 510.5.1 through 510.5.5.
 - **510.5.4 Acceptance test procedure.** Where an in-building 2- way emergency responder communication coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to verify that two-way coverage on each floor of the building is not less than 95 percent. The test procedure shall be conducted as follows:
 - 1. Each floor of the building shall be divided into a grid of 20 approximately equal test areas. Where a floor exceeds 128,000 ft2 (11,900 m2), which is the floor area that can be covered by the maximum grid dimension of 80 ft. (24.4m), the floor shall be subdivided into sectors each having an area less than or equal to 128,000 ft2 (11,900 m2), and each sector be tested individually with 20 grid cells in each sector. Signal strength measurements should be taken at the center of each grid and should be performed using standardized parameters as specified by NFPA 1221 1225

(Remainder of this section is unchanged by this proposed amendment)

Chapter 80 Referenced Standards

NFPA

NFPA 1221 19 Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems.......510.4.2, 510.5, 510.5.4.

NFPA 1225 – 22 Standard for Emergency Services Communications.....510.4.2, 510.5, 510.5.4.

Item B - 4 Request by Reuben E. Clark representing CMI to amend the 2017 and 2020 NEC, Section 680.26(B)(2)(b) as follows:

For the existing 2017 NEC and when adopting the 2020 NEC, prescribe where a certain section is applicable by Inserting a new revision as follows:

680.26(B)(2)(b). Insert an additional paragraph to follow the five-item list and reading as follows:

(6) This method shall only be permitted for above-ground pools.

Item B - 5 Request from Mark Burns representing NC DOI / OSFM to amend the 2018 Plumbing Code, Table 605.3 as follows:

TABLE 605.3 WATER SERVICE PIPE

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe	ASTM D1785; ASTM D2241; ASTM D2672; CSA B137.3; <u>ANSI/AWWA</u> <u>C900</u>

(Remainder of this table is unchanged by this proposed amendment)

Item B - 6 Request from Mark Burns representing NCDOI / OSFM to amend the 2018 Residential Code, Table P2906.4 as follows:

TABLE P2906.4 WATER SERVICE PIPE

MATERIAL	STANDARD
Polyvinyl chloride (PVC) plastic pipe	ASTM D1785; ASTM D2241; ASTM D2672; CSA B137.3; <u>ANSI/AWWA</u> <u>C900</u>

(Remainder of this table is unchanged by this proposed amendment)

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 will be held on June 14, 2022, and the Final Adoption meeting may take place on or after September 13, 2022. The written public comment period expires on July 15, 2022.

Item C - 1 Request by Carl Martin representing NC Department of Insurance to amend the 2018 NC Residential Code, Sections R101.2 and R202 as follows (220315 Item B-3):

R101.2 Scope.

The provisions of the *International Residential Code for One- and Two-family Dwellings* shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, *equipment*, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and *townhouses* not more than three stories above *grade plane* in height with a separate means of egress, and their *accessory structures* not more than three stories above *grade plane* in height. Single family dwellings otherwise permitted by this code shall include *bed and breakfast homes*.

Exceptions:

- 1. Live/work units located in townhouses and complying with the requirements of Section 419 of the International Building Code shall be permitted to be built as one- and two- family dwellings or townhouses. Fire suppression required by Section 419.5 of the International Building Code where constructed under the International Residential Code for One- and Two-family Dwellings shall conform to Section P2904.
- 2. Deleted.

Section R202 DEFINITIONS

LIVE/WORK UNIT. A dwelling unit in which more than 10 percent and less than 50 percent of the space includes a nonresidential use that is operated by the tenant.

Item C - 2 Request from Carl Martin representing NC Department of Insurance to amend the 2018 NC Residential Code, Section R101.2 and Table R302.1; the 2018 NC Building Code Table 602 and Section 903.2.8; and the 2018 NC Fire Code, Section 903.2.8 as follows (220315 Item B-4):

NCRC:

R101.2 Scope.

The provisions of the *International Residential Code for One- and Two-family Dwellings* shall apply to the construction, *alteration*, movement, enlargement, replacement, repair, *equipment*, use and occupancy, location, removal and demolition of <u>one or more</u> detached one- and two-family dwellings and *townhouses* <u>located on a parcel</u> not more than three stories above *grade plane* in height with a separate means of egress, and their *accessory structures* not more than three stories above *grade plane* in height. Single family dwellings otherwise permitted by this code shall include *bed and breakfast homes*.

Exceptions:

- 1. Live/work units located in *townhouses* and complying with the requirements of Section 419 of the *International Building Code* shall be permitted to be built as one- and two- family *dwellings* or townhouses. Fire suppression required by Section 419.5 of the *International Building Code* where constructed under the *International Residential Code for One- and Two-family Dwellings* shall conform to Section P2904.
- 2. Deleted.

