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September 2021

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Introduction

Welcome to the September 2021 OSFM Engineering Newsletter. Since our June 2021 newsletter, there was a regularly scheduled Building Code Council meeting held September 14th, 2021. The results of the meeting will be posted shortly in the minutes, but the results of the D-items are noted, unofficially, in the Building Code Council Approved Rule Changes article below. Of note in this newsletter is an update on the 2020 State Electrical Code status. Please refer to the Current Topics section for an update on that topic.

Current Topics

2020 State Electrical Code – Updated Effective Date; Residential Code Applicability

The 2020 State Electrical Code (2020 NEC with North Carolina Amendments) was accepted by the Building Code Council on June 8, 2021. Its effective date was set at October 1, 2021, as mentioned in the previous Newsletter. However, at the regularly schedule Rule Review Commission, an objection was raised, and that is presently being decided upon by the interested parties, and this notice is a reprint of the information sent to NC Code Officials concerning this matter.

Reprint of effective date notice sent to all electrical certificate holders:

ATTN: NC Code Enforcement Officials

Beginning in 2019, the North Carolina Residential Code for One- and Two-Family Dwellings is prohibited by statute from revision until January 1, 2025. During the August meeting of the Rules Review Commission, the 2020 State Electrical Code was objected by the Commission because the electrical code contains new provisions for one- and two-family dwellings. Upon legal recommendation, the Council voted to change the electrical Amendment package to satisfy the Commission’s objection. The 2020 State Electrical Code will be sent back to the Rules Review Commission at the October regular meeting to determine if the change has satisfied the Commission’s objection.

What this means in plain English:

Should the Rules Review Commission accept the Building Code Council’s modification, the 2020 State Electrical Code would be effective November 1, 2021, and would not be applicable to one- and two-family dwellings. The 2017 State Electrical Code would remain effective for one- and two-family dwellings, including their accessory structures such as swimming pools and PV equipment. Care should be taken not to refer to the 2017 NEC as the “residential code” and the 2020 NEC as the “commercial code” because residential is much more the one- and two-family dwellings. For example, condominiums and apartments will be regulated by the 2020 State Electrical Code. Knowledge of a previous Code must be retained, similar to current projects permitted under a previous cycle.

At last week's regular meeting of the State Board of Examiners of Electrical Contractors, the Licensing Board voted to modify testing on the 2020 NEC from January 1, 2022, to no less than 120 days after the effective date of the adoption of the 2020 NEC. I will be updating the Q-Board at their October regular meeting so they can discuss if the updated exams for electrical inspectors should also be modified to match the Licensing Board.

The staff of OSFM and the Licensing Board are working diligently with the information we have in order to ensure the integrity of the electrical industry. I ask that everyone remains patient for further details.

The webpage dedicated to the electrical code has been updated at the link below to reflect the above text including a third version of the 2020 Amendments.

<https://www.ncosfm.gov/codes/state-electrical-division/state-electrical-code-and-interpretations>

Joe Starling, PE

End of reprint

European Wood Species Interpretation – Requirements for Proper Use

As stated in the prior Engineering Newsletter in July, an interpretation has been posted, and updated several times to address lumber species not recognized in the Residential Code, and how to properly use them. The latest version, as of this Newsletter posting, is August 9th, 2021. Please note, there are allowances for its proper use; it is not outright banned. This interpretation can be found at the following link:

<https://www.ncosfm.gov/residential/050211-use-lumber-species-not-recognized-residential-code>

FIGURE 1: SNIP OF INTERPRETATION FOR NON-PRESCRIPTIVE LUMBER SPECIES



0502.1.1 - The Use of Lumber Species not Recognized by the Residential Code Rev3.pdf

PDF • 556.27 KB - August 09, 2021

2018

Code College - 2021

This year's Code College will be held September 27 through October 1. The courses are being developed such that they can be viewed at a later time, and many practice exam questions were developed and will be posted for the use of not only code-college attendees, but future students as well. There are over 350 registrants as of 9/9/2021, and the Figure below illustrates the breakdown. The total exceeds 350, because some registrants are taking multiple courses. Registration is now closed, and it is "go time". The results of the training will be communicated in December.

