

Code Technology Committee

Area of Study – Labeling of Fire Rated Glazing

2009/2012 Cycle

Code changes related to the CTC area of study noted above

The following are code changes related to the CTC Labeling & Fire Related Glazing that will be considered at the 2009/2012 Code Development Hearings in Baltimore.

FS6: Page 1

FS107: Page 2

FS6–09/10

703.5.1 (New)

Proponent: Lynn Warren Manley, Staff Architect State of Illinois Department of Public Health/Health Care Facilities and Programs, representing self

Add new text as follows:

703.5 Fire-resistance-rated glazing. Fire-resistance-rated glazing, when tested in accordance with ASTM E 119 or UL 263 and complying with the requirements of Section 707, shall be permitted. Fire-resistance-rated glazing shall bear a *label* or other identification showing the name of the manufacturer, the test standard and the identifier “W-XXX,” where the “XXX” is the *fire-resistance rating* in minutes. Such *label* or identification shall be issued by an agency and shall be permanently affixed to the glazing.

703.5.1 Testing. Glazing shall be considered to comply with this section only if it has been tested in accordance with ASTM E 119 or U L 723 without use or consideration of a fire suppression system.

1. Opening protection used in exterior walls in accordance with 705.8.2.
2. Glazing wall systems or window openings used in atriums as permitted under 404.6

Reason: NER-516 was originally approved by the ES Committee under BOCA and was reissued by the ICC ES Committee in Reno in 2007. According to the proponents and with supporting agreement from ES staff members. This glazing system may be used as an equivalent system in any fire barrier, with almost no limitations.

The glazing system is tempered glass, it can be no higher than 13'0" and it cannot be used for hazardous areas. However, according to ES Staff and according to the report (NER-516) there are no limitations for its use as a glazing system in any fire barriers, including but not limited to: exit enclosures, shaft enclosures, occupancy separations, horizontal exits, etc.

The test that this system passed was a simulated E 119 test that was terminated when the sprinkler system activated. No testing was conducted that simulated total or partial failure of the sprinkler system. This system did not pass E 119, but the ES Committee accepts the test as equivalent.

NER-516 amounts to a sprinkler trade off, eliminating all of the requirements for fire ratings where a sprinkler system is provided and installed as proposed in the ES Report.

The proponent of the above changes suggests that NER-516 is not a demonstration of equivalency but rather a code change that has not been considered or voted on by the ICC voting members.

Cost Impact: The cost impact is negligible and not relevant when compared to the loss from fire and loss of life if NER-516 becomes widely used without limitations.

Public Hearing: Committee:	AS	AM	D
Assembly:	ASF	AMF	DF

ICCFILENAME: MANLEY-FS2-703.5.1 NEW

FS107–09/10

702, 703.5, 715.2, 715.3, 715.3.1, Table 715.3 (New), 715.4, 715.4.1, 715.4.2, 715.4.3, 715.4.3.1, 715.4.3.2, 715.5.4, 715.4.4, 715.4.4.1, 715.4.5, 715.4.6, 715.4.6.1, 715.4.6.1.1, 715.4.7, 715.4.7.1, 715.5.8.1.1, 715.5.8.1.2, 715.5.8.1.2.1, 715.5.8.1.2.2, 715.4.7.2, 715.4.7.3, 715.5, 715.4.7.3.1, 715.4.7.4, 715.5.8, 715.5.8.1, 715.5.8.2, 715.6.8.3, Table 715.5, 715.5.9, 715.5.9.1, TABLE 715.4,

Proponent: Paul K. Heilstedt, PE, FAIA, Chair, representing ICC Code Technology Committee (CTC); William F. O’Keeffe, representing SAFTIFirst

1. Add new text:

SECTION 702 DEFINITIONS

Fire-rated glazing. Glazing with either a fire protection rating or a fire resistance rating.

2. Revise as follows:

SECTION 703 FIRE RESISTANCE RATINGS AND FIRE TESTS

703.5 Fire-resistance-rated glazing. Fire-resistance-rated glazing, when tested in accordance with ASTM E 119 or UL 263 and complying with the requirements of Section 707, shall be permitted. Fire-resistance-rated glazing shall bear a label or other identification showing the name of the manufacturer, the test standard and the identifier “W-XXX,” where the “XXX” is the fire-resistance rating in minutes. Such label or identification shall be marked in accordance with Table 715.3 issued by an approved agency and shall be permanently affixed to the glazing.

