

2006 INTERNATIONAL FIRE CODE

Code Change No: **F84-07/08**

Original Proposal

Sections: 509.1 (IBC [F] 911.1)

Proponent: Ken Kraus, Fire Department, Los Angeles, CA

Revise as follows:

509.1 (IBC [F] 911.1) (Supp) Features. Where required by other sections of this code and in all buildings classified as high-rise buildings by the *International Building Code*, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in accordance with Section 706 of the *International Building Code* or horizontal assembly constructed in accordance with Section 711 of the *International Building Code*, or both. The room shall be a minimum of ~~96~~ 250 square feet (~~9~~ 23 m²) with a minimum dimension of ~~8~~ 10 feet (~~2438~~ 3048 mm). A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation. The fire command center shall comply with NFPA 72 and shall contain the following features:

1. The emergency voice/alarm communication system unit.
2. The fire department communications system.
3. Fire-detection and alarm system annunciator system.
4. Annunciator unit visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air-handling systems.
6. The fire-fighters control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking stairway doors simultaneously.
8. Sprinkler valve and water-flow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access.
13. Work table.
14. Generator supervision devices, manual start and transfer features.
15. Public address system, where specifically required by other sections of this code.
16. Elevator fire recall switch in accordance with ASME A17.1.
17. Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.

Reason: This proposal is intended to increase the minimum size of the Fire Command Center to a size and configuration that is conducive to effective use of the facility by emergency responders.

The current minimum requirement for the size of a Fire Command Center is impractical. Fire Command Centers (FCC) not only need to be designed to accommodate a significant number of emergency responders wearing full personal protective equipment. FCC's are also used to review building emergency plans during incidents, co-locate decision makers within the Incident Command System (ICS) and interpret fire protection system information. Given the multiple uses of the FCC, it is extremely likely that the limitations of a 10' by 10' room would serve to compromise the effectiveness of Incident management.

The current minimum size has proven in both exercise and emergency incident scenarios to be too small and confining.

A minimum size of 250 square feet allows for the necessary personnel to effectively perform the required tasks associated with a Fire Command Center.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

509.1 (IBC [F] 911.1) (Supp) Features. Where required by other sections of this code and in all buildings classified as high-rise buildings by the *International Building Code*, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in accordance with Section 706 of the *International Building Code* or horizontal assembly constructed in accordance with Section 711 of the *International Building Code*, or both. The room shall be a minimum of ~~250~~ 200 square feet (23 19 m²) with a minimum dimension of 10 feet (3048 mm). A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation. The fire command center shall comply with NFPA 72 and shall contain the following features:

(Features 1 through 17 are unchanged)

Committee Reason: The proposal was approved because the committee felt that it will provide additional working room for the fire command staff who will occupy the fire command center. The modification provides a more reasonable working size for the fire command center.

Assembly Action:

None

Final Hearing Results

F84-07/08

AM

Code Change No: F85-07/08

Original Proposal

Sections: 509.1 (IBC [F] 911.1)

Proponent: Lawrence G. Perry, AIA, representing Building Owners and Managers Association International (BOMA)

Revise as follows:

509.1 (IBC [F] 911.1) (Supp) Features. Where required by other sections of this code and in all buildings classified as high-rise buildings by the *International Building Code*, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in accordance with Section 706 of the *International Building Code* or horizontal assembly constructed in accordance with Section 711 of the *International Building Code*, or both. The room shall be a minimum of 96 square feet (9 m²) with a minimum dimension of 8 feet (2438 mm). A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation. The fire command center shall comply with NFPA72 and shall contain the following features:

1. The emergency voice/alarm communication system unit.
2. The fire department communications system.
3. Fire-detection and alarm system annunciator system.
4. Annunciator visually indicating the location of the elevators and whether they are operational.
5. Status indicators and controls for air-handling systems.
6. The fire-fighter=s control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking stairway doors simultaneously.
8. Sprinkler valve and water-flow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access, and the location of fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions.
13. Work table.
14. Generator supervision devices, manual start and transfer features.

15. Public address system, where specifically required by other sections of this code.
16. Elevator fire recall switch in accordance with ASME A17.1.
17. Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.

Reason: This proposal will add additional information to first responders in buildings having fire command centers. It will require that the schematic building plans, which are already required, include the location of fire walls, fire barriers, fire partitions, smoke barriers, and smoke partitions. BOMA believes this is a far better method of providing this information to fire inspectors and responding fire fighters than providing stencils or stickers on walls throughout the building. BOMA has submitted a separate proposal to delete the requirement for marking of rated walls (newly added to Section 703.6 of the IBC).

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it will provide the emergency operations commander with needed information in a convenient location at little or no cost.

Assembly Action:

None

Final Hearing Results

F85-07/08

AS

Code Change No: F87-07/08

Original Proposal

Sections: 511 (New), 907.2.12.2 (IBC [F] 907.2.12.2), Appendix I (New)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Add new text as follows:

SECTION 511
EMERGENCY RESPONDER RADIO COVERAGE

511.1 Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building.

511.2 Emergency responder radio coverage in existing buildings. Existing buildings that do not have approved radio coverage for emergency responders within the building shall be equipped with such coverage within 18 months of receiving notice of such deficiency from the fire code official.

2. Revise as follows:

907.2.12.2 (IBC [F] 907.2.12.2) (Supp) Fire department communication system. An approved ~~two-way, fire department communication~~ emergency responder radio coverage system designed and installed in accordance with NFPA 72 shall be provided for fire department use. It shall operate between a fire command center complying with Section 509 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. ~~The fire department communication device shall be provided at each floor level within the enclosed exit stairway.~~

Exception: ~~Fire department radio systems where approved by the fire department.~~

3. Add new appendix as follows:

APPENDIX I
EMERGENCY RESPONDER RADIO COVERAGE

SECTION I101
GENERAL

I101 Scope. Systems, components, and equipment required to provide emergency responder radio coverage shall be in accordance with this appendix.

I101.1 Permit. A construction permit is required for installation of or modification to emergency responder radio coverage systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

SECTION I102
DEFINITIONS

I102.1 Definitions. For the purpose of this appendix, certain terms are defined as follows:

AGENCY. Any emergency responder department within the jurisdiction that utilizes radio frequencies for communication. This could include, but not be limited to, various public safety agencies such as fire department, emergency medical services and law enforcement.

SECTION I103
TECHNICAL REQUIREMENTS

I103.1 Radio signal strength. The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 90 percent of all areas on each floor of the building meet the signal strength requirements in Sections I103.1.1 and I103.1.2.

I103.1.1 Minimum signal strength into the building. A minimum signal strength of -95 dBm shall be receivable within the building.

I103.1.2 Minimum signal strength out of the building. A minimum signal strength of -100 dBm shall be received by the agency's radio system when transmitted from within the building.

I103.2 System design. The emergency responder radio coverage system shall be designed in accordance with Sections I103.2.1 through I103.2.5.

I103.2.1 Amplification Systems Allowed. Buildings and structures which cannot support the required level of radio coverage shall be equipped with a radiating cable system, a distributed antenna system with FCC certified signal boosters, or other system approved by the fire code official in order to achieve the required adequate radio coverage.

I103.2.2 Technical criteria. The fire code official shall maintain a document providing the specific technical information and requirements for the emergency responder radio coverage system. This document shall contain, but not be limited to, the various frequencies required, the location of radio sites, effective radiated power of radio sites, and other supporting technical information.

I103.2.3 Secondary power. The emergency responder radio coverage system shall be equipped with a secondary source of power. The secondary source of power shall be either a battery system or an emergency generator. The secondary power supply shall supply power automatically when the primary power source is lost. The secondary source of power shall be capable of operating the emergency responder radio coverage system for a period of at least twelve hours.

I103.2.3.1 Battery Systems. The active components of the installed system or systems shall be capable of operating on an independent battery system for a period of at least twelve hours without external power input. The battery system shall automatically charge in the presence of external power input.

I103.2.4 Signal Booster requirements. If used, signal boosters shall meet the following requirements:

1. All signal booster components shall be contained in a NEMA4 type water proof cabinet.
2. The battery system shall be contained in a NEMA4 type water proof cabinet.
3. The system shall include automatic alarming of malfunctions of the signal booster and battery system. Any resulting trouble alarm shall be automatically transmitted to an approved central station or proprietary supervising station as defined in NFPA 72 or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.
4. Equipment shall have FCC Certification prior to installation.

I103.2.5 Additional frequencies and change of frequencies. The emergency responder radio coverage system shall be capable of modification or expansion in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC.

I103.3 Installation requirements. The installation of the public safety radio coverage system shall be in accordance with Sections I103.3.1 through I103.3.5.

I103.3.1 Approval prior to installation. No amplification system capable of operating on frequencies licensed to any public safety agency by the FCC shall be installed without prior coordination and approval of the fire code official.

I103.3.2 Permit required. A construction permit as required by Section 105.7.11 shall be obtained prior to the installation of the emergency responder radio coverage system.

I103.3.3 Minimum qualifications of personnel. The minimum qualifications of the system designer and lead installation personnel shall include:

1. A Valid FCC issued General Radio Operators License, and
2. Certification of in-building system training issued by a nationally recognized organization, school or a certificate issued by the manufacturer of the equipment being installed.

The agency may waive these requirements upon successful demonstration of adequate skills and experience satisfactory to the fire code official.

I103.3.4 Acceptance test procedure. When an emergency responder radio coverage system is required, and upon completion of installation, the building owner shall have the radio system tested to ensure that two-way coverage on each floor of the building is a minimum of 90 percent. The test procedure shall be conducted as follows:

1. Each floor of the building shall be divided into a grid of 20 approximately equal areas.
2. The test shall be conducted using a calibrated portable radio of the latest brand and model used by the agency talking through the agency's radio communications system.
3. A maximum of two nonadjacent areas will be allowed to fail the test.
4. In the event that three of the areas fail the test, in order to be more statistically accurate, the floor may be divided into 40 equal areas. A maximum of four nonadjacent areas will be allowed to fail the test. If the system fails the 40-area test, the system shall be altered to meet the 90 percent coverage requirement.
5. A test location approximately in the center of each grid area will be selected for the test, then the radio will be enabled to verify two-way communications to and from the outside of the building through the public agency's radio communications system. Once the test location has been selected, that location shall represent the entire area. If the test fails in the selected test location, that grid area shall fail, and prospecting for a better spot within the grid area will not be allowed.
6. The gain values of all amplifiers shall be measured and the test measurement results shall be kept on file with the building owner so that the measurements can be verified during annual tests. In the event that the measurement results become lost, the building owner will be required to rerun the acceptance test to reestablish the gain values.
7. As part of the installation a spectrum analyzer or other suitable test equipment shall be utilized to insure spurious oscillations are not being generated by the subject signal booster. This test will be conducted at time of installation and subsequent annual inspections.

I103.3.5 FCC compliance. The emergency responder radio coverage system installation and components shall also comply with all applicable Federal regulations, including but not limited to, Federal Communications Rules (47 CFR 90.219).

I103.4 Maintenance. The emergency responder radio coverage system shall be maintained in accordance with Sections I103.4.1 through I103.4.5.

I103.4.1 Maintenance. The public radio coverage system shall be maintained operational at all times.

I103.4.2 Permit required. A permit as required by Section 105.7.4 shall be obtained prior to the modification or alteration of the emergency responder radio coverage system.

I103.4.3 Testing and proof of compliance. The emergency responder radio coverage system shall be inspected and tested annually or whenever structural changes occur including additions or remodels that could materially change the original field performance tests. Testing shall consist of the following:

1. In-building coverage test as described in Section I103.3.4.
2. Signal boosters shall be tested to ensure that the gain is the same as it was upon initial installation and acceptance.
3. Backup batteries and power supplies shall be tested under load of a period of one hour to verify that they will properly operate during an actual power outage. If within the one hour test period the battery exhibits symptoms of failure, the test shall be extended for additional one hour periods until the integrity of the battery can be determined.
4. All other active components shall be checked to verify operation within the manufacturer's specifications.
5. At the conclusion of the testing a report shall be submitted to the fire code official which shall verify compliance with Section I103.3.4.

I103.4.4 Additional frequencies. The building owner shall modify or expand the emergency responder radio coverage system at their expense in the event frequency changes are required by the FCC or additional frequencies are made available by the FCC. Prior approval of a public safety radio coverage system on previous frequencies does not exempt this section.

I103.4.5 Field testing. Agency personnel shall have the right to enter onto the property at any reasonable time to conduct field-testing to verify the required level of radio coverage.

Reason: Large buildings have historically provided barriers to radio communications within them. This is the reason high rise buildings are required to install hard wired, two-way communications systems. The typical system has phone jacks strategically located throughout the building (in stairways, elevator lobbies, and inside elevators), with hand sets available to emergency responders in the lobby or the fire control room. However, problems with this solution include:

- Handset availability – even if they don't get stolen or misplaced, the typical building will only have five handsets, far too few for the dozens to hundreds of firefighters required to successfully bring a high rise fire under control
- Lack of training for responders – while some fire departments routinely train on these systems, each one is different, presenting problems remembering the special considerations necessary to operate successfully in each high rise building; other responders (law enforcement, EMS) don't train on these systems at all, and many times don't even know they exist
- Buildings other than high-rise interfere with routine radio communications, but aren't required to provide an alternative.

When this requirement was implemented, it was the best alternative available. Now, technology has progressed to a point where there are multiple solutions with multiple technologies to address virtually any situation. These solutions support emergency responders' radio systems so that no additional training is required by the responders; the same communication system that they use every day can be used in any building in a jurisdiction.

Emergency response agencies use radio communications routinely and lives depend on the adequacy of the radio communication system. Communications must be able to go both into and out of the buildings in times of emergency. Whether it be someone inside the building requesting assistance, or even worse calling May Day, or the Incident Commander outside the building trying to obtain a status report to make a determination on deployment of additional resources, communications is critical.

Some will complain of the cost of these systems, which range from the relatively inexpensive to very expensive, depending upon the solution chosen by the building owner or developer (one estimate is from \$.40/ft to \$1.25/ft). The fact is that tax payers have invested billions of dollars in their public safety communications systems. It isn't unusual for a mid-size jurisdiction to spend millions of dollars to equip emergency responders with communications systems, only to have a developer construct a building that defeats the entire system inside their facility. Good public policy dictates that these owners/developers bear the cost of upgrading their facilities to allow emergency responders to utilize the tools that tax payers have provided. This is in keeping with the philosophy inherent in the I-Codes that, when a facility grows too large or complex for effective fire response, that fire protection features be provided within the building at the owner's expense.

This proposal provides that an adequate level of communication is available within the building. Once a deficiency is noted in a building, the installation and technical criteria in Appendix I can be utilized to design and install a system to enhance the radio communications. There are several types of systems that can be utilized to enhance radio traffic and under this proposal any of these systems can be used.

This proposal also includes existing buildings in Section 511.2. While modeling and other techniques may provide a good prediction as to whether a building will interfere with radio communications, the reality is that it is unknown if a building will need to install any type of radio system enhancements until after the building is constructed. These issues are dependent on the construction type, shadows of other buildings, size of structure, etc. This proposal includes existing structures so that once the building is built, the system can be installed at any time, when and if it becomes necessary; it also provides a reasonable amount of time for existing buildings to come into conformance (18 months after notification).

The proposed Appendix I includes design, construction, maintenance and testing criteria. This provides guidance to the code official and ensures that the emergency responder radio coverage system will be operational throughout the life of the building.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action:**Approved as Submitted**

Committee Reason: The proposal was approved because the committee felt that it has merit and would resolve a serious and long-standing issue in fire department operational efficiency and safety. The committee indicated, however, that there are substantial issues which need to be resolved, including, but not limited to: applicability to "all" buildings would be unreasonable; the application to existing buildings would be onerous; there is no exception for single family residences; deleting the fire department communications system would eliminate a useful backup system; the title phrase "emergency responder" could lead to demands for other municipal departments that use radios to be provided with such a system; and technical requirements should not be relegated to an appendix. The committee expressed its hope that the continuing work on this topic by the ICC Code Technology Committee and the JFSRC would resolve the concerns.

Assembly Action:**None**

Public Comments

Individual Consideration Agenda

This item is on the agenda for individual consideration because public comments were submitted.

Public Comment 1:

Paul K. Heilstedt, PE, FAIA, Chair, ICC Code Technology Committee, (CTC), requests Approval as Modified by this public comment.

Tom Lariviere, Chair, ICC Joint Fire Service Review Committee (JFSRC), requests Approval as Modified by this public comment.

John Dean, representing the National Association of State Fire Marshals (NASFM), requests Approval as Modified by this public comment.

Sean DeCrane, representing the International Association of Fire Fighters (IAFM), requests Approval as Modified by this public comment.

Jack Murphy, representing the Fire Safety Directors of Greater New York, requests Approval as Modified by this public comment.

Modify proposal as follows:

511.1 Emergency responder radio coverage in new buildings. All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.

Exceptions:

1. Where approved by the building code official and the fire code official, a wired communication system shall be permitted to be installed or maintained in lieu of an approved radio coverage system.
2. Where it is determined by the fire code official that the radio coverage system is not needed.

511.2 Radio signal strength. The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 95 percent of all areas on each floor of the building meet the signal strength requirements in items 511.2.1 and 511.2.2.

511.2.1 Minimum signal strength into the building. A minimum signal strength of -95 dBm shall be receivable within the building.

511.2.2 Minimum signal strength out of the building. A minimum signal strength of -100 dBm shall be received by the agency's radio system when transmitted from within the building.

511.2- 511.3 Emergency responder radio coverage in existing buildings. Existing buildings that do not have approved radio coverage for emergency responders within the building shall be equipped with such coverage according to one of the following: ~~within 18 months of receiving notice of such deficiency from the fire code official.~~

1. Wherever existing wired communication system cannot be repaired or is being replaced, or where not approved in accordance with Section 511.1 Exception 1.
2. Within a time frame established by the adopting authority.

907.2.12.2 (IBC [F] 907.2.12.2) (Supp) Fire department communication system. ~~An approved emergency responder radio coverage system shall be provided for fire department use. It shall operate between a fire command center complying with Section 509 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. Where a wired communications system is approved in lieu of a radio coverage system in accordance with section 511, the wired fire department communications systems shall be designed and installed in accordance with NFPA 72 and shall operate between a fire command center complying with Section 509, elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication device shall be provided at each floor level within the enclosed exit stairway.~~

APPENDIX I
EMERGENCY RESPONDER RADIO COVERAGE

SECTION I103
TECHNICAL REQUIREMENTS

~~I103.1 Radio signal strength.~~ The building shall be considered to have acceptable emergency responder radio coverage when signal strength measurements in 90 percent of all areas on each floor of the building meet the signal strength requirements in Sections I103.1.1 and I103.1.2.

