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ENGINEERING NEWSLETTER



NC Department of Insurance

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Web Interpretations Posted Since Last Newsletter

The following interpretations have been posted since the last Engineering Newsletter edition. You can find interpretations on the Engineering Website located at http://www.ncdoi.com/OSFM/Engineering/CodeServices/engineering_codeservices_interpretations_search3.asp

FYI: Section Numbers preceded by “R”, such as those listed below, indicate that they are from the Residential Code, not the Rehabilitation Code. For these, select “2009 Residential” from the drop down menu.

R313 Carbon Monoxide Alarms

R313.2.1 Smoke Alarms in Existing One and Two Family Dwellings and Townhouses

Heads Up!

This series of articles, starting in this edition of the newsletter, is intended to give a “Heads Up!” or reminder to building officials of code requirements that the Engineering Division has received calls about and has realized may be being overlooked in the field.

Fireblocking at Sole Plates

R602.8

Fireblocking is required in first floor sole plates above a crawl space. This includes penetrations of the sole plate. White caulk does not meet the requirements of 2009 NC Residential Code, Section R602.8.1 for those penetrations. Fire caulk is the typical product used for such penetrations, but it is not the only product. Products listed in the code, or labeled by an approved certified testing agency for fireblocking, or otherwise approved by ICC for fireblocking may be used to fireblock the penetrations.

Thermal Barriers for Floor Bands

R314.5.11

Current language of Section R314.5.11 allows a sill plate and header of a floor system to be sprayed with Spray Polyurethane Foam Insulation (SPFI) without a thermal barrier as long as:

1. Thickness of the SPFI does not exceed 3 ¼”.
2. Foam density is in the range of 1.5 to 2.0 pounds per cubic foot.
3. When tested in accordance with ASTM E 84, the flame spread of the SPFI is 25 or less and the smoke developed index is 450 or less. (Revision 2)

The word “header” is misleading. A sketch in the 2006 and the 2009 commentaries to the International Residential Code clarifies that the “header” is actually the floor band. Consequently, the intent of Section R314.5.11 is to allow the sill plate and the interior of the floor band to be sprayed with foam complying with the above requirements without a thermal barrier covering the foam on the sill plate and the band.

Does DOI “Approve” Products?

Recently, staff noticed that a manufacturer had language on their product website that said that DOI had “approved” their product which is simply not true.

DOI does not approve products and any language suggesting this is a misrepresentation of our role in code enforcement. One of our duties is to explain code concepts and, in some cases, explain how a construction technique does or does not comply with minimum code requirements.

We do keep a watch for manufacturers that use the department as part of their marketing, but we may not see them all. Please notify us if you see this occurring.

New White Papers Posted About Additions to Restaurants and Bars including Plastic and Fabric Enclosed Patio Enclosures

Over the past year, the Engineering Division has received many calls from building officials across the state with code questions about the covered and enclosed patios that restaurants and bars are constructing to economically increase the size of their businesses. The ES Section was asked to produce white papers to give the building officials a quick guide on code requirements that need to be considered when presented with these types of additions.

In order to evaluate what needed to be addressed in the documents, staff began paying special attention to this type of existing additions at restaurants and bars they patronize and quickly noted that not even one of those additions visited fully complied with minimum NC code requirements. In at least one case, not one thing about the addition complied with code.

Two white papers on this subject have been posted:

“Pliable Light Transmitting or Fabric Curtain System for Weather Protection at a Covered Outdoor Space”

and

“Code Considerations for Constructing a Covered Outdoor Space Adjacent to an Existing Restaurant, Bar or Nightclub”

You can locate those documents on our website at

http://www.ncdoi.com/OSFM/Engineering/engineering_wpt.asp

If you have any questions about these or other documents posted there, or if you have a need for a specific topic for future documents, please do not hesitate to contact us. Just call 919-280-3862 and ask to speak to someone in the Evaluation Services Section.

