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December 29, 2009

**TO: PARTIES INTERESTED IN VERTICALLY ACTING, EGRESS FIRE-DOOR ASSEMBLIES**

**SUBJECT: Proposed Acceptance Criteria for Vertically Acting, Egress Fire-door Assemblies, Subject AC421-0210-R1 (BB/MO)**

**Hearing Information:**

Tuesday, February 2, 2010  
8:00 a.m.

**Sheraton Gateway Hotel Los Angeles**  
6101 West Century Boulevard  
Los Angeles, California 90045  
(888) 627-7104

Dear Madam or Sir:

The subject proposed new acceptance criteria will be on the agenda for the Evaluation Committee hearings noted above. The criteria was posted on the alternate agenda for public comment on December 1, 2009. The cover letter for the alternate agenda item, which includes questions by staff that need resolution before we can proceed with development of this criteria, is enclosed for your review.

The proposed criteria draft was submitted by Cornell Iron Works, to assist staff in developing the criteria, and edited and reformatted by ICC-ES. This criteria, if adopted by the Evaluation Committee, will be used to guide staff in the evaluation of any new applications received by ICC-ES recognition of for vertically acting, egress fire-doors.

The code currently does not include provisions for vertically acting doors, however; this type of door could provide a clear, unobstructed, full-width opening in just 80 inches of travel (straight up), and therefore merits consideration. Since the product under consideration is very innovative, and therefore untried, the criteria scope needs to be as narrow as possible.

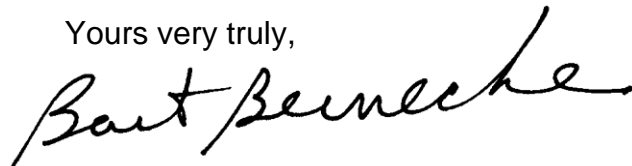
You are cordially invited to submit written comments on agenda items, or to attend the Evaluation Committee hearing and present verbal comments. If you wish to contribute to the hearing, please note the following:

1. Written comments that are received by the Los Angeles business/regional office by **January 19, 2009**, will be forwarded to the committee prior to the hearing, and will be posted on the ICC-ES web site shortly after the comment deadline.
2. Written comments received up to ten days before the meeting, and staff memos responding to comments, will be posted to the web site on **January 28, 2009**.

3. ICC-ES is no longer providing printed copies at the meeting of proposed acceptance criteria, staff memos or public comments. These documents will be available on a limited number of CDs at the meeting, for uploading to computers; and ICC-ES will make arrangements with the hotel business center to have hard copies available for photocopying.
4. Written comments that miss the deadline noted in item (1), above, will only be available at the meeting if you provide 35 copies, collated, stapled, and three-hole punched, either at the meeting itself or to the Los Angeles business/regional office by **January 28, 2009**.
5. If you plan to speak for more than 15 minutes, or offer a visual presentation lasting longer, you should notify ICC-ES staff as far as possible in advance. There will be a computer, projector, and screen available at the meeting for anyone wishing to make a visual presentation, and presentations in most cases will need to be in PowerPoint format. Also, ICC-ES will need to be provided with your presentation at least a half-hour before the start of the relevant meeting session (morning or afternoon) on either a CD or a flash card.
6. If you have any special needs related to a presentation, you should contact ICC-ES staff well in advance of the meeting.
7. Any visual aids for viewing at committee meetings (charts, overhead transparencies, slides, videos, electronic presentations, etc.) will be permitted only if a copy is provided to ICC-ES, before the presentation, in a medium that can be retained with other records of the meeting.
8. Any materials submitted for committee consideration are considered nonconfidential and available for public discussion, as noted in Section 2.7 of the ICC-ES Rules of Procedure for the Evaluation Committee.
9. Prior to the meeting, you should refrain from trying to communicate directly with committee members about agenda items, either verbally or in writing. Committee members reserve the right to refuse such communications.

Your cooperation with these guidelines is much appreciated, as is your interest in the deliberations of the Evaluation Committee. If you have any questions please contact the undersigned at (800) 423-6587, extension 5593, or Michael O'Reardon, PE, Regional Manager, at extension 5685. You may also reach us by e-mail at [es@icc-es.org](mailto:es@icc-es.org).