SECTION 715 OPENING PROTECTIVES

715.1 General. *(No change to current text)*

715.2 Fire-resistance-rated glazing. Fire-resistance-rated glazing tested as part of a fire-resistance-rated wall assembly in accordance with ASTM E 119 or UL 263 and labeled in accordance with Section 703.5, shall be permitted in fire doors and fire window assemblies where tested and installed in accordance with their listings and shall not otherwise be required to comply with this section.

3. Add new text as follows:

715.3 Marking Fire-Rated Glazing Assemblies Fire-rated glazing assemblies shall be marked in accordance with Tables 715.3, 715.5, and 715.6.

715.3.1 Fire-rated glazing that exceeds the code requirements. Fire-rated glazing assemblies marked as complying with hose stream requirements (H) shall be permitted in applications that do not require compliance with hose stream requirements. Fire-rated glazing assemblies marked as complying with temperature rise requirements (T) shall be permitted in applications that do not require compliance with temperature rise requirements. Fire-rated glazing assemblies marked with ratings (XXX) that exceed the ratings required by this code shall be permitted.

Table 715.3
Marking Fire-Rated Glazing Assemblies

Fire Test Standard	Marking	Definition of Marking
<u>ASTM E119 or UL 263</u>	<u>W</u>	<u>Meets wall assembly criteria.</u>
<u>NFPA 257 or UL 9</u>	<u>OH</u>	<u>Meets fire window assembly criteria including the hose stream test.</u>
<u>NFPA 252 or UL 10B or UL 10C</u>	<u>D</u>	<u>Meets fire door assembly criteria.</u>
	<u>H</u>	<u>Meets fire door assembly “Hose Stream” test.</u> <u>Meets to 450° F temperature rise criteria for 30 minutes</u>

Fire Test Standard	Marking	Definition of Marking
	T	
	XXX	The time in minutes of the fire resistance or fire protection rating of the glazing assembly

715.3 715.4 Alternate methods for determining fire-protection. *(No change to current text)*

715.4 715.5 Fire door and shutter assemblies. *(No change to current text)*

Exceptions:

(Exceptions to remain unchanged)

715.4.4 715.5.1 Side hinged or pivoted swinging doors. *(No change to current text)*

715.4.2 715.5.2 Other types of assemblies. *(No change to current text)*

715.4.3 715.5.3 Door assemblies in corridors and smoke barriers. Fire door assemblies required to have a minimum fire protection rating of 20 minutes where located in corridor walls or smoke barrier walls having a fire-resistance rating in accordance with Table 715.4 715.5 shall be tested in accordance with NFPA 252, UL 10B or UL 10C without the hose stream test.

Exceptions:

(Exceptions to remain unchanged)

715.4.3.1 715.5.3.1 Smoke and draft control. *(No change to current text)*

715.4.3.2 715.5.3.2 Glazing in door assemblies. In a 20-minute fire door assembly, the glazing material in the door itself shall have a minimum fire-protection rating of 20-minutes and shall be exempt from the hose stream test. Glazing material in any other part of the door assembly, including transom lites and sidelites, shall be tested in accordance with NFPA 257 or UL 9, including hose stream test, in accordance with Section 715.5.

715.5.4 Door assemblies in other fire partitions. Fire door assemblies required to have a minimum fire-protection rating of 20-minutes where located in other fire partitions having a fire resistance rating of 0.5-hour in accordance with Table 715.4 shall be tested in accordance with NFPA 252, UL 10B or UL 10C with the hose stream test.

(Renumber subsequent sections)

715.4.4 715.5.5 Doors in exit enclosures and exit passageways. Fire door assemblies in exit enclosures and exit passageways shall have a maximum transmitted temperature ~~and point rise~~ of not more than 450F degrees (250C degrees) above ambient at the end of 30 minutes of standard fire test exposure.