~~I103.1.1 Minimum signal strength into the building.~~ A minimum signal strength of -95 dBm shall be receivable within the building.

~~I103.1.2 Minimum signal strength out of the building.~~ A minimum signal strength of -100 dBm shall be received by the agency's radio system when transmitted from within the building.

(Renumber subsequent sections.)

(Portions of Appendix I of the proposal not shown remain unchanged.)

~~Commenter's Reason:~~ The CTC also proposed a code change to address repeaters in F171 – 07/08. The CTC prefers F87 and has worked with the proponent in developing a public comment to clarify the provisions for new and existing buildings.

~~511.1:~~ This section has been clarified to note that the existing coverage levels at the building (not in the building) need not be upgraded as a result of the need for coverage in the building. The purpose of the radio coverage in the building is to take the existing signal outside the building and amplify it. The exceptions provide an option for wired systems as an alternative and also if it is determined by the fire code official that emergency coverage is not needed, then it need not be provided. Obviously, both of these exceptions will require that the code official be consulted by the design professional.

There are two reasons for leaving an exception for the wired systems. One is because some fire service representatives have asked for the option to be there so they can make the decision whether or not to deal with the radio repeater system. Note that it is not automatically available, only if approved, so in your jurisdiction you won't have to approve it. The other reason for the wired option is because there are situations where you cannot solve the problem with radio repeater technology because the space is designed to prevent any radio waves from getting in or out, (lead shielding for example), in those cases the ability will exist for the local code officials to approve, (actually to require as well), a wired system if they agree it is the proper method for that space.

~~511.2:~~ The provisions for signal strength are viewed as critical and need to be uniformly applied. As such, they have been relocated from the proposed appendix and incorporated into the body of the code.

~~511.3:~~ There is clearly a need for existing buildings to be provided with coverage. However, requiring an existing wired system to be updated within 18 months when the system is operational or can be repaired is viewed as excessive. Further, an 18 month threshold is rather arbitrary and really should be left up to the adopting authority to decide the time frame for compliance for existing buildings.

~~907.2.12.2:~~ This comment is intended to clarify where wired systems are provided and approved, it can be used in lieu of a radio system and provides the technical language concerning how the system is to be installed.

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 fifteen meetings - all open to the public. This public comment is a result of the CTC's investigation of the area of study entitled "NIST World Trade Center Recommendations". The CTC web page for this area of study is: <http://www.iccsafe.org/cs/cc/ctc/WTC.html>

Final Hearing Results

F87-07/08

AMPC1

Code Change No: **F89-07/08**

Original Proposal

Sections: 604.2.15.1.3, 604.2.15.3, IBC [F] 403.10.2, IBC [F] 403.11.1

Proponent: James C. Gerren, Clark County, NV Department of Development Services

1. Revise as follows:

604.2.15.1.3 Connected facilities. Power and lighting facilities for the fire command center and elevators specified in Sections 403.8 and 403.9 of the *International Building Code*, as applicable, ~~and electrically powered fire pumps required to maintain pressure,~~ shall be transferable to the standby source. Standby power shall be provided for at least one elevator to serve all floors and be transferable to any elevator.

604.2.15.3 Emergency systems. Exit signs, exit illumination as required by Chapter 10, electrically powered fire pumps required to maintain pressure, and elevator car lighting are classified as emergency systems and shall operate within 10 seconds of failure of the normal power supply and shall be capable of being transferred to the standby source.

Exception: Exit sign, exit and means of egress illumination are permitted to be powered by a standby source in buildings of Group F and S occupancies.

2. Revise IBC as follows:

[F] 403.10.2 Standby power loads. The following are classified as standby power loads:

1. Power and lighting for the fire command center required by Section 403.8; and
- ~~2. Electrically powered fire pumps; and~~
- ~~3. 2. Ventilation and automatic fire detection equipment for smokeproof enclosures.~~

Standby power shall be provided for elevators in accordance with Sections 1007.4 and 3003.

[F] 403.11.1 Emergency power loads. The following are classified as emergency power loads:

1. Exit signs and means of egress illumination required by Chapter 10;
2. Elevator car lighting;
3. Emergency voice/alarm communications systems;
4. Automatic fire detection systems; and
5. Fire alarm systems.
6. Electrically powered fire pumps.

Reason: The purpose of the proposed change is to clarify the code.

Section 9.6.2.1 of NFPA 20 (2003 edition), Standard for the Installation of Stationary Pumps for Fire Protection, requires on-site generators that are used to supply alternate power to electric motor-driven fire pumps to meet the requirements of Level 1, Type 10, Class X emergency power supply systems (EPSSs) of NFPA 110, Standard for Emergency and Standby Power Systems. NFPA 110 (2005 edition), Table 4.1(b) requires Type 10 EPSSs to restore power within 10 seconds. Since standby power is required to be available within 60 seconds, it is not appropriate to include electrically powered fire pumps in the list of standby power loads. Accordingly, the proposed code change would move electrically powered fire pumps from the list of standby power loads in Section 604.2.15.1.3 and IBC [F] 403.10.2 to the list of emergency power loads in Section 604.2.15.3 and IBC [F] 403.11.1.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it will provide correlation with the referenced standard, NFPA 20.

Assembly Action:

None

Final Hearing Results

F89-07/08

AS

Code Change No: **F116-07/08**

Original Proposal

Table 803.3; IBC Table 803.9

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

THESE PROPOSALS ARE ON THE AGENDA OF THE IFC AND THE IBC FIRE SAFETY CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IFC

Revise table as follows:

**TABLE 803.3
INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY^k**

Group	Sprinklered ^l			Nonsprinklered		
	Exit enclosures and exit passageways ^{a,b}	Corridors	Rooms and enclosed spaces ^c	Exit enclosures and exit passageways ^{a,b}	Corridors	Rooms and enclosed spaces ^c
B, E, M, R-1, R-4	B	C	C	A	B	C
<u>R-4</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>B</u>

(Portions of table and footnotes not shown remain unchanged)

PART II – IBC FIRE SAFETY

Revise table as follows:

**TABLE 803.9 (Supp)
INTERIOR WALL AND CEILING FINISH REQUIREMENTS BY OCCUPANCY^k**

Group	Sprinklered ^l			Nonsprinklered		
	Exit enclosures and exit passageways ^{a,b}	Corridors	Rooms and enclosed spaces ^c	Exit enclosures and exit passageways ^{a,b}	Corridors	Rooms and enclosed spaces ^c
B, E, M, R-1, R-4	B	C	C	A	B	C
<u>R-4</u>	<u>B</u>	<u>C</u>	<u>C</u>	<u>A</u>	<u>B</u>	<u>B</u>

(Portions of table and footnotes not shown remain unchanged)

Reason: Table 803.3 in the IFC governs wall and ceiling finish in existing buildings. Table 803.3 in the IBC governs wall and ceiling finish in new buildings.

The change that occurs in this proposal is to increase the flame spread rating from Class C to Class B in rooms and areas within Group R-4 occupancies. These occupancies house clients that in many cases need assistance to evacuate. The increased level of safety afforded by requiring a Class B rating will provide additional time for evacuation before the room is totally involved in fire.

This proposal is consistent with Federal regulations for board and care facilities.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

PART I – IFC

Committee Action:

Disapproved

Committee Reason: The proposal was disapproved because the committee had several concerns with the proposal, including that federal licensing requirements should remain a choice, not an IFC mandate because the code cannot accommodate widely varying licensure requirements. Also, changing the class of interior finish for non-sprinklered Group R-4 in the proposal would be in conflict with the IBC interior finish requirements for new buildings. Applying the provisions to existing buildings would create an undue burden in requiring changes to existing interior finishes.

Assembly Action:

None

PART II – IBC FIRE SAFETY
Committee Action:

Approved as Submitted

Committee Reason: The committee agreed that it was appropriate for the allowable flame spread index in Group R-4, interior wall and ceiling finishes, to be reduced in some instances. Occupants with Group R-4 in many cases need assistance to evacuate. The increased level of safety afforded by requiring a lower maximum flame spread index (Class B rating) provides additional time for evacuation of the structure.

Assembly Action:

None

Final Hearing Results

F116-07/08, Part I	D
F116-07/08, Part II	AS

Code Change No: F120-07/08

Original Proposal

Sections: 804.1; IBC [F] 806.5

Proponent: Douglas H. Evans, PE, Department of Development Services, Clark County, NV

1. Revise IFC as follows:

804.1 (Supp) Interior trim. Material, other than foam plastic, used as interior trim shall have a minimum Class C flame spread index and smoke-developed index, when tested in accordance with ASTM E 84, as described in Section 803.1.1. Combustible trim, excluding handrails and guardrails, shall not exceed 10 percent of the specific wall or ceiling areas ~~in to~~ which it is ~~located~~ attached.

2. Revise IBC as follows:

[F] 806.5 (Supp) Interior trim. Material, other than foam plastic used as interior trim shall have a minimum Class C flame spread and smoke-developed index when tested in accordance with ASTM E 84 or UL 723, as described in Section 803.1. Combustible trim, excluding handrails and guardrails, shall not exceed 10 percent of the aggregate specific wall or ceiling area ~~in to~~ which it is ~~located~~ attached.

Reason: If one reads the code literally, 10 percent all the allowable decorative wall materials may be placed on a single wall, which may actually allow the quantity of decorative materials to exceed the size of a specific wall. The proposed revision limits the percentage of decorative material to the respective wall.

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

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

804.1 (Supp) Interior trim. Material, other than foam plastic, used as interior trim shall have a minimum Class C flame spread index and smoke-developed index, when tested in accordance with ASTM E 84 or UL 723, as described in Section 803.1.1. Combustible trim, excluding handrails and guardrails, shall not exceed 10 percent of the specific wall or ceiling areas to which it is attached.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal was approved because the committee felt that it will provide better control of the fire load of interior finishes. The committee did express a concern that the retroactive provisions of the IFC should recognize that there may be previously approved applications based on the IBC's "aggregate" wall or ceiling area. The modification provides correlation with IBC Section [F] 806.5 and other sections that reference both ASTM E 84 and UL 723 as a result of the approval of code change FS11-06/07 in the last cycle.

Assembly Action:

None

Final Hearing Results

F120-07/08

AM

Code Change No: **F121-07/08**

Original Proposal

Sections: 804.2.3 (IBC [F] 2604.2.3)

Proponent: Douglas H. Evans, PE, Department of Development Services, Clark County, NV

Revise as follows:

804.2.3 (IBC [F] 2604.2.3) (Supp) Area limitation. The interior trim shall not constitute more than 10 percent of the specific wall or ceiling areas of a room or space to which it is attached.

Reason: First of all, the code is inconsistent. Sometimes it specifies walls and ceilings and sometimes walls or ceilings. This revision can be looked at partially as clarification.

Most importantly, imagine a 100,000 sq ft casino, convention center or ballroom with 30 foot high walls (this is not uncommon). Within the other limitations specified in this section, a substantial quantity of decorative foam plastic materials may be installed on a single wall or ceiling. For the 100,000 sq ft example specified, that could allow in excess of 13,000 sq ft of decorative combustible foam plastic "trim".

Cost Impact: The code change proposal will increase the cost of construction and should not affect most applications

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved as Submitted for consistency with the action taken on code change F120-07/08.

Assembly Action:

None

Final Hearing Results

F121-07/08

AS

Code Change No: **F128-07/08**

Original Proposal

Sections: 807.1.2 (IBC [F] 806.1.2)

Proponent: Douglas H. Evans, PE, Department of Development Services, Clark County, NV

Revise as follows:

807.1.2 (IBC [F] 806.1.2) Combustible decorative materials. The permissible amount of decorative materials meeting the flame propagation performance criteria of NFPA 701 shall not exceed 10 percent of the aggregate area of specific walls and ceilings wall or ceiling area to which it is attached.

Exceptions:

1. In auditoriums in Group A, the permissible amount of decorative material meeting the flame propagation performance criteria of NFPA 701 shall not exceed ~~50~~ 75 percent of the aggregate wall ~~area of walls and ceiling~~ where the building is equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, and where the material is installed in accordance with Section 803.4 of the *International Building Code*.
2. The amount of fabric partitions suspended from the ceiling and not supported by the floor in Group B and M occupancies shall not be limited.

Reason: First of all, the code is inconsistent. Sometimes it specifies walls and ceilings and sometimes walls or ceilings. This revision can be looked at partially as clarification.

Most importantly, imagine a 100,000 sq ft casino, convention center or ballroom with 30 foot high walls (this is not uncommon). If one reads the code literally, this section allows all the decorative materials to be placed in a single location. This could allow draperies or other combustible features to be well in excess of the entire wall area. For the 100,000 sq ft example specified, that could allow in excess of 13,000 sq ft of decorative combustible applications in a single location.

The change to Exception 1 clarifies that the surface being considered is the walls and not the ceiling. In most cases, 50 percent of the walls and ceiling area will exceed 75 percent of the wall area. As such, the proposed amendment will be more conservative (and more specific), while still allowing draperies in theaters to cover a substantial portion of the walls.

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

Public Hearing Results

Committee Action:**Approved as Submitted**

Committee Reason: The proposal was approved as Submitted for consistency with the actions taken on code changes F120- and F121-07/08.

Assembly Action:**None**

Final Hearing Results

F128-07/08

AS

Code Change No: **F132-07/08**

Original Proposal

Sections: 903.2.1.3, 903.2.1.4 (IBC [F] 903.2.1.3, [F] 903.2.1.4)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

903.2.1.3 (IBC [F] 903.2.1.3) Group A-3. An automatic sprinkler system shall be provided for Group A-3 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²);
2. The fire area has an occupant load of 300 or more; or
3. The fire area is located on a floor other than the level of exit discharge.

Exception: ~~Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.~~

903.2.1.4 (IBC [F] 903.2.1.4) Group A-4. An automatic sprinkler system shall be provided for Group A-4 occupancies where one of the following conditions exists:

1. The fire area exceeds 12,000 square feet (1115 m²);
2. The fire area has an occupant load of 300 or more; or
3. The fire area is located on a floor other than the level of exit discharge.

Exception: ~~Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.~~

Reason: The intention of the exception was for gymnasiums and similar areas where the probable occupant load was significantly less than what would be determined based on a square footage per occupant factor. These facilities have become multi-use and the occupant load is frequently higher than what was anticipated or expected when the exception was developed, and the fire load can vary based on the used to far exceed what would be expected for a sporting area.

For example, a community recreation center is constructed with no sprinklers over the gymnasium floor. The same area is also utilized for receptions and various community activities such as work fairs, rummage sale, art exhibits, emergency shelters for persons displaced by natural disasters, etc. Such uses could even include eating, sleeping, and fire loads far in excess of a few uniforms and leather volleyballs.

Cost Impact: Since the rest of the building will be sprinklered, the additional cost is only for additional sprinkler lines.

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal was disapproved because the committee felt that the current exception that is aimed at limited-use facilities is needed and that the "exclusive" use of the area for participant sports is the key to successful application and must be strictly enforced by the fire code official at the outset of a project. Changes to the use of the area after occupancy should be reviewed as an illegal change in use that must be regulated.

Assembly Action:

None

Public Comments

Individual Consideration Agenda

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

Public Comment:

Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee, requests Approval as Submitted.

Commenter-s Reason: This public comment allows for the facility to be construction without any restrictions on use or the need for the local fire code official to track each and every event in each and every location where this exception was utilized within the jurisdiction.

The intention of the exception was for gymnasiums and similar areas where the probable occupant load was significantly less than what would be determined based on a square footage per occupant factor. These facilities have become multi-use and the occupant load is frequently higher than what was anticipated or expected when the exception was developed, and the fire load can vary based on the used to far exceed what would be expected for a sporting area.

For example, a community recreation center is constructed with no sprinklers over the gymnasium floor. The same area is also utilized for receptions and various community activities such as work fairs, rummage sale, art exhibits, emergency shelters for persons displaced by natural disasters, etc. Such uses could even include eating, sleeping, and fire loads far in excess of a few uniforms and leather volleyballs.

Final Hearing Results

F132-07/08

AS

Code Change No: **F133-07/08**

Original Proposal

Sections: 903.2.2 (IBC [F] 903.2.2)

Proponent: Jeff Hugo, National Fire Sprinkler Association

Revise as follows:

903.2.2 (IBC [F] 903.2.2) (Supp) Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. Throughout all Group E fire areas greater than ~~20,000~~ 12,000 square feet (~~1858~~ 1115 m²) in area.
2. Throughout every portion of educational buildings below the lowest level of exit discharge that serves that portion of the building.

Exception: An automatic sprinkler system is not required in any fire area or area below the level of exit discharge where every classroom throughout the building has at least one exterior exit door at ground level.

Reason: The continuity of mission is important for educational occupancies. If a community loses a school that community cannot quickly recover to resume normal school activities. There are several similarities between educational and several other occupancies, therefore sprinkler requirements should also be similar. Reducing the fire area from 20,000 s.f. to 12,000 s.f. will aid in fire fighter rescue, smaller area of damage, and a quicker recovery to school programs if a sprinkler system is not chosen. Although through consistent fire drills, deaths are rare, but the possibility exists for a large loss of life in educational occupancies. A threshold of 20,000 square feet is one of the highest minimum sprinkler thresholds in the code and exists without good reason. Some states have already mandated complete sprinkler protection in educational occupancies.

In most cases it is not economically feasible to build a school without sprinkler protection. The cost savings for a community to build a school is introduced when the decision to install sprinklers is done at the early stages of the project where they can take advantage of the sprinkler trade ups for building construction. Another factor to consider is federal, state, and local tax monies available to build and repair schools. A fire sprinkled school will cost less to insure, less to rebuild, less liability to the school system, less injuries, less taxes, and less downtime. According to statistics only 24% of the nation's schools have fire sprinklers. However the average fire loss when sprinklers are present are \$2,800 versus \$12,900 having no sprinklers, resulting in a 78% reduction in damage.

Fires during lockdowns, hostage, or terrorist events are now a concern than during the legacy codes where the 20,000 s.f. threshold evolved from. A fire during a lockdown is a lose-lose event for the administrators' and children. Fire sprinklers can control the fire during the lockdown in lieu of endangering the children exiting during the lockdown or prohibiting egress caused by the fire.

