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Introduction

Welcome to the October 2022 OSFM Engineering Newsletter. Since our July 2022 newsletter, there was a regularly scheduled Building Code Council meeting held September 13th. The result of the meeting is posted in the BCC minutes, and the results of the D-items are noted, unofficially, in the Building Code Council Approved Rule Changes article below. Another article concerning the appliance standard increase is posted for the benefit of the readers; it can be viewed next in the Current Topics section.

Current Topics

Appliance standards – DOE

This is the third reminder of the scheduled appliance efficiency increase taking effect January 1, 2023. As previously noted in the February 2022 and July 2022 Engineering Newsletter, state energy codes, including NC, cannot preempt federal law, and therefore the minimum efficiency allowed simply follows the federal requirement, including the dates when they go into effect. Designers and contractors are encouraged to plan accordingly, as the effective date is not based on permit date of a project, but rather on the effective date of the standard. The effective date is:

- For straight AC units (split system or package) January 1, 2023, and this is an installed-by date. Equipment not meeting the standard cannot be legally installed in NC **on or after this date**, but they could be shipped to other areas of the country where the installed-by date is not mandatory.
- For heat pumps (split system or package) January 1, 2023, but it is a manufacturing end date, so products legally manufactured up to that point in time can be installed after that date.
- This efficiency increase is not for commercial units, only to HVAC units subject to the National Appliance and Energy Conservation Act of 1987 (NAECA).

The split-system heat pump requirements for NC are going to be 15 SEER in cooling mode, and 8.8 HSPF in heating. Straight AC split systems will be required to be 15 SEER if capacity if less than 45,000 Btu/hr, and 14.5 SEER if capacity is greater than or equal to 45,000 Btu/hr.

Also, for further reading please refer to the North Carolina Board of Examiners for Plumbing, Heating, and Fire Sprinkler Contractors May 2022 Newsletter for a very good and informative article concerning this standard.

www.nclicensing.org – refer to the Newsletters tab, and click the link for the **May 2022 Newsletter**.

As noted in this referenced article, there has been federal legislation introduced that could make the AC installed-by date a manufacturer cease-date, but there is no way to predict that, and as of this writing it is still only a proposal. There has been no known change to this as of 9/28/2022.

Guidance for Code Officials

There will be no special inspections on Dec 31, 2022 (New Year’s Eve, and it is on a Saturday this year) to determine if the last of the legally allowed straight-AC systems were installed in any given building. Documenting the installation date is largely going to be the responsibility of the installing contractor, and we suggest they maintain their paperwork if their work is later called into question by an interested third-party, such as the buyer. Code officials are limited to the inspections listed in the administrative code, and therefore if the inspection occurs on or after Jan 1, 2023 (New Year’s Day, and it is a Sunday) and there was not a prior inspection of the system noting the absence of the unit on Dec 31, 2022, the code official has no reason

to disapprove it. However, by the same token, they also cannot prove it *was* installed, so if the installation date is called into question, the contractor is wholly responsible for their installation.

The last time this occurred, in 2013, we do not recall any issues after-the-fact, and the straight AC units then were subject to the same install-by rules as are coming up, so the expectation is it will be the same, in that installers select equipment appropriate and legal for the intended installation date.

Recurring Articles

Building Code Council Approved Rule Changes

A regularly scheduled quarterly BCC meeting was held on September 13th, 2022. The full agendas can be read at the links 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 the September meeting are on the website, the September minutes will be available at a later date. However, the unofficial results of the D-items for the September meeting are posted below.

BCC Meeting Agenda-September, 2022

[BCC Agenda - 20220913 - September 13, 2022 | OSFM \(ncosfm.gov\)](#)

BCC Meeting Minutes-June 2022

[BCC Minutes - June 14, 2022 | OSFM \(ncosfm.gov\)](#)

Once the Building Code Council “approved” 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 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, 2023 for items pertaining to the Commercial Building Code.

BCC Proposed Amendments-September 2022

- Item D – 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): (Remainder not shown for brevity) – **approved**
- Item D – 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): (Remainder not shown for brevity) - **approved**
- Item D – 3 Request by Kim Wooten representing self to amend the 2020 National Electrical Code, Article 100 Definitions as follows (220315 Item B-6): (Remainder not shown for brevity) – **Tabled until next quarterly meeting**
- Item D – 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): (Remainder not shown for brevity) – **approved**
- Item D – 5 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) (Tabled from the June 14, 2022 meeting): (Remainder not shown for brevity) – **Declined (withdrawn by proponent)**

Code Officials Qualification Board Updates

The COQB will hold its regularly scheduled meeting October 25, 2022.