FIGURE 2: 2021 CODE COLLEGE REGISTRATION TOTAL, INCLUSIVE OF IN-PERSON AND REMOTE, AS OF SEPTEMBER 9, 2021

Monday, Sep. 27, FIRE	198
Tuesday, Sep. 28, ELECTRICAL	124
Wednesday, Sep. 29, RCI (MEC...	92
Thursday, Sep. 30, BUILDING	117
Friday, Oct. 1, RESIDENTIAL	98



Recurring Articles

Building Code Council Approved Rule Changes

A regularly scheduled quarterly BCC meeting was held on September 14th, 2021. The full agenda can be read at the link listed below. The link will take you to the BCC Minutes webpage and the reader must then click on the .pdf file to open the agenda file. The minutes for this September meeting are not published yet, but the unofficial results of the D-items are posted below. The minutes from the June 2021 meeting are posted, and they are available at the link below.

BCC Meeting Agenda-September, 2021

<https://www.ncosfm.gov/bcc-agenda-20210914-september-14-2021>

BCC Meeting Minutes-June 2021

<https://www.ncosfm.gov/bcc-minutes-june-8-2021>

The full proposals of the September B-items are available again on the NCDOT-OSFM website. They are available as hyperlinks. A different format of this was done for the March 2021 Meeting, and now starting with the September 2021 agenda the website was reformatted to allow this to continue in a more readable manner. See following Figure for an illustration of this new feature. All the September 14th B-items were accepted by the council.

FIGURE 3: SNIP OF LINKS TO FULL B-ITEM PROPOSALS

BCC Agenda - 20210914 - September 14, 2021

[Item B - 1 Request by David Smith representing the NC BCC Residential Ad Hoc Committee to amend the 2018 NC Residential Building Code, Section R404.4](#)

[Item B - 2 Request by Carl Martin representing the Department of Insurance to amend the 2018 NC Building Code, Section 116.1](#)

[Item B - 3 Request by Carl Martin representing the Department of Insurance to amend the 2018 Building Code, Section 3006.2](#)

[Item B - 4 Request by Carl Martin representing the Department of Insurance to amend the 2018 NC Building Code, Section 3006.3](#)

[Item B - 5 Request by Colin Trimming representing the NC Fire Code Revision Committee to amend the 2018 NC Fire Code, Section 304.4.2.3](#)



[21 Sept Agenda -Final.pdf](#)

PDF • 618.51 KB • September 02, 2021

[Building Code Council \(BCC\)](#)

Once the Building Code Council approved September D-items are also approved by the Rule Review Commission, (sometimes an amendment gets sent back to Building Code Council for various technical reasons) the adopted rules will be placed on the NCDOT Engineering website. Please refer to the Cumulative Supplements article of this newsletter for the link to the cumulative supplements from past meetings.

The full review of the September-approved code amendments is left to the reader, but **the titles of each item** are bulleted below. Remember these are not final until they are through the Rules Review process. The approved September D-items, if approved by Rules Review Commission, will be effective January 1, 2022.

BCC Proposed Amendments-September 2021 (draft results)

- Item D – 1 Request from Carl Martin representing the Department of Insurance to amend the 2018 NC Administration Code, Chapters 1, 2, and 3 as follows (210309 Item B-1): (Remainder not shown for brevity) – **approved**
- Item D – 2 Request from Wayne Hamilton representing the NC Building Code Council Tent Ad-hoc Committee to amend the 2018 NC Fire Code, Section 3103.4 as follows (210309 Item B-3): (Remainder not shown for brevity) - **approved**
- Item D – 3 Request from Bryan Dale Robinson representing the City of Raleigh to amend the 2018 NC Building Code as follows (210309 Item B-5): (Remainder not shown for brevity) – **approved**
- Item D – 4 Request from Drew Crawford representing DIYtiny, INC to add to the 2018 NC Building Code, Sections 101.2, Exception #6 and amend Section 202 as follows (210309 Item B-6): (Remainder not shown for brevity) – **Tabled until the December meeting.**
- Item D – 5 Request from Drew Crawford representing DIYtiny, INC to amend the 2018 NC Residential Building Code, Sections R202, R305.1, R328 as follows (210309 Item B-7): (Remainder not shown for brevity) – **Tabled until the December meeting.**
- Item D – 6 Request from Kerry Sutton representing American Concrete Institute (ACI), Dave Tepke representing ACI Carolinas Chapter, Mark LeMay representing International Concrete Repair Institute (ICRI), Bill Brickey representing ICRI Carolinas Chapter, Keith Kesner representing CVM, Tim Cooke representing SKA Consulting Engineering, and Douglas Allen representing Simpson Strong-Tie to add to the 2018 NC Existing Building Code, Section 606.1.1 and to amend Chapter 16 as follows: (Remainder not shown for brevity) – **approved**