Statistics from a four year period of 1999-2002, there were an estimated average of 7,070 structure fires in educational occupancies along with 113 injuries and \$112 million in property damage. K-12 schools make up 5,230 fires, 88 injuries, and \$74 million in fire damage. This is money from the taxes we pay, and these are our children getting burned and injured. Fire sprinklers can reduce the cost while increasing fire protection. Including fire sprinklers during the design process can significantly reduce the construction cost.

Bibliography:

EDUCATIONAL PROPERTIES, National Fire Protection Association, September 2006

Practical Information on Crisis Planning: A Guide for Schools and Communities, US Dept of Education, Jan. 2007

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide increased life safety and property protection in buildings that are an essential part of a community. Whereas several previous proposals sought to sprinkler all schools without exception, this proposal includes a reduced but reasonable threshold that is similar to other sprinkler thresholds in Section 903.

Assembly Action:

None

Final Hearing Results

F133-07/08

AS

Code Change No: F135-07/08

Original Proposal

Sections: 903.2.6 (IBC [F] 903.2.6)

Proponent: Jesse J. Beitel, Hughes Associates, Inc., representing American Home Furnishings Alliance and National Home Furnishings Association

Revise as follows:

903.2.6 (IBC [F] 903.2.6) Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. Where a Group M fire area exceeds 12,000 square feet (1115 m²);
2. Where a Group M fire area is located more than three stories above grade plane; or
3. Where the combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m²); or
4. Where a Group M occupancy is used primarily for the display and sale of upholstered furniture.

Reason: This proposal is submitted jointly by the American Home Furnishings Alliance (AHFA) and the National Home Furnishings Association (NHFA) in the interest of making furniture retail and warehouse facilities safer for employees, customers and first responders. AHFA represents manufacturers and importers of residential furniture, some of whom also operate branded retail stores. NHFA's membership comprises 2,800 corporate entities representing 10,000 retail furniture stores in all 50 states and several foreign countries.

The proposal to require sprinklers for Group M occupancies containing significant amounts of upholstered furniture recognizes that, under certain circumstances, all upholstered furniture will ignite and contribute to the fuel load of a fire. There is no such thing as totally fire safe upholstered furniture.

The AFHA and the NHFA have examined proposals for exempting vendors of certain constructions of furniture and concluded that such exemptions would be impractical for local code officials to enforce. This is the case because the internal construction of furniture cannot be established reliably without deconstructing it.

Further, materials and constructions touted as more fire resistant have not proven so to the satisfaction of fire authorities. The U.S. Consumer Product Safety Commission (CPSC) has tested furniture with combustion modified polyurethane foam such as that required in California and the United Kingdom and found that such foam does not meaningfully improve fire performance when furniture is exposed to an open flame. Other researchers have found that constructions employing the fire-blocking barriers now prevalent in mattresses do not reliably slow the progression of furniture fires. This is likely due to the variety of upholstery fabrics and seating geometries typical of furniture as compared to mattresses.

The most protective code measure would establish uniform, easily enforceable sprinkler requirements and not base safety considerations on differences in furniture construction that may or may not exhibit better fire performance in a retail setting.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

903.2.6 (IBC [F] 903.2.6) Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. Where a Group M fire area exceeds 12,000 square feet (1115 m²);
2. Where a Group M fire area is located more than three stories above grade plane;
3. Where the combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m²); or
4. Where a Group M occupancy is used ~~primarily~~ for the display and sale of upholstered furniture.

Committee Reason: The proposal was approved because the committee felt that it is a good first step supported by the furniture industry in attempting to deal with the hazards presented by upholstered furniture. The committee indicated its sense that future efforts on the topic need to address Group F and S upholstered furniture occupancies as well and that a reasonable sprinkler threshold needs to be added to provide some relief to the small businesses that will now be affected. The modification removes a subjective term that the committee felt could create serious enforcement inconsistencies.

Assembly Action:

None

Final Hearing Results

F135-07/08

AM

Code Change No: F136-07/08

Original Proposal

Sections: 903.2.8, 903.2.8.1, 903.2.9 (IBC [F] 903.2.8, [F] 903.2.8.1, [F] 903.2.9)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

903.2.8 (IBC [F] 903.2.8) Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 fire area exceeds 12,000 square feet (1115 m²);
2. A Group S-1 fire area is located more than three stories above grade plane; or
3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m²).
4. A group S-1 fire area used for the storage of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m²).

903.2.8.1 (IBC [F] 903.2.8.1) (Supp) Repair garages. An automatic sprinkler system shall be provided throughout all buildings used as repair garages in accordance with Section 406 of the *International Building Code*, as shown:

1. Buildings having two or more stories above grade plane, including basements, with a fire area containing a repair garage exceeding 10,000 square feet (929 m²).
2. Buildings no more than one story above grade plane, with a fire area containing a repair garage exceeding 12,000 square feet (1115 m²).
3. Buildings with a repair garage servicing vehicles parked in the basement.
4. A group S-1 fire area used for the repair of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m²).

903.2.9 (IBC [F] 903.2.9) (Supp) Group S-2. An automatic sprinkler system shall be provided throughout buildings classified as enclosed parking garages in accordance with Section 406.4 of the *International Building Code* as follows.

1. Where the fire area of the enclosed parking garage exceeds 12,000 square feet (1115 m²); or
2. Where the enclosed parking garage is located beneath other groups.

~~**Exception:** Enclosed parking garages located beneath Group R-3 occupancies.~~

Reason: This proposal adds an additional trigger for sprinkler protection in repair garages. This is a logical alignment with Section 903.2.9.1. Currently, a building that stores trucks is required to be protected by a fire sprinkler system at 5,000 square feet but if trucks are repaired within the same building, the building can go up to 12,000 square feet. The addition of the term 'stored' within 903.2.8 has been added since a multi-purpose are used to store more than trucks, such as a fire station bay, is an S-1 rather than an S-2.

The removal of the exception to 903.2.9 is to add clarity. Group R-3 occupancies are required to be protected by a fire sprinkler system and the exception adds confusion.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

903.2.9 (IBC [F] 903.2.9) (Supp) Group S-2. An automatic sprinkler system shall be provided throughout buildings classified as enclosed parking garages in accordance with Section 406.4 of the *International Building Code* as follows.

1. Where the fire area of the enclosed parking garage exceeds 12,000 square feet (1115 m²); or
2. Where the enclosed parking garage is located beneath other groups.

Exception: Enclosed parking garages located beneath Group R-3 occupancies.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal was disapproved because the committee felt that it will provide fire protection for the more hazardous area of garages. The modification retains the exception because Group R-3 occupancies can be sprinklered with an NFPA 13D system which would not include the garages.

Assembly Action:

None

Final Hearing Results

F136-07/08

AM

Code Change No: **F138-07/08**

Original Proposal

Sections: 903.2.10, 903.2.12.1, 903.2.12.2, 903.2.13, Table 903.2.13 (IBC [F] 903.2.10, [F] 903.2.12.1, [F] 903.2.12.2, [F] 903.2.13, [F] Table 903.2.13)

Proponent: Daniel E. Nichols, PE, NY State Division of Code Enforcement and Administration

1. Revise as follows:

903.2.10 (IBC [F] 903.2.10) ~~Windowless stories in all occupancies~~ Specific buildings areas and hazards. In all occupancies an automatic sprinkler system shall be installed for building design or hazards in the locations set forth in Sections 903.2.10.1 through ~~903.2.10.1.3~~ 903.2.10.6.

Exception: Group R-3 and Group U.

2. Relocate sections and table as follows:

~~903.2.12.1~~ **903.2.10.4 (IBC [F] ~~903.2.12.1~~ [F] 903.2.10.4) Ducts conveying hazardous exhausts.** Where required by the *International Mechanical Code*, automatic sprinklers shall be provided in ducts conveying hazardous exhaust, flammable or combustible materials.

Exception: Ducts where the largest cross-sectional diameter of the duct is less than 10 inches (254 mm).

~~903.2.12.2~~ **903.2.10.5 (IBC [F] ~~903.2.12.2~~ [F] 903.2.10.5) Commercial cooking operations.** An automatic sprinkler system shall be installed in a commercial kitchen exhaust hood and duct system where an automatic sprinkler system is used to comply with Section 904.

~~903.2.13~~ **903.2.10.6 (IBC [F] ~~903.2.13~~ [F] 903.2.10.6) Other required suppression system.** In addition to requirements of 903.2, the provisions indicated in Table ~~903.2.13~~ 903.2.10 also require the installation of a suppression system for certain buildings and areas.

**TABLE 903.2.13 903.2.10 (IBC TABLE [F] ~~903.2.13~~ [F] 903.2.10)
ADDITIONAL REQUIRED FIRE-EXTINGUISHING SYSTEMS**

(No change to table contents)

Reason: At present both Section 903.2.10 and 903.2.12 identify “other” places where sprinkler protection is required. These 5 things are either based on an identifiable hazard of the activity or design. As compared to section 903.2.11 which is essentially a list of references to other provisions, these 5 are detailed in Section 903. The distinction between the items in 903.2.10 and .12 is artificial and unneeded. Further, the existing title of 903.2.10 – Windowless stories in all occupancies is misleading. Only subsection 903.2.10.1 addresses the windowless situation. The intent of this proposal is editorial. It results in the sprinkler requirement provisions of 903 to be in 4 rough categories: 1 – Based on occupancy; 2 – based on building design or feature; 3-reference to other section; 4 – during construction;

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

Public Hearing Results

Committee Action:**Approved as Submitted****Committee Reason:** The proposal was approved because the committee felt that it provides a logical reorganization of the sections.**Assembly Action:****None**

Final Hearing Results

F138-07/08**AS**

Code Change No: F140-07/08

Original Proposal

Sections: 903.3.1.2 (IBC [F] 903.3.1.2)**Proponent:** Jeffrey M. Shapiro, PE, International Code Consultants, representing National Multi Housing Council**Revise as follows:**

903.3.1.2 (IBC [F] 903.3.1.2) NFPA 13R sprinkler systems. ~~Where allowed in buildings of In~~ Group R occupancies, up to and including four stories in height, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13R.

Reason: The proposed change is intended to clarify application of the code with respect to NFPA 13R systems. The title of NFPA 13R is "Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height," with the key word being "occupancies." Currently, Section 903.3.1.2, by referring to "buildings of Group R," implies that NFPA 13R systems would not be permitted in any portion of a mixed use occupancy, which is inappropriate. In a mixed use containing Group R, it is entirely appropriate to permit NFPA 13R as a basis for sprinkler protection in the residential portion of the building, as well as accessory uses within residential areas. Other areas are, however, be required to be protected in accordance with NFPA 13. The proposal makes this clear.

Note that Section 903.2.7 still requires fire sprinklers throughout all buildings with a Group R fire area, so by changing Section 903.3.1.2 to refer to "occupancies," there is no impact on the requirement that the entire building containing a Group R fire area must be sprinklered.

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

Public Hearing Results

Committee Action:**Disapproved**

Committee Reason: The proposal was disapproved because the committee disagreed that the proposal is a simple clarification and clean-up of the section and felt that there is also sufficient ambiguity in Section 903.3.1 and all of its subsections to create a need for a complete re-work of that section and all of its subsections. It was felt that this section could be viewed as a specific requirement that would override Section 903.3.1 which could be viewed as only the general requirement and that mixed uses could claim on that basis that non-residential parts of the building do not need to comply with NFPA 13. Based on the proposed wording, it was also felt that this revised section could mandate the use of NFPA 13R for all Group R occupancies

Assembly Action:**None**

Public Comments

Individual Consideration Agenda

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

Public Comment:

Jeffrey Shapiro, PE, International Code Consultants, representing National Multi Housing Council, requests Approval as Modified by this public comment.

Replace proposal with the following:

903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Sections 903.3.1.1, unless otherwise permitted by Sections 903.3.1.2 or 903.3.1.3.

903.3.1.1 NFPA 13 sprinkler systems. Where the provisions of this code require that a building or portion thereof be equipped throughout with an automatic sprinkler system in accordance with this section, sprinklers shall be installed throughout in accordance with NFPA 13 except as provided in Section 903.3.1.1.1.

903.3.1.1.1 Exempt locations. Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the fire code official.
3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. Rooms or areas that are of noncombustible construction with wholly noncombustible contents.
5. Fire service access elevator machine rooms and machinery spaces.

903.3.1.2 NFPA 13R sprinkler systems. ~~Where allowed in buildings of Group R, up to and including four stories in height, a~~ Automatic sprinkler systems ~~shall be in Group R occupancies up to and including four stories in height shall be permitted to be~~ installed throughout in accordance with NFPA 13R.

903.3.1.2.1 Balconies and decks. Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units where the building is of Type V construction, provided there is a roof or deck above. Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

903.3.1.3 NFPA 13D sprinkler systems. ~~Where allowed,~~ Automatic sprinkler systems ~~installed~~ in one- and two-family dwellings shall be permitted to be installed throughout in accordance with NFPA 13D.

Commenter's Reason: The proposed revision addresses the request of the code development committee for a comprehensive cleanup of this section. Although our original intent was simply to clarify application of the code with respect to NFPA 13R systems, the committee made it clear that they wanted the whole section fixed. That has now been done.

Final Hearing Results

F140-07/08

AMPC

Code Change No: F144-07/08

Original Proposal

Sections: 903.3.1.3 (IBC [F] 903.3.1.3)

Proponent: Anthony C. Apfelbeck, City of Altamonte Springs, FL

Revise as follows:

903.3.1.3 (IBC [F] 903.3.1.3) NFPA 13D sprinkler systems. Where allowed, automatic sprinkler systems installed in one and two-family dwellings and townhouses shall be installed throughout in accordance with NFPA 13D.

Reason: This proposal clarifies that NFPA 13D systems are an appropriate application in the townhouse environment. A townhouse is defined as a "single-family dwelling" by the IBC and the IRC. IRC Section R317.2 further indicates, "Each townhouse shall be considered a separate building. . ." NFPA 13D's scope states, "This standard shall cover the design and installation of automatic sprinkler systems for protection against the fire hazards in one- and two-family dwellings and manufactured homes." NFPA 13D's definition of dwelling states, "Any building that contains not more than one or two dwelling units. . ." Therefore, since each townhouse is classified as a separate building designed under the IBC, IRC and 13D definitions, the 13D system is an appropriate level of protection for each townhouse.

There are also a number of practical applications that preclude the utilization of a 13R system in a townhouse environment without significant difficulty:

1. Since "townhomes" typically involve separate ownership of property and the units extent from "foundation to roof", a common 13R system piping supplying all units would necessitate a complex common ownership element shared between the differing property owners. A community association would need to be established in order to "own" the common element. This common element may also require recorded easement to access the system in each persons house.
2. This community association would need to maintain the 13R system since 13R systems require maintenance and inspections in accordance with NFPA 25. This would involve coordinated access to each property and a shared maintenance cost.
3. If an external bell or monitoring of the 13R system is required, this would necessitate a separate house electrical panel, again owned by a community association. This would create an ongoing expense of electrical service and maintenance/testing of a fire alarm monitoring panel, if present.
4. If monitoring of the 13R system is required, this would then mandate a method of transmission which may involve the added expense of phone lines to the community association. An easement may be needed to access the phone lines.

None of these issues are present when an NFPA 13D system is installed in a townhouse. Therefore, the 13D system is appropriate for the townhouse application.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it is consistent with the scope of NFPA 13D. It was pointed out, however, that the definition of "townhouse" in the IBC includes 3 or more attached dwelling units which differs from the term defined in the IRC. Some separation requirement could be added to this section to resolve that issue.

Assembly Action:

None

Final Hearing Results

F144-07/08

AS

Code Change No: F147-07/08

Original Proposal

Sections: 903.4.1 (IBC [F] 903.4.1)

Proponent: Steven L. Schoon, Golder Ranch Fire District, AZ, representing Arizona Fire Marshals Association

Revise as follows:

903.4.1 (IBC [F] 903.4.1) (Supp) Monitoring. Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved ~~central station, remote supervising station or proprietary~~ supervising station or, when approved by the fire code official, shall sound an audible signal at a constantly attended location.

Exceptions:

1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.
2. Backflow prevention device test valves located in limited area sprinkler system supply piping shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

Reason: The proposed revision is for consistency with the code language found in the fire alarm system monitoring Section 907.7.5 (2007 Supplement to the IFC) Supervising Station is defined by the IFC and the wording of central station, remote supervising station or proprietary supervising station is not needed.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it removes unnecessary text.

Assembly Action:

None

Final Hearing Results

F147-07/08

AS

Code Change No: F157-07/08

Original Proposal

Sections: 905.3.3 (IBC [F] 905.3.3)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

905.3.3 (IBC [F] 905.3.3) (Supp) Covered mall buildings. A covered mall building shall be equipped throughout with a standpipe system where required by Section 905.3.1. Covered mall buildings not required to be equipped with a standpipe system by Section 905.3.1 shall be equipped with Class I hose connections connected to the automatic sprinkler system sized to deliver water at 250 gallons per minute (946.4 L/min) at the most hydraulically remote outlet hose connection while concurrently supplying the automatic sprinkler system demand. The standpipe system shall be designed to not exceed a friction loss of 50 pounds per square inch (345 kPa) with a flow of 250 gallons per minute (946.4 L/min) from the fire department connection to the hydraulically most remote hose connection. Hose connections shall be provided at each of the following locations:

1. Within the mall at the entrance to each exit passageway or corridor.
2. At each floor-level landing within enclosed stairways opening directly on the mall.
3. At exterior public entrances to the mall.
4. At other locations as necessary so that the distance to reach all portions of a tenant space or anchor store does not exceed 200 (60 960 mm) feet from a hose connection.

Reason: Design of standpipe systems need to have two parameters, flow and pressure. Currently, there is no residual design pressure as part of the requirement which, in turn, provides a discrepancy on what output pressure to a fire department standpipe pack will be. Additionally, this section provides for hose connections connected to a sprinkler system rather than a bona-fide standpipe system. A vast majority of these systems act as a manual wet system, requiring the fire department to pump the FDC. Since this section deals with is a sprinkler system with hose connections, it makes sense that the maximum pump pressure is 175 psi so there is not unneeded damage to the sprinkler heads.