NCRC:

Section R202 DEFINITIONS

TOWNHOUSE. A single-family *dwelling unit* constructed in a group of two or more attached units separated by property lines <u>or assumed property lines</u> in which each unit extends from foundation to roof and with yard or public way on not less than two sides.

NCRC: TABLE R302.1 EXTERIOR WALLS

EXTERIOR	WALL ELEMENT	MINIMUM FIRE-RESISTANCE RATING	MINIMUM FIRE SEPARATION DISTANCE
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 with exposure from both sides	< 3 feet < 5 feet ^a
	Not fire-resistance rated	0 hours	3 feet5 feet^a
Projections	Fire-resistance rated	1 hour on the underside	< 3 feet < 5 feet ^a
	Not fire-resistance rated	0 hours	3 feet5 feet^a
Openings in walls	Not allowed	N/A	< 3 feet < 5 feet ^a
	Unlimited	0 hours	≥ 3 feet > 5 feet ^a
Penetrations	All	Comply with Section R302.4	< 3 feet < 5 feet ^a
		None required	≥ 3 feet≥ 5 feet^a

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable.

a. Fire separation distance requirement for multiple dwellings on a single parcel.

NCBC: TABLE 602

FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE^{a,d,g}

FIRE SEPARATION DISTANCE = X (feet)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP H ^e	OCCUPANCY GROUP F-1, M, S-1	OCCUPANCY GROUP A, B, E, F-2, I, R ^{i,j} , S- 2, U ^h
$X < 5^{b}$	All	3	2	1
5 ≤ X < 10	IA Others	3 2	2 1	1 1
10 ≤ X < 30	IA, IB IIB, VB Others	2 1 1	1 0 1	1° 0 1°
X ≥ 30	All	0	0	0

For SI: 1 foot = 304.8 mm.

- a. Load-bearing exterior walls shall also comply with the fire-resistance rating requirements of Table 601.
- b. See Section 706.1.1 for party walls.
- c. Open parking garages complying with Section 406 shall not be required to have a fire-resistance rating.
- d. The fire-resistance rating of an exterior wall is determined based upon the fire separation distance of the exterior wall and the story in which the wall is located.
- e. For special requirements for Group H occupancies, see Section 415.6.
- f. For special requirements for Group S aircraft hangars, see Section 412.4.1.
- g. Where Table 705.8 permits nonbearing exterior walls with unlimited area of unprotected openings, the required fire-resistance rating for the exterior walls is 0 hours.
- h. For a building containing only a Group U occupancy private garage or carport, the exterior wall shall not be required to have a fire-resistance rating where the fire separation distance is 5 feet (1523 mm) or greater.
- i. For Group R-3 detached one—and two-family dwellings of any construction type and not more than three stories above grade plane in height with a separate means of egress, a fire separation distance of 5 feet or less shall be 1-hour fire-resistant rated and shall be 0-hour fire-resistant rated for distances greater than 5 feet.
- j. For Group R-3 attached one—and two family dwellings of any construction type separated with fire walls complying with Section 706, containing no other occupancy classification, and not more than three stories above grade plane in height with a separate means of egress, a fire separation distance of 5 feet or less shall be 1-hour fire resistant rated and shall be 0-hour fire resistant rated for distances greater than 5 feet.

NCBC:

903.2.8 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*, except as provided for in Section 903.2.8.5.

Exceptions:

- 1. An *automatic sprinkler system* is not required in new adult and child day care facilities located in existing Group R-3 and R-4 occupancies.
- 2. An automatic sprinkler system is not required in temporary overflow shelters.
- 3. An *automatic sprinkler system* is not required in camping units located within a campground where all of the following conditions exist.
- 3.1. The camping unit is limited to one story in height.
- 3.2. The camping unit is less than 400 square feet (37 m2) in area.
- 3.3. The camping unit does not have a kitchen.
- 4. An automatic sprinkler system is not required in an *open air camp cabin* that complies with the following:
- 4.1. The *open air camp cabin* shall have at least two remote unimpeded exits. Lighted exit signs shall not be required.
- 4.2. The *open air camp cabin* shall not be required to have plumbing or electrical systems, but if the cabin has these systems, then the provisions of the code otherwise applicable to those systems shall apply.
- 4.3. Smoke alarms and portable fire extinguishers may be required as otherwise provided in the code.
- 5. An *automatic sprinkler system* is not required in the following Group R-3 buildings not more than three *stories above grade plane* in height with a separate *means of egress*:
- 5.1. Detached one and two family dwellings.
- 5.2. Attached one and two family dwellings separated with fire walls complying with Section 706 and containing no other occupancy classification.

