



North Carolina Building Code Council

Staffed by the NC Department of Insurance

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Building Code Council

Chairman:
Robbie Davis - 21
(General Contractor)

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

Members:
Charles A. Conner, AIA - 22
(Architect)

Gary Embler - 23
(Home Builder)

Ralph Euchner - 19
(Gas Industry)

Keith Hamilton - 19
(Plumbing and Heating Contractor)

Wayne Hamilton - 21
(Fire Services)

Bridget Herring - 23
(Public Representative)

Steve L. Knight, PE - 21
(Structural Engineer)

Frankie Meads - 22
(County Gov't Rep)

Robert Morrow - 19
(Electrical Contractor)

Keith Rogers, PE - 21
(Mechanical Engineer)

Tony W. Sears - 22
(Municipal-Gov't Rep)

Leon Skinner - 21
(Building Inspector)

David L. Smith - 22
(Coastal Contractor)

Eric Tjalma - 23
(State Agency)

J. Wade White, Jr. - 19
(Electrical Engineer)

December 18, 2018

Robbie Davis, Chairman
5998 Dortches Boulevard
Rocky Mount, NC 27804

RE: Agenda for the Monday, January, 28, 2019 NC Building Code Council Meeting (Due to December 11, 2018 snow cancellation)

Mr. Davis:

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 Monday, January 28, 2019 (Albemarle Building).
2. Standing Committees will meet at the conclusion of the Building Code Council meeting as necessary.
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 will not be accepted at this meeting due to publication deadlines.
 - 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 September 11, 2018 NC Building Code Council Meeting.**
- Item A – 3 Request by Mike Hejduk to address the Council regarding an Online Code College for Code Enforcement Officials.**
- Item A – 4 Request by Ronnie Hayes representing Town of Leland, for approval of the Town Fire Protection and Prevention Ordinance**
- Item A – 5 Request by Ed Parvin representing the Town of Carolina Beach, for approval of Ordinance No. 14-953 for fire protection and prevention.**
- Item A – 7 Rules Review Commission Meeting Report**
- Item A – 8 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 2019 meeting.

- Item B – 1 Request by Charles E. Quicksill, Jr., and Charles B Hawley, III to amend the 2018 North Carolina Residential Code, Section P2717 and the 2018 North Carolina Plumbing Code, Section 409 as follows:**

P2717.2 Sink and dishwasher. The combined discharge from a dishwasher and a one- or two- compartment sink, with or without a food-waste disposer, shall be served by a trap of not less than 1½ inches (38mm) in outside diameter. The dishwasher discharge pipe or tubing shall rise to the underside of the counter and shall be securely fastened to the underside of the sink rim or counter before connecting to the head of the food-waste disposer or to a wye fitting in the sink tailpiece.

P2717.2.1 Required pan. Where a dishwasher is installed in a location where water leakage will cause damage to primary structural members, the appliance shall be installed in a structured plastic or fiber glass pan having a material thickness of not less than 0.0236 inch (0.6010 mm), or other pans approved for such use.

P2717.2.2 Pan size and drain. The pan shall not be less than 3/4 inches (19 mm) deep and shall be of sufficient size and shape to receive dripping or condensate from the appliance. A drain line may be attached or an optional moisture sensor can be placed within the pan to indicate the presence of moisture.

409.1 Approval.

Commercial dishwashing machines shall conform to ASSE 1004 and NSF 3.

409.2 Water connection.

The water supply to a dishwashing machine shall be protected against backflow by an air gap that is integral with the machine or a backflow preventer shall be installed in accordance with Section 608. *Air gaps* shall comply with ASME A112.1.2 or A112.1.3.

409.2.1 Required pan. Where a dishwasher is installed in a location where water leakage will cause damage to primary structural members, the appliance shall be installed in a structured plastic or fiber glass pan having a material thickness of not less than 0.0236 inch (0.6010 mm), or other pans approved for such use.

409.2.1.1 Pan size and drain. The pan shall be not less than 3/4 inches (19 mm) and shall be of sufficient size and shape to receive dripping or condensate from the appliance. A drain line may be attached or an optional moisture sensor can be placed within the pan to indicate the presence of moisture.

409.3 Waste Connection.

The waste connection of a dishwashing machine shall comply with Section 802.1.6 or 802.1.7, as applicable.

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 January 28, 2019 and the Final Adoption meeting may take place on or after March 2019. The written public comment period expires on March 4, 2019.

Item C – 1 Request by Eurilynn Caraballo representing Mecklenburg County Code Enforcement to amend the 2018 NC Building Code, Section 1009.7.2 as follows:

Exceptions:

1. Areas for assisted rescue that are located 10 feet (3048 mm) or more from the exterior face of a building are not required to be separated from the building by fire-resistance rated walls or protected openings.

2. The fire-resistance rating and opening protectives are not required in the exterior wall where the building is equipped throughout with an automatic sprinkler system installed in accordance with section 903.3.1.1 or 903.3.1.2.