Location of the standpipe connections is revised to take into account some of the vast and varying designs found in mall layouts. The design of a covered mall has its roots to the covering of a city street. Section 402 of the IBC is still based on this premise, noticeable by the 20 foot wide mall walkway, tenant separations, etc. The fire department hose connections required by the section are to allow the fire department to extinguish a fire within the building, independent of the height of the mall. The problem is that the current hose connections are predicated on the exiting requirements found in IBC Section 402. Section 402.4.4 requires the travel distance within the mall space of a maximum of 200 feet. The theory is that the measurement starts at all mall entrances and exits, and meets the distances found in IFC Section 905 for sprinklered buildings. However, the current system does nothing for fires in tenant spaces and anchor buildings.

The current code text does not provide adequate coverage for the covered mall building design. The revision in Item 4 will allow for additional hose connections throughout the mall to reach those portions of the mall that are not within 200' of hose from a connection required in Items #1-3.

The term "outlet" is revised to "connection" so that it is consistent throughout the requirements.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

905.3.3 (IBC [F] 905.3.3) (Supp) Covered mall buildings. A covered mall building shall be equipped throughout with a standpipe system where required by Section 905.3.1. Covered mall buildings not required to be equipped with a standpipe system by Section 905.3.1 shall be equipped with Class I hose connections connected to the automatic sprinkler system sized to deliver water at 250 gallons per minute (946.4 L/min) at the most hydraulically remote hose connection while concurrently supplying the automatic sprinkler system demand. The standpipe system shall be designed to not exceed a ~~friction loss of 50 pounds per square inch (345 kPa)~~ residual pressure loss with a flow of 250 gallons per minute (946.4 L/min) from the fire department connection to the hydraulically most remote hose connection. Hose connections shall be provided at each of the following locations:

1. Within the mall at the entrance to each exit passageway or corridor.
2. At each floor-level landing within enclosed stairways opening directly on the mall.
3. At exterior public entrances to the mall.
4. At other locations as necessary so that the distance to reach all portions of a tenant space ~~anchor store~~ does not exceed 200 (60 960 mm) feet from a hose connection.

Committee Reason: The proposal was approved because the committee felt that it provides good guidance to the code official regarding design of standpipe systems in covered malls. The modifications reflect what the committee felt the correct pressure loss terminology should be and also the fact that a covered mall, by definition, does not include anchor stores.

Assembly Action:**None**

Final Hearing Results

F157-07/08

AM

Code Change No: F158-07/08

Original Proposal

Sections: 905.3.7 (IBC [F] 905.3.7)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Delete without substitution:

~~**905.3.7 (IBC [F] 905.3.7) Marinas and boatyards.** Marinas and boatyards shall be equipped throughout with standpipe systems in accordance with NFPA 303.~~

Reason: This section is no longer needed after the recent adoption of the Chapter 45 Marinas (Supp). Section 905.3.7 now needs to be deleted since the issue of standpipes is now addressed in Chapter 45 (Supp). The deletion needs to occur in the IFC and IBC.

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

Public Hearing Results

Committee Action:**Approved as Modified****Modify the proposal as follows:**

905.3.7 (IBC [F] 905.3.7) Marinas and boatyards. Standpipes in marinas and boatyards shall comply with Chapter 45.

Committee Reason: The proposal was approved because the committee felt that that the proponent's reason statement substantiates the need for the change, however the committee also felt that leaving a "pointer" section in Section 905, as indicated in the modification, would be useful to the fire code official.

Assembly Action:**None**

Final Hearing Results

F158-07/08

AM

Code Change No: **F159-07/08**

Original Proposal

Sections: 905.4 (IBC [F] 905.4)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

905.4 (IBC [F] 905.4) Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise approved by the fire code official.
2. On each side of the wall adjacent to the exit opening of a horizontal exit.

Exception: Where floor areas adjacent to a horizontal exit are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30480 mm) of hose, a hose connection shall not be required at the horizontal exit.

3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.

Exception: Where floor areas adjacent to an exit passageway are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30480 mm) of hose, a hose connection shall not be required at the entrance from the exit passageway to other areas of the building.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall.
5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a hose connection located either on the roof or at the highest landing of a stairway with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.
6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or story is more than 200 feet (60 960 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in approved locations.

Reason: The exception to item #2 was included in the code as a recognition of the fact that multiple outlets in the same vicinity do not add to safety but merely increase costs. The same should be true for the situation described in item #3. If there is an outlet that is located in the vicinity of the exit passageway entrance, then it makes sense to use that and not require an outlet at each entrance.

To illustrate, imagine two scenarios: 1) In a multi-level covered mall building, an exit stairway exists in which a vertical standpipe is provided. The stairway is located approximately 30 feet from the mall entrance. Because the code requires an outlet at the entrance to the exit passageway, a second outlet would need to be installed although the area could be reached from the outlet in the stairway. 2) An exit passageway is provided in a health care setting as a way to meet travel distances and smoke compartment criteria. It is not a horizontal exit because the area of refuge does not exist in the passageway. Multiple doors access the corridor from rooms and spaces adjacent to it. According to the current language of the code, a hose outlet would be required adjacent to each of these doors which would result in an outlet every 20 – 30 feet (or even closer) inside the passageway.

In both these scenarios the literal application of the code does not contribute to additional safety but merely adds cost to the construction. It is only reasonable that the exception apply to this condition in the same manner as that item immediately prior.

This proposal will afford the same level of logic and reason as that in the prior item and eliminate a sometimes costly duplication.

Cost Impact: The code change proposal will not increase the cost of construction. A reduction in construction costs will occur in situations where the proposed exception reduces the redundant outlet(s).

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it provides a useful clarification and refinement of required standpipe hose connection locations.

Assembly Action:

None

Final Hearing Results

F159-07/08

AS

Code Change No: **F160-07/08**

Original Proposal

Sections: 906.2 (IBC [F] 906.2)

Proponent: A. Brooks Ballard, Virginia Department of Corrections

Revise as follows:

906.2 (IBC [F] 906.2) (Supp) General requirements. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.

Exceptions:

1. The travel distance to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.
2. Thirty-day inspections shall not be required and maintenance shall be allowed to be once every three years for dry-chemical or halogenated agent portable fire extinguishers that are supervised by a listed and approved electronic monitoring device, provided that all of the following conditions are met:
 - 2.1. Electronic monitoring shall confirm that extinguishers are properly positioned, properly charged and unobstructed.
 - 2.2. Loss of power or circuit continuity to the electronic monitoring device shall initiate a trouble signal.
 - 2.3. The extinguishers shall be installed inside of a building or cabinet in a noncorrosive environment.
 - 2.4. Electronic monitoring devices and supervisory circuits shall be tested every three years when extinguisher maintenance is performed.
 - 2.5. A written log of required hydrostatic test dates for extinguishers shall be maintained by the owner to ensure that hydrostatic tests are conducted at the frequency required by NFPA10.
3. In Group I-3, portable fire extinguishers shall be permitted to be located at staff locations.

Reason: Extinguishers located throughout the facility are at times tampered with, removed and/or used for weapons by occupants in a detention or correctional setting. This change would protect the extinguishers from damage or removal by inmates while still making them available to staff and employees for use in an emergency situation. At least one of the Legacy Codes allowed extinguishers to be located at staff locations and/or locked.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it provides a reasonable exception to the fire extinguisher location requirements for Group I-3 occupancies, where tampering is a concern.

Assembly Action:

None

Final Hearing Results

F160-07/08

AS

Code Change No: F161-07/08

Original Proposal

Sections: 907.1.1, 907.1.2 (New) [IBC [F] 907.1.1, [F] 907.1.2 (New)]

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.1.1 (IBC [F] 907.1.1) (Supp) Construction documents. ~~Construction documents for fire alarm systems shall be submitted for review and approval prior to system installation.~~ of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code, the *International Building Code*, and relevant laws, ordinances, rules and regulations, as determined by the fire code official.

907.1.2 (IBC [F] 907.1.2) (Supp) Fire alarm shop drawings. ~~Construction documents~~ Shop drawings for fire alarm systems shall be submitted for review and approval prior to system installation. ~~Construction documents~~ and shall include, but not be limited to, all of the following:

1. A floor plan which indicates the use of all rooms.
2. Locations of alarm-initiating ~~and notification appliances~~ devices.
3. Locations of alarm notification appliances, including candela ratings for visible alarm notification appliances.
3. 4 Location of fire alarm control unit, transponders, and notification power supplies.
4. 5 Annunciators.
5. 6 Power connection.
6. 7 Battery calculations.
7. 8 Conductor type and sizes.
8. 9 Voltage drop calculations.
9. 10 Manufacturers, data sheets indicating model numbers and listing information for equipment, devices and materials.
10. 11 Details of ceiling height and construction.
11. 12 The interface of fire safety control functions.
12. 13 Classification of the supervising station.

907.1.2 (Supp) 907.1.3 (IBC [F] 907.1.3) Equipment. (No change to current text)

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

Bill Aaron (Code Consultants, Inc.),
 Diane Arend (Office of the State Fire Marshal; California),
 Gene Boecker (Code Consultants, Inc),
 Shane Clary (Bay Alarm)
 John Guhl (Office of the State Fire Marshal; California),
 Tom Hammerberg (Automatic Fire Alarm Association, Inc),
 Bill Hoppie (SimplexGrinnell),
 Dan Nichols (Building Codes Division; State of New York),
 Jim Schifiliti (Fire Safety Consultants, Inc)

These changes are important because construction documents and shop drawings are not for the same purpose. The wording added to 907.1.1 was extracted from the IBC, Section 106.1.1. Shop drawings referred to in Section 907 are specific to fire alarm equipment and installation. This information may not be available at the time the contractor applies for the building permit, but is essential for review prior to the installation of the fire alarm system.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that the change provides a needed refinement of the construction document requirements which were part of the reorganization of Section 907 in the last cycle.

Assembly Action:

None

Final Hearing Results

F161-07/08

AS

Code Change No: F162-07/08

Original Proposal

Sections: 907.2 (IBC [F] 907.2)

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing National Multi Housing Council

Revise as follows:

907.2 (IBC [F] 907.2) (Supp) Where required - new buildings and structures. An approved manual, automatic or manual and automatic fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.22 and provide occupant notification in accordance with Section 907.6, unless other requirements are provided by another section of this code.

A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

Exceptions:

1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.
2. The manual fire alarm box is not required for Group R-2 occupancies.

Reason: Manual fire alarm boxes in apartment occupancies invite tampering and false alarms, and there is no apparent fire safety benefit to be gained by placing a single fire alarm box in such occupancies.

Justification offered last year to substantiate the need for the single manual alarm box was that it might be needed by a sprinkler technician to initiate an alarm if sprinklers/waterflow switches are out of service, but this makes no sense. Assuming that the alarm box is located in the valve room to avoid making it available to vandals, a technician working on any part of the sprinkler system, other than the valve, would be far away, and may or may not even know where the alarm box is. If the box were to be located where it will be accessible for occupant use, it is difficult to believe that occupants would know the location of a single pull box in a building or that they would seek out the box to initiate an alarm if the waterflow switch failed.

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

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

907.2 (IBC [F] 907.2) (Supp) Where required - new buildings and structures. An approved manual, automatic or manual and automatic fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.22 and provide occupant notification in accordance with Section 907.6, unless other requirements are provided by another section of this code.

A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

Exceptions:

1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.
2. The manual fire alarm box is not required for Group R-2 occupancies unless required by the fire code official to provide a means for fire watch personnel to initiate an alarm during a sprinkler system impairment event. Where provided, the manual fire alarm box shall not be located in an area that is accessible to the public.

Committee Reason: The proposal was approved because the committee agreed that the manual fire alarm box should not be provided in Group R-2 where false alarms are a problem. The modification avoids putting the manual fire alarm box in all Group R-2 occupancies where there could be a false alarm problem while leaving open the option for the fire code official to require one in a restricted location for use by fire watch personnel, if needed.

Assembly Action:

None

Final Hearing Results

F162-07/08

AM

Code Change No: F163-07/08

Original Proposal

Sections: 907.2, 907.2.6.3, 907.2.8.2, 907.2.11, 907.2.12, 907.2.12.1, 907.2.13, 907.2.14, 907.2.17, 902.1 (IBC [F] 907.2, [F] 907.2.6.3, [F] 907.2.8.2, [F] 907.2.11, [F] 907.2.12, [F] 907.2.12.1, [F] 907.2.13, [F] 907.2.14, [F] 907.2.17, [F] 902.1)

Proponent: Gene Boecker, Code Consultants, Inc.

1. Revise as follows:

907.2 (IBC [F] 907.2) (Supp) Where required new buildings and structures. An approved ~~manual, automatic or manual and automatic~~ fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.22 and provide occupant notification in accordance with Section 907.6, unless other requirements are provided by another section of this code.

A minimum of one manual fire alarm box shall be provided in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

Exception: The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.

907.2.6.3 (IBC [F] 907.2.6.3) (Supp) Group I-3 occupancies. Group I-3 occupancies shall be equipped with a manual ~~fire alarm system~~ and automatic ~~fire alarm~~ smoke detection system installed for alerting staff.

907.2.8.2 (IBC [F] 907.2.8.2) (Supp) Automatic smoke detection fire alarm system. An automatic ~~smoke detection fire alarm~~ system that activates the occupant notification system in accordance with Section 907.6 shall be installed throughout all interior corridors serving sleeping units.

Exception: An automatic ~~smoke fire~~ detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

907.2.11 (IBC [F] 907.2.11) (Supp) Special amusement buildings. An automatic smoke detection system shall be provided in special amusement buildings in accordance with Sections 907.2.11.1 through 907.2.11.3.

Exception: ~~In areas where ambient conditions will cause a smoke detection system to alarm, an approved alternative type of automatic fire detector shall be installed.~~

907.2.12 (IBC [F] 907.2.12) (Supp) High-rise buildings. Buildings with a floor used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be provided with an automatic ~~fire alarm~~ smoke detection system in accordance with Section 907.2.12.1 and an emergency voice/alarm communication system in accordance with Section 907.6.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.21 and Section 412 of the *International Building Code*.
2. Open parking garages in accordance with Section 406.3 of the *International Building Code*.
3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the *International Building Code*.
4. Low-hazard special occupancies in accordance with Section 503.1.1 of the *International Building Code*.
5. Buildings with an occupancy in Group H-1, H-2 or H-3 in accordance with Section 415 of the *International Building Code*.
6. In Group I-1 and I-2 occupancies, the alarm shall sound at a constantly attended location and general occupant notification shall be broadcast by the paging system.

907.2.12.1 (IBC [F] 907.2.12.1) (Supp) Automatic fire ~~smoke~~ detection. ~~Smoke detectors~~ An automatic smoke detection system shall be provided in accordance with this section. ~~Smoke detectors shall be connected to an automatic fire alarm system.~~ The activation of any detector required by this section shall operate the emergency voice/alarm communication system. Smoke detectors shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection, elevator machine rooms, and in elevator lobbies.
2. In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m³/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.
3. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies, a smoke detector is allowed to be used in each return-air riser carrying not more than 5,000 cfm (2.4m³/s) and serving not more than 10 air-inlet openings.

907.2.13 (IBC [F] 907.2.13) (Supp) Atriums connecting more than two stories. A ~~fire alarm~~ smoke detection system shall be installed in occupancies with an atrium that connects more than two stories. The system shall be activated in accordance with Section 907.6. Such occupancies in Group A, E or M shall be provided with an emergency voice/alarm communication system complying with the requirements of Section 907.6.2.2.

907.2.14 (IBC [F] 907.2.14) (Supp) High-piled combustible storage areas. An automatic ~~fire~~ smoke detection system shall be installed throughout high-piled combustible storage areas where required by Section 2306.5.

907.2.17 (IBC [F] 907.2.14) (Supp) Underground buildings with smoke control systems. Where a smoke control system is installed in an underground building in accordance with the *International Building Code*, automatic ~~fire~~ smoke detectors shall be provided in accordance with Sections ~~907.2.17.1 and 907.2.17.2~~.

2. Add new definition as follows:

902.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AUTOMATIC SMOKE DETECTION SYSTEM. A fire alarm system that has initiation devices that utilize smoke detectors for protection of an area such as a room or space with detectors to provide early warning of fire.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Shane Clary (Bay Alarm)
John Guhl (Office of the State Fire Marshal; California),

Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

The main purpose of this code proposal is to align terms within this Section to two main terms, “automatic smoke detection system” and “manual fire alarm system.” Currently, the language can be confusing with some sections requiring automatic fire detection systems and others requiring automatic smoke detection systems. Both of these terms are technically requiring the same thing. However, an automatic fire detection can be interpreted as a sprinkler system, which is not the intent of this section. If it was, the requirements would be found in Section 903.

A definition has been added for automatic smoke detection system, to assist the code user in determining what the code is specifically requiring.

Of special note, Section 907.2.11 appears to be a technical change. However, this is editorial since this allowance is globally accepted throughout Section 907, being specifically regulated in Section 907.5.3.

Furthermore, Section 907.2.12.1 removes redundant language with the addition of the ‘system’ requirement and is not a technical change.

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

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

907.2.13 (IBC [F] 907.2.13) (Supp) Atriums connecting more than two stories. A ~~fire alarm smoke detection~~ system shall be installed in occupancies with an atrium that connects more than two stories, with smoke detection installed throughout the atrium. The system shall be activated in accordance with Section 907.6. Such occupancies in Group A, E or M shall be provided with an emergency voice/alarm communication system complying with the requirements of Section 907.6.2.2.

(Portions of proposal not shown remain unchanged)

Committee Reason: The proposal was approved because the committee felt that it will provide correlated usage of the newly defined term “automatic smoke detection system” and the term “manual fire alarm system”, thus eliminating the current confusion caused by some sections requiring “automatic fire detection systems” (which could be interpreted as being a sprinkler system) and others requiring “automatic smoke detection systems”. The modification provides clarification that only the atrium portion of the building is required to be provided with smoke detection, not the entire building.

Assembly Action:

None

Final Hearing Results

F163-07/08

AM

Code Change No: F164-07/08

Original Proposal

Sections: 907.2.5, 907.2.6, 907.2.6.3.3, 907.2.7.1, 907.2.12.2, 907.6, 907.6.2.1.1, 9097.6.2.1.2, 907.6.2.2, 907.6.2.3.3 (New), 907.6.2.2.4, 907.7.3.2, 907.7.4 (IBC [F] 907.2.5, [F] 907.2.6, [F] 907.2.6.3.3, [F] 907.2.7.1, [F] 907.2.12.2, [F] 907.6, [F] 907.6.2.1.1, [F] 907.6.2.1.2, [F] 907.6.2.2, [F] 907.6.2.3.3 (New), [F] 907.6.2.2.4, [F] 907.7.3.2, [F] 907.7.4

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.5 (IBC [F] 907.2.5) (Supp) Group H. A manual fire alarm system that activates the occupant notification system shall be installed in Group H-5 occupancies and in occupancies used for the manufacture of organic coatings. An automatic smoke detection system that activates the occupant notification system shall be installed for highly toxic gases, organic peroxides and oxidizers in accordance with Chapters 37, 39 and 40, respectively.

