

May 10, 2004

Mr. Dan Tingen
Tingen Construction Company
8411 Garvey Drive/# 101
Raleigh, NC 27616

RE: Agenda for the June 8, 2004 Building Code Council Meeting

Dear Dan:

This is to officially notify you and other interested parties of a regularly scheduled meeting of the Building Code Council. The June Building Code Council meeting will be held at the NC Department of Insurance, OSFM building, located at 322 Chapanoke Road, Raleigh, NC 27603. Persons requiring auxiliary aids or service should notify the Council at least (10) working days prior to the meeting.

1. The Work Session will begin at 9:00 AM on Monday, June 7, 2004 and is open to the public on a non-contributing basis.
2. Committees will meet after the close of the Work Session.
3. The Public Hearing will begin at 1:00 PM on Monday, June 7, 2004. The Council will receive testimony at this time.
4. Committees will continue after the close of the Public Hearing.
5. The Building Code Council meeting will begin at 9:00 AM on Tuesday, June 8, 2004.
6. Appeals will be heard after the close of the Council meeting.

PART A - ADMINISTRATIVE ITEMS

The following Administrative items have been received since the last Council meeting. These items require Council action but are not subject to the Rule Making process.

ITEM A-1 - APPROVAL OF MINUTES OF THE MARCH 9, 2004 BUILDING CODE COUNCIL MEETING.

ITEM A-2 - REQUEST BY RON EDMONSON, DIRECTOR WITH VANCE COUNTY FOR AUTHORITY TO REVIEW PLANS AND SPECIFICATIONS FOR BUILDINGS AS LISTED IN TABLE 502 OF THE NORTH CAROLINA ADMINISTRATION AND ENFORCEMENT CODE.

ITEM A-3 - REQUEST BY GARY CORNELL, DIRECTOR OF BURKE COUNTY FOR AUTHORITY TO REVIEW PLANS AND SPECIFICATIONS FOR BUILDINGS AS LISTED IN TABLE 502 OF THE NORTH CAROLINA ADMINISTRATION AND ENFORCEMENT CODE.

ITEM A-4 - OTHER ADMINISTRATIVE ITEMS

PART B - NEW PETITIONS FOR RULEMAKING

The following Petitions for Rule Making have been received since the last Council meeting. The Council will vote to either 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 Rule Making process. The Council may send any Petition to the appropriate committee for review. The Public Hearing for Petitions granted will be held on December 13, 2004 and the Final Adoption meeting will take place on December 14, 2004.

ITEM B-1 - REQUEST BY STAFF TO ADOPT THE 2005 NEC, INCLUDING AMENDMENTS FROM THE 2002 NC ELECTRICAL CODE.

ITEM B-2 - OTHER PETITIONS:

PART C - NOTICE OF RULE MAKING PROCEEDINGS AND PUBLIC HEARING

The attached Petitions for Rule Making have been granted by the Council. Notice of Rule Making proceedings and Public Hearing has been made. The Public Hearing will be held on September 13, 2004 and the Final Adoption meeting will take place on September 14, 2004. No further action is required by the Council at this time.

PART D - PUBLIC HEARING AND FINAL ADOPTION

The following Petitions for Rule Making have been granted by the Council. Notice of Rule Making proceedings and Public Hearing has been made. The Public Hearing will be held on June 7, 2004 and the Final Adoption meeting will take place on June 8, 2004. The Council will give no further consideration to Petitions that are disapproved. Petitions that are approved will proceed through the Rule Making process.

D-1. MAKE GENERAL CLARIFICATIONS AND MODIFICATIONS TO THE ACCESSIBILITY CODE TO MAKE IT COMPLY WITH AMERICANS WITH DISABILITIES ACT REQUIREMENTS FOR APPROVAL BY THE US DEPARTMENT OF JUSTICE.

This code change is proposed to allow for certification of the NC Accessibility Code by USDOJ.

D-2. REVISE SECTION 305.2 OF THE NORTH CAROLINA FUEL GAS CODE AS FOLLOWS:

305.2 Elevation of ignition source. Equipment and appliances having an ignition source shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor in hazardous locations and public garages, private garages, repair garages, motor fuel-dispensing facilities and parking garages. For the purpose of this section, rooms or spaces that are not part of the living space of a dwelling unit and that communicate directly with a private garage through openings shall be considered to be part of the private garage.