Exception: The maximum transmitted temperature rise is not required ~~limited~~ in buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

715.4.4.1 715.5.5.1 Glazing in doors. Fire protection rated glazing shall be limited to 100-sq. inches (0.065 m²). ~~Fire protection rated glazing in excess of 100-sq. inches (0.065 m²) shall be permitted in fire door assemblies when unless the glazing has been tested as components of the door assemblies and not as glass lights, and shall have has a~~ maximum transmitted temperature rise of 450F degrees (250C degrees) in accordance with Section 715.4.4 715.5.5.

Exception: The maximum temperature rise is not ~~required~~ limited in buildings equipped with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.

715.4.5 715.5.6 Fire door frames with transom lights and sidelights. Door frames with transom lights, sidelights, or both shall be permitted where a ¾-hour fire protection rating or less is required in accordance with Table 715.4. ~~Where a fire protection rating exceeding ¾ hour is required in accordance with Table 715.4,~~ Fire door frames with transom lights, sidelights, or both, ~~shall be permitted where~~ installed with fire-resistance rated glazing tested as an assembly in accordance with ASTM E119 or UL 263 shall be permitted where a fire-protection rating exceeding ¾-hour is required in accordance with Table 715.4.

715.4.6 715.5.7 Labeled protective assemblies. *(No change to current text)*

715.4.6.1 715.5.7.1 Fire door labeling requirements. Fire doors shall be labeled showing the name of the manufacturer or other identification readily traceable back to the manufacturer, the name or trademark of the third-party inspection agency, the fire protection rating and, where required for fire doors in exit enclosures and exit passageways by Section 715.4.4 715.5.5, the maximum transmitted temperature point. Smoke and draft control doors complying with UL 1784 and shall be labeled as such and shall also comply with Section ~~715.4.6.3~~ 715.5.7.3. Labels shall be approved and permanently affixed. The label shall be applied at the factory or location where fabrication and assembly are performed.

715.4.6.1.4 715.5.7.1.1 Light kits, louvers and components. Listed light kits and louvers and their required preparations shall be considered as part of the labeled door where such installations are done under the listing program of the third-party agency. Where tested for such use, fire doors and door assemblies shall be permitted to consist of components, including glazing, vision light kits and hardware that are labeled, listed or classified by different third party agencies.

715.4.6.2 715.5.7.2 Oversized doors. *(No change to current text)*

715.4.6.3 715.5.7.3 Smoke and draft control door labeling requirements. *(No change to current text)*

715.4.7 715.5.8 Glazing material. *(No change to current text)*

715.4.7.1 715.5.8.1 Size limitations. ~~Fire-protection-rated glazing used in fire doors shall comply with the size limitations of NFPA 80, and as provided in sections 715.5.8.1.1 and 715.8.1.2.~~

Exceptions:

715.5.8.1.1 Fire-resistance-rated glazing in door assemblies in fire walls and fire barriers rated greater than 1-hour. Fire-resistance-rated glazing tested to ASTM E119 or UL 263 and NFPA 252, UL10B or UL 10C shall be permitted in fire door assemblies located in fire walls and in fire barriers in accordance with Table 715.4 to the maximum size tested and in accordance with their listings.

715.5.8.1.2 Fire-protection-rated glazing in door assemblies in fire walls and fire barriers rated greater than 1-hour. Fire-protection-rated glazing shall be prohibited in fire walls and fire barriers except as provided in 715.5.8.1.2.1 and 715.5.8.1.2.2

715.5.8.1.2.1 Horizontal exits. ~~1. Fire-protection-rated glazing in fire doors located in fire walls shall be prohibited except where serving a fire door in a horizontal exit, a self-closing swinging door shall be permitted to have a vision panel of not more than 100 square inches without a dimension exceeding 10 inches. Fire-protection-rated glazing shall be permitted as vision panels in self-closing swinging fire door assemblies serving as horizontal exits in fire walls where limited to 100 square inches with no dimension exceeding 10 inches.~~

715.5.8.1.2.2 Fire barriers. ~~2. Fire-protection-rated glazing shall not be installed in fire doors shall be permitted in fire doors having a 1-1/2-hour fire protection rating intended for installation in fire barriers, where limited to 100 square inches, unless the glazing is not more than 100 square inches in area.~~