Yours very truly,



Bart Berneche, P.E.  
Staff Engineer

BB/raf

Enclosure

cc: Evaluation Committee



## ICC EVALUATION SERVICE, INC., RULES OF PROCEDURE FOR THE EVALUATION COMMITTEE

### 1.0 PURPOSE

The purpose of the Evaluation Committee is to monitor the work of ICC-ES, in issuing evaluation reports; to evaluate and approve acceptance criteria on which evaluation reports may be based; and to sponsor related changes in the applicable codes.

### 2.0 MEETINGS

**2.1** The Evaluation Committee shall schedule meetings that are open to the public in discharging its duties under Section 1, subject to Section 3.

**2.2** All scheduled meetings shall be publicly announced.

**2.3** Two-thirds ( $\frac{2}{3}$ ) of the voting Evaluation Committee members shall constitute a quorum. A majority vote of members present is required on any action.

**2.4** In the absence of the nonvoting chairman-moderator, Evaluation Committee members present shall elect an alternate chairman from the committee for that meeting. The alternate chairman shall be counted as a voting committee member for purposes of maintaining a committee quorum and to cast a tie-breaking vote of the committee.

**2.5** Minutes of the meetings shall be kept.

**2.6** An electronic audio record of meetings shall be made by ICC-ES; no other audio, video, electronic or stenographic recordings of the meetings will be permitted. Visual aids (including, but not limited to, charts, overhead transparencies, slides, videos, or presentation software) viewed at meetings shall be permitted only if the presenter provides ICC-ES before presentation with a copy of the visual aid in a medium which can be retained by ICC-ES with its record of the meeting and which can also be provided to interested parties requesting a copy. A copy of the ICC-ES recording of the meeting and such visual aids, if any, will be available to interested parties upon written request made to ICC-ES together with a payment as required by ICC-ES to cover costs of preparation and duplication of the copy. These materials will be available beginning five days after the conclusion of the meeting but will no longer be available after one year from the conclusion of the meeting.

**2.7** Parties interested in the deliberations of the committee should refrain from communicating, whether in writing or verbally, with committee members regarding agenda items. All written communications and submissions regarding agenda items should be delivered to ICC-ES. All such written communications and submissions shall be considered nonconfidential and available for discussion in open session of an Evaluation Committee meeting, and shall be delivered at least ten days before the scheduled Evaluation Committee meeting if they are to be forwarded to the committee. Materials delivered to ICC-ES at least ten

days before the scheduled meeting will be posted on the ICC-ES web site ([www.icc-es.org](http://www.icc-es.org)) prior to the meeting. After this time, parties wishing to submit materials for consideration by the Evaluation Committee must deliver a sufficient number of copies as directed by ICC-ES. Consideration of materials not received by ICC-ES at least ten days before the meeting is at the discretion of the Evaluation Committee. Following the meeting, ICC-ES will make all materials considered by the Evaluation Committee available on the web site for a maximum period of one year following the meeting. The committee reserves the right to refuse recognition of communications which do not comply with the provisions of this section.

### 3.0 CLOSED SESSIONS

Evaluation Committee meetings shall be open except that the chairman may call for a closed session to seek advice of counsel.

### 4.0 ACCEPTANCE CRITERIA

**4.1** Acceptance criteria are established by the committee to provide a basis for issuing ICC-ES evaluation reports on products and systems under codes referenced in Section 2.0 of the Rules of Procedure for Evaluation Reports. They also clarify conditions of acceptance for products and systems specifically regulated by the codes.

Acceptance criteria may involve a product, material, method of construction, or service. Consideration of any acceptance criteria must be in conjunction with a current and valid application for an ICC-ES evaluation report, an existing ICC-ES evaluation report, or as otherwise determined by the Evaluation Committee.

#### 4.2 Procedure:

**4.2.1** Proposed acceptance criteria shall be developed by the ICC-ES staff and discussed in open session with the Evaluation Committee during a scheduled meeting, except as permitted in Section 5.0 of these rules.