NCFC:

903.2.8 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 day care facilities located in existing Group R-3 and R-4 occupancies.
- 2. An automatic sprinkler system is not required in temporary overflow shelters.
- 3. An *automatic sprinkler system* is not required in camping units located within a campground where all of the following conditions exist.
- 3.1. The camping unit is limited to one story in height.
- 3.2. The camping unit is less than 400 square feet (37 m2) in area.
- 3.3. The camping unit does not have a kitchen.
- 4. An automatic sprinkler system is not required in an *open air camp cabin* that complies with the following:
- 4.1. The *open air camp cabin* shall have at least two remote unimpeded exits. Lighted exit signs shall not be required.
- 4.2. The *open air camp cabin* shall not be required to have plumbing or electrical systems, but if the cabin has these systems, then the provisions of the code otherwise applicable to those systems shall apply.
- 4.3. Smoke alarms and portable fire extinguishers shall be installed as required by other sections of this code.
- 5. An *automatic sprinkler system* is not required in the following Group R-3 buildings not more than three *stories above grade plane* in height with a separate *means of egress*:
- 5.1. Detached one and two family dwellings.
- 5.2. Attached one and two family dwellings separated with fire walls complying with NC Building Code, Section 706 and containing no other occupancy classification.
- Item C 3 Request by Kim Wooten representing self to amend the 2020 National Electrical Code, Article 100 Definitions as follows (220315 Item B-6):

2020 NEC text:
Article 100 - Definitions
Coordination, Selective (Selective Coordination)

Localization of an overcurrent condition to restrict outages to the circuit or equipment affected, accomplished by the selection and installation of overcurrent protective devices and their ratings or settings for the range of available overcurrents, from overload to the available fault current, and for the full range of overcurrent protective device opening times associated with those overcurrents.

Replace via Amendment with: Article 100 – Definitions Coordination, Selective (Selective Coordination)

Localization of an overcurrent condition to restrict outages to the circuit or equipment affected for fault current events that extend beyond 0.1 second, and accomplished by the selection and installation of overcurrent protective devices and their ratings or settings for the range of available overcurrents under such conditions, whether originating from overload, ground-fault or short circuit, and for the full range of overcurrent protective device opening times applicable to such events.

- Item C 4 Request from Carl Martin representing NC Department of Insurance to amend the 2018 NC Administrative Code, Section 204.3.5 as follows 220315 Item B-7):
 - 204.3.5 Design professional seal required. Where the General Statutes, North Carolina Board of Architecture and Registered Interior Designers, or the North Carolina Board of Examiners for Engineers and Land Surveyors require, no permit shall be issued unless the construction documents (drawings and specifications), bear the North Carolina seal of a registered design professional. Construction documents shall include the name and address of the business entity (individual, corporation or partnership) with whom the registered design professional is affiliated. Questions concerning this section should be directed to the North Carolina Board of Architecture and Registered Interior Designers or the North Carolina Board of Examiners for Engineers and Land Surveyors.

Exceptions: For permitting purposes, the seal of a registered design professional is not required when the building, structure or project involved is in one of the categories listed below, unless otherwise required pursuant to the provisions of the General Statutes or the technical codes:

- 1. A family residence, up to eight units attached with grade level exit, which is not a part of or physically connected with any other buildings or residential units;
- 2. A building upon any farm that is for the use of any farmer, unless the building is of such nature and intended for such use as to substantially involve the health or safety of the public;
- 3. An institutional or commercial building if it does not have a total cost of construction exceeding \$90,000;
- 4. An institutional or commercial building if the total building area does not exceed 2,500 square feet (2.32 m2) in gross floor area;
- 5. Alteration, remodeling or renovation of an existing building_that is exempt under this section, or alteration, remodeling or renovation of an existing building or building site that does not alter or affect the structural system of the building; change the building's access or exit pattern; or change the live or dead load on the building's structural system. This subdivision shall not limit or change any other exemptions to this chapter or to the practice of engineering under Chapter 89C of the General Statutes.
- 6. The preparation and use of details and shop drawings, assembly or erection drawings, or graphic descriptions utilized to detail or illustrate a portion of the work required to construct the project in accordance with the plans and specifications prepared or to be prepared under the requirements or exemptions of this chapter.
- 7. Nothing in this chapter shall be construed to prevent any individual from making plans or data for

buildings for himself or herself. This exemption does not apply to plans for places of religious

worship.