907.2.6 (IBC [F] 907.2.6) (Supp) Group I. A manual fire alarm system that activates the occupant notification system shall be installed in Group I occupancies. An automatic smoke detection system that activates the occupant notification system shall be provided in accordance with Sections 907.2.6.1 and 907.2.6.2.

907.2.6.3.3 (IBC [F] 907.2.6.3.3) Smoke detectors. An automatic smoke detection system shall be installed throughout resident housing areas, including sleeping units and contiguous day rooms, group activity spaces and other common spaces normally accessible to residents.

Exceptions:

1. Other approved smoke-detection arrangements providing equivalent protection, including, but not limited to, placing detectors in exhaust ducts from cells or behind protective guards listed for the purpose, are allowed when necessary to prevent damage or tampering.
2. Sleeping units in Use Conditions 2 and 3 as described in Section 308 of the *International Building Code*.
3. Smoke detectors are not required in sleeping units with four or fewer occupants in smoke compartments that are equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.

907.2.7.1 (IBC [F] 907.2.7.1) (Supp) Occupant notification. During times that the building is occupied, the initiation of a signal from a manual fire alarm box or from a water flow switch shall not be required to activate the alarm notification appliances when an alarm signal is activated at a constantly attended location from which evacuation instructions shall be initiated over an emergency voice/alarm communication system installed in accordance with Section 907.6.2.2.

~~The emergency voice/alarm communication system shall be allowed to be used for other announcements, provided the manual fire alarm use takes precedence over any other use.~~

907.2.12.2 (IBC [F] 907.2.12.2) (Supp) Fire department communication system. An approved two-way, fire department communication system designed and installed in accordance with NFPA 72 shall be provided for fire department use. It shall operate between a fire command center complying with Section 509 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication device shall be provided at each floor level within the enclosed exit stairway.

Exception: Fire department radio systems are allowed to replace two-way fire department communication systems where approved by the fire department.

907.6 (IBC [F] 907.6) (Supp) Alarm Occupant notification systems. A fire alarm system shall annunciate at the panel and shall initiate occupant notification upon activation, in accordance with Sections 907.6.1 through 907.6.2.3.4. Where a fire alarm system is required by another section of this code, it shall be activated by:

1. Automatic fire detectors.
2. Sprinkler water-flow devices.
3. Manual fire alarm boxes.
4. Automatic fire-extinguishing systems.

Exceptions:

- ~~1. Occupant notification is not required for fire detectors used to control fire safety functions in accordance with Section 907.4.~~
2. Where notification systems are allowed elsewhere in Section 907 to annunciate at a constantly attended location.

907.6.2.1.1 (IBC [F] 907.6.2.1.1) (Supp) Average sound pressure. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every ~~occupied~~ occupiable space within the building. The minimum sound pressure levels shall be: 75 dBA in occupancies in Groups R and I-1; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies.

907.6.2.1.2 (IBC [F] 907.6.2.1.2) (Supp) Maximum sound pressure. The maximum sound pressure level for audible alarm notification appliances shall be 110 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than ~~405~~ 95 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72 and audible alarm notification appliances shall not be required.

907.6.2.2 (IBC [F] 907.6.2.2) (Supp) Emergency voice/alarm communication system. The emergency voice/alarm communication system shall be designed and installed in accordance with NFPA 72. The operation of any automatic fire detector, sprinkler waterflow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information and directions for a general or staged evacuation on a minimum of the alarming floor, the floor above and the floor below in accordance with the buildings fire safety and evacuation plans required by Section 404. In high-rise buildings, the system shall operate on a minimum of the alarming floor, the floor above and the floor below. Speakers shall be provided throughout the building by paging zones. As a minimum, paging zones shall be provided as follows:

1. Elevator groups.
2. Exit stairways.
3. Each floor.
4. Areas of refuge as defined in Section 1002.1.

Exception: In Group I-1 and I-2 occupancies, the alarm shall sound in a constantly attended area and a general occupant notification shall be broadcast over the overhead page.

907.6.2.2.3 (IBC [F] 907.6.2.2.3) Alternate uses. The emergency voice/alarm communication system shall be allowed to be used for other announcements, provided the manual fire alarm use takes precedence over any other use.

(Renumber subsequent section)

907.7.3.2 (IBC [F] 907.7.3.2) (Supp) High-rise buildings. In buildings with a floor used for human occupancy that is located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access, a separate zone by floor shall be provided for all each of the following types of alarm-initiating devices where provided:

1. Smoke detectors.
2. Sprinkler water-flow devices.
3. Manual fire alarm boxes.
4. Other approved types of automatic fire detection devices or suppression systems.

907.7.4 (IBC [F] 907.7.4) (Supp) Access. Access shall be provided to each ~~detector~~ fire alarm device and notification appliance for periodic inspection, maintenance and testing.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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907.2.5 Justification – The added language is for consistency with the language for other Occupancy Groups.

907.2.6 Justification – The added language is for consistency with the language for other Occupancy Groups.

907.6.3.3 Exceptions Justification – The added language is to identify where to find more information regarding Use Conditions 2 and 3. This improves usability of the Code.

907.2.7.1 Justification – The language is relocated to section 907.6.2.2 for clarity so that emergency voice alarm system requirements are grouped in one area.

907.2.12.2 Justification – The added language is for clarity indicating that fire department radio systems are allowed as a substitute for two-way fire department communications systems.

907.6 Justification – This exception is in direct conflict with the requirements of Section 907.4 which requires occupant notification.

907.6.2.1.1 Justification - The added language is for consistency with the language throughout this code.

907.6.2.1.2 Justification – The decibel level is revised to be in alignment with NFPA 72 and A.D.A.

907.6.2.2.3 Justification – The language is relocated from section 907.2.7.1 for clarity so that emergency voice alarm system requirements are grouped in one area.

907.6.2.2.34 Justification – Renumbering to incorporate the relocated emergency voice/alarm communication requirement.

907.7.4 Justification – The added language is for clarity indicating that access is to be provide for all fire alarm devices for servicing

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

Public Hearing Results

Committee Action:**Approved as Submitted**

Committee Reason: The proposal was approved because the committee agreed that the change provides a logical, needed refinement and correlation of the language used in all occupancy group fire alarm requirements which were part of the reorganization of Section 907 in the last cycle.

Assembly Action:**None**

Final Hearing Results

F164-07/08**AS**

Code Change No: F165-07/08

Original Proposal

Sections: 907.2.6 (IBC [F] 907.2.6)**Proponent:** Gene Boecker, Code Consultants, Inc.**Revise as follows:**

907.2.6 (IBC [F] 907.2.6) (Supp) Group I. A manual fire alarm system shall be installed in Group I occupancies. An automatic smoke detection system shall be provided in accordance with Sections 907.2.6.1 and 907.2.6.2.

Exceptions:

1. Manual fire alarm boxes in resident or patient sleeping areas of Group I-1 and I-2 occupancies shall not be required at exits if located at all nurses= control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.5.2 are not exceeded.
2. Occupant notification systems are not required to be activated where private mode signaling installed in accordance with NFPA 72 is approved by the fire code official.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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 Bill Hopple (SimplexGrinnell),
 Dan Nichols (Building Codes Division; State of New York),
 Jim Schifiliti (Fire Safety Consultants, Inc)

The new exception is to clearly allow only notifying the staff instead of all building occupants in the event of a fire. This is a common practice in Group I occupancies, and the current language would not allow that.

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

Public Hearing Results

Committee Action:**Approved as Submitted**

Committee Reason: The committee agreed that there is no need to notify of a fire alarm the occupants who are incapable of taking meaningful evacuation action in response to it and that the fire code official should have specific approval authority in that decision.

Assembly Action:

None

Final Hearing Results

F165-07/08

AS

Code Change No: **F166-07/08**

Original Proposal

Sections: 907.2.9.1 (IBC [F] 907.2.9.1)

Proponent: Jeffrey M. Shapiro, PE, International Code Consultants, representing himself

Revise as follows:

907.2.9.1 (IBC [F] 907.2.9.1) (Supp) Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group R-2 occupancies where:

1. Any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge;
2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit; or
3. The building contains more than 16 dwelling units or sleeping units.

Exceptions:

1. A fire alarm system is not required in buildings not more than two stories in height where all dwelling units or sleeping units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least 1-hour fire partitions and each dwelling unit or sleeping unit has an exit directly to a public way, exit court or yard.
4. 2. Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and the occupant notification appliances will automatically activate throughout the notification zones upon a sprinkler water flow.
2. ~~A manual fire alarm system is not required in buildings not more than two stories in height that do not have interior corridors serving dwelling units provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1023.6, Exception 4.~~
3. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to an exterior exit access that leads directly to the exits or are served by open-ended corridors designed in accordance with Section 1023.6, Exception 4.

Reason: This proposal returns the exceptions in Section 907.2.9.1 to the 2006 IFC text. These exceptions were changed as part of Proposal F122-06/07, which according to the proponent was not intended to make technical changes to the 2006 requirements. However, closer scrutiny revealed that the change significantly reduced the scope of the old Exception 3 (which was revised and renumbered as Exception 2 in the 2007 Supplement) by limiting application to only allow elimination of manual alarms, as opposed to the entire alarm system, and only in buildings not exceeding two stories in height.

Likewise, the change to the old Exception 1 (which was revised and incorporated into Exception 2 in the 2007 Supplement) significantly reduced the scope of Exception 1 by only allowing elimination of manual fire alarm boxes, as opposed to the entire alarm system. Because Proposal F122 provided no justification for making these technical changes, this proposal simply reverses unsubstantiated revisions to the code.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that the change returning the exceptions to the 2006 edition Section 907.2.9.1 is appropriate because the reorganization of Section 907 in the last cycle did not intend to make any technical changes but did in this case, without any justification.

Assembly Action:

None

Final Hearing Results

F166-07/08

AS

Code Change No: **F167-07/08**

Original Proposal

Sections: 907.2.10 through 907.2.10.3 (New) [IBC [F] 907.2.10 through [F] 907.2.10.3 (New)], 907.3.3.4

Proponent: Gene Boecker, Code Consultants, Inc.

1. Add new text as follows:

907.2.10 (IBC [F] 907.2.10) Group R-4. Fire alarm systems and smoke alarms shall be installed in Group R-4 occupancies as required in Sections 907.2.10.1 through 907.2.10.3.

907.2.10.1 (IBC [F] 907.2.10.1) Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in Group R-4 occupancies.

Exceptions:

1. A manual fire alarm system is not required in buildings not more than two stories in height where all individual sleeping units and contiguous attic and crawl spaces to those units are separated from each other and public or common areas by at least 1-hour fire partitions and each individual sleeping unit has an exit directly to a public way, exit court or yard.
2. Manual fire alarm boxes are not required throughout the building when the following conditions are met:
 - 2.1. The building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.
 - 2.2. The notification appliances will activate upon sprinkler water flow; and
 - 2.3. At least one manual fire alarm box is installed at an approved location.
3. Manual fire alarm boxes in resident or patient sleeping areas shall not be required at exits where located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.5.2.1 are not exceeded.

907.2.10.2 (IBC [F] 907.2.10.2) Automatic smoke detection system. An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be installed in corridors, waiting areas open to corridors and habitable spaces other than sleeping units and kitchens.

Exceptions:

1. Smoke detection in habitable spaces is not required where the facility is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1.
2. An automatic smoke detection system is not required in buildings that do not have interior corridors serving sleeping units and where each sleeping unit has a means of egress door opening directly to an exit or to an exterior exit access that leads directly to an exit.

907.2.10.3 (IBC [F] 907.2.10.3) Smoke alarms. Single- and multiple-station smoke alarms shall be installed in accordance with Section 907.2.11.

(Renumber subsequent sections)

2. Revise as follows:

907.3.3.4 (Supp) Group R-4. An automatic or manual fire alarm system that activates the occupant notification system in accordance with Section 907.6 shall be installed in existing Group R-4 residential care/assisted living facilities in accordance with Section 907.2.10.

Exceptions:

1. Where there are interconnected smoke alarms meeting the requirements of Section ~~907.2.10~~ 907.2.11 and there is at least one manual fire alarm box per floor arranged to sound continuously the smoke alarms.
2. Other manually activated, continuously sounding alarms approved by the fire code official.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This is to add a requirement for new Group R-4 occupancies. Reviewing the occupancy categories in Chapter 3, a Group R-4 can be considered either a small Group I-1 or a Group R-2 with occupants that have special needs or limitations. A further review finds that both Group I-1 and Group R-2 occupancies both have fire alarm requirements for new buildings, but Group R-4 does not. The lack of needed requirements in the current IBC/IFC is very evident. The code change proposal will not increase the cost of construction since IFC Section 907.3 requires a fire alarm retroactively in Group R-4 occupancies. As the IFC currently reads, a one day old R-4 would technically be required to retrofit an automatic or manual alarm system into the building, which doesn't make sense.

The proposed language is based on the Group R-2 requirements for manual fire alarm systems and Group I-1 requirements for automatic smoke detection systems. The proposed language adds exceptions that would apply to Group I-1 occupancies, such as additional manual pull box exceptions for sprinklered sleeping areas and nurses stations, and removes the 16 dwelling unit requirement for manual fire alarms since an Group R-4 cannot have more than 16 occupants.

The proposed language also modifies the retroactive Group R-4 requirements to reference back to the new requirements. Currently, there is not clear direction on what is required for a fire alarm system retroactively. The reference to the new section provides needed requirements.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The committee felt that the change provides a needed refinement and correlation of the fire protection requirements for new Group R-4 occupancies, which are currently in conflict with the alarm requirements for existing Group R-4 occupancies. Currently, existing Group R-4 occupancies are required to be provided with an automatic or manual fire alarm whereas new Group R-4 occupancies are not required to be so equipped.

Assembly Action:

None

Final Hearing Results

F167-07/08

AS

Code Change No: F168-07/08

Original Proposal

Sections: 907.2.12 (IBC [F] 907.2.12)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.12 (IBC [F] 907.2.12) (Supp) High-rise buildings. Buildings with a floor used for human occupancy located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency voice/alarm communication system in accordance with Section 907.6.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.21 and Section 412 of the *International Building Code*.
2. Open parking garages in accordance with Section 406.3 of the *International Building Code*.
3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the *International Building Code*.
4. Low-hazard special occupancies in accordance with Section 503.1.1 of the *International Building Code*.
5. Buildings with an occupancy in Group H-1, H-2 or H-3 in accordance with Section 415 of the *International Building Code*.
6. In Group I-1 and I-2 occupancies, the alarm shall sound at a constantly attended location and general occupant notification shall be broadcast by the ~~paging system~~ emergency voice/alarm communication system.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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 Dan Nichols (Building Codes Division; State of New York),
 Jim Schifiliti (Fire Safety Consultants, Inc)

All other fire alarm systems in high-rises require the use of an emergency voice/alarm communication system. Paging systems do not have supervised wiring or specific secondary power requirements. There is no assurance this system will work when it is needed to work. NFPA 72 and this Code allow emergency voice/alarm systems to be used for other purposes, such as paging. In addition, NFPA 72 does not require emergency voice/alarm systems to operate automatically, so the operation will be the same with the added benefit of having the circuits supervised and the ability to operate on secondary power in the event of a building power failure. Currently there is no requirement for paging systems to be on an emergency power source.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it corrects the type of voice system suitable for high-rise buildings to a more reliable, supervised voice alarm communications system.

Assembly Action:

None

Final Hearing Results

F168-07/08

AS

Code Change No: **F169-07/08**

Original Proposal

Sections: 907.2.12.1, 907.2.12.1.1 (New), 907.2.12.1.2 (New) [IBC [F] 907.2.12.1, [F] 907.2.12.1.1 (New), [F] 907.2.12.1.2 (New)]

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.12.1 (IBC [F] 907.2.12.1) (Supp) Automatic fire detection. Automatic smoke detection in high rise buildings shall be in accordance with Sections 907.2.12.1.1 and 907.2.12.1.2.

907.2.12.1.1 (IBC [F] 907.2.12.1.1) Area smoke detection. Area smoke detectors shall be provided in accordance with this section. Smoke detectors shall be connected to an automatic fire alarm system. The activation of any detector required by this section shall operate the emergency voice/alarm communication system in accordance with Section 907.6.2.2. Smoke detectors shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment or similar room which is not provided with sprinkler protection, ~~elevator machine rooms, and in elevator lobbies.~~
2. In each elevator machine room and in elevator lobbies.

907.2.12.1.2 (IBC [F] 907.2.12.1.2) Duct smoke detection. Duct smoke detectors complying with Section 907.4.1 shall be located as follows:

- ~~2.~~ 1. In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m³/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.
- ~~3.~~ 2. At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies, a smoke detector is allowed to be used in each return-air riser carrying not more than 5,000 cfm (2.4m³/s) and serving not more than 10 air-inlet openings.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

Bill Aaron (Code Consultants, Inc.),
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 Gene Boecker (Code Consultants, Inc),
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 John Guhl (Office of the State Fire Marshal; California),
 Tom Hammerberg (Automatic Fire Alarm Association, Inc),
 Bill Hopple (SimplexGrinnell),
 Dan Nichols (Building Codes Division; State of New York),
 Jim Schifiliti (Fire Safety Consultants, Inc)

Justification for proposal for Section 907.2.12.1: Item 2 is added to avoid confusion with the requirements of item 1. Elevator machine rooms and elevator lobbies are required to have smoke detectors for elevator recall even if these locations are sprinklers. By moving them to a separate line, it should reduce confusion in interpretations in this code.

Justification for proposal for Section 907.2.12.1.2: A separate duct smoke detection section is being added to avoid confusion and to clarify that the type of smoke detector used shall be approved for duct applications (higher air velocities, temperatures and humidity) and to allow the use of a supervisory signal in lieu of a fire alarm signal (emergency voice alarm/communication notification).