**4.2.2** Proposed acceptance criteria shall be available to interested parties at least 30 days before discussion at the committee meeting.

**4.2.3** The committee shall be informed of all pertinent written communications received by ICC-ES.

**4.2.4** Attendees at Evaluation Committee meetings shall have the opportunity to speak on acceptance criteria listed on the meeting agenda, to provide information to committee members.

**4.3** Approval of acceptance criteria shall be as specified in Section 2.3 of these rules.

**4.4** Actions of the Evaluation Committee may be

appealed in accordance with the ICC-ES Rules of Procedure for Appeal of Acceptance Criteria or the ICC-ES Rules of Procedure for Appeals of Evaluation Committee Technical Decisions.

**5.0 COMMITTEE BALLOTING FOR ACCEPTANCE CRITERIA**

**5.1** Acceptance criteria may be issued without a public hearing following a 30-day public comment period and a majority vote for approval by the Evaluation Committee when, in the opinion of ICC-ES staff, one or more of the following conditions have been met:

1. The subject is nonstructural, does not involve life safety, and is addressed in nationally recognized standards or generally accepted industry standards.
2. The subject is a revision to an existing acceptance criteria that requires a formal action by the Evaluation Committee, and public comments raised were resolved by staff with commenters fully informed.
3. Other acceptance criteria and/or the code provide precedence for the revised criteria.

**5.2** Negative votes must be based upon one or more of the following, for the ballots to be considered valid and require resolution:

- a. *Lack of clarity:* There is insufficient explanation of the scope of the acceptance criteria or insufficient description of the intended use of the product or system; or the acceptance criteria is so unclear as to be unacceptable. (The areas where greater clarity is required must be specifically identified.)
- b. *Insufficiency:* The criteria is insufficient for proper evaluation of the product or system. (The provisions of the criteria that are in question must be specifically identified.)
- c. *The subject of the acceptance criteria is not within the scope of the applicable codes:* A report issued by ICC-ES is intended to provide a basis for approval under the codes. If the subject of the acceptance criteria is not regulated by the codes, there is no basis for issuing a report, or a criteria. (Specifics must be provided concerning the inapplicability of the code.)

d. *The subject of the acceptance criteria needs to be discussed in a public hearings.* The committee member requests additional input from other committee members, staff or industry.

**5.3** An Evaluation Committee member, in voting on an acceptance criteria, may only cast the following ballots:

- Approved
- Approved with Comments
- Negative: Do Not Proceed

**6.0 COMMITTEE COMMUNICATION**

Direct communication between committee members, and between committee members and an applicant or concerned party, with regard to the processing of a particular acceptance criteria or evaluation report shall take place only in a public hearing of the Evaluation Committee. Accordingly:

**6.1** Committee members receiving an electronic ballot should respond only to the sender (staff). Committee members who wish to discuss a particular matter with other committee members, before reaching a decision, should ballot accordingly and bring the matter to the attention of ICC-ES staff, so the issue can be placed on the agenda of a future committee meeting.

**6.2** Committee members who are contacted by an applicant or concerned party on a particular matter that will be brought to the committee will refrain from private communication and will encourage the applicant or concerned party to forward their concerns through the ICC-ES staff in writing, and/or make their concerns known by addressing the committee at a public hearing, so that their concerns can receive the attention of all committee members. ■

*Effective March 18, 2008*

## PROPOSED ACCEPTANCE CRITERIA FOR VERTICALLY ACTING, EGRESS FIRE-DOOR ASSEMBLIES

AC421

Proposed December 2009

### PREFACE

Evaluation reports issued by ICC Evaluation Service, Inc. (ICC-ES), are based upon performance features of the International family of codes and other widely adopted code families, including the Uniform Codes, the BOCA National Codes, and the SBCCI Standard Codes. Section 104.11 of the *International Building Code*® reads as follows:

The provisions of this code are not intended to prevent the installation of any materials or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been approved. An alternative material, design or method of construction shall be approved where the building official finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability and safety.