Item C – 2 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Energy Conservation Code, Section R406.6.2 Compliance Report as follows:

5. The RESNET Registry number (or equivalent) for the ERI.

Item C – 3 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Residential Code, Section N1106.6.2 (R406.6.2) Compliance Report as follows:

5. The RESNET Registry number (or equivalent) for the ERI.

Item C – 4 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Residential Code, Section N1106.6.1 (R406.6.1) Compliance Software Tools as follows:

N1106.6.1 (R406.6.1) Compliance software tools. Compliance software tools for this section shall be in compliance with ANSI/RESNET/ICC 301-2014 (Including Addenda A & B).

Item C – 5 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Residential Code, Section N1106.2 (R406.2) Mandatory Requirements as follows:

N1106.2 (R406.2) Mandatory requirements. Compliance with this section requires that the provisions identified in Sections N1101.14 through N1104 labeled as “mandatory” be met. The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table 402.1.1 or Table 402.1.3 of the 2012 North Carolina Energy Conservation Code. Minimum standards associated with compliance shall be the ANSI/RESNET/ICC 301-2014 Standard (Including Addenda A and B) for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using Energy Rating Index. A North Carolina registered design professional or certified HERS rater is required to perform the analysis if required by North Carolina licensure laws.

Item C – 6 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Energy Conservation Code, Section R406.2 as follows:

N1106.2 (R406.2) Mandatory requirements. Compliance with this section requires that the provisions identified in Sections R401 through R404 labeled as “mandatory” be met. The building thermal envelope shall be greater than or equal to levels of efficiency and Solar Heat Gain Coefficient in Table 402.1.1 or Table 402.1.3 of the 2012 North Carolina Energy Conservation Code. Minimum standards associated with compliance shall be the ANSI/RESNET/ICC 301 – 2014 Standard (Including Addenda A and B) for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index. A North Carolina registered design professional or certified HERS rater is required to perform the analysis if required by North Carolina licensure laws.

Item C – 7 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Residential Code, Section N1106.7.1 (R406.7.1) Minimum Capabilities as follows:

N1106.7.1 (R406.7.1) Minimum capabilities. Calculation procedures used to comply with this section shall be software tools capable of calculating the ERI as described in Section N1106.3 and shall be in compliance with ANSI/RESNET/ICC 301 (Including Addenda A and B), and the software shall include the following capabilities:

1. Computer generation...

Item C – 8 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Energy Conservation Code, Section R406.6.1 Compliance Software Tools as follows:

R406.6.1 Compliance software tools. Compliance software tools for this section shall be in compliance with the ANSI/RESNET/ICC 301-2014 (Including Addenda A & B).

Item C – 9 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Energy Conservation Code, Section R406.7.1 Minimum Capabilities as follows:

N1106.7.1 (R406.7.1) Minimum capabilities. Calculation procedures used to comply with this section shall be software tools capable of calculating the ERI as described in Section N1106.3 and shall be in compliance with ANSI/RESNET/ICC 301 (Including Addenda A and B), and the software shall include the following capabilities:

1. Computer generation...

Item C – 10 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Residential Code, Section Part IX Referenced Standards / ICC as follows:

ANSI/RESNET/ICC 301-14 (Including Addenda A & B) Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating IndexN1106.2, N1106.6.1, N1106.7.1

Item C – 11 Request by Ryan Miller representing the NC Building Performance Association to amend the 2018 NC Energy Conservation Code, Section NC Residential Provisions, Chapter 6 Referenced Standards, ICC as follows:

ANSI/RESNET/ICC 301-14 (Including Addenda A & B) Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index.....R406.2, R406.6.1, R406.7.1

Item C – 12 Request by Barry Siegal representing BSC Holdings, Inc. to amend the 2018 NC Building Code, Section 903.2.8 and Table 602 and 2018 NC Fire Prevention Code, Section 903.2.8 as follows:

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. *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 have at least two remote unimpeded exits. Lighted exit signs shall not be required.
- 4.3. Smoke detectors and portable fire extinguishers shall be installed as required by other sections of this Code.

5. An automatic sprinkler system is not required in Group R-3 detached on-and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress.

NC BUILDING CODE

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 ^f	OCCUPANCY GROUP A, B, E, F-2, I, R ^b , S-2, U
$X < 5^b$	All	3	2	1
$5 \leq X < 10$	IA Others	3 2	2 1	1 1
$10 \leq X < 30$	IA, IB IIB, VB Others	2 1 1	1 0 1	^c 1 0 ^c 1
$X \geq 30$	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 Group R-3 detached one- and two-family dwellings and townhouses 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 3 feet or less shall be 1-hour fire-resistant rated and shall be 0-hour fire-resistant rated for distances greater than 3 feet.