Details, including future meetings, past meetings, agendas, and minutes are available on this webpage link

Department Notes

Engineering Department Personnel Notes

Curtis McLaughlin

We are happy to welcome Mr. Curtis McLaughlin as our new Chief Residential Code Consultant. Curtis holds an engineering degree with an emphasis in construction and he comes to us from the private sector where he worked for several general contracting firms, performing field work to assure company QA/QC polices, codes, performance standards and specifications were being met. In addition, as a college campus facility manager he was responsible for plant operations, security and construction administration of new buildings and renovations. Curtis also has experience with state agencies, including DHHS, where he performed audits of healthcare facilities and DOT, where he performed inspections on various roadway constructions. We are happy to have Curtis in this position.

Kathryn Whalen, PE

We are also happy to add to our staff Ms. Kathryn Whalen as our Chief Mechanical Code Consultant. Kate comes to us from a private design firm where she acquired considerable experience designing mechanical HVAC systems, lab exhaust, and associated piping systems. She also has experience designing fire sprinkler systems, layouts, and hydraulic calculations. In addition to these duties, she has experience with LEED certification requirements, including building energy modeling. We are happy to have Kate fill this position.

***As of October 2022, here is the staff list and respective responsibilities for the NC Building Code:
(Kate and Curtis will be added to this list once they have a few weeks acclimating):***

- 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,
- **David Rittlinger**: BCC meeting minutes and agenda, Rules Review Commission, Formal interpretations, Administrative Code (non-statute)
919-647-0008 david.rittlinger@ncdoi.gov
- **Sam Whittington**: Investigator, Complaints
919-647-0028 sam.whittington@ncdoi.gov
- **Chris McLamb**: Investigator, Complaints
919-647-0105 christopher.mclamb@ncdoi.gov
- **Tommy Green**: Investigator, Complaints
919-647-0069 tommy.green@ncdoi.gov

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.

A new sort feature was added to assist users in sorting the interpretations. The “Sort by” and “Order” drop down box sorts the interpretations in order of the posting date to the website. There is “Asc” which sorts it in Ascending calendar time, (oldest to newest) and “Desc” sorts it in Descending calendar time, or newest to oldest. We hope this function allows users of this webpage to easily check on the date any particular interpretation was posted, or if anything new was posted since the last time you used it.

Code, Guidance, Appeals link:

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

FIGURE 1: NEW LOOK OF CODE INTERPRETATIONS LANDING PAGE

OSFM » Codes » Code Interpretations

[Code Interpretations](#) - [Appeals](#) - [Formal Interpretations](#) - [Guidance Papers](#)

Get notified of new code interpretations using RSS feeds



The screenshot shows a web interface for filtering and sorting code interpretations. It includes a breadcrumb trail, navigation links, and a notification link. The main content area features several filters: 'Code Type' (set to 'Energy Conservation'), 'Edition' (set to '2018'), and a 'Search' input field. Below these are 'Sort by' (set to 'Date Published') and 'Order' (set to 'Asc') dropdown menus. To the right of these dropdowns are 'Apply' and 'Reset' buttons. Green arrows point to the 'Sort by' and 'Order' dropdowns, with a red arrow pointing to the 'Get notified of new code interpretations using RSS feeds' link.

Interpretations

Administrative

No additional since July newsletter

Building

No additional since July 2022 newsletter

Fire Protection

No additional since July 2022 newsletter

Energy

No additional since July 2022 newsletter

Plumbing

No additional since July 2022 newsletter

Residential

No additional since July 2022 newsletter

Accessibility Interpretations

No additional since July 2022 newsletter

Electrical Interpretations

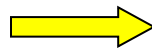
Presently, if you use the main Interpretations site, you need to click on "ALL" edition to view the Electrical interpretations on that site. However, if you go to the main Electrical Division site, there are interpretations for the NC Electrical Code, see following link:

[State Electrical Division | OSFM \(ncosfm.gov\)](https://ncosfm.gov)

State Electrical Division

The State Electrical Division is a department within Engineering's Risk Management Division of the Office of State Fire Marshal. The State Electrical Division works closely with the Codes Division and the Manufactured Building Division by providing the regulatory authority over all classes of electrical systems.