Similar provisions are contained in the Uniform Codes, the National Codes, and the Standard Codes.

ICC-ES may consider alternate criteria, provided the report applicant submits valid data demonstrating that the alternate criteria are at least equivalent to the criteria proposed in this document, and otherwise meet the applicable performance requirements of the codes. Notwithstanding that a product, material, or type or method of construction meets the requirements of the criteria proposed in this document, or that it can be demonstrated that valid alternate criteria are equivalent to the criteria in this document and otherwise meet the applicable performance requirements of the codes, ICC-ES retains the right to refuse to issue or renew an evaluation report, if the product, material, or type or method of construction is such that either unusual care with its installation or use must be exercised for satisfactory performance, or malfunctioning is apt to cause unreasonable property damage or personal injury or sickness relative to the benefits to be achieved by the use of the product, material, or type or method of construction.

*Acceptance criteria are developed for use solely by ICC-ES for purpose of issuing ICC-ES evaluation reports.*

## PROPOSED ACCEPTANCE CRITERIA FOR VERTICALLY ACTING, EGRESS FIRE-DOOR ASSEMBLIES

### 1 1.0 INTRODUCTION

2 **1.1 Purpose:** The purpose of this acceptance criteria is to establish requirements for  
3 vertically acting, egress fire-door assemblies to be recognized in an ICC Evaluation  
4 Service, Inc. (ICC-ES), evaluation report under the 2009 *International Building Code*<sup>®</sup>  
5 (IBC) since the building code does not include provisions for this type of product. Basis  
6 of recognition is IBC Section 104.11. Applicable code sections are IBC Sections 715  
7 and 1008.

8 **1.2 Scope:** Vertically acting, egress fire-door assemblies are used as opening  
9 protectives in fire-resistance-rated wall assemblies, as smoke-and-draft-control  
10 assemblies, and as a means of egress. Vertically acting egress fire-door assemblies  
11 may remain open normally, and close only to provide fire and smoke protection, or they  
12 may be kept closed to provide security, and be opened and closed on demand to  
13 provide a means of egress.

### 14 1.3 Codes and Referenced Standards

15 **1.3.1** 2009 *International Building Code*<sup>®</sup> (IBC), International Code Council.

16 **1.3.2** ANSI/UL 10B-1997, UL Standard for Fire Safety Tests of Door Assemblies,  
17 Underwriters Laboratories Inc.

18 **1.3.3** NFPA 80-07, Standard for Fire Doors and Other Opening Protectives, National  
19 Fire Protection Association.

20 **1.3.4** ANSI/UL 325-02, UL Standard for Safety for Door, Drapery, Gate, Louver, and  
21 Window Operators and Systems, Underwriters Laboratories Inc.

22 **1.3.5** ANSI/UL 864-96, UL Standard for Safety for Control Units for Fire-protective  
23 Signaling Systems, Underwriters Laboratories Inc.

24       **1.3.6** BHMA A156.10-06, Power Operated Pedestrian Doors, Builders Hardware  
25 Manufacturer's Association.

26       **1.4 Definitions:**

27       **1.4.1 Vertically Acting, Egress Fire-door Assembly:** A vertically acting, egress  
28 fire-door assembly is a fire door complying with IBC Section 715, hardware and other  
29 accessories which provide for power operation as an alternate to egress doors in  
30 compliance with IBC Section 1008, and a frame. These together provide a specific  
31 degree of fire protection to an opening as well as provide for the use of the door as a  
32 means of egress.

33       **1.4.2 Integrated Standby Power Supply:** The supply of power, which is part of a  
34 nominally-functioning operating system (one that is working properly under normal  
35 conditions), that is available for use by the operating system to continue normal  
36 operations. The standby power is sufficient to operate the door for a minimum of 50  
37 door opening and closing cycles, after the building power system has failed to deliver  
38 the power necessary to keep the operating system in a nominally-functional state.