Item C – 13 Request by Colin Triming representing the NC Fire Code Revision Committee to amend the 2018 NC Existing Building Code, Sections 403.11, 804.4.3, 1104.2 as follows:

403.11 Carbon Monoxide alarms. Individual sleeping units and individual dwelling units in Group R and I occupancies and classrooms in Group E occupancies and Group A-2 occupancies that contain a fuel-burning appliance or a fuel-burning fireplace shall be provided with carbon monoxide alarms in accordance with Section 915 of the North Carolina Building Code, except that the carbon monoxide alarms shall be allowed to be solely battery operated.

804.4.3 Carbon Monoxide alarms. Individual sleeping units and individual dwelling units in Group R and I occupancies and classrooms in Group E occupancies and Group A-2 occupancies that contain a fuel-burning appliance or a fuel burning fireplace shall be provided with carbon monoxide alarms in accordance with Section 915 of the North Carolina Building Code, except that the carbon monoxide alarms shall be allowed to be solely battery operated.

1104.2 Carbon Monoxide alarms in existing portions of a building. Where an *addition* is made to a building or structure of a Group A-2, I-1, I-2, I-4 or R occupancies, or classrooms are added in Group E occupancies, the *existing building* shall be provided with carbon monoxide alarms in accordance with Section 915 of the *North Carolina Building Code* or Section R315 of the *North Carolina Residential Code*, except the carbon monoxide alarms shall be allowed to be solely battery operated.

Item C – 14 Request by Carl Martin representing the NC Department of Insurance to amend the 2018 NC Building Code, Sections 312.1 & H109.2 as follows:

312.1 General

Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

Agricultural buildings

Aircraft hangars, accessory to a one- or two-family residence (see Section 412.5)

Barns

Carports

Fences and ground signs more than 6 feet (1829 mm) in height

Grain silos, accessory to a residential occupancy

Greenhouses

Livestock shelters

Photovoltaic panel system (mounted at grade)

Private garages

Retaining walls

Sheds

Stables

Tanks

Towers

SECTION H101 GENERAL

H101.2 Signs exempt from permits.

The following signs are exempt from the requirements to obtain a *permit* before erection:

1. Nonilluminated wall signs.
2. Temporary signs.
3. Signs erected by transportation authorities.
4. Projecting signs not exceeding 6 square feet (0.56 m²).
5. The changing of moveable parts of an approved sign that is designed for such changes, or the repainting or repositioning of display matter shall not be deemed an alteration.
6. Ground signs less than 6 feet (1829 mm) in height above finished grade.

SECTION H109 GROUND SIGNS

H109.2 Required Clearance. The bottom coping of every ground sign shall be not less than 3 feet (914 mm) above the ground or street level, which space can be filled with platform decorative trim or light wooden construction.

Exception: Signs that have a solid base of masonry, steel or similar material, commonly known as monument signs.

Item C – 15 Request by the NC Building Code Council representing the NC General Assembly to amend the 2018 NC Energy Conservation Code, Section R101.2 as follows:

R101.2 Scope.

This code applies to *residential buildings* and the buildings sites and associated systems and equipment.

Exception:

1. In accordance with N.C.G.S. 143-138 (b19), no energy conservation code provisions shall apply to detached and attached garages located on the same lot as a dwelling.

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2017
SESSION LAW 2018-65
HOUSE BILL 573**

AN ACT TO MAKE BUSINESS AND REGULATORY CHANGES TO VARIOUS STATE LAWS.

The ratified and signed legislation reads in part with respect to the energy conservation code requirements:

The General Assembly of North Carolina enacts:

EXEMPT RESIDENTIAL GARAGES FROM ENERGY EFFICIENCY CODES SECTION

2.(A) G.S. 143-138 is amended by adding a new subsection to read: “(b19) Exclusion From Energy Efficiency Code Requirements for Residential Garages. -The Council shall provide for an exemption for detached and attached garages located on the same lot as a dwelling from any requirements in the energy efficiency standards pursuant to Chapter 11 of the North Carolina Residential Code for One- and Two-Family Dwellings and Chapter 4 of the North Carolina Energy Conservation Code.”

SECTION 2.(b) This section becomes effective October 1, 2018.

Item C – 16 Request by the NC Building Code Council representing the NC General Assembly to amend the 2018 NC Residential Code, Section N1101.1 as follows:

N1101.1 Scope.

This chapter regulates the energy efficiency for the design and construction of buildings regulated by this code.

Exception:

1. In accordance with N.C.G.S. 143-138 (b19), no energy conservation code provisions shall apply to detached and attached garages located on the same lot as a dwelling.

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2017
SESSION LAW 2018-65
HOUSE BILL 573**

AN ACT TO MAKE BUSINESS AND REGULATORY CHANGES TO VARIOUS STATE LAWS.