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it provides needed clarification of the automatic fire detection and duct smoke detection systems for high-rise buildings.

Assembly Action:

None

Final Hearing Results

F169-07/08

AS

Code Change No: F172-07/08

Original Proposal

Sections: 907.2.18.1 (IBC [F] 907.2.18.1)

Proponent: Gene Boecker, Code Consultants, Inc.

Delete without substitution:

~~**907.2.18.1 (IBC [F] 907.2.18.1) (Supp) Public address system.** Where a fire alarm system is not required by Section 907.2, a public address system shall be provided which shall be capable of transmitting voice communications to the highest level of exit discharge serving the underground portions of the structure and all levels below.~~

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need further clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This is a 'do-loop' and old language. The 'do-loop' is that an automatic smoke detection system is required by 907.2 (namely 907.2.17), so 907.2.18.1 is not needed. Also, if a reason was found where an automatic detection system isn't needed, the PA system is in direct conflict with the EVACS system found in 907.2.18 for deep underground buildings.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which deletes an unneeded and unenforceable section.

Assembly Action:

None

Final Hearing Results

F172-07/08

AS

Code Change No: **F173-07/08**

Original Proposal

Sections: 907.2.21 (IBC [F] 907.2.21)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.21 (IBC [F] 907.2.21) (Supp) Airport traffic control towers. An automatic fire detection system that activates the occupant notification system in accordance with Section 907.6 shall be provided in airport control towers in all occupiable and equipment spaces.

Exception: Audible appliances shall not be installed within the control tower cab.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Shane Clary (Bay Alarm)
John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

The proposed changes to 907.2.21 are to provide clarification as to where fire alarm devices and appliances are required within airport traffic control towers. Equipment spaces have been added as these may be areas within an airport traffic control tower where a fire may begin, but may not be occupied. Early warning of a fire in these areas is required so as to alert the occupants of occupancy and emergency forces.

Due to the nature of the operation of airport traffic control towers, the notification of occupants within the cab is to be by visual notification appliances only.

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

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

907.2.21 (IBC [F] 907.2.21) (Supp) Airport traffic control towers. An automatic ~~fire~~ smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be provided in airport control towers in all occupiable and equipment spaces.

Exception: Audible appliances shall not be installed within the control tower cab.

Committee Reason: The proposal was approved because the committee felt that it recognizes the critical need for quiet in air traffic control tower cabs. The modification provides correlation of the terminology in this section with the terminology established by code change F163-07/08.

Assembly Action:

None

Final Hearing Results

F173-07/08

AM

Code Change No: F174-07/08

Original Proposal

Sections: 907.2.22 (IBC [F] 907.2.22)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.2.22 (IBC [F] 907.2.22) (Supp) Battery rooms. An automatic smoke detection system shall be installed in areas containing stationary storage battery systems with a liquid capacity of more than 50 gallons (189 L). ~~The detection system shall activate a local alarm signal at a constantly attended location or shall be supervised by an approved central, proprietary, or remote station service.~~

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This is in conflict with IFC Section 907.7.5 (Supp) regarding monitoring. A battery room does not have any special conditions that should give the local alarm option since IFC 907.7.5 (Supp) does not permit any other automatic smoke detection system from utilizing a local alarm only.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it deletes text that is in conflict with the alarm monitoring requirements of Section 907.

Assembly Action:

None

Final Hearing Results

F174-07/08

AS

Code Change No: **F179-07/08**

Original Proposal

Sections: 907.4.1 (IBC [F] 907.4.1)

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.4.1 (IBC [F] 907.4.1) (Supp) Duct smoke detectors. Smoke detectors installed in ducts shall be listed for the air velocity, temperature and humidity present in the duct. Duct smoke detectors shall be connected to the building's fire alarm control unit when a fire alarm system is required by 907.2. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location and shall perform the intended fire safety function in accordance with this code and the *International Mechanical Code*. Duct smoke detectors shall not be used as a substitute for required open area detection.

Exceptions:

1. The supervisory signal at a constantly attended location is not required where duct smoke detectors activate the buildings alarm notification appliances.
2. In occupancies not required to be equipped with a fire alarm system, actuation of a smoke detector shall activate a visible and an audible signal in an approved location. Smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Shane Clary (Bay Alarm)
John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This section is being modified to clarify that duct smoke detectors shall be listed for the air velocity, temperature and humidity present in the duct system (due to the higher air velocities, temperatures and humidity's inside HVAC ducts) and to correlate with the fire safety function requirements of the International Mechanical Code (HVAC shut-down and fire-smoke damper activation). The language in this proposal is also consistent with the requirements of NFPA 72.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it provides a clear statement that duct smoke detectors must be suitable and listed for the environment within the duct system.

Assembly Action:

None

Final Hearing Results

F179-07/08

AS

Code Change No: F180-07/08

Original Proposal

Sections: 907.5.3, 907.5.3.1 (New) [IBC [F] 907.5.3, [F] 907.5.3.1 (New)]

Proponent: Gene Boecker, Code Consultants, Inc.

Revise as follows:

907.5.3 (IBC [F] 907.5.3) (Supp) Automatic smoke detection. An automatic smoke detection system shall utilize ~~The automatic fire detectors shall be smoke detectors. Where unless ambient conditions prohibit such an~~ installation. of smoke detectors, In spaces where smoke detectors are not utilized, other approved automatic fire ~~detection shall be permitted required. Where an automatic sprinkler protection system installed in such areas in~~ accordance with Section 903.3.1.1 or 903.3.1.2 is provided and connected to the building fire alarm system, ~~automatic heat detection required by this section shall not be required.~~

907.5.3.1 (IBC [F] 907.5.3.1)Automatic sprinkler system. In areas where ambient conditions prohibit the ~~installation of smoke detectors, an automatic sprinkler system installed in such areas in accordance with Section~~ 903.3.1.1 or 903.3.1.2 and connected to the fire alarm system shall be approved as automatic fire detection.

Exception: Heat detectors for elevator functions.

Reason: Section 907 evolved as an amalgamation of the three legacy codes. Although Section 907 was revised during the last cycle some additional items have been identified that need clarification. The charging statement for Occupancy Groups is inconsistent. The text that indicates what is required is inconsistent. And, the general arrangement of text, although in a logical format, is not consistent with the way many people approach the code. Nor is it consistent with the way that Section 903 is organized. The proposal is an effort made by a group of people from various segments of the industry and code application to correlate, reformat and generally improve usability of the code. Before addressing the technical and formatting changes involved in the proposal, it is worth noting appreciation to the people who helped work on this effort. In alphabetical order:

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Gene Boecker (Code Consultants, Inc),
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John Guhl (Office of the State Fire Marshal; California),
Tom Hammerberg (Automatic Fire Alarm Association, Inc),
Bill Hopple (SimplexGrinnell),
Dan Nichols (Building Codes Division; State of New York),
Jim Schifiliti (Fire Safety Consultants, Inc)

This is an attempt to clean up the language regarding automatic smoke detection. The purpose is to drive home that automatic smoke detection systems use smoke detectors unless they are not able to be installed because of the space being served. Also, it spins off the automatic sprinkler system tradeoff to make it an approved use in place of smoke detectors when the area cannot be served with smoke detectors and the system is connected to the fire alarm system. The exception listed as part of the proposed sprinkler system tradeoff section is so the code user does not utilize this section for the prescriptive elevator requirements in ASME A17.1 for the specialized fire safety functions regulated therein.

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

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The proposal was disapproved because the committee felt that it does not provide the clarity desired by the proponent and would cause confusion in the application of the section.

Assembly Action:

None

Public Comments

Individual Consideration Agenda

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

Public Comment:

Gene Boecker, Code Consultants, Inc., representing himself, requests Approval as Modified by this public comment.

Modify proposal as follows:

907.5.3 (IBC [F] 907.5.3) (Supp) Automatic smoke detection. ~~Where an~~ An automatic smoke detection system is required it shall utilize smoke detectors unless ambient conditions prohibit such an installation. In spaces where smoke detectors are cannot be utilized due to ambient conditions, ~~other approved automatic fire heat detectors detection~~ shall be ~~required~~ permitted.

907.5.3.1 (IBC [F] 907.5.3.1) Automatic sprinkler system. For conditions other than specific fire safety functions noted in Section 907.4, in ~~in~~ areas where ambient conditions prohibit the installation of smoke detectors, an automatic sprinkler system installed in such areas in accordance with Section 903.3.1.1 or 903.3.1.2 ~~and that is~~ connected to the fire alarm system shall be approved as automatic ~~fire~~ heat detection.

~~Exception: Heat detectors for elevator functions.~~

Commenter's Reason: The language intent in the original proposal is incorporated into the single section. Consistent with the other code changes this year, the distinction is made between smoke detection and "fire alarm." The application whereby heat detection is permitted is included but clarified so that sprinklers cannot be used as a substitution for specific heat detectors required in Section 907.4. This is consistent with current intent.

While there may yet be a need to clean up some of the interpretation applications it is important to get the "fire alarm" language out of the code since it is being deleted elsewhere and will no longer have relevance. This maintains the status quo in application while cleaning up the language for the 2009 edition.

Final Hearing Results

F180-07/08

AMPC

Code Change No: **F189-07/08**

Original Proposal

Sections: 909.11 (IBC [F] 909.11)

Proponent: Robert J. Davidson, Davidson Code Concepts, LLC, representing himself

Revise as follows:

909.11 (IBC [F] 909.11) (Supp) Power systems. The smoke control system shall be supplied with two sources of power. Primary power shall be the normal building power systems. Secondary power shall be from an approved standby source complying with the International Code Council *Electrical Code Administrative Provisions*. The standby power source and its transfer switches shall be in a room separate from the normal power transformers and switch gear and ventilated directly to and from the exterior. The room shall be enclosed with not less than 1-hour fire barriers constructed in accordance with Section 706 of the *International Building Code* or horizontal assemblies constructed in accordance with Section 711 of the *International Building Code*, or both. ~~Power distribution from the two sources shall be by independent routes.~~ Transfer to full standby power shall be automatic and within 60 seconds of failure of the primary power. The systems shall comply with this code or the International Code Council *Electrical Code Administrative Provisions*.

Reason: This deletion is being recommended from a practical standpoint. The section requires that the stand-by power source and the transfer switches be in a room separate from the normal power transformers and switch gear.

Both the normal power supply and the stand-by power supply are controlled by the transfer switches. The power to the various devices and equipment that make up the smoke control system are distributed from the transfer switches.

That being the case, how can you distribute power from the two sources independently? To do so would require the power supply to go to a transfer switch located at each device or piece of equipment.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it deletes problematic, unenforceable code text.

Assembly Action:

None

Final Hearing Results

F189-07/08

AS

Code Change No: F193-07/08

Original Proposal

Sections: 910.2 (IBC [F] 910.2)

Proponent: Rick Thornberry, PE, The Code Consortium, representing AAMA Smoke Vent Task Group

Revise as follows:

910.2 (IBC [F] 910.2) Where required. Smoke and heat vents shall be installed in the roofs and draft curtains shall be installed on the underside of roofs of one-story buildings or portions thereof occupied for the uses set forth in Sections 910.2.1 through 910.2.3.

Reason: This is an editorial clarification to provide for a charging requirement that draft curtains are required to be installed under the provisions of this section as are smoke and heat vents.

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

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee felt that the proposal could create confusion in that it appears to require draft curtain in all cases whereas Chapter 23 allows certain exceptions. It was also felt that that the subject matter should be located in Section 910.3.5.

Assembly Action:

None

Public Comments

Individual Consideration Agenda

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

Public Comment:

Rick Thornberry, The Code Consortium, Inc., representing AAMA Smoke Vent Task Group, requests Approval as Modified by this public comment.

Replace proposal as follows:

910.3.5 (IBC [F] 910.3.5) Draft curtains. Where required by Table 910.3, draft curtains shall be ~~provided~~ installed on the underside of the roof in accordance with this section.

Exception: Where areas of buildings are equipped with ESFR sprinklers, draft curtains shall not be provided within these areas. Draft curtains shall only be provided at the separation between the ESFR sprinklers and the conventional sprinklers.

Commenter's Reason: Based on the Committee's suggestion made in its Reason for disapproval of the original code change proposal, we are submitting this Public Comment. Instead of revising Section 910.2, we are proposing to revise Section 910.3.5 Draft Curtains as indicated in the Committee's Reason statement. This is an editorial clarification which indicates that the draft curtains are to be installed on the underside of the

roof. Although this may be obvious, there is no definition for draft curtain, nor any other indication that draft curtains are to be installed on the underside of roofs. However, it is a basic assumption made by designers and installers who provides draft curtains in conjunction with smoke and heat vents.

Final Hearing Results

F193-07/08

AMPC

Code Change No: F194-07/08

Original Proposal

Table 910.3 (IBC [F] Table 910.3)

Proponent: Rick Thornberry, PE, The Code Consortium, representing AAMA Smoke Vent Task Group

Revise table footnote as follows:

**TABLE 910.3 (IBC TABLE [F] 910.3)
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS^a**

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929m².

- a. ~~Requirements for rack storage heights in excess of those indicated shall be in accordance with Chapter 23. For solid-piled storage heights in excess of those indicated, an approved engineered design shall be used.~~
- b. The distance specified is the maximum distance from any vent in a particular draft curtained area to walls or draft curtains which form the perimeter of the draft curtained area.
- c. Where draft curtains are not required, the vent area to floor area ratio shall be calculated based on a minimum draft curtain depth of 6 feet (Option 1).
- d. "H" is the height of the vent, in feet, above the floor.

Reason: Chapter 23 does not contain specific requirements for smoke and heat vents. It refers to Section 910.

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

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee felt that Note a serves valuable function in directing the code user to Chapter 23, notable Section 2308.5, and should be retained

Assembly Action:

None

Public Comments

Individual Consideration Agenda

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

Public Comment:

Rick Thornberry, The Code Consortium, Inc., representing AAMA Smoke Vent Task Group, requests Approval as Modified by this public comment.

Replace proposal as follows:

**TABLE 910.3 (IBC TABLE [F] 910.3)
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS^a**

(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m²

- Additional requirements for rack storage heights in excess of those indicated shall be in accordance with Chapter 23. For solid-piled storage heights in excess of those indicated, an approved engineered design shall be used.
- The distance specified is the maximum distance from any vent in a particular draft curtained area to walls or draft curtains which form the perimeter of the draft curtained area.
- Where draft curtains are not required, the vent area to floor area ratio shall be calculated based on a minimum draft curtain depth of 6 feet (Option 1).
- "H" is the height of the vent, in feet, above the floor.

Commenter's Reason: We agree with the Committee's concerns expressed in their Reason for disapproving this code change that the reference to Chapter 23 for rack storage heights in excess of those indicated in the table as noted in Footnote a serves a valuable function. However, the purpose for us deleting the reference was that there were no specific requirements that addressed smoke and heat vents and/or draft curtains. Therefore, we felt that it was an unnecessary reference within the context of the Table and Section 910. To remedy this and to clarify the code reference, we have proposed this Public Comment which slightly revises Footnote a to indicate that Chapter 23 should be referred to for "additional" requirements for those rack storage heights in excess of those indicated in the table. This will alert the user of the code to the fact that there are other requirements that should be considered in addition to those for the smoke and heat vents specified in Table 910.3 for these very rack storage facilities. Yet they will not need to refer to Chapter 23 for any additional criteria for smoke and heat vents or draft curtains.

Final Hearing Results

F194-07/08

AMPC

Code Change No: F195-07/08

Original Proposal

Table 910.3 (IBC [F] Table 910.3)

Proponent: Rick Thornberry, PE, The Code Consortium, representing AAMA Smoke Vent Task Group

Revise table column heading and footnote as follows:

**TABLE 910.3 (IBC TABLE [F] 910.3)
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS^a**

OCCUPANCY GROUP AND COMMODITY CLASSIFICATION	DESIGNATED STORAGE HEIGHT (feet)	MINIMUM DRAFT CURTAIN DEPTH (feet)	MAXIMUM AREA FORMED BY DRAFT CURTAINS (square feet)	VENT-AREA-TO FLOOR-AREA RATIO ^c	MAXIMUM SPACING OF VENT CENTERS (feet)	MAXIMUM DISTANCE TO <u>FROM</u> VENTS FROM TO WALL OR DRAFT CURTAIN ^b (feet)
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(Portions of table not shown remain unchanged)

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929m².

- Requirements for rack storage heights in excess of those indicated shall be in accordance with Chapter 23. For solid-piled storage heights in excess of those indicated, an approved engineered design shall be used.
- ~~The distance specified is the maximum distance from any vent in a particular draft curtained area to walls or draft curtains which form the perimeter of the draft curtained area.~~ Vents adjacent to walls or draft curtains shall be located within a horizontal distance not greater than the maximum distance specified in this column as measured perpendicular to the wall or draft curtain that forms the perimeter of the draft curtained area.
- Where draft curtains are not required, the vent area to floor area ratio shall be calculated based on a minimum draft curtain depth of 6 feet (Option 1).
- "H" is the height of the vent, in feet, above the floor.

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Reason: This proposal is for editorial clarity. Not every vent is required to be within the specified maximum distance from a wall or draft curtain. That limitation is only applicable to those vents adjacent to the walls or draft curtains and not to other vents located in the middle of the draft curtained area.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which clarifies the intent of the code with regard to vent spacing.

Assembly Action:

None

Final Hearing Results

F195-07/08

AS

Code Change No: F198-07/08

Original Proposal

Sections: 910.3.4 (IBC [F] 910.3.4)

Proponent: Rick Thornberry, PE, The Code Consortium, representing AAMA Smoke Vent Task Group

Revise as follows:

910.3.4 (IBC [F] 910.3.4) (Supp) Vent locations. Smoke and heat vents shall be located 20 feet (6096 mm) or more from adjacent lot lines and fire walls and 10 feet (3048 mm) or more from fire barriers. Vents shall be uniformly located within the roof area ~~above high-piled storage areas,~~ with consideration given to roof pitch, draft curtain location, sprinkler location and structural members.

Reason: Editorial clarification. This requirement should apply in all cases, not just for high piled storage areas.

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

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: The committee felt that the proposal could lead to vents being required throughout all roof areas, even where they would serve no useful purpose.

Assembly Action:

None

Public Comments

Individual Consideration Agenda

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

Public Comment:

Rick Thornberry, The Code Consortium, Inc., representing AAMA Smoke Vent Task Group, requests Approval as Modified by this public comment.