Qualification Board Update

Inspector Open Mic -

Most Friday mornings from 8:30 to 9:00, staff host an “Inspector Open Mic” via WebEx. This is an informal forum for code officials to ask questions. The meeting link is on the web page [Home Page | OSFM \(ncosfm.gov\)](#); scroll down the page to “EVENTS”. Depending on the week, the date will vary, but the following snip is indicative is where it will be located:

FIGURE 4: WEB PAGE LOCATION OF OPEN MIC NOTICES

The screenshot shows a dark red background with white text. The main heading is "News & Events". Below it are three columns: "Press Releases", "Newsletters", and "Events".

Press Releases	Newsletters	Events
Friday, September 10, 2021 Insurance Commissioner Mike Causey to announce new fire ratings for Cramerton, McAdenville, China Grove on Friday	Friday, July 02, 2021 Engineering Newsletter - June 2021 - Version 2	Fri, Sep 10 2021, 8:30 - 9am Open Mic 9/10/21
Friday, July 16, 2021 Insurance Commissioner Mike Causey to speak at Building Inspectors' Conference, honor longtime insurance agency owner with award during visit to Carteret County	Wednesday, June 30, 2021 OSFM - Quarterly Report - June 2021	Fri, Sep 10 2021, 9am - 4pm COQB Education & Research Committee Meeting 9/10/2021
Tuesday, July 13, 2021 Commissioner Causey to honor eight firefighters who rescued victims from mobile home fire, present grant checks on Wednesday	Friday, June 25, 2021 Engineering Newsletter - June 2021 - Version 2	Mon, Sep 13 2021, 1 - 2pm Building Code Council - Committee Meeting - September 13, 2021
	Tuesday, April 13, 2021 Engineering Newsletter - April 2021	Tue, Sep 14 2021, 9 - 10am Building Code Council Meeting - September 14, 2021
	Friday, January 15, 2021 Engineering Newsletter - Jan 2021	more events...
	more newsletters...	

Minutes

The minutes of the Qualifications Board Meeting Minutes are available at the following link, and see Figure below for image from website:

Meeting Minutes and Agendas

<https://www.ncosfm.gov/licensing-cert/code-officials-qualification-board-coqb/coqb-meeting-dates>

FIGURE 5: IMAGE OF Q'BOARD WEBSITE TABLE OF MINUTES

Minutes

COQB Minutes - April 27, 2021 Board Mtg
COQB Minutes - January 26, 2021 Board Mtg
COQB Minutes - April 6, 2021 Special Board Mtg
COQB Minutes - October 27, 2020 Board Mtg

- **Sam Whittington:** Certification and Investigator, Complaints
919-647-0028 sam.whittington@ncdoi.gov
- The second investigator position was recently filled by Chris McLamb.

Department Notes

Engineering Department

Personnel Notes

Chris McLamb

We are pleased to welcome Chris to the OSFM Team. Chris is joining us as an Investigator with the Home Inspector Licensure Board and Code Officials Qualification Board.

Chris comes to DOI from the NC Dept. of Public Safety, NC National Guard where he was a CAD Design Technician using AutoCAD and Revit. He has drawn both residential and commercial plans and performed field inspections of work in progress. Prior to that he was an electrical designer including fire alarm systems. Chris has a bachelor's degree from ECU in Industrial Management and Industrial Technology Management.