Exception: Elevation of the ignition source is not required for appliances that are listed as flammable vapor resistant and for installation without elevation.

This code change is proposed to allow for new industry listings.

D-3. ADD A NEW SECTION 608 TO THE NORTH CAROLINA MECHANICAL CODE AS FOLLOWS:

SECTION 608
FABRIC AIR DISTRIBUTION DEVICE

608.1 General. Fabric air distribution devices are supply air distribution systems operating under positive pressure. Air distribution occurs through any combination of permeable fabric, linear perforated vents, linear mesh vents or orifices. The systems consist of circular, semi-circular or quarter circle sections ranging from 6 inches to 84 inches joined together with zippers. Fittings include elbows, transitions, reducers, saddle-T's, and end caps.

608.2 Material. The materials shall have a flame-spread index not exceeding 25 and a smoke-developed index not exceeding 50. Fabric shall meet the criteria as set forth in Section 4.0 of the ACCEPTANCE CRITERIA FOR FABRIC AIR DISPERSION SYSTEMS (AC167 dated July 2000) by ICBO Evaluation Service, Inc. Product must be listed by UL as "Distribution Devices, Air" and be tested by an ICBO Evaluation Service accredited independent testing laboratory (or other third party code evaluation service acceptable to NCDOD) that the material is in accordance with the ACCEPTANCE CRITERIA FOR FABRIC AIR DISPERSION SYSTEMS (AC167 dated July 2000).

608.3 Design. The fabric air dispersion system shall be designed in accordance with the manufacturer's design guide or design manual. The design shall be documented in such a way as to be verifiable by the AHJ if requested by that AHJ. Design criteria shall include, but not be limited to, fabric air distribution device sizing, length, and support system, vent or orifice location and sizing, and system supply flow rates. Maximum air temperature, velocity, pressure and fabric permeability shall be taken into consideration.

Exception: The fabric air dispersion system may be designed by a licensed design professional in lieu of the above.

608.4 LIMITATIONS:

608.4.1 The use of the fabric air dispersion system shall be those imposed by the evaluation report(s) for that manufacturer's product and by all North Carolina Mechanical Code requirements that may apply.

608.4.2 Product installation and supports shall comply with the manufacturer's installation instructions and the requirements of North Carolina Mechanical Code Chapter 6 and the approved evaluation report(s).

608.4.3 Product shall not pass through any fire-rated construction or penetration.

608.4.4 Product shall be used for positive pressure air distribution only. Negative pressure uses (i.e., return or exhaust air) are prohibited.

608.4.5 Product shall be used in exposed interior locations only, and cannot be concealed from view by building walls, partitions, floor/ceiling assemblies, or roof.

608.4.6 Clearance from combustibles shall be in accordance with the manufacturers installation instructions or North Carolina Mechanical Code Chapter 3, as applicable

608.4.7 Maximum positive pressure differential shall be limited to 3.1 inches of water column or the maximum positive pressure differential of that manufacturer's product, whichever is less.

608.4.8 Periodic cleaning and maintenance shall be in accordance with the manufacturer's recommendations. Mechanical duct cleaning means are prohibited.

608.4.9 Documentation shall be provided from the AHU manufacturer that using this product will not adversely affect the operation of the AHU.

608.4.10 Fabric air dispersion systems shall meet the requirements of North Carolina Mechanical Code paragraph 309.1.

This code change is proposed to allow for fabric air distribution devices.

D-4. ADD A NEW SECTION 603.1.1 TO THE NORTH CAROLINA MECHANICAL CODE AS FOLLOWS:

603.1.1 Nothing in this section shall be deemed to preclude the use, within a conditioned space, of a duct system that combines the functions of air transport and air diffusion provided that the materials used in the said duct system have a fire spread/smoke developed rating not greater than 25/50.

This code change is proposed to allow for fabric air distribution devices.

D-5. REVISE SECTION R307.2.2 OF THE NORTH CAROLINA MECHANICAL CODE AS FOLLOWS:

307.2.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, polybutylene, polyethylene, ABS, CPVC or PVC pipe or tubing. All components shall be selected for the pressure and temperature rating of the installation. Condensate waste and drain line sizes shall not be less than ¾-inch (19 mm) internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal, except that condensate drain lines in attics and under-floor spaces of one- and two-family dwellings shall be at least 1 inch inside diameter. Where the drain pipes from more than one unit are manifolded together . . .