Overview



Codes

[Code Interpretations](#)

[Codes - Current and Past](#)

[Commercial Plan Review](#)

[Code Book Sales](#)

State Electrical Division

The link should take you to the above webpage, and you should be able to click on the Code Interpretations Link and see the following line items when you scroll down.

Code Type: Edition: Search: Sort by: Order:

Interpretation	Code Type	Edition	Published
Section 314.27(C) - Ceiling Boxes for Paddle Fans	Electrical	2020	01/03/2022
Section 210.11(C) - Required v. Non-Required Receptacles	Electrical	2020	01/03/2022

FIGURE 2: MAIN ELECTRICAL CODE INTERPRETATIONS SECTION**Electrical Interpretations**

No additional since July 2022 newsletter

Formal Interpretations and Appeals and Guidance Papers

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

Formal Interpretations

220706 Orange County Inspections Department 2018 NCRC AV105 Barrier Requirements
 220808 Randolph County Building Inspections 2018 NCBC Section 903.2.11.7 Woodworking operations and 903.2.11.8 Manufacture of upholstered furniture or mattresses
 220819 Buncombe County Permits & Inspections 2018 NCPC Section 306.2.4 Tracer wire and 2018 NCRC Section P2604.1.4 Tracer wire
 220824 Mecklenburg County Code Enforcement 2018 NCRC Section R302.2.4 Structural Independence and 2018 NCBC Section 1609.1 Applications
 220923 WC Construction Company LLC 2018 NCBC Section 1001.1 General and 1003.1 Applicability
 220928 Town of Chapel Hill Bldg and Dev Srvs 2018 NCACP 106.2.2 and 2018 NCFC Section 104
 220930 16 Pointe Properties 2018 NC Residential Code Section AM108.1 Post height and Table AM108.1 Deck Support Post Height
 220930 Town of Chapel Hill Bldg and Dev Srvs Commercial Kitchen Definition

Appeals

20220812 Harrison - Gates in Egress Stairway NCDOT Decision
 20221007 Davidson Co Schools - Door Locks for Exceptional Children Classrooms NCDOT Decision

Guidance Papers

SL 2022-46 Temporary Reduction in Duct Insulation Levels For Residential Buildings
 SL 2022-46 Temporary Reduction in Duct Insulation Levels For Commercial Buildings

Cumulative Supplements










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

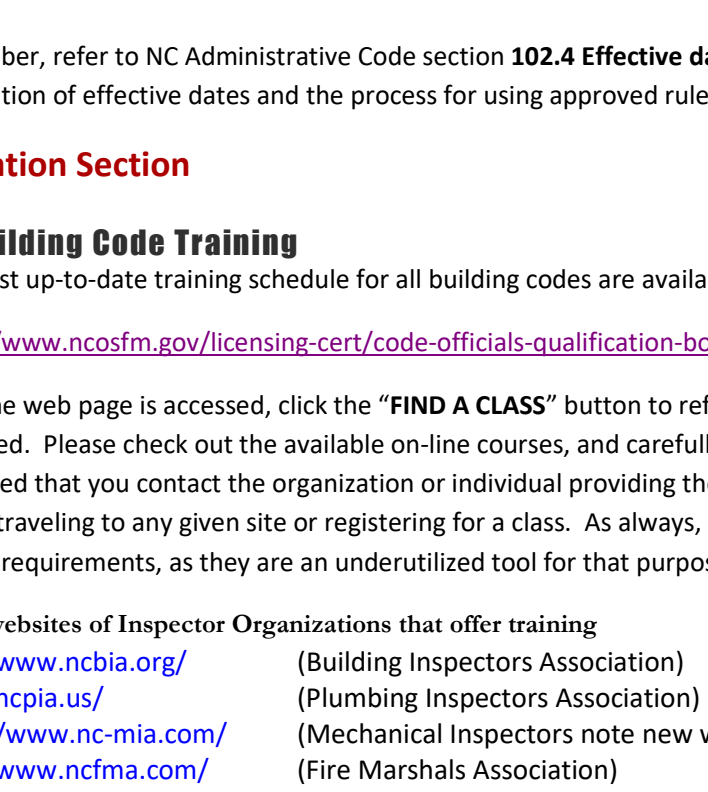
Cumulative code changes link:

<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 3: 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)

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:

[COQB - Meeting Dates | OSFM \(ncosfm.gov\)](#)

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 been meeting this year and are well into the process or even complete with the first pass. 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>