Upcoming Building Code Council Meetings

The next scheduled Building Code Council meetings will be held on June 13 and 14. Times and locations are as follows:

6/13/2011 NC Building Code Council Meeting -

10:00AM Work Session - 1:00PM Public Hearing -

NC Department of Insurance, 322 Chapanoke Road, Raleigh, NC 27603 - Classroom Downstairs

6/14/2011 NC Building Code Council Meeting -

9:00AM Council Meeting -

NC Department of Insurance, 322 Chapanoke Road, Raleigh, NC 27603 - Classroom Downstairs

Lessons Learned:

With this edition of the newsletter, we will begin a series of articles with suggestions about how to avoid complaints that have been made to the Qualifications Board Staff about NC Building Officials. The articles will not include names or locations. The purpose of these articles is to give building officials suggestions on how to handle particular situations so that they either

1. Will not have such a complaint lodged against them, or
2. Will be able to defend their actions if such a complaint is lodged against them.

Complaint: Footing not 12 inches below the frost line

The footing in two areas was measured to be approximately 8” below finished grade.

Investigator Finding:

NC Residential Code Section R403.1.4 Minimum Depth states:

“All exterior footings and foundations systems extend below the frost line specified in Table R301.2(1). In no case shall the bottom of the exterior footing be less than 12 inches below grade.”

The 2002 NC Administration and Enforcement Code, Section 306.1 Inspections, General states:

“As the work pursuant to a permit progresses, Code Enforcement Officials shall make as many inspections of the work as may be necessary to satisfy them that it is being done according to the provisions of the applicable State Statutes and local ordinances and of the terms of the permit. At a minimum, the following inspections shall be performed by the inspection department:

1. Footing inspection;
2. Under-slab inspection, as appropriate;
3. Foundation inspection, wood frame construction;
4. Rough-in inspection;
5. Building framing;
6. Insulation inspection;
7. Fire protection inspection; and
8. Final inspection.”

Findings: A slab/footing inspection involves the observation of the depth and width of the area in which the concrete is to be poured, placement of the rebar, wire mesh, vapor barrier and load bearing value and condition of the soil. After the footing inspection is passed, the subsequent inspection is the framing inspection. The footing has been backfilled at this time and it is assumed the slab or footing area has not been altered before the pour. A footing not below 12 inches below grade is a violation of the code but it cannot be demonstrated that the inspector knew of this violation.

Informal Staff Recommendation: Remember that the Code requires the CEO to make as many inspections as necessary to verify that a building is being constructed according to Code. It is suggested that building officials inspect the footing, foundation and brick ledge after the pour as well as before. The footing inspection could be given a “conditional” pass before the pour and a final pass after the pour. The second footing inspection could be conducted during the next scheduled inspection, provided that the contractor leaves a few spots without backfill. Although some violations could still be missed, this effort at least suggests that the CEO has made his or her best effort.

Email Address Request

The staff of the NC Code Official qualification Board is requesting your email address. We are currently updating our database and will have the opportunity to send communications regarding certification and renewals via email. Besides being quicker, this will enable us to communicate more frequently. We are pleased and excited to offer this additional customer service and are hopeful that you will find it useful.

Please take a moment not to visit our website at http://www.ncdoi.com/OSFM/Engineering/COQB/engineering_coqb_home.asp (Q-Board Homepage) and click on the green box in the upper right corner. You will be taken to a screen where you can enter a certificate number and your most useful email address. You only need to do this once, even if you have multiple certificates.

FREE CEU Classes on the NC Energy Code for Code Enforcement Officials

The NC Code Officials Qualification Board is in process of updating the inspector certification program to include the 2009 NC Energy Code in the core curriculum and testing. Beginning in 2012, the 2009 NC Energy Code will be included in the instructional curriculum and testing for inspector certifications. Consequently, it is important that current building, mechanical, electrical, and plumbing inspectors receive training on the 2009 NC Energy Code to ensure consistent enforcement of the code provisions.

For this purpose, free NC Energy Conservation Code training classes for Code Officials are now scheduled. Better yet, there should be a class sometime during the year within 60 miles of your office to keep travel costs low.