(General Statute 83A-13)

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 on March 15, 2022. The Final Adoption meeting will take place on June 14, 2022. The Council will give no further consideration to Petitions that are disapproved. Petitions that are approved will proceed through the Rulemaking process. The effective date is January 1, 2023 unless otherwise noted.

Item D - 1 Request by Kevin Brinkman representing the National Elevator Industry, Inc. (NEII) to amend 2018 NC Plumbing Code, Section 1003.4 as follows (211214 Item B-5):

1003.4 Oil Separators required.

At repair garages where floor or trench drains are provided, car washing facilities, factories where oily and flammable liquid wastes are produced <u>and hydraulic elevator pits</u>, oil separators shall be installed into which oil-bearing, grease-bearing or flammable wastes shall be discharged before emptying into the building drainage system or other point of disposal.

Exception: An oil separator is not required in hydraulic elevator pits where an *approved* alarm system is installed. Elevator sump pits with oil minder pumps shall discharge the oil into a temporary storage tank. Such alarm systems shall not terminate the operation of pumps utilized to maintain emergency operation of the elevator by fire fighters.

Item D - 2 Request by Jamieson Stapleton representing Southern Energy Management to amend 2018 NC Energy Code, Table 405.5.2(1) as follows (211214 Item B-6):

Change Footnote h of Table 405.5.2 in the North Carolina Energy Conservation Code as follows:

- h For residences with conditioned basements, R-2 and R-4 residences and townhouses, the following formula shall be used to determine glazing area: the revised reference design total glazing area shall be the lesser of:
- (1) Proposed glazing area
- (2) The revised reference design total glazing area calculated using the following formula: $AF = As \times FA \times F$ where:
- AF = Total glazing area Revised reference design total glazing area
- As = Standard reference design total glazing area = 0.15 x Conditioned Floor Area
- FA = (Above-grade thermal boundary gross wall area)/(above-grade boundary wall area + 0.5 × below-grade boundary wall area).
- F = (Above-grade thermal boundary wall area)/(above-grade thermal boundary wall area +common wall area) or 0.56, whichever is greater. and where:

Thermal boundary wall is any wall that separates conditioned space from unconditioned space or ambient conditions. Above-grade thermal boundary wall is any thermal boundary wall component not in contact with soil. Belowgrade boundary wall is any thermal boundary wall in soil contact. Common wall area is the area of walls shared with an adjoining dwelling unit. LAF, As and CFA are in the same units.

Item D - 3 Request from Bryan Holland representing National Electrical Manufacturers Association (NEMA) to amend the 2018 NC Electrical Code, Section 10.1 and 10.2 as follows (211214 Item B-7):

10.1 TITLE

These Administrative Regulations along with the requirements included in the 2020 Edition of the National Electrical Code (NFPA-70 - 2020) as adopted by the North Carolina Building Code Council on June 8, 2021, to be effective November 1, 2021, with the following amendments:

(1) 110.26(E)(2)	(12) 230.67	(23) 334.15(C)
(2) 210.8	(13) 230.71(B)	(24) 406.4(D)(4)
(3) 210.8(A)	(14) 230.85	(25) 410.2
(4) 210.8(A)(2)	(15) 250.50	(26) 410.16(C)
(5) 210.8(A)(3)	(16) 250.53(A)(2)	(27) 555.10 (3)
(6) 210.8(A)(5)	(17) 250.140	(28) 555.35(A)(3)
(7) 210.8(B)(4)	(18) 250.142(B)	(29) 680.4
(8) 210.8(F)	(19) 300.3(B)	(30) 680.21(D)
(9) 210.12(D)	(20) Table 300.5	(31) 695.2
(10) 210.52(B)(2)	(21) 300.9	(32) 695.3
(11) 210.52(C)(2)	(22) 320.23(A)	

shall be known as the North Carolina Electrical Code, and may be cited as such or as the State Electrical Code; and will be referred to herein as "the code" or "this code". This code shall not apply to one- and two-family dwellings effective November 1, 2022. The 2017 State Electrical Code shall apply to one- and two family dwellings.

10.2 SCOPE

Article 80 Administration and Enforcement of the code is hereby not adopted and does not apply for this code. For Scope and Exceptions to Applicability of Technical Codes, refer to the North Carolina Administrative Code and Policies. This code shall not apply to one- and two-family dwellings.

Part E - Reports

- * Ad-Hoc Committee Reports
- *** Standing Committee Reports**
- **❖** Staff Reports
- ❖ Chairman's Report

Part F - Appeals

W.C. Construction Co., LLC appeal is scheduled for July 27, 2022 at the Albemarle Building (325 N. Salisbury Street, Raleigh, NC).

Sincerely,

Carl Martin, RA. Secretary, NC Building Code Council