The ratified and signed legislation reads in part with respect to the energy conservation code requirements:

The General Assembly of North Carolina enacts:

EXEMPT RESIDENTIAL GARAGES FROM ENERGY EFFICIENCY CODES

SECTION 2.(a) G.S. 143-138 is amended by adding a new subsection to read: “(b19) Exclusion From Energy Efficiency Code Requirements for Residential Garages. -The Council shall provide for an exemption for detached and attached garages located on the same lot as a dwelling from any requirements in the energy efficiency standards pursuant to Chapter 11 of the North Carolina Residential Code for One- and Two-Family Dwellings and Chapter 4 of the North Carolina Energy Conservation Code.”

Section 2.(b) This section becomes effective October 1, 2018.

Item C – 17 Request by the NC Building Code Council representing the NC General Assembly to amend the 2018 Existing Building Code, Section 101.12 as follows:

101.12 Energy conservation exceptions.

The following exceptions apply to energy conservation code provisions in existing buildings in accordance with NC General Statutes:

1. In accordance with N.C.G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U. This exclusion shall apply to the entire building area.

2. In accordance with the N.C.G.S. 143-138 (b19), for residential buildings, no energy conservation code provisions shall apply to detached and attached garages located on the same lot as a dwelling.

**GENERAL ASSEMBLY OF NORTH CAROLINA
SESSION 2017
SESSION LAW 2018-65
HOUSE BILL 573**

AN ACT TO MAKE BUSINESS AND REGULATORY CHANGES TO VARIOUS STATE LAWS.

The ratified and signed legislation reads in part with respect to the energy conservation code requirements:

The General Assembly of North Carolina enacts:

EXEMPT RESIDENTIAL GARAGES FROM ENERGY EFFICIENCY CODES

SECTION 2.(a) G.S. 143-138 is amended by adding a new subsection to read: “(b19) Exclusion From Energy Efficiency Code Requirements for Residential Garages. -The Council shall provide for an exemption for detached and attached garages located on the same lot as a dwelling from any requirements in the energy efficiency standards pursuant to Chapter 11 of the North Carolina Residential Code for One- and Two-Family Dwellings and Chapter 4 of the North Carolina Energy Conservation Code.”

SECTION 2.(b) This section becomes effective October 1, 2018.

Item C – 18 Request by Daniel Priest representing Priest Architecture, PLLC to amend the 2018 NC State Building Code, Table 2902.1 and the 2018 NC State Plumbing Code, Table 403.1 as follows:

2	Business (See Sections 2902.2, 2902.3, and 2902.3.2.2)	B	Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50	1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80	–	1 per 100 ^q	1 service ^o sink
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q. For business occupant loads of 25 or fewer, drinking fountains shall not be required.

Item C – 19 Request by Daniel Priest representing Priest Architecture, PLLC to amend the 2018 NC State Plumbing Code, Section 410.2 as follows:

410.2 Small occupancies. Drinking fountains shall not be required for an occupant load of 15 or fewer.

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 September 11, 2018. The Final Adoption meeting will take place on January 28, 2019. 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 William T. Noland P.E. representing Noland Construction Consulting, PLLC – Agent for Onslow County to amend the 2018 NC Building Code, Section 1704 Special Inspections as follows:

1705.4 Masonry construction.

Exception: Special inspections and tests shall not be required for:

4. Non-load bearing masonry partition walls and screens as determined and designated as such by the registered design professional in or added to the construction documents.

Item D – 2 Request by Michael Rettie representing Orange County Inspections to amend the 2018 NC Residential Code, Section AM111.1 as follows:

AM111.2 Guard rail posts.

Guard rail posts nominal 4x4 or larger may be notched at their support up to 1½ inches (3.81 cm).

Item D – 3 Request by Randall Shackelford, P.E. representing Simpson Strong-Tie Co., Inc. to amend the 2018 NC Residential Code, Section AM109 as follows:

AM109.1 Deck bracing.

Decks shall be braced to provide lateral stability. Lateral stability shall be provided in accordance with one of the methods in Sections AM109.1.1 through AM109.1.5.

AM109.1.1. Lateral bracing not required.

When the deck floor height is less than 4 feet (1219 mm) above finished grade as shown in Figure AM109.1(1) and the deck is attached to the structure in accordance with Section AM104, lateral bracing is not required. Lateral bracing is not required for freestanding decks with a deck floor height 30 inches (762 mm) or less above finished grade.

AM109.1.2. Knee bracing.

4x4 wood knee braces are permitted to be provided on each column in both directions for freestanding decks or parallel to the structure at the exterior column line for attached decks per Figure AM109.1(2). The knee

braces shall attach to each post at a point not less than 1/3 of the post length from the top of the post, and the braces shall be angled between 45 degrees (0.79 rad) and 60 degrees (1.05 rad) from the horizontal. Knee braces shall be ~~bolted~~ fastened to the post and the girder/double band in accordance with one 5/8 inch (16 mm) hot dip galvanized bolt with nut and washer at both ends of the brace of the methods shown in Table AM109.1; as shown in Figure AM109.1(2).

