

## New York State Energy Code Technical Subcommittee

October 12, 2012

### Meeting Minutes

Member in Attendance:

- Ian Graham (NYC)
- Don Winston (NYC)
- Mark Schwarz (NYC)
- Marshall Kaminer (NYC)
- Scott Copp
- Mike DeWein
- John Ferraro
- Todd Stewart
- Daniel Farrell
- Mike Burke
- Mike Burnetter, DOS
- Joseph Hill, Chair, DOS

The meeting convened at approximately 9:37 am. Chair Joseph Hill noted that a quorum of members were present. Joseph Hill stated that the majority of today's meeting would focus on residential provisions of the code, but some items of business from 10/11 commercial code session needed to be addressed first.

A motion was made by Ian Graham to move **Automatic Receptacle Control Section 8.4.2 of ASHRAE 90.1-2010** in its entirety from the mandatory provisions, to prescriptive provisions, creating Section 8.5.2 This language would *also* be added where appropriate in **Section 11.3.1, Section 12, and Appendix G**.

A show of hands was requested by the Chair; the record reflects that all members voted in favor

Motion was made to move **ASHRAE 90.1-2010 Section 9.4.1.4 Automatic Daylighting Controls for Primary Sidelighted Areas** Energy modeling from the mandatory sections to prescriptive provisions of daylighting controls Section 9.5 and 9.6 such that energy modeling requirement would reflect this change.

A show of hands was requested by the Chair; the record reflects that all members voted in favor

Motion was made to replace the fenestration Table **C402.3 Building Envelope Requirements: Fenestration** with **ASHRAE 90.1-2010 Tables 5.5 – 4, 5, 6** by climate zone and fenestration frame type.

A show of hands was requested by the Chair; the record reflects that all members voted in favor

Joseph Hill then directed the group to consider a series of proposed changes to the Chapter 4, Residential Energy Code.

NYSERDA, has submitted a spreadsheet of clarification compliance path methodologies for the ECCCNY. After discussion of some clarifications to language proposed by NYSERDA, a motion was made to direct DOS to determine how to incorporate if appropriate, definitions of “performance” versus “prescriptive” (approach to code compliance). The motion was seconded, and vote was taken with a majority of members supporting.

Joseph Hill asked the group to consider revising language in to specifically prohibit Class I Vapor Retarders in Climate Design Zone 4. Joseph Hill stated that the proposed provision would give code enforcement officials better language to prohibit Class I Vapor barriers in Climate Zone 4 where they are still seeing poly vapor retarders installed where the climate conditions do not warrant it, and where the installation of Class I present potential long term problems. Two additional footnotes are proposed as part of these revisions:

**~~§ER402.5.6~~ Vapor retarders. (Mandatory).** Class I or II vapor retarders are required on the interior side of frame walls in Zones 5 and 6 for all above grade framed walls, and floors and ceilings where the framed cavity is not ventilated to allow moisture to escape.

**Exceptions:**

1. *Basement walls.*
2. Below-grade portion of any wall.
3. Construction where moisture or its freezing will not damage the materials.
4. Air Impermeable insulation meeting **Section 402.2.1.1 unvented attic assemblies**, condition #4, which requires air impermeable insulation to be a Class III vapor retarder.

Class I Vapor retarders (perm rating) are prohibited in Climate Design Zone #4, unless and if the design professional can demonstrate that a Class I Vapor retarder is warranted by high humidity conditions.

**402.56 .1 Class III vapor retarders.** Class III vapor retarders shall be permitted in lieu of Class I or II vapor retarders where the conditions in Table E402.56.1 are met.

**TABLE E402.5 6.1  
CLASS III VAPOR RETARDERS <sup>1</sup>**

**ZONE CLASS III VAPOR RETARDERS PERMITTED FOR:**

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<sup>1</sup> Spray foam with a minimum density of 2 lbs/ft<sup>3</sup> (2.98 kg/m) applied to the interior cavity side of OSB, plywood, fiberboard, insulating sheathing or gypsum is deemed to meet the insulating sheathing requirement where the spray foam R-value meets or exceeds the specified insulating sheathing R-value.