Pak Yip, PE

Pak has accepted the position of Building Code (Commercial) Consultant, and is performing the duties of the Chief Residential Code Consultant also until further notice.

Dan Dittman, PE

Dan has accepted the position of Engineering Systems Supervisor, and is providing the Energy Code Consultant duties.

As of September 2021, here is the staff list and respective responsibilities for the NC Building Code:

- Pak Yip: **Building** Code (non-accessibility)
- Charlie Johnson: **Fire** Code (includes Chapter 9 of the NCBC)
919-647-0094 charlie.johnson@ncdoi.gov
- Pak Yip: **Residential** Code
919-647-0007 pak.yip@ncdoi.gov
- Jim Rodgers: **Residential** Code (non-structural)
919-647-0056, 919-270-3699 (cell) jim.rodgers@ncdoi.gov
- Pam Schooler: **Existing Building** Code
919-647-0011: pam.schooler@ncdoi.gov
- Tara Barthelmess: **Accessibility**
919-647-0014 tara.barthelmess@ncdoi.gov
- Mark Burns: **Plumbing** Code
919-647-0006 mark.burns@ncdoi.gov
- David Rittlinger: **Mechanical** and **Fuel Gas** Code
919-647-0008 david.rittlinger@ncdoi.gov
- Dan Dittman: **Energy** Code
919-647-0012 dan.dittman@ncdoi.gov

State Electrical Division Contacts

- Danny Thomas: **Electrical** Code – General Electrical Code Questions
919-647-0062 daniel.thomas@ncdoi.gov
- Joe Starling: State **Electrical** Engineer
919-397-6159 joseph.starling@ncdoi.gov

In addition, the following topics will be addressed by:

- **Engineering Manager: Carl Martin** - contact for Statutes, Appeals, Council items (other than meeting minutes and agenda), Engineer Elements and Components,
- **Vacant (Carl Martin, interim)**: BCC meeting minutes and agenda, Rules Review Commission, Formal interpretations, **Administrative** Code (non-statute)
919-647-0009 carl.martin@ncdoi.gov
- **Sam Whittington**: Certification and Investigator, Complaints
919-647-0028 sam.whittington@ncdoi.gov
- **Chris McLamb**: Certification and Investigator, Complaints

Link to New Website Personnel Contacts for Codes and Interpretations

<https://www.ncosfm.gov/codes/contact-codes-and-interpretations>

New Code Interpretations, Guidance Papers, and Appeals Posted

Since the prior newsletter, the following web interpretations, guidance papers, or appeals have been posted. Trades not shown did not have new web interpretations posted. The matrix of codes has been replaced with a drop-down menu box-driven sort function. Please notice that whenever you sort, then view an interpretation, you need to re-apply the sort function as the site defaults back to all the interpretations when the back-arrow is pressed.

Code, Guidance, Appeals link:

<https://www.ncosfm.gov/interpretations>

FIGURE 6: NEW LOOK OF CODE INTERPRETATIONS LANDING PAGE

OSFM Code Interpretations



Code Type Edition Search

- Any - - Any -

Apply

Interpretations

Fire Protection

No additional since June 2021 newsletter

Energy

No additional since June 2021 newsletter

Plumbing

No additional since June 2021 newsletter

Residential

0502.1.1 - The Use of Lumber Species not Recognized by the Residential Code_Rev3.pdf

Accessibility Interpretations

No additional since June 2021 newsletter

Electrical Interpretations

Presently, if you use the main Interpretations site, you need to click on "ALL" edition to view the Electrical interpretations on that site. However, if you go to the main Electrical Division site, there are interpretations for the 2017 NC Electrical Code, see following link:

<https://www.ncosfm.gov/codes/state-electrical-division/state-electrical-code-and-interpretations>

The link should take you to a webpage, and you should see the following line items when you scroll down.

2017 Electrical Interpretations

Interpretation
90.2(B)(5) - Electrical Utility Conductors and Equipment
Article 100 - Structures Defined
110.14 - Tightening Torque Inspection and Responsibility
210.8(A)(4) - GFCI Protection in a Crawl Space

FIGURE 7: MAIN ELECTRICAL CODE INTERPRETATIONS SECTION

The illustrated diagrams that used to be on the Electrical Division website are not available yet at this time due to transition of the 2017 NC Electrical Code to the 2020 Electrical Code.