This code change is proposed to improve condensate drainage flow.

D-6. ADD DEFINITIONS TO SECTION R202 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

“Dampproofing. A coating or the application of coatings applied that is intended to prevent the penetration of water vapor and moisture through or into walls or into interior spaces”.

“Waterproofing. A coating or application of coatings applied that is intended to prevent the penetration of water under hydrostatic pressure through or into walls or into interior spaces”.

This code change is proposed for clarification.

D-7. REVISE SECTION R311.4 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

R311.4 Hallways and Interior Doors. The minimum width of a hallway shall not be less than 3 feet (914 mm). All doors from habitable rooms shall be a minimum nominal 2’-6” x 6’-8”.

This code change is proposed to set a minimum for doors in a means of egress.

D-8. ADD TO TABLE 602.3. (1) OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

TABLE 602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

| <u>DESCRIPTION OF BUILDING ELEMENTS</u> | <u>NUMBERS AND TYPE OF FASTENERS</u> | <u>SPACING OF FASTENERS</u> |
|---|---|--|
| <u>Ledger Strip</u> | <u>3-16d common 4 - 3” x 0.131” nail 4 - 3” 14 gage staple</u> | <u>Face nail at 2” on center under each joist</u> |

This code change is proposed to provide prescriptive nailing requirements for ledger strips.

D-9. REVISE SECTION R613.1 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

General. This section prescribes performance and construction requirements for exterior window systems installed in wall systems. Waterproofing, sealing and flashing systems are not included in the scope of this section. See section 703.8 for flashing requirements.

This code change is proposed for cross reference.

D-10. REVISE SECTION R614.1 IN THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

R614.1 Side Hinge and Garage Doors. Exterior side hinge doors and garage doors shall have a structural design pressure rating as required by ~~Table 301.2(4)~~ Table 301.2(5) or Section 4402. These doors are not required to be rated for water resistance nor air infiltration.

This code change is proposed for cross reference.

D-11. ADD THE FOLLOWING TO SECTION R 602.10.5 AND FIGURE R602.10.5 (2) OF THE NORTH CAROLINA RESIDENTIAL CODE:

R602.10.5 Continuous structural panel sheathing.
(Add the following after the first paragraph.)

Exception: Vertical wall segments in one story or first story of two story buildings next to garage openings shall be permitted to have a 6:1 height-to-width ratio (with height being measured from top of header to sill plate) when constructed in accordance with the following provisions. Each panel shall have a length of not less than 16 inches (406 mm) and a height of not more than 10 feet (3048 mm). Each panel shall be sheathed on one face with a single layer of 3/8-inch-minimum-thickness (9.5 mm) wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Figure R602.10.5 (2). The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure R602.10.5 (2). The header shall extend between the inside faces of the first full-length outer studs of each panel. The clear span of the header between the inner studs of each panel shall be not less than six feet (1829 mm) and not more than 18 feet (5486 mm) in length. A strap with an uplift capacity of not less than 1000 pounds (454 kg) shall fasten the header to the side of the inner studs opposite the sheathing. Two anchor bolts shall be installed in accordance with Section R403.1.6, and plate washers shall be a minimum of 2 inches by 2 inches by 3/16 inch (51 mm by 51 mm by 4.8 mm) thick and shall be used on each bolt. This exception is only permitted in Seismic Design Categories A-C.

(Diagram will be included in final action.)

This code change is proposed to allow for alternate braced wall construction.

D-12. ADD NEW SECTIONS REGARDING CLOSED CRAWL SPACES IN THE NORTH CAROLINA RESIDENTIAL CODE.

This code change is proposed to allow for alternate systems of crawl spaces without natural ventilation.

D-13. REVISE TABLE R703.4 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

**Table R703.4
Weather-Resistant Siding Attachment and Minimum Thickness**

| Siding Material | Nominal thickness ^a (inches) | Joint treatment | Sheathing Paper Required | Type of supports for the Siding Material & Fasteners |
|-------------------------|---|-----------------|--------------------------|--|
| Brick Veneer | 2 | Section R703 | Yes | See section R703 and Figure R703.7 ^h |
| Concrete Masonry veneer | 2 | | (m) | |

Delete footnote m: ~~for masonry veneer, a weather-resistant membrane or building paper is not required over water-repellent sheathing materials when a 1-inch air space is provided between the veneer and the sheathing. When the 1-inch space is filled with mortar, a weather-resistant membrane or building paper is required over studs or sheathing.~~

This code change is proposed to improve brick veneer drainage.