Modify proposal as follows:

910.3.4 (IBC [F] 910.3.4) (Supp) Vent locations. Smoke and heat vents shall be located 20 feet (6096 mm) or more from adjacent lot lines and fire walls and 10 feet (3048 mm) or more from fire barriers. Vents shall be uniformly located within the roof in the areas of the building where the vents are required to be installed by Section 910.2 with consideration given to roof pitch, draft curtain location, sprinkler location and structural members.

Commenter's Reason: This Public Comment responds to the Committee's Reason for disapproving the original code change proposal. The Committee was concerned that the original revisions to this section would have caused vents to be required throughout all roof areas in the building, even in areas where they would serve no useful purpose or were not otherwise required. So we have revised the code change proposal so that it clearly indicates that the vents are only to be installed in those areas of the building where the vents are required by Section 910.2. The important point of this revision is that the vents must be uniformly located within the roof in those areas where vents are to be provided and not just where they are located above high-piled storage areas.

Final Hearing Results

F198-07/08

AMPC

Code Change No: F199-07/08

Original Proposal

Sections: 910.3.5 (IBC [F] 910.3.5)

Proponent: Edwin M. Berkel, CFI, Mehlville Fire Protection District, representing himself

Revise as follows:

910.3.5 (IBC [F] 910.3.5) Draft curtains. Where required, draft curtains shall be provided in accordance with this section.

Exception: Where areas of buildings are equipped with ESFR sprinklers, draft curtains shall not be provided within these areas. Draft curtains shall only be provided at the separation between the ESFR sprinklers and the ~~conventional~~ standard response sprinklers

Reason: The existing code text makes use of an undefined term, "conventional sprinklers". This code change corrects that by using "standard response sprinklers" which is the correct term utilized in the reference standards.

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

Public Hearing Results

Committee Action:**Approved as Submitted**

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which provides clarification by using correct sprinkler terminology in the correct manner.

Assembly Action:**None**

Public Comments

Individual Consideration Agenda

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

Public Comment:

Bob Eugene, Underwriters Laboratories, Inc., requests Approval as Modified by this public comment.

Modify proposal as follows:

910.3.5 (IBC [F] 910.3.5) Draft curtains. Where required, draft curtains shall be provided in accordance with this section.

Exception: Where areas of buildings are equipped with ESFR sprinklers, draft curtains shall not be provided within these areas. Draft curtains shall only be provided at the separation between the ESFR sprinklers and the ~~standard response~~ non-ESFR sprinklers.

Commenter's Reason: The approved code text uses "standard response sprinklers" which is the correct term utilized in the reference standards, but might limit some of the sprinkler response technology. The intent is to limit the early response of sprinklers using different response technology and this change will provide an unlimited array of sprinklers that maybe found in High-piled storage arrangement.

Final Hearing Results

F199-07/08

AMPC

Code Change No: F201-07/08

Original Proposal

Sections: 912.2.1 (IBC [F] 912.2.1)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

912.2.1 (IBC [F] 912.2.1) Visible location. Fire department connections shall be located on the street side of buildings, fully visible and recognizable from the street or nearest point of fire department vehicle access or as otherwise approved by the fire ~~code official~~ chief.

Reason: Item F132-06/07, Section 912.2 received a lengthy debate and committee modification which subsequently received membership approval at the final action hearings in NY. The final revision to IFC 912.2 requires that the FDC is located as required by the fire chief and reads as follows:

912.2 Location. With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be approved by the fire chief.

The proposed revision to IFC 912.2.1 merely correlates with the revision to IFC 912.2 and eliminates conflict between the two sections.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which properly changes the approval authority from the fire code official to the fire chief since fire department connection location is a fire department operational issue.

Assembly Action:

None

Final Hearing Results

F201-07/08

AS

Code Change No: F202-07/08

Original Proposal

Sections: 912.4 (IBC [F] 912.4)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

Revise as follows:

912.4 (IBC [F] 912.4) Signs. An metal approved permanent sign with raised letters at least 1 inch (25 mm) in size shall be mounted on all new and existing fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served.

Reason: Many sprinkler and standpipe systems were installed prior to current standards. Furthermore, standpipe systems are currently allowed to be manual or automatic in non high-rise buildings as well as many buildings have partial sprinkler or standpipe systems.

The purpose of the sign is to provide the responding firefighters with the correct information on which portions of a building are served by the fire department connection. Many buildings include multiple sets of fire department connections which are not interconnected. Some examples include:

1. Separate connections for the building sprinkler system and the dry standpipe system in open parking structures
2. Rehabilitated buildings where a sprinkler system is only installed on certain floors
3. A high-rise building constructed prior to the adoption of a building code that has a manual wet system

Signs are also required in NFPA 14, and this proposal will allow the raised letter sign to be provided as indicated in NFPA 14 or provide another sign. Many departments are requiring other signs which are more descriptive and provide more information than the minimal sign required in NFPA 14.

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

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

912.4 (IBC [F] 912.4) Signs. An metal approved permanent sign with raised letters at least 1 inch (25 mm) in size shall be mounted on all new and existing fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served.

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide important information to the fire department as to which of multiple fire department connections should be used. The modification retains the current text of the first sentence of the section for correlation with the requirements of NFPA 13.

Assembly Action:

None

Final Hearing Results

F202-07/08

AM

Code Change No: **F203-07/08**

Original Proposal

Sections: 913.2.1 (New) [IBC 913.2.1 (New)]

Proponent: Phillip Brazil, PE, Reid Middleton, Inc., representing himself

1. (IFC) Add new text as follows:

913.2 Protection against interruption of service. The fire pump, driver, and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.

913.2.1 Protection of fire pump rooms. Rooms where fire pumps are located shall be separated from all other areas of the building in accordance with the *International Building Code*.

2. (IBC) Add new text as follows:

[F] 913.2 [Supp] Protection against interruption of service. The fire pump, driver, and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquake, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.

[F] 913.2.1 Protection of fire pump rooms. Fire pumps shall be located in rooms that are separated from all other areas of the building by 2-hour fire barriers constructed in accordance with Section 706 or 2-hour horizontal assemblies constructed in accordance with Section 711, or both.

Exceptions:

1. In other than high-rise buildings, separation by 1-hour fire barriers constructed in accordance with Section 706 or 1-hour horizontal assemblies constructed in accordance with Section 711, or both, shall be permitted in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
2. Separation is not required for fire pumps physically separated in accordance with NFPA 20.

Reason: The Standard for the Installation of Stationary Pumps for Fire Protection, NFPA 20, specifies protection for indoor fire pumps by means of physical or fire separation. I assume the 2007 edition of NFPA 20 will be the edition that is referenced in the 2009 IBC and IFC. Section 5.12.1.1 of NFPA 20 specifies physical separation or protection by fire-rated construction. I interpret “fire-rated construction” to be a reference to separation by a fire barrier, horizontal assembly, or both. Section 5.12.1.1.1 specifies a 2-hour fire-resistance rating for the separation in high-rise buildings but is silent on the physical separation distance. Table 5.12.1.1.2 specifies the physical separation distances and fire-resistance ratings for nonhigh-rise buildings. A 2-hour fire-resistance rating for the separation is specified except for fully sprinklered buildings and pump rooms/houses (i.e., equipped throughout with an automatic sprinkler system complying with NFPA 13 or NFPA 13R). A minimum physical separation distance of 50 feet is specified in all cases and, presumably, would apply when physical separation is utilized in a high-rise building.

By referencing NFPA 20 in the IBC, the physical or fire separation specified in Section 5.12.1.1 of NFPA 20 becomes a construction requirement. The purpose of this proposal is to specify the fire separation as a requirement in the IBC so that designers and building officials are made aware of it. The proposed language will also clarify what is required. The reference to separation by “fire-rated construction” in NFPA 20 does not make it clear what is required for protection of the separating walls and horizontal assemblies at openings, penetrations, joints, ducts and air transfer openings. It is also silent on requirements for continuity, where one or more of the separating walls is an exterior wall, and where one of the horizontal assemblies is a roof assembly. Specifying fire barriers and horizontal assemblies makes it clear what is required by virtue of their provisions in Sections 706 and 711, respectively.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which will provide an increased level of fire pump reliability by enclosing them in a fire-resistance rated pump room using requirements correlated with NFPA 20.

Assembly Action:

None

Final Hearing Results

F203-07/08

AS

Code Change No: F219-07/08

Original Proposal

Sections: 1802.1 (IBC [F] 415.2), 2703.2.2.1

Proponent: Doug Hall, Fire Department, City of Westminster, CO, representing Fire Marshal's Association of Colorado

Revise as follows:

**SECTION 1802
DEFINITIONS**

1802.1 (IBC [F] 415.2) Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

HAZARDOUS PRODUCTION MATERIAL (HPM). A solid, liquid or gas associated with semiconductor manufacturing that has a degree-of-hazard rating in health, flammability or ~~reactivity~~ instability of Class 3 or 4 as ranked by NFPA 704 and which is used directly in research, laboratory or production processes which have as their end product materials that are not hazardous.

2703.2.2.1 Design and construction. Piping, tubing, valves, fittings and related components used for hazardous materials shall be in accordance with the following:

1. Piping, tubing, valves, fittings and related components shall be designed and fabricated from materials that are compatible with the material to be contained and shall be of adequate strength and durability to withstand the pressure, structural and seismic stress and exposure to which they are subject.
2. Piping and tubing shall be identified in accordance with ASME A13.1 to indicate the material conveyed.
3. Readily accessible manual valves or automatic remotely activated fail-safe emergency shutoff valves shall be installed on supply piping and tubing at the following locations:
 - 3.1. The point of use.
 - 3.2. The tank, cylinder or bulk source.
4. Manual emergency shutoff valves and controls for remotely activated emergency shutoff valves shall be identified and the location shall be clearly visible, accessible and indicated by means of a sign.
5. Backflow prevention or check valves shall be provided when the backflow of hazardous materials could create a hazardous condition or cause the unauthorized discharge of hazardous materials.
6. Where gases or liquids having a hazard ranking of:

Health hazard Class 3 or 4
Flammability Class 4
~~Reactivity~~ Instability Class 3 or 4

in accordance with NFPA 704 are carried in pressurized piping above 15 pounds per square inch gauge (psig) (103 kPa), an approved means of leak detection and emergency shutoff or excess flow control shall be provided. Where the piping originates from within a hazardous material storage room or area, the excess flow control shall be located within the storage room or area. Where the piping originates from a bulk source, the excess flow control shall be located as close to the bulk source as practical.

Exceptions:

1. Piping for inlet connections designed to prevent backflow.
2. Piping for pressure relief devices.

CODE CHANGES RESOURCE COLLECTION – INTERNATIONAL BUILDING CODE

Reason: NFPA 704 no longer recognizes the “Reactivity” label for the applicable classification of hazardous materials. Revising the classification to the current 2007 edition of NFPA 704 terminology reflects exactly what the IFC standards reference states. The use of the term “reactivity” misinforms the intent of this specific classification. Appropriate use of the term “instability” reflects the intent of the current NFPA 704 classification system for fire personnel and industrial emergency responders.

“Reactivity” has been erroneously taught to thousands of emergency responders and private industry users that the numeric rating system quantified the degree of reactivity a chemical might have with other chemicals, i.e. how reactive a chemical is to something else.

Instability directly correlates to the degree of intrinsic susceptibility of materials to release energy when exposed to thermal or mechanical shock and/or elevated temperatures or pressure. There is no direct correlation with a chemical's compatibility to another chemical substance.

There are approximately 16 references in the 2007 IFC to the NFPA 704 standard. The IFC should accurately reflect the information from a standard.

Cost Impact: No direct cost impact to facility users as the NFPA 704 numeric rating system has not changed for instability.

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which would provide a useful clarification of the terminology and correlation with NFPA 704.

Assembly Action:

None

Final Hearing Results

F219-07/08

AS

Code Change No: F225-07/08

Original Proposal

Sections: 2201.1, 2202.1 (New), 1103.5, 1106.1; IBC 412.1 (New)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

1. Revise as follows:

2201.1 Scope. Automotive motor fuel-dispensing facilities, marine motor fuel-dispensing facilities, fleet vehicle motor fuel-dispensing facilities aircraft motor-vehicle fuel-dispensing facilities and repair garages shall be in accordance with this chapter and the *International Building Code*, *International Fuel Gas Code* and the *International Mechanical Code*. Such operations shall include both operations that are accessible to the public and private operations.

1103.5 Dispensing of flammable and combustible liquids. The dispensing, transferring and storage of flammable and combustible liquids shall be in accordance with this chapter and Chapter 34. Aircraft motor vehicle fuel-dispensing ~~stations~~ facilities shall be in accordance with Chapter 22.

1106.1 Aircraft motor vehicle fuel-dispensing ~~stations~~ facilities. Aircraft motor vehicle fuel-dispensing ~~stations~~ facilities shall be in accordance with Chapter 22.

2. Add new definition as follows:

2202.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AIRCRAFT MOTOR-VEHICLE FUEL-DISPENSING FACILITY. That portion of property where flammable or combustible liquids or gases used as motor fuels are stored and dispensed from fixed equipment into the fuel tanks of aircraft.

3. Add new text as follows:

IBC 412.1 General. Aircraft related occupancies shall comply with this section and the *International Fire Code*.

(Renumber subsequent sections)

Reason: The IFC has construction requirements for aircraft related facilities in Chapter 11 Aviation Facilities, however, Section 412 Aircraft-related Occupancies in the IBC does not direct the user to the fire code other than for aircraft paint hangers. The new language proposed for Section 412.1 will provide that reference.

Additionally, IFC Chapter 11 Aviation Facilities requires "Aircraft Motor-Vehicle Fuel-Dispensing Stations" to be installed in accordance with Chapter 22 of that code, however, of all the different types of motor vehicle facilities defined by Chapter 22 and listed in Section 2201.1 Scope, aircraft motor-vehicle fuel-dispensing stations are not included. The proposed language clarifies that these facilities are within the scope of Chapter 22 and provides a definition.

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

Public Hearing Results

Committee Action:**Approved as Modified****Modify the proposal as follows:**

2202.1 Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

AIRCRAFT MOTOR-VEHICLE FUEL-DISPENSING FACILITY. That portion of property where flammable or combustible liquids or gases used as motor fuels are stored and dispensed from fixed automotive-type equipment into the fuel tanks of aircraft.

(Portions of proposal not shown remain unchanged)

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change, which fills the need for defining this type of motor fuel dispensing facility. The modification further clarifies that these facilities, found mainly at small, local airports, use the same type of dispensing equipment as automotive facilities rather than the more sophisticated fuelers and systems found at larger airports.

Assembly Action:**None**

Final Hearing Results

F225-07/08

AM

Code Change No: F233-07/08

Original Proposal

Sections: 2209.5.1.1, Chapter 45 (New); IBC 406.5.2, Chapter 35 (New)

THESE PROPOSALS ARE ON THE AGENDA OF THE IFC AND THE IBC GENERAL CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

Proponent: Thomas Joseph, Chair, Hydrogen Industry Panel on Codes (HIPOC)

1. PART I – IFC**Revise as follows:**

2209.5.1.1 (Supp) Vehicle fueling pad. The vehicle fueling pad shall be fueled on non-coated or concrete or a other approved paving material having a resistivity resistance not exceeding one megohm as determined by an approved method the methodology specified in DIN EN 1081.

2. Add standard to Chapter 45 as follows:

European Committee for Standardization (EN)
Central Secretariat
Rue de Stassart 36
B-10 50 Brussels

European Standard EN 1081: 1998 Resilient Floor Coverings – Determination of the Electrical Resistance

PART I – IBC GENERAL

406.5.2 (Supp) Vehicle fueling pad. The vehicle ~~fueling pad~~ shall be fueled on non-coated ~~of~~ concrete or a other approved paving material having a resistivity resistance not exceeding 1 megohm as determined by an approved method ~~the methodology specified in DIN EN 1081.~~

2. Add standard to Chapter 35 as follows:

European Committee for Standardization (EN)
Central Secretariat
Rue de Stassart 36
B-10 50 Brussels

European Standard EN 1081: 1998 Resilient Floor Coverings – Determination of the Electrical Resistance

Reason: The proposed changes retain the original intent of this section while correcting some incorrect language and providing additional guidance for the code official. These changes address concerns voiced by ICC members during the last code cycle regarding the specified units and the request for additional guidance for the code official by using a referenced standard.

Units: Megohms are the appropriate measurement of resistance, not resistivity.

Referenced Standard: The referenced EN standard 1081:1998, which now has DIN status, is the best available standard that is applicable to measuring resistance of vehicle fueling pads. With this change the official still has the option to use another approved method, but DIN EN 1081:1998 is the referred method for measurement if non-coated concrete is not used. It may be worth noting that DIN EN 1081:1998 was created using an open, transparent and consensus-based process similar to the procedures used by ANSI-approved standard development organizations. Considering Standard 1081 also bares the EN designation, the U.S. building regulatory community should be comfortable that it has been, and will continue to be, carefully scrutinized and representative of the work of a true consensus body that we Americans are familiar with.

These proposed changes will retain the original intent of this section to dissipate static electricity built up on the vehicle from driving before the driver's door is opened--with corrected language and better guidance. The overall goal is to increase the safety of vehicle fueling. Concrete is allowed for the fueling pad with no resistance measurements needed; if an alternate material is desired, it can be used as long as it has a resistance less than or equal to 1 megohm. Both the concrete and 1 megohm criteria are cited from the American Petroleum Institute (API) 2003 Recommended Practices (RP), section 4.6.9.2. NFPA 77: *Recommended Practice on Static Electricity*, section 7.4.1.3 also points out that a resistance of 1 megohm or less is considered adequate to dissipate any charges. Additionally, the proposed language has been proposed by the State of Michigan, Department of Environmental Quality – Waste and Hazardous Materials Division for Michigan's *Hydrogen Storage and Dispensing Rules*, and is consistent with changes proposed under the current cycle to NFPA 55-2005, *Standard for the Storage, Use, and Handling of Compressed Gasses and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks*.

Cost Impact: The code change proposal will increase the cost of construction.

Public Hearing Results

Note: The following analysis was not in the Code Change Proposal book but was posted on the ICC website.

Analysis: Review of proposed new standard EN 1981:1998 indicated that, in the opinion of ICC Staff, the standard did comply with ICC standards criteria.

PART I – IFC

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that the proponent had responded to the committees concerns regarding the way the standard is referenced. That concern was expressed in the committee action on code change F156-07/07 in the last cycle.