39       **1.4.3 Critical System Faults:** Critical system faults are conditions that would keep  
40 the door from closing to protect the opening. These include interruptions of the closing  
41 cycle caused by obstructions in the pathway of the door, standby power being below  
42 nominally-functional strength during normal operation, and the intentional disabling of  
43 power operation by the power operator due to depletion of standby power to below the  
44 emergency operation threshold strength.

45       **1.4.4 Knowing-act Activation:** The act of operating a door operator by pressing a  
46 switch or other similar action, with the knowledge of what will happen.

47       **2.0 BASIC INFORMATION**

48       **2.1 General:** The following information shall be submitted:

49       **2.1.1 Product Description:** The following details shall be submitted:

50       **2.1.1.1** General information on each component of the vertically acting, egress fire-  
51 door assembly.

52       **2.1.1.2** Complete information concerning assembly dimensions, configuration, and  
53 material specifications.

54       **2.1.1.3** Manufacturing process.

55       **2.1.1.4** Dimensioned scaled drawings of the assembly with significant components  
56 of the assembly identified.

57       **2.1.2 Installation Instructions:** Installation shall be in accordance with NFPA 80  
58 and the instructions shall be in accordance with the instruction requirements of UL 325.  
59 Installation details shall be submitted and shall include the following:

60       **2.1.2.1** Instructions on the installation of all assembly components and configuration  
61 of the automatic closing system.

62       **2.1.2.2** Electrical schematics for all applicable assembly components. The  
63 installation instructions shall specify that the assembly and the automatic closing system  
64 shall be installed in accordance with the applicable requirements of the IBC, the  
65 National Electrical Code, and NFPA 80, and that the local code official shall be  
66 consulted for applicable requirements before installing.

67       **2.1.2.3** Instructions on field-testing the installed assembly for proper operation. The  
68 installation instructions shall specify the need for electrical supervision of the power  
69 supply and to consult with the local code official for applicable requirements at the time  
70 of installation.

71       **2.1.2.4** An inspection shall be performed on each door, at installation, and  
72 successful testing shall be documented in writing by the installer and a copy provided to  
73 the local code official and building owner's representative. The documentation shall  
74 state the requirement for not less than annual inspection by a trained door systems  
75 technician in accordance with the requirements of NFPA 80. Written records of all

76 testing shall be maintained and shall be made available to the local code official upon  
77 request. The door system technicians must be trained and approved by the door  
78 assembly manufacturer, and the training and approval program documentation shall be  
79 submitted to ICC-ES as part of the quality control documentation.

80 **2.1.3 Packaging and Identification:** A description of the method of packaging and  
81 field identification of the vertically acting, egress fire-door assemblies shall be included.  
82 Identification of each assembly shall include the evaluation report number, the name or  
83 logo of the inspection agency, and the serial number for each assembly; the  
84 manufacturer's name and location; the model number; and the fire-resistance and  
85 smoke rating of the assembly. If an assembly is manufactured at several locations, each  
86 component shall be distinctively marked to identify its place of manufacture. The logo of  
87 the inspection agency, if used as part of the identification, must be included in the report  
88 under this acceptance criteria.

89 **2.1.4 Field Preparation:** Details ~~shall be submitted~~ of field preparation for installing  
90 a vertically acting, egress fire-door assembly shall be submitted. Details or minimum  
91 criteria for field preparation of the surrounding construction that provides structural  
92 support to the assembly and its components, shall also be submitted.

93 **2.2 Testing Laboratories:** Testing laboratories shall comply with Section 2.0 of the  
94 ICC-ES Acceptance Criteria for Test Reports (AC85) and Section 4.2 of the ICC-ES  
95 Rules of Procedure for Evaluation Reports.

96 **2.3 Test Reports:** Test reports shall comply with AC85.

97 **2.4 Product Sampling:** Sampling of vertically acting, egress fire-door assemblies for  
98 tests under this criteria shall comply with Section 3.1 of AC85.

## 99 **3.0 TEST AND PERFORMANCE REQUIREMENTS**

100 **3.1 Assembly Components:**

101       **3.1.1 General:** Vertically acting, egress fire-door assemblies qualified in accordance  
102 with this acceptance criteria shall be constructed as described in the approved quality  
103 documentation. The assemblies shall comply with the applicable fire protection rating in  
104 accordance with IBC Section 715. The door shall also comply with the reliability and  
105 ease-of-use characteristics outlined in this criteria.