5	Vented cladding over OSB
	Vented cladding over Plywood
	Vented cladding over Fiberboard
	Vented cladding over Gypsum
	Insulated sheathing with $R$ -value $\geq 5$ over 2x4 wall <sup>2</sup>
	Insulated sheathing with $R$ -value $\geq 7.5$ over 2x6 wall <sup>2</sup>
6	Vented cladding over Fiberboard
	Vented cladding over Gypsum
	Insulated sheathing with $R$ -value $\geq 7.5$ over 2x4 wall <sup>2</sup>
	Insulated sheathing with $R$ -value $\geq 11.25$ over 2x6 wall <sup>2</sup>

A motion was then made to vote on the language amended as shown above, and was seconded; the record will show that the vote was unanimous.

Joseph Hill then moved the discussion to the proposed blower door testing requirements. Joseph asked the members to state what their general feeling was about the proposed blower door testing/envelope air leakage requirement.

- Mike DeWein – Is supportive of requiring testing not to exceed 5 ACH 50. Will go with the majority.
- John Ferraro – Would like to see blower door testing. Would suggest allowing builders to do blower door testing, rather than requiring third party tester.
- Mike Burnetter – Stated if blower door testing is required the tester should be the same person as the person doing the visual inspection.
- Daniel Farrell – Stated that because IECC 2012 include mandatory blower door testing at 3 ACH 50 it would be untenable for NY State to do something significantly less rigorous.
- Mike Burke – Supports blower door testing; Suggests not making builders do both mandatory third-party inspection and blower door testing.
- Joseph Hill – Stated that visual inspections are, in general not being done for insulation and air-sealing. various issues around enforcement, including that CEO's aren't called for open-wall inspections, lack of resources at the local level. He believes that performance testing is going to be widely accepted as a means of code compliance going forward, and that backing away from testing will not likely be supported by the Building Codes Council. Efficiency advocates will be asking why NY has backed away from mandatory testing, as this is where significant gains in savings can be made.

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<sup>2</sup> Where Class III Vapor retarders are utilized, the R value of the insulated sheathing shown in this table will override the R value of the insulated sheathing required for Wood Framed wall R values shown by Table R402.1.1

3 where insulated sheathing with R-values equivalent to those shown in Table R 406 is installed, class I vapor retarders shall not be installed on winter warm side of above grade exterior walls.

A proposal was made to remove the last sentence from **Section 402.4.2.2 Visual Inspection option**. The following sentence would be struck: ~~Where required by the code enforcement official, an approved third party independent of the installer of the insulation shall inspect the air barrier and insulation.~~ shall inspect all components and verify compliance for additions, alternations. The Chair requested a show of hands; the record shows that there were 7 votes in favor; 1 abstention

A motion was made to amend **Section 401.4.1.2** after item 7, to add the following **Exception: Testing shall not be required for any and all building additions, alterations, or renovations.** The Chair requested a show of hands; the record shows that there were 9 votes in favor.

**R402.4.2.1 Testing.** The language below was proposed in various configurations by Mike DeWein, Mike Burke, and NYSERDA. This language was proposed to the group for consideration (this will be substituted for the existing language in Section 402.4.2.1):

For detached one- and two-family dwellings or townhouses, not more than three stories above grade in height, each dwelling unit shall be tested and verified as having an air leakage rate not exceeding 5 air changes per hour in Climate Zones 4 through 6. Testing shall be conducted with a blower door at a pressure of .2 inches w.g. (50 Pascals). Testing shall be conducted in accordance with ASHRAE/ASTM E779.

For other Residential groups (R1, R2, R3, R4), each dwelling unit shall be tested and verified as having an air leakage rate not exceeding 0.3 CFM<sub>50</sub> per square foot of enclosure surface area in Climate Zones 4 through 6. Testing shall be conducted with a blower door at a pressure of .2 inches w.g (50 Pascals). Testing shall be conducted in accordance with ASHRAE/ASTM E779.