715.4.7.2 715.5.8.2 Exit and elevator protectives. *(No change to current text)*

715.4.7.3 715.5.8.3 Labeling. *(No change to current text)*

715.4.7.3.4 715.5.8.3.1 Identification. *(No change to current text)*

715.4.7.4 715.5.8.4 Safety glazing. *(No change to current text)*

(Renumber subsequent sections)

715.5.8 715.6.8 Interior fire window assemblies. Fire-protection-rated glazing used in fire window assemblies located in fire partitions and fire barriers shall be limited to use in assemblies with a maximum fire-resistance rating of 1-hour in accordance with this section.

715.5.8.1 715.6.8.1 Where ¾-hour fire-protection window assemblies permitted. Fire-protection-rated glazing requiring 45 minute opening protection in accordance with Table 715.5 715.6 shall be limited to fire partitions designed in accordance with Section 709 and fire barriers utilized in the applications set forth in Sections 707.3.6 and 707.3.8 where the fire resistance rating does not exceed 1 hour. Fire-resistance-rated glazing assemblies tested in accordance with ASTM E119 or UL 263 shall not be subject to the limitations of this section.

715.5.8.2 715.6.8.2 Area limitations. The total area of windows shall not exceed 25 percent of the area of a common wall with any room.

715.6.8.3. Where 1/3- hour fire-protection window assemblies permitted. Fire-protection-rated glazing shall be permitted in window assemblies tested to NFPA 257 or UL 9 in smoke barriers and fire partitions requiring 1/3-hour opening protection in accordance with Table 715.6

**TABLE 715.5-715.6
FIRE WINDOW ASSEMBLY FIRE-PROTECTION RATINGS**

TYPE OF WALL ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE WINDOW ASSEMBLY RATING (hours)	FIRE RATED GLAZING MARKING
Interior walls			
Fire walls	All	NP ^a	<u>W-xxx^b</u>
Fire barriers	>1	NP ^a	<u>W-xxx^b</u>
	1	NP ^a	<u>W-xxx^b</u>
<u>Incidental use areas (707.3.6), Mixed occupancy separations(707.3.8)</u>	<u>1</u>	<u>¾</u>	<u>OH-45 or W-60</u>
Fire partitions	1	¾	<u>OH-45 or W-60</u>
	0.5	1/3	<u>OH-20 or W-30</u>
Smoke barriers	1	¾	<u>OH-45 or W-60</u>
Exterior walls	>1	1-1/2	<u>OH-90 or W-XXX^B</u>
	1	¾	<u>OH-45 or W-60</u>
	<u>0.5</u>	<u>1/3</u>	<u>OH-20 or W-30</u>
Party wall	All	NP	<u>Not Applicable</u>

NP – Not Permitted

a. Not permitted except fire resistance rated glazing assemblies tested to ASTM E119 or UL 263, as specified in Section 715.2

b. xxx = The fire rating duration period in minutes, which shall be equal to the fire resistance rating required for the wall assembly.

715.5.9 715.6.9 Labeling. Fire-protection-rated glazing shall bear a label or other identification showing the name of the manufacturer, the test standard and information required Section 715.5.9.1 Table 715.6 that shall be issued by an approved agency and shall be permanently affixed to the glazing.

715.5.9.1 Identification. For fire protection-rated glazing, the label shall bear the following two-part identifiers: “OH–XXX.” “OH” shall indicate that the glazing has been tested to and meets both the fire protection and the hose-stream requirements of NFPA 257 or UL 9. “XXX” shall indicate the fire-protection rating period, in minutes, that was tested.