D-14. REVISE SECTION R703.8 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

R 708.3 Flashing. Approved corrosion-resistive flashing shall be provided in the exterior wall envelope in such a manner as to prevent the entry of water into the wall cavity or penetration of water to the building structural framing components. Install flashing per ASTM E 2112 *Standard Practice for Installation of Exterior Windows, Doors and Skylights*, or in accordance with manufacturer’s instructions. Aluminum flashing may not be used in contact with cementitious material, except at counter flashing. The flashing shall extend to the surface . . .
(Include a reference to the standard in Chapter 43 – References.)

This code change is proposed for cross reference.

D-15. REVISE SECTION R703.7.4.2 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

R703.7.4.2 Air Space. The veneer shall be separated from the sheathing by an air space of a minimum of nominal 1 inch (25.4 mm) air space but not more than 4.5 inches (114 mm). ~~The weather-resistant membrane or asphalt-saturated felt required by Section R703.2 is not required over water-repellent sheathing materials.~~

This code change is proposed to improve brick veneer drainage.

D-16. REVISE SECTION R903.3 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

R903.3 Coping. Parapet walls shall be properly coped with noncombustible, weatherproof materials of a width no less than the thickness of the parapet wall. Parapet coping shall extend 2 inches minimum down the faces of the parapet.

This code change is proposed to improve veneer flashing.

D-17. REVISE SECTION R905.2.8.3 OF THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

R905.2.8.3 Crickets and saddles. A cricket or saddle shall be installed on the ridge side of any chimney greater than 30 inches (762 mm) wide. Cricket or saddle covering shall be sheet metal or of the same material as

the roof covering. Provide flashing at the intersection of the cricket or saddle and the chimney. See Section 703.8.

This code change is proposed for cross reference.

D-18. REVISE TABLE 4402(b) IN THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

TABLE 4402(b)
DESIGN PRESSURES IN PSF FOR GARAGE DOORS ^{1,2,3,4,5,6}
POSITIVE AND NEGATIVE IN PSF

9x7 Doors

| Velocity (mph) | Mean Roof Height (ft) | | |
|-----------------------|------------------------------|------------------------|------------------------|
| | 15 | 25 | 35 |
| <u>110</u> | <u>20 + 19.1 -21.6</u> | <u>23 + 19.1 -21.6</u> | <u>26 + 20.0 -22.6</u> |
| <u>120</u> | <u>25 + 22.8 -25.8</u> | <u>29 + 22.8 -25.8</u> | <u>32 + 23.8 -26.9</u> |
| <u>130</u> | <u>30 + 26.7 -30.2</u> | <u>35 + 26.7 -30.2</u> | <u>39 + 27.9 -31.5</u> |

16x7 Doors

| Velocity (mph) | Mean Roof Height (ft) | | |
|-----------------------|------------------------------|---------------------|---------------------|
| | 15 | 25 | 35 |
| <u>110</u> | <u>+ 18.3 -20.4</u> | <u>+ 18.3 -20.4</u> | <u>+ 19.1 -21.3</u> |
| <u>120</u> | <u>+ 21.8 -24.3</u> | <u>+ 21.8 -24.3</u> | <u>+ 22.8 -25.4</u> |
| <u>130</u> | <u>+ 25.6 -28.5</u> | <u>+ 25.6 -28.5</u> | <u>+ 26.7 -29.8</u> |