106       **3.1.2 Door:** The door shall be power operated and the operator shall have an  
107 integrated standby power supply. The door shall be operable from both sides without  
108 special knowledge or effort, using a force not to exceed 15 pounds (67 N) on the  
109 actuating device of the door operator, even when the door is subjected to a 250 pound  
110 (1100 N) force applied perpendicular to the door adjacent to the opening device.

111       **3.1.3 Door Operator:** Only labeled power operators and motors specifically listed for  
112 use with the door shall be used. Listed power operator systems and motors shall  
113 comply with the requirements of ANSI/UL 325. Operator motors shall be protected.

114       **3.1.4 Integrated Standby Power Supply:** Standby power shall be provided as part  
115 of the door operating system. The standby power shall pick up its connected loads  
116 within 10 seconds of failure of the building's normal source of power. The standby  
117 power shall have a capacity of 50 opening and closing cycles, from fully closed – to a  
118 minimum of 80 inches (203 cm) above finished floor to allow egress – to fully closed  
119 again to protect the opening.

120       **3.1.5 Releasing Device:** The door shall be automatic-closing by smoke detection in  
121 accordance with IBC Section 715.4.8.3, and shall be self-closing when the temperature  
122 reaches 500°F (260°C) on either side of the door. After self-closing, the door shall  
123 remain closed until reset.

124       **3.2 Performance Testing:** The door assembly and operating system shall be tested  
125 in accordance with the UL 10B and UL325 standards. Testing shall be submitted  
126 verifying the following performance characteristics:

127       **3.2.1** The door must be easily recognized as being a door and must be operable  
128 without a key or special knowledge or special effort. Door manual operation must  
129 comply with IBC Section 1008.1.9. The door assembly shall have signage meeting the  
130 intent of UL 325 and BHMA A156.10 requirements for sliding doors [except, they shall  
131 be modified to account for the vertically-acting nature of the doors], and the  
132 specifications shall be submitted by the manufacturer to ICC-ES for approval. The  
133 actuating device shall function by knowing-act activation. If a force is required to  
134 activate the device to signal the power operating system to open the door, the force  
135 shall not be more than 15 pounds (67 N). On the side of the door from which egress is  
136 made, the force shall be applied normal to the plane of the door in the direction of  
137 egress travel. The door shall be operable as specified even when a force of 250 pounds  
138 (1100 N) is applied perpendicular to the door adjacent to the opening device.

139       **3.2.2** Closing speed for power operation shall be not less than 6 inches (152 mm)  
140 per second to assure timely protection of the opening, and not more than 24 inches (61  
141 cm) per second, in accordance with NFPA 80. The door assembly shall have  
142 entrapment protection meeting the intent of the requirements of Section 29 of UL 325  
143 and BHMA A156.10 for sliding doors and these specifications shall be submitted by the  
144 manufacturer to ICC-ES for approval.

145       **3.2.3** The assembly shall be self-closing or automatically closing upon signal from a  
146 separately supplied UL 864 listed building alarm system or from a listed smoke-  
147 automatic fire detector, fire alarm equipment, or approved signaling device installed in  
148 accordance with NFPA 80.

149       **3.2.4** While in a fire alarm condition, the door shall open to a minimum of 80 inches  
150 (203 cm) above finished floor within 10 seconds of actuating the operating device and  
151 shall not have more than a 10 second delay after the opening is cleared of pedestrians  
152 before the door starts to re-close.

153       **3.2.5** The door shall be equipped with integrated, standby power and shall be  
154 subjected to cycle testing to verify the reserve power capacity. One cycle shall be

155 defined as the time to completely open the door to a minimum height of 80 inches (203  
156 cm) ~~minimum~~, from a fully closed position, and return it to the fully closed position. The  
157 integrated standby power supply shall have sufficient capacity to operate the door for 50  
158 cycles without the aid of building power.

