



~~Deval L. Patrick~~
-Governor

The Commonwealth of Massachusetts

Department of Public Safety

One Ashburton Place, Room 1301
Boston, Massachusetts 02108-1618

Phone (617) 727-3200

Fax (617) 727-5732

TTY (617) 727-0019

www.mass.gov/dps

Andrea J. Cabral
Secretary

Thomas G. Gatzunis, P.E.
Commissioner

~~DRAFT~~ Minutes

Board of Building Regulations and Standards

Fire Prevention Fire Protection (FPFP) Advisory Committee

RJA, Inc. - 1661 Worcester Road – Suite 501, Framingham, MA - Conference Room

February 24, ~~2014~~, 9:00 a.m.

2015

1. Roll Call - Call to Order 9:12 am
 - 1.1. Robert Carasitti Chair (RC) present absent
 - 1.2. Dave LeBlanc V-Chair (DL) present absent
 - 1.3. Walter Adams (WA) present absent
 - 1.4. Don Contois (DC) present absent
 - 1.5. Harold Cutler (HC) present absent
 - 1.6. Rob Anderson (RA or designee) present absent Mike Guigli for RA (MG)
 - 1.7. Chief Gary McCarraher (GM) present absent
 - 1.8. Boston Fire Commissioner present absent
 - 1.9. State Fire Marshal (or designee) present absent Jen Hoyt for the SFM (JH)
 - 1.10. Kurt Ruchala (KR) present absent
 - 1.11. Louise Vera (LV) or Alternate present absent

The chair noted that with 7 members present a quorum was achieved.

General note on format: votes are noted as (Motion by: XX, Second by: XX, Vote: In Favor-Opposed- Abstaining).

2. Review and approval of November 10 meeting minutes:

One typographical error was noted for correction in the 11/10/14 minutes. A motion was made by JH to accept the 11/10/14 minutes as amended. KR seconded.

Motion: JH 2nd: KR Vote: 7-0-0

Review of November 25 meeting minutes:

MG identified that a listing of exhibits used in the meetings needs to be included. Sufficient detail in terms of dates/versions of documents should be clearly identified. The chair indicated that the exhibits from 11/25 could be constructed and included in the draft 11/25 minutes. Since this represents a significant change and it may take some time, the chair tabled acceptance of the 11/25 minutes until the list could be created and reviewed by the members.

3. Review of MA Unique 1016.1.1 Exit Travel Distance Increase for F-1 and S Uses (WA)

This item was tabled as WA was unable to attend the meeting. The chair gave a synopsis of the issue and that WA wants to share his research with the committee.

4. Procedural Matters

The chair explained that due involvement of the company in development of code provisions at the national level involving the exterior wall testing provisions, he was recusing himself from the next discussion. Likewise DL was recusing from the discussion. The chair then asked for a volunteer to serve as chair for the issue. KR volunteered and hearing no objections from others, the chair was turned over to KR.

5. Code change proposals for exterior walls (Public comment and discussion): Follow-up to October 9, 2014 efforts.

The FPPF continued its discussion on code change proposals for exterior walls. A total of four code change proposals were submitted for review and comment. Some are proposed to the current 8th edition and others are identified for the 9th edition. The FPPF had discussed the proposals during previous meetings (the most recent being October 9, 2014).

Due to conflicts, BC and DL recused themselves from discussion by leaving the room. KR acted as chair for the purpose of addressing agenda item #5.

KR reviewed the past actions and discussions of FPPF by reviewing the minutes from October 9, 2014.

Due to an accepted motion from the October 9, 2014 meeting, the 8th edition proposals were not discussed further and the FPPF focused discussion on the proposals to the 9th edition.

- a. The FPPF discussed the specific proposal for 1403.5 Part 1 and reiterated the discussion from October 9, 2014. Motion was made to maintain the position noted in the October 9, 2014 minutes.

The FPPF did not object to the proposal but noted it does not follow the BBRS criteria of the Model 15 effort.