TABLE AM109.1
FASTENING OF BRACE TO POST AND GIRDER/BAND (CHOOSE ONE)

<u>Fastener</u>	<u>Installation</u>	<u>Minimum Distances</u>
<u>One 5/8" diameter hot dipped galvanized through bolt with nut and washer</u>	<u>Perpendicular to post or girder/band</u>	<u>2-3/16" end distance</u>
<u>Two hot dipped galvanized (ASTM A153, Class C, minimum) screws having minimum diameter of 0.270" and long enough to achieve 3" penetration into the post or girder/band.</u>	<u>Perpendicular to post or girder/band</u>	<u>1" edge distance, 1-1/2" horizontal spacing, minimum 3" end distance</u>

AM109.1.3. Post embedment.

For free standing decks without knee braces or diagonal bracing, lateral stability is permitted to be provided by embedding the post in accordance with Figure AM109.1(3) and Table AM109.42.

TABLE AM109.42
POST EMBEDMENT FOR FREE STANDING DECKS

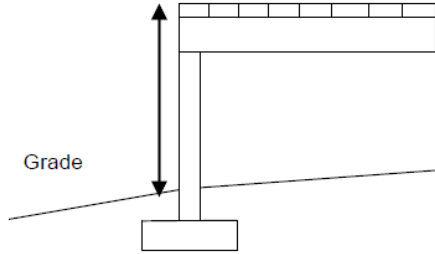
POST SIZE	MAXIMUM TRIBUTARY AREA	MAXIMUM POST HEIGHT	EMBEDMENT DEPTH	CONCRETE DIAMETER
4" x 4"	48 SF	4'-0"	2'-6"	1'-0"
6" x 6"	120 SF	6'-0"	3'-6"	1'-8"

AM109.1.4. Cross bracing.

2x6 diagonal vertical cross bracing is permitted to be provided in two perpendicular directions for free standing decks or parallel to the structure at the exterior column line for attached decks. The 2x6 bracing shall be attached to the posts with one 5/8 inch (16 mm) hot dip galvanized bolt with nut and washer at each end of each bracing member per Figure AM109.1(4).

AM109.1.5. Piles in coastal regions.

For embedment of piles in coastal regions, see Chapter 46.



Less than 4' (decking to grade) and attached to structure no bracing required

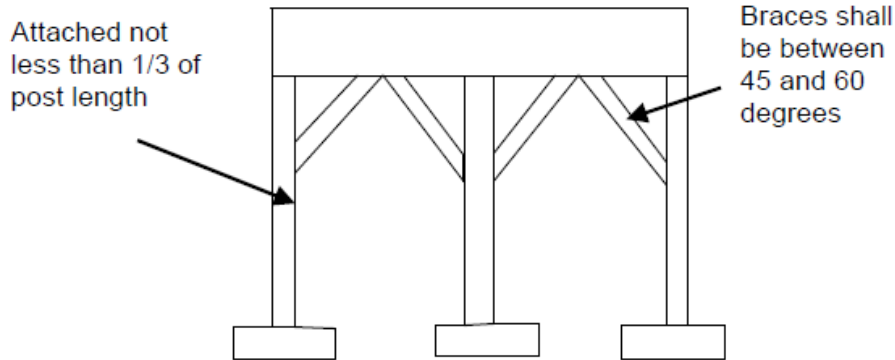
For SI: 1 inch = 25.4, 1 foot = 304.8 mm

**FIGURE AM109.1(1)
NO LATERAL BRACING**

(No change)

Freestanding decks requiring bracing shall be installed in both directions off each post

Decks attached to structure require diagonal bracing only at outside girder line parallel with structure



For SI: 1 inch = 25.4, 1 foot = 304.8 mm

**FIGURE AM109.1(2)
KNEE BRACING**

Item D – 4 Request by Colin Triming, representing the NC Fire Code Revision Committee, to amend the 2018 NC Building/Fire Codes, Sections 915.1.1, 915.1.2, 915.1.3, 915.4.1 as follows:

915.1.1 Where required. Carbon monoxide detection shall be provided in Group A-2, I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 915.2 where any of the conditions in Sections 915.1.2 through 915.1.6 exist.

915.1.2 Fuel-burning appliances and fuel-burning fireplaces. Carbon monoxide detection shall be provided in Group A-2 occupancies, dwelling units, sleeping units and classrooms that contain a fuel-burning appliance or a fuel-burning fireplace.

915.1.3 Forced air furnaces. Carbon monoxide detection shall be provided in Group A-2 occupancies, dwelling units, sleeping units and classrooms served by a fuel-burning, forced air furnace.

915.4.1 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

Exceptions:

1. Where installed in buildings without commercial power, battery-powered carbon monoxide alarms shall be an acceptable alternative.