159 **3.2.6** The door assembly shall include heat responsive links for fire protection  
160 service complying with UL 33 or temperature-sensing releasing devices complying with  
161 UL864 installed at the door opening as required by NFPA 80. The temperature-sensing  
162 devices shall cause the door to disengage from the power operator and self-close when  
163 the temperature reaches 500°F (260°C) on either side of the door. Once self-closed due  
164 to excessive temperature at the opening, the door shall remain disengaged from the  
165 power operator ~~in the closed position~~ until operation of the assembly is reset.

166 **3.2.7** The assembly shall include sensors to stop the door from closing beyond an  
167 obstruction during a power closing cycle if the pathway is obstructed. If the door is  
168 stopped as a result of sensing an obstruction, the door shall re-open to full egress  
169 height, and resume closing within 10 seconds if in the alarm condition, at which point  
170 the door ~~would~~ shall stop at the obstruction. When the obstruction is removed, the door  
171 shall resume closing within 10 seconds to the fully closed position.

### 172 **3.3 Fire-resistance Testing:**

173 **3.3.1** The fire-resistance rating of the vertically acting, egress fire door assembly  
174 shall be established by tests conducted in accordance with UL 10B.

175 **3.3.2** The fire-resistance rating of the assembly shall be compatible with the fire-  
176 resistance rating of the opening into which it is to be installed in accordance with IBC  
177 Section 715.

178 **3.3.3** The vertically acting, egress fire door assembly shall be installed in the test  
179 door opening in the manner in which it is intended to be used. The tested door  
180 assembly shall be subjected to the fire-endurance test with the door's bottom bar resting  
181 on a non-combustible floor surface.

182       **3.3.4** Nonsymmetrical assemblies shall be tested with both faces exposed to the  
183 furnace, and the assigned fire resistance rating shall be the shortest duration obtained  
184 from the two tests. When evidence is furnished to show that the door was tested with  
185 the least fire-resistant side exposed to the furnace, the assembly need not be subjected  
186 to tests from the opposite side, subject to acceptance by ICC-ES.

187       **3.4 Transmission of Alarms and Faults:** Critical system faults shall cause an  
188 audible and visible alarm signal to be activated at the door location. The assembly shall  
189 have the capability of signaling critical system faults to a constantly attended location as  
190 required by the code official. The fire-door assembly's status, both the alarm condition  
191 and state (open and closed), shall be capable of being remotely monitored as required  
192 by the code official.

#### 193       **4.0 QUALITY CONTROL**

194       **4.1** Vertically acting, egress fire door assemblies shall be manufactured under an  
195 approved quality control program with inspections by an inspection agency accredited  
196 by IAS, or otherwise acceptable to ICC-ES.

197       **4.2** Quality documentation complying with the ICC-ES Acceptance Criteria for Quality  
198 Documentation (AC10) shall be submitted.

#### 199       **5.0 EVALUATION REPORT RECOGNITION**

200       The evaluation report shall provide the following information:

201       **5.1** Drawings and details of the vertically acting, egress fire-door assembly, including  
202 a list of all components qualified under this criteria.

203       **5.2** A description of the fire-resistant construction in which the vertically acting, egress  
204 fire-door assembly was qualified in accordance with the test requirements specified in  
205 Section 3.2 of this criteria.

206       **5.3** The minimum and maximum door sizes allowable for the door assembly.

207       **5.4** The following conditions of use shall be included in the evaluation report:

208           **5.4.1** ~~Use only~~ Only those components described in the evaluation report shall be  
209 used with the assembly - every component used with the door assembly ~~is~~ shall be  
210 listed specifically for its intended use.

211           **5.4.2** The door assembly ~~must~~ shall be installed and tested by trained installers  
212 approved by the door assembly manufacturer.

213           **5.4.3** The door ~~must~~ shall be kept clear of obstructions at all times.

214           **5.4.4** The door ~~must~~ shall be inspected and tested at least once each year to verify  
215 proper working condition. Records of these yearly inspections and tests shall be kept  
216 and shall be made available to the code official for inspection. ■