Motion: DC so moved 2nd: HC Vote: 6-0-0

- b. The FPPF discussed the specific proposal for 1403.5 Part 2 and the minutes from October 9, 2014 were reviewed by the committee. The proponents discussed a new development in the 2015 IBC that requires water-barrier membranes to be tested and questioned the applicability of the NFPA 285 test for the exterior wall systems. FPPF members explained that the NFPA 285 test is modeled after a situation of flashover within a building, breaking out the window to the exterior but that the test measures the flame spread along the exterior of the building as a criteria. The fires in MA concerning fire spread along the exterior of the building were discussed in generalities as an example of the need for testing and criteria for exterior walls. Also, limited accessibility for the fire department via ladder trucks was discussed as a major factor in the need for exterior wall requirements, specifically the NFPA 285 test.

The proponents provided the perspective that combustible, wood-framed buildings have limited test requirements for exterior walls; however, non-combustible construction types are subject to the exterior wall test criteria. A discussion ensued regarding height and area limitations set on buildings based on the construction type of the structure. If the buildings are provided with a sprinkler system, the area of the buildings can be substantially increased. Where large buildings with combustible exteriors are constructed, issues are often created when considering fire department access to the fire. Fire departments must expend time and effort to strip cladding from the exterior of the building, or alternatively to break through to the exterior wall from the interior of the building to access a fire within the exterior wall.

FPPF suggested a reduced air space within the exterior wall construction may reduce the oxygen available to fuel a fire in an exterior wall. It was noted that the proposed 2603 exception has provisions for limited air space within the exterior wall assembly.

FPPF raised concerns that the installation of a NFPA 13R sprinkler system would not suffice to control a fire traveling through combustible concealed spaces. A suggestion was made to amend the proposal to define the sprinkler system exception as only for buildings with an NFPA 13 sprinkler system. As discussed on October 9, 2014, a suggestion was made to include a fire flow analysis with the sprinkler exception. Another suggestion was to include draft stopping at every floor or every 20 ft. Based on the language of the proposal to 2603 and the connection to the suggestions for 1403.5, discussion on 1403.5 Part 2 was tabled.

- c. The FPPF discussed the specific proposal for 2603.5.5 to the 9th edition (2015 IBC). It was noted that the proposed exception #3 is the language included in the base 2015 code. Discussion ensued regarding the covering of the plastic insulation on both sides by masonry or concrete vs. covering on one side. The question was raised about the basis for this proposed change and why MA should choose to lessen requirements from the national standard of the 2015 IBC.

The difference between fire stopping and draft stopping was discussed. Draft stopping methods were determined to be ineffective against the transfer of heat. Chapter 7 of the 2015 IBC provided 7 types of materials that could be used for firestopping, two of which may be acceptable for application in an exterior wall assembly.

FPPF stopped for a break at 10:50am and returned from the break at 11:02am

The proponents suggested amending the proposed 2306.5.5.3 with a reference to the approved firestopping materials as listed in Chapter 7.

Discussion continued regarding 2603.5.5.3.1. The location of firestopping was discussed and an audience member suggested FPPF consider that EFIS exterior wall systems are plastic insulation wrapped with a non-combustible membrane, and that the need for a NFPA 285 test was a result of the use of these EFIS systems. The issue was raised that if the firestopping option is approved by FPPF, the EFIS systems would not be in compliance. FPPF countered that there is a proposed compliance option to use NFPA 285 testing (proposed 2603.5.5.1) without imposing firestopping requirements of 2603.5.5.3.1.

FPPF discussed the proposed 2603.5.5 and noted that the exception #2 ties to the previous discussion on 1403.5. It was summarized that FPPF had discussed 2603.5.5.1 and determined that there was no issue with the proposed language, discussed 2603.5.5.3 and determined that the firestopping materials should reference Chapter 7, and that further discussion was needed for 2603.5.5.2.

It was suggested that the proposed 2603.5.5.2 was not needed since the language in exception #3 to 2603.5.5 was similar. The proponents suggested that gypsum be permitted as an alternative to masonry or concrete as listed in 2603.5.5 exception #3. FPPF member suggested more information is needed to determine the minimum thickness of gypsum equivalent to 1" of masonry or concrete. Chapter 7 was consulted to determine that ½" type x gypsum affords the same fire resistance rating as 1" of masonry or concrete.