Formal Interpretations and Appeals and Guidance Papers

Here are the **Formal Interpretations** posted since the prior Newsletter:

- 210622 Thomas Brasse NCPC 403.5.1 C900 Underground Water Distribution Pipe
- 210727 Buddy Jenkins 2018 NCPC Table 403.1 Footnote e
- 210630 Buddy Jenkins NCPC 403 Travel Distance to Toilet Fixtures
- 210817 Andrew Reece NCAC 101.3.2.1 Multiple Detached One and Two Family Dwellings on a Single Lot
- 210827 Jeff McIntosh NCRC Table R602.3(1) Fasteners for High Wind Zones
- 210901 John Harvey NCRC R101.2 Applicability of Code Based on Bldg Height in Stories
- 210901 Chad Askew NCBC 1006.3 Dwelling Separation Requirements Related to Single Means of Egress

Appeals

No appeals since prior Engineering Newsletter

Guidance Papers

Window and Door Installation Requirement for Framing and Insulation Inspection Temporarily During COVID-19 (updated August 25, 2021 and noted to be still in effect until noted otherwise)

Cumulative Supplements










Cumulative code changes and their adoption dates can be found on the DOI website at:

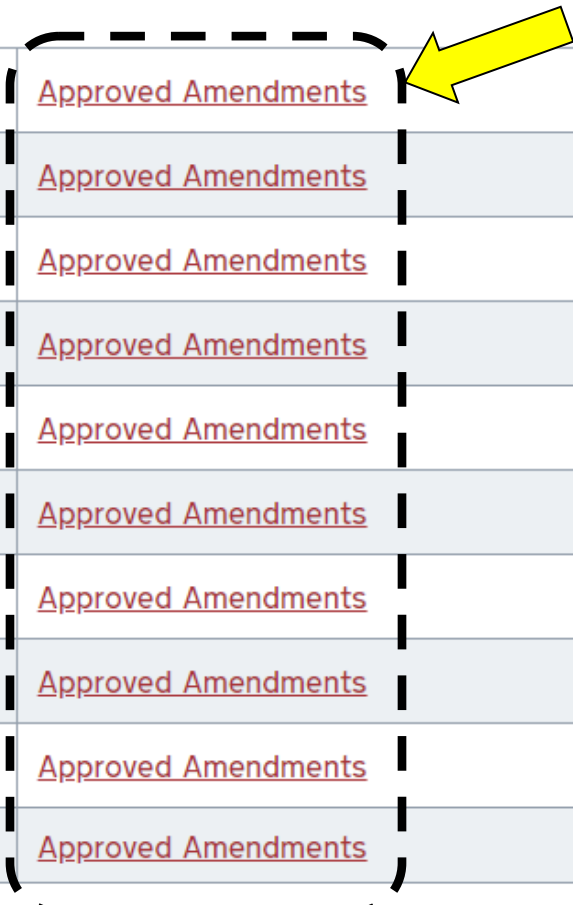
Cumulative code changes link:

<https://www.ncosfm.gov/codes/codes-current-and-past>

Each code volume has a file associated with it. The files range in size from three pages (Fuel Gas) to 64 pages (Residential). If the reader would find a table of contents beneficial for the quick perusal of these documents, please contact Rob Roegner Rob.Roegner@ncdoi.gov or Carl Martin Carl.Martin@ncdoi.gov.

FIGURE 8: TABLE OF APPROVED AMENDMENTS

2018 Administrative 	Approved Amendments
2018 Building 	Approved Amendments
2018 Residential 	Approved Amendments
2018 Energy Conservation 	Approved Amendments
2018 Existing Building 	Approved Amendments
2018 Fire 	Approved Amendments
2018 Fuel Gas 	Approved Amendments
2018 Mechanical 	Approved Amendments
2018 Plumbing 	Approved Amendments
2017 Electrical Code *	Approved Amendments



Remember, refer to NC Administrative Code section **102.4 Effective date of rules**, and **102.5 Interim use of approved rules** for clarification of effective dates and the process for using approved rules prior to the effective date.