2. In A-2 occupancies the carbon monoxide detector shall be permitted to be battery powered.

Item D – 5 Request by Colin Triming, representing the NC Fire Code Revision Committee, to amend the 2018 NC Mechanical Code, Sections 313.4.1.2, 313.4.1.3, 313.4.1.1, 313.4.4.1 as follows:

313.4.1.2 Fuel-burning appliances and fuel-burning fireplaces. Carbon monoxide shall be provided in Group A-2 occupancies, dwelling units, sleeping units and classrooms that contain a fuel-burning appliance or a fuel-burning fireplace.

313.4.1.3 Forced air furnaces. Carbon monoxide detection shall be provided in Group A-2 occupancies, dwelling units, sleeping units and classrooms served by a fuel-burning, forced air furnace.

313.4.1.1 Where required. Carbon monoxide detection shall be provided in Group A-2, I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 313.4.2 where any of the conditions in Sections 313.4.1.2 through 313.4.1.6 exist.

313.4.4.1 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

Exceptions:

1. Where installed in buildings without commercial power, battery-powered carbon monoxide alarms shall be an acceptable alternative.

2. In A-2 occupancies the carbon monoxide detector shall be permitted to be battery powered.

Item D – 6 Request by Colin Triming, representing the NC Fire Code Revision Committee, to amend the 2018 NC Fuel Gas Code, Sections 311.4.1.1, 311.4.1.2, 311.4.1.3, 311.4.4.1 as follows:

311.4.1.1 Where required. Carbon monoxide detection shall be provided in Group A-2, I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 311.4.2 where any of the conditions in Sections 311.4.1.2 through 311.4.1.6 exist.

311.4.1.2 Fuel-burning appliances and fuel-burning fireplaces. Carbon monoxide shall be provided in Group A-2 occupancies, dwelling units, sleeping units and classrooms that contain a fuel-burning appliance or a fuel-burning fireplace.

311.4.1.3 Forced air furnaces. Carbon monoxide detection shall be provided in Group A-2 occupancies, dwelling units, sleeping units and classrooms served by a fuel-burning, forced air furnace.

311.4.4.1 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than that required for overcurrent protection.

Exceptions:

1. Where installed in buildings without commercial power, battery-powered carbon monoxide alarms shall be an acceptable alternative.

2. In A-2 occupancies the carbon monoxide detector shall be permitted to be battery powered.

Item D – 7 Request by Colin Triming, representing the NC Fire Code Revision Committee, to amend the 2018 NC Fire Code, Section 404.2.3 as follows:

~~**404.2.3 Lockdown plans.** Where facilities develop a lockdown plan, it shall be in accordance with Sections 404.2.3.1 through 404.2.3.3.~~

~~**404.2.3.1 Lockdown plans contents.** Lockdown plans shall be *approved* by the *fire code official* and shall include the following:~~

~~1. Initiation. The plan shall include instructions for reporting an emergency that requires a lockdown.~~

~~2. Accountability. The plan shall include accountability procedures for staff to report the presence or absence of occupants.~~

~~3. Recall. The plan shall include a prearranged signal for returning to normal activity.~~

~~4. Communications and coordination. The plan shall include an approved means of two way communication between a central location and each secured area.~~

404.2.3 Lockdown plans. Lockdown plans shall only be permitted where such plans are approved by the *fire code official* and are in compliance with Sections 404.2.3.1 and 404.2.3.2.

404.2.3.1 Lockdown plan contents. Lockdown plans shall include the following:

1. Identification of individuals authorized to issue a lockdown order.

2. Security measures used during normal operations, when the building is occupied, that could adversely affect egress or fire department operations.

3. A description of identified emergency and security threats addressed by the plan, including specific lockdown procedures to be implemented for each threat condition.

4. Means and methods of initiating a lockdown plan for each threat, including:
 - 4.1. The means of notifying occupants of a lockdown event, which shall be distinct from the fire alarm signal.
 - 4.2. Identification of each door or other access point that will be secured.
 - 4.3. A description of the means or methods used to secure doors and other access points.
 - 4.4. A description of how locking means and methods are in compliance with the requirements of this code for egress and accessibility.
 5. Procedures for reporting to the fire department any lockdown condition affecting egress or fire department operations.
 6. Procedures for determining and reporting the presence or absence of occupants to emergency response agencies during a lockdown.
 7. Means for providing two-way communication between a central location and each area subject to being secured during a lockdown.
 8. Identification of the prearranged signal for terminating the lockdown.
 9. Identification of individuals authorized to issue a lockdown termination order.
 10. Procedures for unlocking doors and verifying that the means of egress has been returned to normal operations upon termination of the lockdown.
 11. Training procedures and frequency of lockdown plan drills.
- 404.2.3.2 Drills.** Lockdown plan drills shall be conducted in accordance with the approved plan. Such drills shall not be substituted for fire and evacuation drills required by Section 405.2.

Item D – 8 Request by Robert Privott, representing the NC Home Builders Association, to amend the 2017 NC Electrical Code, Article 210.8(A) Ground-Fault Circuit-Interrupter Protection for Personnel as follows:

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(A) Dwelling Units. All 125-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in 210.8 (A)(1) through (10) shall have ground-fault circuit-interrupter protection for personnel.