The classes are taught through a grant received by the NC Energy Office from the American Recovery and Reinvestment Act from the US Dept. of Energy. The classes will be taught by the Building and Fire Code Academy. They have worked with the NC Qualification Board staff to get the classes approved for CEUs and to ensure that the instruction is appropriate.

The classes are scheduled for two days at each location. The first day is Residential and the second day is Commercial. You may register for either day or both days in each location at the following link: <http://www.bfcacademy.com/catalog/index.php?cPath=145>

CEUs for Code Enforcement Officials will be awarded for attendance as follows:

Residential class: 5 hours Building
1hour Mechanical

Commercial class: 2 hours Building
2 hours Mechanical
1 hour Plumbing
1 hour Electrical

Free Energy Code Training for Designers and Contractors and Inspectors

The North Carolina State Energy Office is sponsoring Energy Conservation Code training targeted for designers and contractors that is funded by the American Recovery and Reinvestment Act through a contract with the US Department of Energy’s Pacific Northwest National Laboratory. Note that specific training only for inspectors is being provided by the Building & Fire Code Academy through funding appropriated by the American Recovery and Reinvestment Act for that purpose. However, the training by the Mathis Group is also appropriate and recommended for inspectors. The scope of the Mathis Group contract allows this training to be provided to designers, contractors, and inspectors.

The Mathis Group is providing free, one day NC Energy Code training classes across the state targeted to the needs of designers and contractors. The name of the class is “Why Buildings Matter” The class is free if you pre-register. There will be a charge for those who do not pre-register.

The class provides 6 hours of AIA CEUs.

The class is also recommended to code enforcement officials and has been approved for Q-Board CEUs as follows:

AREA(S)	CREDIT HOUR(S)
ELEC/CS1909	1 HOUR
BLDG/CS1910	2 HOURS
BLDG/CS1911	2 HOURS
MECH/CS1912	1 HOUR

To pre-register, go to:

<https://www.123signup.com/servlet/SignUpMember?PG=1534340182300&P=15343401911422654200&Info>

Upcoming Code Officials Qualification Board Meetings

The next Qualification Board meeting will be on June 7th, at 10:00 am. This will be brief meeting held by phone. Any member of the public who wishes to attend should come to the OSFM office at 322 Chapanoke Road in Raleigh.

The next regular Board meeting will be held at the OSFM office on July 26th at 1:00pm in the classroom.

Effective Dates for the 2012 Codes and 2011 NC Electrical Code

NC Code	Effective Date	Mandatory Effective Date**
2011 Electrical	TBD	TBD
2012 Building	9/1/2011	3/1/2012
2012 Fire	9/1/2011	3/1/2012
2012 Fuel Gas	9/1/2011	3/1/2012
2012 Mechanical	9/1/2011	3/1/2012
2012 Plumbing	9/1/2011	3/1/2012
2012 Administration	No Technical Changes	
2012 Energy Conservation	TBD	TBD
2012 Residential	TBD	TBD
2012 Rehab	TBD	TBD

** For Code Enforcement Official Certification testing purposes, exams will transition to the 2012 NC State Building Codes and 2011 National Electrical Code on the mandatory effective date for each trade.

New AccessUpdate Newsletter Posted

The Engineering Division produces an AccessUpdate newsletter about every other month that focuses on Accessibility code requirements and other relevant code information. The latest edition came out this month. To subscribe, go to:

www.ncdoi.com/OSFM/Engineering/CodeServices/engineering_codeservices_interpretations_accessibility.asp

Previous AccessUpdate newsletters can be found on the same webpage to bring you up to date with the earlier editions. If there are any topics you would like to see addressed in the newsletter, please send an email to Laurel.Wright@ncdoi.gov

Feedback

Your feedback is always welcome. If you have comments, questions or suggestions concerning the newsletter or how the Engineering Division can better serve you, please let us know.

You can forward your input by replying to the email you received that contained the link to this newsletter.