Education Section

NC Building Code Training

The most up-to-date training schedule for all building codes are available at the following link:

<https://www.ncosfm.gov/licensing-cert/code-officials-qualification-board-coqb/coqb-code-education>

Once the web page is accessed, click the “**FIND A CLASS**” button to refine your search. Many in-person classes have been reopened. Please check out the available on-line courses, and carefully read the locations and means of course offering. It is suggested that you contact the organization or individual providing the training to verify the locations and means of training before traveling to any given site or registering for a class. As always, please consider the use of Standard Courses for fulfilling Con-Ed requirements, as they are an underutilized tool for that purpose.

Other websites of Inspector Organizations that offer training

<http://www.ncbia.org/> (Building Inspectors Association)
<http://ncpia.us/> (Plumbing Inspectors Association)
<https://www.nc-mia.com/> (Mechanical Inspectors note new website address – formerly www.ncmia.com)
<http://www.ncfma.com/> (Fire Marshals Association)
<https://nceia.com/> (Electrical Inspectors, note the new website address)

Reminder: Before signing up for any class, verify the course number. Attendee will not receive credit for courses that they attended within the prior three years. Some courses are taught at multiple sites across multiple years.

Reminders and other Resources

Open Mic

The department (OSFM-Engineering) has been experimenting with better ways to provide updates and outreach to code officials, and one of the methods being given a test-drive is a virtual open – mic Webex meeting. In order to view the times, proceed to the following link, and follow the directions therein:

[Inspector Open Mic | OSFM \(ncosfm.gov\)](https://www.ncosfm.gov/inspector-open-mic)

Please participate as your time allows.

Tentative 2024 NC Code Development Calendar:

The ad hoc process has begun for the 2024 NC Building Codes. The ad hoc committees have begun meeting, or will begin meeting shortly for their respective code volumes. The meeting notices will be published at the following location:

<https://www.ncosfm.gov/codes/building-code-council-bcc/bcc-ad-hoc-committee-meeting-information>

If a January 1, 2024 date is the goal, then the codes should be submitted as B-Items no later than the December 2022 meeting along with the fiscal notes. The schedule would go as follows:

- December 2022 – B-Item
- March 2023 – C-Item
- June 2023 – D-Item
- Rules Review Approval between June 2023 and September 2023.
- Proof reading and submittal to ICC for printing after Rules Review has approved.

The ad-hoc meetings are announced on the following location:

<https://www.ncosfm.gov/codes/building-code-council-bcc/bcc-meeting-dates>

Code Amendments Going into Effect

Every January 1st, a number of previously approved code amendments go into effect, but they are approved alternate methods used at the permit holder’s discretion until that date. Please refer to the following link:

<https://www.ncosfm.gov/codes/codes-current-and-past>

Accessibility Newsletters

Note: Previously, it was cited that the interpretations within the Accessibility Newsletters were the equivalent of a web interpretation, but the current Deputy Commissioner, Carl Martin, has deemed them to more appropriately be guidance or informal interpretations. This note will be included in future printings.

With the updating of the NCDOT webpage, the Accessibility Newsletter were removed. If there are any questions about a specific topics or general Accessibility questions, please contact Tara Barthelmess (919-647-0014).

New NC Regulations for Manufactured Homes – 2019 Edition

The 2019 NC Regulations for Manufactured Homes became effective on 9/1/2019. As discussed in the June, 2021 Newsletter, the 2019 Manufactured Homes Regulations (and revisions) are posted online and can be downloaded, printed or viewed from the NCDOT-OSFM website. The regulations are available at the link below (you will have to scroll down a little once you hit the main webpage, see Figure below for where links are situated on web page) as we want contractors, designers and inspectors to have ready access.

<https://www.ncosfm.gov/manufactured-bldg/manufactured-homes>

FIGURE 9: SNIP OF WEB PAGE WITH MANUFACTURED HOMES 2019 REGULATIONS



The 2019 Regulations may be purchased from 8:30am to 4:30pm, Monday thru Friday. For details and availability, contact Lori Miller at 919-647-0029 or lori.miller@ncdot.gov.