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October 27, 2015

Mr. Mo Madani
Florida Building Commission
c/o Florida Department of Business & Professional Regulation
1940 North Monroe Street
Tallahassee, FL 32399
Via E-mail Transmission: Mo.Madani@myfloridalicense.com

DS 2015-134

SUBJECT: Petition for Declaratory Statement Before the Florida Building Commission Regarding The Florida Building Code, Fifth Edition, Energy Volume, Table C402.4.3

Dear Mr. Madani:

Please consider this letter as a request for a petition for a declaratory statement before the Florida Building Commission. The request involves high speed door compliance to maximum air leakage requirements.

Our request focuses on a particular high speed door, offered by Rytec Corporation, to be installed in a facility in Tampa, Florida. The maximum air leakage requirements for doors are found in the Florida Energy Code Fifth Edition (2014) Table C402.4.3. The Florida Energy Code Fifth Edition uses the 2012 International Energy Conservation Code (IECC) as its base code. No maximum air leakage value for high speed doors is shown in Table C402.4.3 of that IECC edition. However, Table C402.5.2 of the 2015 IECC shows high speed doors requiring a maximum air leakage rate of 1.30 cubic feet per minute per square foot.

To support our request, attached is International Code Council (ICC) code change proposal C182-13 which was approved by the ICC membership at the 2013 fall final hearings during the 2015 IECC code development cycle. The Commenter's Reason supporting the public comment provides technical justification. Manufacturers supply documentation in the form of a report showing testing to ANSI/DASMA 105.

Our questions are as follows:

1. Can the maximum air leakage rate requirement for high speed doors as shown in Table C402.5.2 of the 2015 IECC be used for the high speed door to be installed in the facility in question, to meet the intent of the Florida Energy Code Fifth Edition based on technical justification? Our understanding is that the answer is Yes, provided that the authority having jurisdiction approves the use of the Table per the "alternate method" allowance in the Code.
2. Is the Florida Energy Code Fifth Edition Section C102, "Alternate Materials - Methods of Construction, Design or Insulating Systems", applicable toward use of the Table described in Question #1? Our understanding would conclude that the answer is Yes, provided that the authority having jurisdiction finds the Table referenced in Question #1 to be itself applicable to the door in question.

Please advise as to when our Petition will be considered by the Commission. In the meantime, if you have any questions, please contact me. Thank you for your consideration of this matter.

Sincerely,

Joseph R. Hetzel

JOSEPH R. HETZEL, P.E.
Technical Director

JRH/eb

cc: Commercial & Residential Garage Door Technical Committee
Rolling Door Division
High Performance Door Division

CE182-13

Table C402.4.3

Proposed Change as Submitted

Proponent: Joseph R. Hetzel, P.E., Thomas Associates, Inc., representing the Door & Access Systems Manufacturers Association (DASMA) International (jhetzel@thomasamc.com)

Revise as follows:

TABLE C402.4.3
MAXIMUM AIR INFILTRATION RATE
FOR FENESTRATION ASSEMBLIES

FENESTRATION ASSEMBLY	MAXIMUM RATE (CFM/FT^2)	TEST PROCEDURE
Windows	0.20[a]	AAMA/WDMA/ CSA101/I.S.2/A440 or NFRC 400
Sliding doors	0.20[a]	
Swinging doors	0.20[a]	
Skylights - with condensation weepage openings	0.30	
Skylights - all other	0.20[a]	
Curtain walls	0.06	NFRC 400 or ASTM E 283 at 1.57 psf (75 Pa)
Storefront glazing	0.06	
Commercial glazed swinging entrance doors	0.06	
Revolving doors	1.00	
Garage doors	0.40	ANSI/DASMA 105, NFRC 400, or ASTM E 283 at 1.57 psf (75 Pa)
Rolling doors	1.00	
High speed doors[b]	1.30	

For SI: 1 cubic foot per minute = 0.47 L/s, 1 square foot = 0.093 m^2

a. The maximum rate for windows, sliding and swinging doors, and skylights is permitted to be 0.3 cfm per square foot of fenestration or door area when tested in accordance with AAMA/WDMA/CSA101/I.S.2/A440 at 6.24 psf (300 Pa).

b. A non-swinging door intended for vehicular access and material transportation, with a minimum opening rate of 32 inches per second

Reason: "High speed doors" are typically automatically controlled, non-swinging doors, and are commonly used in conjunction with vehicular traffic or transportation of materials and are not generally intended for pedestrian traffic. Sizes typically range from 8x8 to 12x12. When high speed doors are used in a building exterior envelope, the primary purposes are for environmental control and/or building security.