Required tests shall be performed by an approved party. A written report of the results of the test shall be signed by the party performing the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

Motion was made and seconded. A show of hands was requested by the Chair. The record shows that 7 members voted yes, and one member abstained.

A motion made by Todd Stewart to add the following language to the language just added to **Section R402.4.2.1 Testing**, and the motion was seconded:

**Exception:** Testing is not required if the code enforcement official or an approved third party has visually inspected the building envelope tightness and insulation items as listed table 402.4.1.1, *Air Barrier and Insulation Installation* and can verify, by written report, that all items in the table have been properly installed to verify compliance.

A show of hands on the motion was requested by the Chair. The record shows that one member voted in favor; 8 opposed.

Todd Stewart proposed the following language for Section **R403.2.3 Building Cavities**. Building framing cavities shall not be used as supply ducts or plenums. Any building cavity *located entirely within the interior of the building thermal envelope* may be used as a return air plenum and shall be sealed in accordance with R403.2.2.

A show of hands on the motion was requested by the Chair. The record shows that 8 members voted in favor; 1 opposed.

Mike Burnetter proposed the following amendment to Section **R403.2.1 Insulation**:

- Re-label Exception to Exception 1; and add
- Exception 2 to read as follows: Any duct located in an exterior wall shall be sealed and insulated with a minimum of R-5 rigid or spray foam insulation installed between the duct and the exterior sheathing and at each side of the stud cavity.

A motion was made and seconded to vote on this proposed change. A show of hands on the motion was requested by the Chair. The record shows that 7 members votes in favor; 2 members were opposed.

A motion was made to add the following language amended as shown below:

**R402.6 Combustion, Ventilation, Dilution Air.** Air for combustion, ventilation, and dilution of flue gases for gas fired appliances installed in buildings shall be provided by application of one of the methods prescribed in Sections G2407.5 through G2470.9 12 of the ~~New York State Fuel Gas Code, 2010~~. Residential Code of New York State , or where dictated by building occupancy classification, Sections 304.1 through and including **304.12** the Fuel Gas Code of New York State. Solid fuel burning appliances and Oil fired appliances shall be provided in accordance with combustion air in accordance with Chapter 17 of the Residential Code of New York State, or where dictated by building occupancy classification, Chapter 7 of the Mechanical Code of New York State.

A show of hands on the motion was requested by the Chair. The record will show that 9 members voted in favor.

Joseph Hill provided the follow proposed amendment to **Section 403.5 Mechanical ventilation**, utilizing language from the Residential or Mechanical codes:

**Chapter ~~3~~ 4, Section ~~R302~~ R403.5 , Mechanical Ventilation-Design Conditions**

**~~R303.4~~ R 302.2 403.5.2 Mechanical ventilation.**

The dwelling unit shall be provided with whole-house mechanical ventilation in accordance with either Section M1507.3 of the Residential Code of New York State, Section 403 of the Mechanical Code of New York State, as applicable.

~~M1503.3~~ R 403.5.3 Kitchen and Bathroom exhaust rates.

Minimum required exhaust rates for kitchens and bathrooms shall be sized in accordance with Section M1507.4. of the Residential Code of New York State. Exhaust systems capable of exhausting in excess of 400 cubic feet per minute shall be provided with makeup air at a rate approximately equal to the exhaust air rate and shall comply with Section M1503.4 of the Residential Code of New York State, or Sections 403 and 505 of the Mechanical Code of New York State, as applicable.

**R 403.5.4 Fireplaces**

Factory-built or masonry fireplaces shall be equipped with an exterior air supply to assure proper fuel combustion unless the room is mechanically ventilated and controlled so that the indoor pressure is neutral or positive, in accordance with Section R1006.1 of the Residential Code of New York State, or the requirements of the Mechanical Code of New York State.

A show of hands on the motion was requested by the Chair. The record will show that 9 members voted in favor.

At 4:45pm, the Chairman indicated that all items which have been brought forth for discussion had been heard and resolved, concluding the activities of the Subcommittee's action on the IECC 2012 and ASHRAE 90.-2010. Mr. Hill thanked the Subcommittee members for their service, and made a motion for a final adjournment.