**TABLE 715.4-715.5
FIRE DOOR AND FIRE SHUTTER PROTECTION RATINGS
OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS**

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE	FIRE RATED GLAZING MARKING DOOR VISION PANEL^c	MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours)		FIRE RATED GLAZING MARKING SIDELITE/TRANSOM PANEL	
					Fire protection	Fire resistance	Fire protection	Fire resistance

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE	FIRE RATED GLAZING MARKING DOOR VISION PANEL ^e	MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours)		FIRE RATED GLAZING MARKING SIDELITE/TRANSOM PANEL	
Fire walls and fire barriers having a required fire resistance rating greater than 1 hour	4	3	<u>Not Permitted</u>	<u>Not Permitted</u>	<u>Not permitted</u>	<u>4</u>	<u>Not Permitted</u>	<u>W-240</u>
	3	3 ^a	<u>Not Permitted</u>	<u>Not Permitted</u>	<u>Not Permitted</u>	<u>3</u>	<u>Not Permitted</u>	<u>W-180</u>
	2	1-1/2	<u>100 sq. in.^c</u>	<u><=100 sq.in. = D-H-90</u> <u>>100 sq.in.= D-H-W-90</u>	<u>Not Permitted</u>	<u>2</u>	<u>Not Permitted</u>	<u>W-120</u>
	1-1/2	1-1/2	<u>100 sq. in.^c</u>	<u><=100 sq.in. = D-H-90</u> <u>>100 sq.in.= D-H-W-90</u>	<u>Not Permitted</u>	<u>1-1/2</u>	<u>Not Permitted</u>	<u>W-90</u>
	<u>2</u>	<u>1-1/2</u>	<u>100 sq. in.^c</u> _g	<u><=100 sq.in. = D-H-90</u> <u><=100 sq.in.= D-H-T-or D-H-T-W-90</u>	<u>Not Permitted</u>	<u>2</u>	<u>Not Permitted</u>	<u>W-120</u>
Shaft, exit enclosures and exit passageway walls								
Fire barriers having a required fire-resistance rating of 1 hour: Shaft, exit enclosure and exit passageway walls	1	1	<u>100 sq. in.^c</u> _g	<u><=100 sq.in. = D-H-60</u> <u>>100 sq.in.= D-H- T-60 or D-H-T-W-60</u>	<u>Fire protection</u> <u>Not Permitted</u>	<u>Fire resistance</u> <u>1</u>	<u>Fire protection</u> <u>Not Permitted</u>	<u>Fire resistance</u> <u>W-60</u>

TYPE OF ASSEMBLY	REQUIRED WALL ASSEMBLY RATING (hours)	MINIMUM FIRE DOOR AND FIRE SHUTTER ASSEMBLY RATING (hours)	DOOR VISION PANEL SIZE	FIRE RATED GLAZING MARKING DOOR VISION PANEL ^e	MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours)		FIRE RATED GLAZING MARKING SIDELITE/TRANSOM PANEL	
					Fire protection	Fire resistance	Fire protection	Fire resistance
Other fire barriers Fire partitions:: Corridor walls Other fire partitions	1	3/4	Maximum size tested	D-H-NT-45	Fire protection		D-H-NT-45	
	1	1/3 ^b	Maximum size tested	D-20	3/4 ^b		D-H-OH-45	
	0.5	1/3 ^b	Maximum size tested	D-20	1/3		D-H-OH-20	
	1	3/4	Maximum size tested	D-H-45	3/4		D-H-45	
	0.5	1/3		D-H-20	1/3		D-H-20	
Exterior walls	3	1-1/2	100 sq. in. ^c	≤100 sq.in. = D-H-90 >100 sq.in. D-H-W-90	Fire protection	Fire resistance	Fire protection	Fire resistance
					Not Permitted		3	
	2	1-1/2	100 sq. in. ^c	≤100 sq.in. = D-H-90 >100 sq.in.= D-H-W-90	Not Permitted	2	Not Permitted	W-120
					D-H-45	Fire Protection		D-H-NT-45
1	3/4	Maximum size tested		3/4				
Smoke barriers	1	1/3 ^b	Maximum size tested	D-20	Fire protection		D-H-OH-45	
					3/4			

- a. Two doors, each with a fire protection rating of 1-1/2 hours, installed on opposite sides of the same opening in a fire wall, shall be deemed equivalent in fire protection rating to one 3-hour fire door.
- b. For testing requirements, see Section 715.5.3 716.4.3.
- c. Fire resistance rated glazing tested to ASTM E119 per section 715.2 shall be permitted, in the maximum size tested.
- d. Except where the building is equipped throughout with an automatic sprinkler and the fire-rated glazing meets the criteria established in Section 715.5.5.1.
- e. Under the column heading "Fire rated glazing marking door vision panel", W refers to the fire-resistance rating of the glazing, not the frame.