High speed door panels or curtains are usually made of a thin layer of vinyl, fabric, rubber or composite material. Materials can be opaque, translucent or a combination thereof.

The assemblies are constructed of flexible materials at the perimeter to provide sealing against air leakage but yet to allow variations in contact between door panels/curtains and jamb construction to maximize the effectiveness of continual high speed operation. Thus, high speed doors cannot comply with prescriptive air leakage requirements for any current fenestration assembly type in Table C402.4.3. The high speed nature of these doors provides for minimizing of "air exchange", a valuable and predominant characteristic of minimizing overall energy losses through a door opening.

An air leakage value of 1.30 cfm/sf is recommended for a high speed door based on a tested value of 1.26 obtained via a March 2012 DASMA-sponsored test on a representative 8'x8' high speed door product.

Cost Impact: This code change proposal will not increase the cost of construction.

C402.4.3T-EC-HETZEL.doc

Public Hearing Results

The following errata were not posted to the ICC website. The existing value in Table C402.4.3 for commercial glazed swinging entrance doors was incorrectly shown as 0.06.

TABLE C402.4.3
MAXIMUM AIR INFILTRATION LEAKAGE RATE
FOR FENESTRATION ASSEMBLIES

FENESTRATION ASSEMBLY	MAXIMUM RATE (CFM/FT^2)	TEST PROCEDURE
Curtain walls	0.06	NFRC 400 or ASTM E 283 at 1.57 psf (75 Pa)
Storefront glazing	0.06	
Commercial glazed swinging entrance doors	~~0.06~~ 1.00	
Revolving doors	1.00	

Committee Action: Disapproved

Committee Reason: The committee understood that the concept needs to be addressed, but more specificity is needed including a definition.

Assembly Action: None

Individual Consideration Agenda

C5-152

This item is on the agenda for individual consideration because a public comment was submitted.

Joseph R. Hetzel, P.E., Thomas Associates, Inc., representing Door & Access Systems Manufacturers Association (DASMA), requests Approval as Modified by this Public Comment.

Public Comment:

Modify the proposal as follows:

TABLE C402.4.3
MAXIMUM AIR ~~INFILTRATION~~ LEAKAGE RATE
FOR FENESTRATION ASSEMBLIES

FENESTRATION ASSEMBLY	MAXIMUM RATE (CFM/FT^2)	TEST PROCEDURE
Windows	0.20[a]	AAMA/WDMA/ CSA101/I.S.2/A440 or NFRC 400
Sliding doors	0.20[a]	
Swinging doors	0.20[a]	
Skylights - with condensation weepage openings	0.30	
Skylights - all other	0.20[a]	
Curtain walls	0.06	NFRC 400 or ASTM E 283 at 1.57 psf (75 Pa)
Storefront glazing	0.06	
Commercial glazed swinging entrance doors	1.00	
Revolving doors	1.00	
Garage doors	0.40	ANSI/DASMA 105, NFRC 400, or ASTM E 283 at 1.57 psf (75 Pa)
Rolling doors	1.00	
High speed doors[b]	1.30	

For SI: 1 cubic foot per minute = 0.47 L/s, 1 square foot = 0.093 m^2

a. The maximum rate for windows, sliding and swinging doors, and skylights is permitted to be 0.3 cfm per square foot of fenestration or door area when tested in accordance with AAMA/WDMA/CSA101/I.S.2/A440 at 6.24 psf (300 Pa).

~~b. A non-swinging door intended for vehicular access and material transportation, with a minimum opening rate of 32 inches per second~~

CHAPTER 2
GENERAL DEFINITIONS

Add a new definition as follows:

HIGH SPEED DOOR: A non-swinging door used primarily to facilitate vehicular access or material transportation, with a minimum opening rate of 32 inches per second, a minimum closing rate of 24 inches per second, and an automatic closing device.

Commenter's Reason: High speed doors are often used in energy related applications where an internal building environment must be controlled. In these applications, "air exchange" (air flowing through the door opening when the door is in other than the fully closed position) is the predominant energy concern. Because of their design, high speed doors cannot meet any of prescriptive values given in the current Table. Since air leakage values cannot be traded off like U-factor values, a specific maximum value for high speed doors is needed. The value proposed is based on research described in the reasoning given in our original proposal.

With respect to our original proposal, we have moved the description of a "high speed door" (proposed footnote b) into the Definitions section of the code. In the description, we have included additional parameters as well as descriptive language found elsewhere in the code.

The Table heading has been revised for consistency within the IECC.

CE182-13

Final Action: AS AM AMPC ✓ D