(1) Bathrooms

(2) Garages, and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use

Exception No. 1 to (2): Receptacles that are not readily accessible.

Exception No. 2 to (2): A single receptacle or a duplex receptacle for two appliances located within dedicated space for each appliance that, in normal use, is not easily moved from one place to another and that is cord-and-plug connected in accordance with 400.10(A)(6), (A)(7), or (A)(8).

Receptacles installed under the exceptions to 210.8(A)(2) shall not be considered as meeting the requirements of 210.52(G)

Item D – 10 Request by Terry Cromer, representing the NC Association of Electrical Contractors, Inc., to amend the 2017 NC Electrical Code, Table 300.5 as follows:

Table 300.5 Minimum Cover Requirements, 0 to 1000 Volts, Nominal, Burial in Millimeters (Inches)

Location of Wiring Method or Circuit	Type or Wiring Method or Circuit									
	Column 1 Direct Burial Cables or Conductors		Column 2 Rigid Metal Conduit or Intermediate Metal Conduit		Column 3 Nonmetallic Raceways Listed for Direct Burial Without Concrete Encasement or Other Approved Raceways		Column 4 Residential Branch Circuits Rated 120/125/250 Volts or Less with GFCI Protection and Maximum Overcurrent Protection of 20- 50 Amperes		Column 5 Circuits for Control or Irrigation and Landscape Lighting Limited to Not More Than 30 Volts and Installed with Type UF or in Other Identified Cable or Raceway	
	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
All locations not specified below	600	24	150	6	450	18	300	12	150	6
In trench below 50 mm (2 in.) thick concrete or equivalent	450	18	150	6	300	12	150	6	150	6
Under a building	0 (in raceway or Type MC or Type MI cable identified for direct burial)	0	0	0	0	0	0 (in raceway or Type MC or Type MI cable identified for direct burial)	0	0 (in raceway or Type MC or Type MI cable identified for direct burial)	0
Under minimum of 102 mm (4 in.) thick concrete exterior slab with no vehicular traffic and the slab extending not less than 152 mm (6 in) beyond the underground installation	450	18	100	4	100	4	150 (direct burial) 100 (in raceway)	6 4	150 (direct burial) 100 (in raceway)	6 4
Under streets, highways, roads, alleys, driveways, and parking lots	600	24	600	24	600	24	600	24	600	24
One- and two-family dwelling driveways and outdoor parking areas, and used only for dwelling-related purposes	450	18	450	18	450	18	300	12	450	18
In or under airport runways, including adjacent areas where trespassing prohibited	450	18	450	18	450	18	450	18	450	18

Notes:

1. Cover is defined as the shortest distance in millimeters (inches) measured between a point on the top surfaces of any direct-buried conductor, cable, conduit, or other raceway and the top surface of finished grade, concrete, or similar cover.
2. Raceways approved for burial only where concrete encased shall require concrete envelope not less than 50 mm (2 in) thick.
3. Lesser depths shall be permitted where cables and conductors rise for terminations or splices or where access is otherwise required.
4. Where one of the wiring method types listed in Columns 1 through 3 is used for one of the circuit types in Columns 4 and 5, the shallowest depth of burial shall be permitted.
5. Where solid rock prevents compliance with the cover depths specified in this table, the wiring shall be installed in metal or nonmetallic raceway permitted for direct burial. The raceways shall be covered by a minimum of 50 mm (2 in.) of concrete extending down to rock.

Item D – 11 Request by David Smith, representing the Residential Ad-Hoc Committee, to amend the 2018 NC Residential Code, Sections R202, R305, R310, R328 as follows:

Revisions to Sections R202, R305 and R310
Added Section R328

Section R202
Definitions

EGRESS ROOF ACCESS WINDOW. A skylight or roof window designed and installed to satisfy the emergency escape and rescue opening requirements in Section R310.2.

LANDING PLATFORM. A landing provided as the top step of a stairway accessing a loft.

LOFT. A floor level located more than 30 inches (762 mm) above the main floor and open to it on at least one side with a ceiling height of less than 6 feet 8 inches (2032 mm), used as a living or sleeping space.

Section R305
Ceiling Height

R305.1 Minimum height. *Habitable space*, hallways and portions of *basements* containing these spaces shall have a ceiling height of not less than 7 feet (2134 mm). Bathrooms, toilet rooms and laundry rooms shall have a ceiling height of not less than 6 feet 8 inches (2032 mm).