Reason:

(Heilstedt) The ICC Board established the ICC Code Technology Committee (CTC) as the venue to discuss contemporary code issues in a committee setting which provides the necessary time and flexibility to allow for full participation and input by any interested party. The code issues are assigned to the CTC by the ICC Board as "areas of study". Information on the CTC, including: meeting agendas; minutes; reports; resource documents; presentations; and all other materials developed in conjunction with the CTC effort can be downloaded from the following website: <http://www.iccsafe.org/cs/cc/ctc/index.html>. Since its inception in April/2005, the CTC has held seventeen meetings - all open to the public.

This proposed change is a result of the CTC's investigation of the area of study entitled "Labeling of Fire Rated Glazing". The scope of the activity is noted as:

Identify root causes of problems selecting, specifying, installing, and inspecting fire protective and fire resistive glazing and other assembly components including the frames. Propose identification requirements and other related code changes.

The marking provisions of the IBC applicable to fire rated glazing ("Marking Provisions") were first adopted as a part of Chapter 7 of the IBC in 2004. In the last development cycle, the Fire Safety Committee recommended that the ICC Board consider submitting the marking of fire rated glazing to the Code Technology Committee (CTC) as an area of study since repeat proposals to change the Marking Provisions were being submitted on a regular basis.

The ICC Board referred the Marking Provisions to the CTC as an area of study and a Study Group (SG), Chaired Carl Wren, was formed. The SG consisted of both fire and building code officials; architects; engineers; fire rated window and door manufacturers; primary fire rated glazing manufacturers; and a fire protection engineer. It was recognized by the SG that the existing marking system, as those marks were designated in product listings, was leading to fire protection products in applications not allowed by the IBC. After numerous meetings and a full hearing before the CTC, the SG and the CTC unanimously approved proposing these changes to the IBC's Marking Provisions.

The primary objective of the CTC in proposing these changes is to make the Marking Provisions of Chapter 7 easier to understand and enforce and to minimize the possibility that the system could result in confusion between fire protection rated products in applications where fire-resistance rated products meeting ASTM E 119 are permitted. The proposal includes the following changes:

1- Adds a new Table 715.3, to define and relate the various test standards for fire rated glazing to the designations used to mark fire rated glazing. A new definition of the term "fire rated glazing" would also be included.

2- While the designations "W," "OH," "D," "DT," "DH" and "XXX" used to mark fire rated glazing will remain as they were originally adopted in 2004, the marking of fire rated glazing in fire door assemblies (D) are simplified by deleting the NH designation (not hose stream tested) and the NT designation (not temperature rise tested). It is clarified that those designations correspond to test standards, not end uses. Tables 715.4 and 715.5 show the markings required for acceptance in specified applications.

3- All text provision used to define and relate test standards to marking designations are deleted in favor of including all of the required marking provisions in Tables 715.3, 715.4 and 715.5. This is intended to provide building and fire code officials with easy access to all of the information needed when inspecting fire window and fire door installations, including required marking designations.

4- In connection with removing many of the text provisions referring to the marking of fire rated glazing and the inclusion of all pertinent marking requirements in tables 715.4 and 715.5, a number of columns are added to those Tables. These new columns specify the required designations that the building and fire code officials will need to look for when inspecting fire rated glazing in the various categories of fire resistance rated walls, fire door assemblies and fire window assemblies identified in Tables 715.4 and 715.5.

5- The size limitation provisions starting at 715.4.6.1 are re-written to eliminate the use of "exceptions" and thus clarify them - no substantive changes to these provisions are intended.

6- It was determined that Table 715.4 inadvertently omitted reference to 1 1/2 hour doors in shaft, exit enclosures and exit passageway walls and this proposal adds that reference to the Table.

7- The Marking Provisions have been written to clarify that fire protection rated glazing tested to NFPA 257 and used in transoms and sidelites in certain fire barriers and corridor walls will also have to be tested to NFPA 252 since they are a part of a door assembly. Accordingly, these glazings are marked D-H-OH-XXX.