- The pressures in this table are for garage doors at least 9 ft x 7 ft and at least 2 ft from a corner.
- Alternate design pressures may be determined by using the North Carolina State Building Code General Construction, ASCE 7-98 or the 2000 International Building Code.
- For doors in a structure with a roof slope of 10 degrees (2:12) or less from the horizontal the pressures from this table may be multiplied by ~~0.90~~ 0.92.
- Design pressure ratings based on tests done according to ASTM E330 or ANSI/DASMA 108 are adequate documentation.
- Garage doors on the ground level of a structure in a flood zone do not have to meet the above design pressures provided all of the following conditions are met:
 - Structure is anchored to the girders and top of the piling to resist the forces given in Chapter 44. The garage door occurs below the top of the piling.
 - Provide openings at the garage level that comply with either of the following options:
 - Design all exterior walls at the garage level to break away at 20 psf or less or:
 - Provide openings (in walls at the garage level without the garage door) equal to at least 20% of the total wall area from the ground to the roof.
- Design pressures are based on Exposure B condition.
 - For 15' mean roof height, multiply by 1.21 for Exposure C values and by 1.47 to get Exposure D values
 - For 25' mean roof height, multiply 1.34 for Exposure C values and by 1.60 to get Exposure D values
 - For 35' mean roof height, multiply 1.38 for Exposure C values and by 1.63 to get Exposure D values

This code change is proposed to allow for lower design pressures based on exposure.

D-19. ADD A NEW TABLE 301.2(5) IN THE NORTH CAROLINA RESIDENTIAL CODE AS FOLLOWS:

TABLE 301.2(5)
DESIGN PRESSURES FOR GARAGE DOORS ^{1,2,3,4,5,6}
POSITIVE AND NEGATIVE IN PSF

9x7 Doors

| Velocity (mph) | Mean Roof Height (ft) | | |
|----------------|-----------------------|--------------|--------------|
| | 15 | 25 | 35 |
| 90 | + 12.8 -14.5 | + 12.8 -14.5 | + 13.4 -15.1 |
| 100 | + 15.8 -17.9 | + 15.8 -17.9 | + 16.5 -18.7 |

16x7 Doors

| Velocity (mph) | Mean Roof Height (ft) | | |
|----------------|-----------------------|--------------|--------------|
| | 15 | 25 | 35 |
| 90 | + 12.3 -13.7 | + 12.3 -13.7 | + 12.8 -14.3 |
| 100 | + 15.2 -16.9 | + 15.2 -16.9 | + 15.8 -17.6 |

1. The pressures in this table are for garage doors at least 2 ft from a corner.
2. Alternate design pressures may be determined by using the North Carolina State Building Code General Construction, ASCE 7-98 or the 2000 International Building Code.
3. For doors in a structure with a roof slope of 10 degrees (2:12) or less from the horizontal pressures from this table may be multiplied by 0.92.
4. Design pressure ratings based on tests done according to ASTM E330 or ANSI/DASMA 108 are adequate documentation.
5. Garage doors on the ground level of a structure in a flood zone do not have to meet the above design pressures provided all of the following conditions are met:
 - a. Structure is anchored to the girders and top of the piling to resist the forces given in Chapter 44.
 - b. The garage door occurs below the top of the piling.
 - c. Provide openings at the garage level that comply with either of the following options: 1. Design all exterior walls at the garage level to break away at 20 psf or less or;
2. Provide openings (in walls at the garage level without the garage door) equal to at least 20% of the total wall area from the ground to the roof.
6. Design pressures are based on Exposure B condition.
 - a. For 15' mean roof height, multiply by 1.21 for Exposure C values and by 1.47 to get Exposure D values
 - b. For 25' mean roof height, multiply by 1.34 for Exposure C values and by 1.60 to get Exposure D values
 - c. For 35' mean roof height, multiply by 1.38 for Exposure C values and by 1.63 to get Exposure D values

This code change is proposed to allow for lower design pressures based on exposure.

D-20. INCLUDE REFERENCE TO THE DASMA GARAGE DOOR WIND LOAD GUIDE IN THE NORTH CAROLINA RESIDENTIAL CODE:

This code change is proposed for cross reference.

PART E - REPORTS

BUILDING CODE COUNCIL STANDING COMMITTEE REPORTS

ITEM E-1 - ADMINISTRATION COMMITTEE

AD HOC AND COMMENTARY COMMITTEE REPORTS

ITEM E-2 - INTERNATIONAL EXISTING BUILDING COMMITTEE

STAFF REPORTS

OTHER REPORTS

PART F - APPEALS

The following Appeals have been scheduled since the last Council meeting. These Appeals require Council hearing and action but are not subject to the Rule Making process.

ITEM F-1 - SUPERIOR WALLS VS. DAVIDSON COUNTY

ITEM F-2 - TODAY HOMES OF NC VS. NC DEPARTMENT OF INSURANCE

ITEM F-3 - OTHER APPEALS

Sincerely,

Barry Gupton, PE
Secretary