- d. A motion was made for FPPF to recommend to the Board to not accept the proposed 1403.5 Part 2 and 2603.5.5 exception #2 since additional protection through sprinklers for protection against exterior flame spread is not equivalent to the level of protection afforded by an NFPA 285 test. Through friendly amendment it was added that if BBRS felt it was going to approve the proposal, they do so only with the following conditions: 1) only where a NFPA 13 sprinkler system is provided and 2) where fire flow analysis has been performed without sprinkler decrease allowance that shows adequate water is available.

Motion: DC so moved 2nd: HC Vote: 5-0-1 (MG abstained)

A motion was made for FPPF to recommend to the Board that the proposed language of 2603.5.5 exception #1 is not accept the proposed language, rather to adopt the language of the base 2015 IBC.

Motion: JH so moved 2nd: DC Vote: 6-0-0

A motion was made for FFPF to recommend to the Board that the proposed language of 2603.5.5.1 be accepted.

Motion: HC so moved 2nd: DC Vote: 6-0-0

A motion was made for FFPF to recommend to the Board to not accept the proposed 2603.5.5.2 but amend 2603.5.5 exception #2 of the 2015 IBC (proposed 2603.5.5 exception #3) to include a provision to allow an equivalent to 1" masonry or concrete covering for foam plastic insulation such as minimum ½" type X gypsum. Also, a modification would be needed to renumber the proposed sections and reference in 2603.5.5 to 2603.5.5.2.

Motion: DC so moved 2nd: LV Vote: 6-0-0

A motion was made for FFPF to recommend to the Board to accept the proposed 2603.5.5.3.1 except that "65 ft" be reduced to "40 ft".

Motion: HC so moved 2nd: DC Vote: 6-0-0

A motion was made for FFPF to recommend to the Board to accept the proposed 2603.5.5.3.2 with the language "Materials used for firestopping in exterior wall assemblies shall comply with Section 7.18.2.1" and to removed all numbering and original proposed language.

Motion: HC so moved 2nd: DC Vote: 6-0-0

A motion was made for FFPF to recommend to the Board that if the concepts approved in 2603.5 are proposed for inclusion in 1403.5 by the proponent, then FFPF would not be opposed to a revised code change proposal.

Motion: DC so moved 2nd: LV Vote: 6-0-0

MG suggested to the proponents that they bring their proposals to the IBC.

Meeting adjourned at 12:22pm.

Exhibits List for Item 4

1. FFPF Final Minutes October 9 (2014)
2. BEC Chairs Letters to BBRS (BSA 7/22/14)
3. Fire Stopping Alternatives for STYROFOAM CAVITMATE (May 1995: DCN 888)
4. Email dialogue between R Keleher and T Riley on 8/14-15/14 to be placed in September 2014 BBRS Agenda File
5. Exhibit Submitted 2/24/15 – ANNEX A to NFPA 285, page 16, section A.1.1.2 highlighted.
6. BBRS Code Amendment Section 1403.5 (Part 1) undated but received by FFPF on 9/8/14; provided in word and pdf formats
7. BBRS Code Amendment Section 1403.5 (Part 2) undated but received by FFPF on 9/8/14; provided in word and pdf formats
8. BBRS Code Amendment Section 2603.5.5, undated but received by FFPF on 9/8/14; provided in word and pdf formats
9. BBRS Code Amendment Section 2603.5.5 (REV 1), undated but received by FFPF on 9/8/14; provided in word and pdf formats
10. Excerpt from Untitled NBC document (possibly 93/1), pages 51 and 52, regarding concealed space fire stopping
11. NRC Report: Spread of Fire in Vertical Concealed Spaces Containing Foamed-Plastics Insulation Part II. Expanded Polystyrenes by W Taylor (November 1981).
12. 2006 Ontario Building Code, page 6 Division B – Part 3, Section 3.1.4.
13. Fire Protection Research Foundation Report: Fire Hazards of Exterior Wall Assemblies Containing Combustible Components by Nathan White and Michael Delichatsios (June 2014)
14. ULC Report File CSS 0011 Fire Stops in Concealed Spaces (June 8, 1995)
15. Email received by T Riley mailbox on 7/31/14 @10:44 PM from R Keleher.