(O'Keefe) The marking provisions of the IBC applicable to fire rated glazing ("Marking Provisions") were first adopted as a part of Chapter 7 of the IBC in 2004. In the last development cycle, the Fire Safety Committee recommended that the ICC Board consider submitting the marking of fire rated glazing to the Code Technology Committee (CTC) as an area of study since repeat proposals to change the Marking Provisions were being submitted on a regular basis, because of confusion and misuse of products being marked by individual manufacturers under the current system.

The ICC Board referred the Marking Provisions to the CTC as an area of study and a Study Group (SG), Chaired by Carl Wren, was formed. The SG consisted of both fire and building code officials; architects; engineers; fire rated window and door manufacturers; primary fire rated glazing manufacturers; and a fire protection engineer.

It was recognized by the SG that the existing marking system, as those marks were designated in product listings, was leading to the misuse of fire protection products in applications not allowed by the IBC. It was also recognized that "T" marking were being applied by some manufacturers to designate use of fire protection products in temperature rise doors that in fact did not limit temperature rise and should not be so marked. Attached as support are documents submitted to the CTC Labeling Study Group that show the confusion in listings showing end-use marks that are not permitted by the IBC. After numerous meetings and a full hearing before the CTC, the SG and the CTC unanimously approved proposing these changes to the IBC's Marking Provisions.

The primary objective of the CTC in proposing these changes is to make the Marking Provisions of Chapter 7 easier to understand and enforce and to minimize the possibility that the system could result in confusion between fire protection rated products in applications where fire-resistance rated products meeting ASTM E 119 are required. The proposal includes the following changes:

1- Adds a new Table 715.3, to define and relate the various test standards for fire rated glazing to the designations used to mark fire rated glazing. A new definition of the term "fire rated glazing" would also be included.

2- While the designations "W," "OH," "D," "DT," "DH" and "XXX" used to mark fire rated glazing will remain as they were originally adopted in 2004, the marking of fire rated glazing in fire door assemblies (D) are simplified by deleting the NH designation (not hose stream tested) and the NT designation (not temperature rise tested). It is clarified that those designations correspond to compliance with test standards only, not that they are permitted for end uses. Tables 715.4 and 715.5 show the markings required for acceptance in specified applications.

3- All text provision used to define and relate test standards to marking designations are deleted in favor of including all of the required marking provisions in Tables 715.3, 715.4 and 715.5. This is intended to provide building and fire code officials with easy access to all of the information needed when inspecting fire window and fire door installations, including required marking designations.

4- In connection with removing many of the text provisions referring to the marking of fire rated glazing and the inclusion of all pertinent marking requirements in tables 715.4 and 715.5, a number of columns are added to those Tables. These new columns specify the required designations that the building and fire code officials will need to look for when inspecting fire rated glazing in the various categories of fire resistance rated walls, fire door assemblies and fire window assemblies identified in Tables 715.4 and 715.5.

5- The size limitation provisions starting at 715.4.6.1 are re-written to eliminate the use of "exceptions" and thus clarify them - no substantive changes to these provisions are intended.

6- It was determined that Table 715.4 inadvertently omitted reference to 1 1/2 hour doors in shaft, exit enclosures and exit passageway

walls and this proposal adds that reference to the Table.

7- The Marking Provisions have been written to clarify that fire protection rated glazing tested to NFPA 257 and used in transoms and sidelites in certain fire barriers and corridor walls will also have to be tested to NFPA 252 since they are a part of a door assembly. Accordingly, these glazings are marked D-H-OH-XXX. It has also been clarified where fire rated glazing products must be tested to and marked as complying with ASTM E119 in sidelight and transom assemblies in openings requiring greater than ¾-hour protection, and for glazing sizes exceeding 100 sq. inches in doors rated 1-hour and greater.

8. Section 715.4.6.1 was revised to clarify labeling of door assembly components, and to recognize that door assemblies are permitted to have components labeled by different test agencies.

Bibliography: Examples of UL Listing Markings submitted to CTC Labeling Study Group.

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

Public Hearing:	AS	AM	D
Committee:	ASF	AMF	DF
Assembly:			

ICCFILENAME: HEILSTEDT-FS3-702