Exceptions:

1. For rooms with sloped ceilings, the required floor area of the room shall have a ceiling height of not less than 5 feet (1524 mm) and not less than 50 percent of the required floor area shall have a ceiling height of not less than 7 feet (2134 mm).
2. The ceiling height above bathroom and toilet room fixtures shall be such that the fixture is capable of being used for its intended purpose. A shower or tub equipped with a showerhead shall have a ceiling height of not less than 6 feet 8 inches (2032 mm) above an area of not less than 30 inches (762 mm) by 30 inches (762 mm) at the showerhead.
3. Beams, girders, ducts or other obstructions in *habitable space* shall be permitted to project to within 6 feet 4 inches (1931 mm) of the finished floor.
4. Ceiling heights in lofts are permitted to be less than 6 feet 8 inches.

Section R310

Emergency Escape and Rescue Openings

R310.2.5 Egress roof access window. Egress roof access windows shall be deemed to meet the requirements of Section R310 where installed such that the bottom of the opening is not more than 44 inches (1118 mm) above the floor, provided the egress roof access window complies with the minimum opening area requirements of Section R310.2.1.

Section R328

Lofts

R328.1 Minimum loft area and dimensions. Lofts used as a sleeping or living space shall meet the minimum area and dimension requirements of Sections R328.1.1 through R328.1.4.

R328.1.1 Minimum area. Lofts shall have floor area of not less than 35 square feet (3.25 m²).

R328.1.2 Maximum area. Lofts shall have a floor area not greater than 70 square feet (6.50 m²).

R328.1.3 Minimum dimensions. Lofts shall not be less than 5 feet (1524 mm) in any horizontal dimension.

R328.1.4 Height effect on loft area. Portions of a loft with a sloping ceiling measuring less than 3 feet (914 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

Exception: Under gable roofs with a minimum slope of 6 units vertical in 12 units horizontal (50-percent slope) portions of a loft with a sloped ceiling measuring less than 16 inches (406 mm) from the finished floor to the finished ceiling shall not be considered as contributing to the minimum required area for the loft.

R328.2 Loft access. The access to and primary egress from lofts shall be any type described in Sections R328.2.1 through R328.2.4.

R328.2.1 Stairways. Stairways accessing lofts shall comply with this code or with Sections R328.2.1.1 through R328.2.1.5.

R328.2.1.1 Width. Stairways accessing a loft shall not be less than 17 inches (432 mm) in clear width at or above the handrail. The minimum below the handrail shall be not less than 20 inches (508 mm).

R328.2.1.2 Headroom. The headroom in stairways accessing a loft shall be not less than 6 feet 2 inches (1880 mm), as measured vertically, from a sloped line connecting the tread or landing platform nosings in the middle of their width.

R328.2.1.3 Treads and Risers. Risers for stairs accessing a loft shall be not less than 7 inches (178 mm) and not more than 12 inches (305 mm) in height. Tread depth and riser height shall be calculated in accordance with one of the following formulas:

1. The tread depth shall be 20 inches (508 mm) minus $\frac{4}{3}$ of the riser height, or

2. The riser height shall be 15 inches (381 mm) minus $\frac{3}{4}$ of the tread depth.

R328.2.1.4 Landing platforms. The top tread and riser of stairways accessing lofts shall be constructed as a landing platform where the loft ceiling height is less than 6 feet 2 inches (1880 mm) where the stairway meets the loft. The landing platform shall be 18 inches to 22 inches (457 to 559 mm) in depth measured from the nosing of the landing platform to the edge of the loft, and 16 to 18 inches (406 to 457 mm) in height measured from the landing platform to the loft floor.

R328.2.1.5 Handrails. Handrails shall comply with Section R311.7.8.

R328.2.1.6 Stairway guards. Guards at open sides of stairways shall comply with Section R312.1.

R328.2.2 Ladders. Ladders accessing lofts shall comply with Sections R328.2.1 and R328.2.2.

R328.2.2.1 Size and capacity. Ladders accessing lofts shall have a rung width of not less than 12 inches (305 mm) and 10 inches (254 mm) to 14 inches (356 mm) spacing between rungs. Ladders shall be capable of supporting a 200 pound (75 kg) load on any rung. Rung spacing shall be uniform within 3/8-inch (9.5 mm).

R328.2.2.2 Incline. Ladders shall be installed at 70 to 80 degrees from horizontal.

R328.2.4 Ships ladders. Ships ladders accessing lofts shall comply with Sections R311.7.12.1 and R311.7.12.2. The clear width at and below handrails shall be not less than 20 inches (508 mm).


R328.2.5 Loft Guards. *Loft guards shall be located along the open side of lofts. Loft guards shall not be less than 36 inches (914 mm) in height or one-half of the clear height to the ceiling, whichever is less.*

Part E – Reports

- ❖ **Chairman’s Report**
- ❖ **Ad-Hoc Committee Reports**
- ❖ **Standing Committee Reports**
- ❖ **Staff Reports**
- ❖ **Public Comments**

Part F – Appeals

Sincerely,

A handwritten signature in black ink, appearing to read "Barry Gupton", with a long horizontal line extending to the right.

Barry Gupton, P.E. Secretary,
NC Building Code Council