Assembly Action:

None

PART II – IBC GENERAL

Committee Action:

Disapproved

Committee Reason: The committee did not receive enough data to determine the applicability of the requirements.

Assembly Action:

None

Public Comments

Individual Consideration Agenda

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

Public Comment:

Thomas Joseph, Chair, Hydrogen Industry Panel on Codes, requests Approval as Submitted.

Commenter's Reason: The Hydrogen Industry asks the Membership to uphold IFC Committee Action on Part I for "As Submitted" and reverse IBC General Committee Action on Part II from "Disapprove" to "As Submitted" for consistency and uniformity in enforcement.

Fifteen (15) copies of the European Standard DIN EN 1081:1998-04, proposing electrostatic discharge (ESD) material and testing requirements for vehicle fueling surfaces were purchased and provided to the IFC Secretariat and Code Development Committee. The Secretariat's analysis indicated DIN EN 1081 was reviewed for compliance with ICC policy and accepted as compliant. Part I was subsequently reviewed and approved by the IFC Development Committee.

Part II was disapproved by IBC General Development Committee, not on technical grounds, but based on (1) Not having received additional copies of the standard and (2) that the IFC Secretariat's review and acceptance of DIN EN 1081 had not been coordinated with the IBC-General Secretariat or the IBC General Committee.

Final Hearing Results

F233-07/08, Part I	AS
F233-07/08, Part II	AS

Code Change No: F241-07/08

Original Proposal

Sections: 2403.8.4 (New); IBC 3102.1

Proponent: Daniel E. Nichols, PE, NY State Division of Code Enforcement and Administration

THESE PROPOSALS ARE ON THE AGENDA OF THE IFC AND THE IBC GENERAL CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IFC

Add new text as follows:

2403.8.4 Membrane structures on buildings. Membrane structures that are erected on buildings, balconies, decks, or other structures shall be regulated as permanent membrane structures in accordance with Section 3102 of the *International Building Code*.

(Renumber subsequent sections)

PART II – IBC GENERAL

3102.1 General. The provisions of this section shall apply to air-supported, air-inflated, membrane-covered cable and membrane-covered frame structures, collectively known as membrane structures, erected for a period of 180 days or longer. Those erected for a shorter period of time shall comply with the *International Fire Code*. Membrane structures covering water storage facilities, water clarifiers, water treatment plants, sewage treatment plants, greenhouses and similar facilities not used for human occupancy, are required to meet only the requirements of Sections 3102.3.1 and 3102.7. Membrane structures erected on a building, balcony, deck or other structure for any period of time shall comply with this section.

CODE CHANGES RESOURCE COLLECTION – INTERNATIONAL BUILDING CODE

Reason: The purpose of this code proposal is to limit the location where temporary membrane structures can be erected, based on regulations already found in the temporary membrane structure requirements.

Temporary membrane structures that are placed in a field or parking lot are afforded several safety features including fire separation distance from other hazards (buildings, vehicles), separation from other tents, and provide an unobstructed means of egress path for the uniformly located exits. When a membrane structure is placed upon a building or deck, the temporary membrane structure requirements do not currently regulate exiting from the temporary membrane structure to a set of stairs or door nor do they regulate the hazards that could be below the temporary membrane structure. Furthermore, the temporary membrane structure section does not contain requirements on the regulation of the loads temporary membrane structures would have on a structure below.

With the means of egress, fire separation, and structural issues, it is best for temporary membrane structures to be regulated as permanent membrane structures and subject to the International Building Code.

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

Public Hearing Results

PART I – IFC

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because it provides needed guidance to the fire code official on how membrane structures erected on buildings are to be viewed and regulated. Without this change, they are essentially a building addition without regulation. The action is also consistent with the action taken by the IBC-General Committee on Part II.

Assembly Action:

None

PART II – IBC GENERAL

Committee Action:

Approved as Submitted

Committee Reason: If a membrane is constructed on a building it needs to be regulated. This proposal would clarify between the temporary requirements in the IFC and the permanent membrane requirements in the IBC.

Assembly Action:

None

Final Hearing Results

F241-07/08, Part I	AS
F241-07/08, Part II	AS

Code Change No: F243-07/08

Original Proposal

Chapter 24, Section: 105.6.43, 105.7.13, 202 (IBC 202); Table 906.1 (IBC Table [F] 906.1)

Proponent: Tom Lariviere, Fire Department, Madison, MS, representing Joint Fire Service Review Committee

THESE PROPOSALS ARE ON THE AGENDA OF THE IFC AND THE IBC GENERAL CODE DEVELOPMENT COMMITTEES AS 2 SEPARATE CODE CHANGES. SEE THE TENTATIVE HEARING ORDERS FOR THESE COMMITTEES.

PART I – IFC

1. Revise Chapter 24 as follows:

CHAPTER 24 TENTS, CANOPIES AND OTHER MEMBRANE STRUCTURES

SECTION 2401 GENERAL

2401.1 (Supp) Scope. Tents, canopies and membrane structures shall comply with this chapter. The provisions of Section 2403 are applicable only to temporary tents, canopies and membrane structures. The provisions of Section 2404 are applicable to temporary and permanent tents, canopies and membrane structures.

SECTION 2402 DEFINITIONS

CANOPY. A structure, enclosure or shelter constructed of fabric or pliable materials supported by any manner, except by air or the contents it protects, and is open without sidewalls or drops on 75 percent or more of the perimeter

TENT. A structure, enclosure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported by any manner except by air or the contents that it protects.

SECTION 2403 TEMPORARY TENTS, CANOPIES AND MEMBRANE STRUCTURES

2403.1 General. All temporary tents, ~~canopies~~ and membrane structures shall comply with this section.

2403.2 Approval required. Tents and membrane structures having an area in excess of ~~200~~ 400 square feet (~~19~~ 37 m²) and ~~canopies in excess of 400 square feet (37 m²)~~ shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the fire code official.

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. ~~Fabric canopies~~ Tents open on all sides which comply with all of the following:
 - 2.1. Individual ~~canopies tents~~ having a maximum size of 700 square feet (65 m²).
 - 2.2. The aggregate area of multiple ~~canopies tents~~ placed side by side without a fire break clearance of 2 feet (3658 mm), not exceeding 700 square feet (65 m²) total.
 - 2.3. A minimum clearance of 12 feet (3658 mm) to all structures and other tents.

2403.3 Place of assembly. (No change to current text)

2403.4 Permits. (No change to current text)

2403.5 Use period. Temporary tents, air-supported, air-inflated or tensioned membrane structures ~~and canopies~~ shall not be erected for a period of more than 180 days within a 12-month period on a single premises.

2403.6 Construction documents. A detailed site and floor plan for tents, ~~canopies~~ or membrane structures with an occupant load of 50 or more shall be provided with each application for approval. The ~~tent, canopy~~ or membrane structure floor plan shall indicate details of the means of egress facilities, seating capacity, arrangement of the seating and location and type of heating and electrical equipment.

2403.7 Inspections. (No change to current text)

2403.7.1 Inspection report. (No change to current text)

2403.8 Access, location and parking. Access location and parking for temporary tents, ~~canopies~~ and membrane structures shall be in accordance with this section.

2403.8.1 Access. (No change to current text)

2403.8.2 Location. Tents, ~~canopies~~ or membrane structures shall not be located within 20 feet (6096 mm) of lot lines, buildings, other tents, ~~canopies~~ or membrane structures, parked vehicles or internal combustion engines. For the purpose of determining required distances, support ropes and guy wires shall be considered as part of the temporary membrane structure, or tent ~~or canopy~~.

Exceptions:

1. Separation distance between membrane structures, and tents ~~and canopies~~ not used for cooking, is not required when the aggregate floor area does not exceed 15,000 square feet (1394 m²).
2. Membrane structures, or tents ~~or canopies~~ need not be separated from buildings when all of the following conditions are met:
 - 2.1. The aggregate floor area of the membrane structure, or tent ~~or canopy~~ shall not exceed 10,000 square feet (929 m²).

- 2.2. The aggregate floor area of the building and membrane structure, ~~or tent or canopy~~ shall not exceed the allowable floor area including increases as indicated in the *International Building Code*.
- 2.3. Required means of egress provisions are provided for both the building and the membrane structure, ~~or tent or canopy~~, including travel distances.
- 2.4. Fire apparatus access roads are provided in accordance with Section 503.

2403.8.3 Location of structures in excess of 15,000 square feet in area. (No change to current text)

2403.8.4 Connecting corridors. (No change to current text)

2403.8.5 Fire break. An unobstructed fire break passageway or fire road not less than 12 feet (3658 mm) wide and free from guy ropes or other obstructions shall be maintained on all sides of all tents, ~~canopies~~ and membrane structures unless otherwise approved by the fire code official.

2403.9 Anchorage required. Tents, ~~canopies~~ or membrane structures and their appurtenances shall be adequately roped, braced and anchored to withstand the elements of weather and prevent against collapsing. Documentation of structural stability shall be furnished to the fire code official on request.

2403.10 Temporary air-supported and air-inflated membrane structures. (No change to current text)

2403.10.1 Door operation. (No change to current text)

2403.10.2 Fabric envelope design and construction. (No change to current text)

2403.10.3 Blowers. (No change to current text)

2403.10.4 Auxiliary power. (No change to current text)

2403.11 Seating arrangements. Seating in tents, ~~canopies~~ or membrane structures shall be in accordance with Chapter 10.

2403.12 Means of egress. Means of egress for temporary tents, ~~canopies~~ and membrane structures shall be in accordance with Sections 2403.12.1 through 2403.12.8.

2403.12.1 Distribution. (No change to current text)

2403.12.2 Number. (No change to current text)

**TABLE 2403.12.2
MINIMUM NUMBER OF MEANS OF EGRESS AND MEANS OF
EGRESS WIDTHS FROM TEMPORARY MEMBRANE
STRUCTURES, AND TENTS AND CANOPIES**

OCCUPANT LOAD	MINIMUM NUMBER OF MEANS OF EGRESS	MINIMUM WIDTH OF EACH MEANS OF EGRESS (inches)	MINIMUM WIDTH OF EACH MEANS OF EGRESS (inches)
		Tent or Canopy	Membrane Structure
10 to 199	2	72	36
200 to 499	3	72	72
500 to 999	4	96	72
1,000 to 1,999	5	120	96
2,000 to 2,999	6	120	96
Over 3,000 ^a	7	120	96

For SI: 1 inch = 25.4 mm.

- a. When the occupant load exceeds 3,000, the total width of means of egress (in inches) shall not be less than the total occupant load multiplied by 0.2 inches per person.

2403.12.3 Exit openings from tents. (No change to current text)

2403.12.4 Doors. (No change to current text)

2403.12.5 Aisle. (No change to current text)

2403.12.5.1 Arrangement and maintenance. (No change to current text)

2403.12.6 Exit signs. (No change to current text)

2403.12.6.1 (Supp) Exit sign illumination. (No change to current text)

2403.12.7 Means of egress illumination. (No change to current text)

2403.12.8 Maintenance of means of egress. (No change to current text)

SECTION 2404
TEMPORARY AND PERMANENT TENTS, CANOPIES
AND MEMBRANE STRUCTURES

2404.1 General. All tents, ~~canopies~~ and membrane structures, both temporary and permanent, shall be in accordance with this section. Permanent tents, ~~canopies~~ and membrane structures shall also comply with the *International Building Code*.

2404.2 Flame propagation performance treatment. Before a permit is granted, the owner or agent shall file with the fire code official a certificate executed by an approved testing laboratory certifying that the tents; ~~canopies~~ and membrane structures and their appurtenances; sidewalls, drops and tarpaulins; floor coverings, bunting and combustible decorative materials and effects, including sawdust when used on floors or passageways, shall be composed of material meeting the flame propagation performance criteria of NFPA 701 or shall be treated with a flame retardant in an approved manner and meet the flame propagation performance criteria of NFPA 701, and that such flame propagation performance criteria are effective for the period specified by the permit.

2404.3 Label. Membrane structures, ~~or tents or canopies~~ shall have a permanently affixed label bearing the identification of size and fabric or material type.

2404.4 Certification. An affidavit or affirmation shall be submitted to the fire code official and a copy retained on the premises on which the tent or air-supported structure is located. The affidavit shall attest to the following information relative to the flame propagation performance criteria of the fabric:

1. Names and address of the owners of the tent, ~~canopy~~ or air-supported structure.
2. Date the fabric was last treated with flame-retardant solution.
3. Trade name or kind of chemical used in treatment.
4. Name of person or firm treating the material.
5. Name of testing agency and test standard by which the fabric was tested.

2404.5 (Supp) Combustible materials. Hay, straw, shavings or similar combustible materials shall not be located within any tent, ~~canopy~~ or membrane structure containing an assembly occupancy, except the materials necessary for the daily feeding and caring of animals. Sawdust and shavings utilized for a public performance or exhibit shall not be prohibited provided the sawdust and shavings are kept damp. Combustible materials shall not be permitted under stands or seats at any time.

2404.6 Smoking. Smoking shall not be permitted in tents, ~~canopies~~ or membrane structures. Approved "No Smoking" signs shall be conspicuously posted in accordance with Section 310.

2404.7 Open or exposed flame. Open flame or other devices emitting flame, fire or heat or any flammable or combustible liquids, gas, charcoal or other cooking device or any other unapproved devices shall not be permitted inside or located within 20 feet (6096 mm) of the tent, ~~canopy~~ or membrane structures while open to the public unless approved by the fire code official.

2404.8 Fireworks. Fireworks shall not be used within 100 feet (30 480 mm) of tents, ~~canopies~~ or membrane structures.

2404.9 Spot lighting. (No change to current text)

2404.10 Safety film. Motion pictures shall not be displayed in tents, ~~canopies~~ or membrane structures unless the motion picture film is safety film.

2404.11 (Supp) Clearance. (No change to current text)

2404.12 Portable fire extinguishers. (No change to current text)

2404.13 Fire protection equipment. (No change to current text)

2404.14 Occupant load factors. (No change to current text)

2404.15 Heating and cooking equipment. (No change to current text)

2404.15.1 Installation. (No change to current text)

2404.15.2 Venting. Gas, liquid and solid fuel-burning equipment designed to be vented shall be vented to the outside air as specified in the *International Fuel Gas Code* and the *International Mechanical Code*. Such vents shall be equipped with approved spark arresters when required. Where vents or flues are used, all portions of the tent, ~~canopy~~ or membrane structure shall be not less than 12 inches (305 mm) from the flue or vent.

2404.15.3 Location. (No change to current text)

2404.15.4 Operations. (No change to current text)

2404.15.5 Cooking tents. Tents where cooking is performed shall be separated from other tents, ~~canopies~~ or membrane structures by a minimum of 20 feet (6096 mm).

2404.15.6 Outdoor cooking. Outdoor cooking that produces sparks or grease-laden vapors shall not be performed within 20 feet (6096 mm) of a tent, ~~canopy~~ or membrane structure.

2404.15.7 Electrical heating and cooking equipment. (No change to current text)

2404.16 LP-gas. (No change to current text)

2404.16.1 General. (No change to current text)

2404.16.2 Location of containers. LP-gas containers shall be located outside. Safety release valves shall be pointed away from the tent, ~~canopy~~ or membrane structure.

2404.16.2.1 Containers 500 gallons or less. (No change to current text)

2404.16.2.2 Containers more than 500 gallons. (No change to current text)

2404.16.3 Protection and security. Portable LP-gas containers, piping, valves and fittings which are located outside and are being used to fuel equipment inside a tent, ~~canopy~~ or membrane structure shall be adequately protected to prevent tampering, damage by vehicles or other hazards and shall be located in an approved location. Portable LP-gas containers shall be securely fastened in place to prevent unauthorized movement.

2404.17 Flammable and combustible liquids. (No change to current text)

2404.17.1 Use. (No change to current text)

2404.17.2 Flammable and combustible liquid storage. Flammable and combustible liquids shall be stored outside in an approved manner not less than 50 feet (15 240 mm) from tents, ~~canopies~~ or membrane structures. Storage shall be in accordance with Chapter 34.

2404.17.3 Refueling. Refueling shall be performed in an approved location not less than 20 feet (6096 mm) from tents, ~~canopies~~ or membrane structures.

2404.18 Display of motor vehicles. Liquid- and gas-fueled vehicles and equipment used for display within tents, ~~canopies~~ or membrane structures shall be in accordance with Sections 2404.18.1 through 2404.18.5.3.

2404.18.1 Batteries. (No change to current text)

2404.18.2 Fuel systems. Vehicles or equipment shall not be fueled or defueled within the tent, ~~canopy~~ or membrane structure.

2404.18.2.1 Quantity limit. (No change to current text)

2404.18.2.2 Inspection. (No change to current text)

2404.18.2.3 Closure. (No change to current text)

2404.18.3 Location. (No change to current text)

2404.18.4 Places of assembly. (No change to current text)

2404.18.5 Competitions and demonstrations. Liquid and gas-fueled vehicles and equipment used for competition or demonstration within a tent, ~~canopy~~ or membrane structure shall comply with Sections 2404.18.5.1 through 2404.18.5.3.

2404.18.5.1 Fuel storage. (No change to current text)

2404.18.5.2 Fueling. (No change to current text)

2404.18.5.3 Spills. (No change to current text)

2404.19 Separation of generators. Generators and other internal combustion power sources shall be separated from tents, ~~canopies~~ or membrane structures by a minimum of 20 feet (6096 mm) and shall be isolated from contact with the public by fencing, enclosure or other approved means.

2404.20 Standby personnel. When, in the opinion of the fire code official, it is essential for public safety in a tent, ~~canopy~~ or membrane structure used as a place of assembly or any other use where people congregate, because of the number of persons, or the nature of the performance, exhibition, display, contest or activity, the owner, agent or lessee shall employ one or more qualified persons, as required and approved, to remain on duty during the times such places are open to the public, or when such activity is being conducted.

Before each performance or the start of such activity, standby personnel shall keep diligent watch for fires during the time such place is open to the public or such activity is being conducted and take prompt measures for extinguishment of fires that occur and assist in the evacuation of the public from the structure.

There shall be trained crowd managers or crowd manager supervisors at a ratio of one crowd manager/supervisor for every 250 occupants, as approved.

2404.21 (Supp) Combustible vegetation. Combustible vegetation that could create a fire hazard shall be removed from the area occupied by a tent, ~~canopy~~ or membrane structure, and from areas within 30 feet (9144 mm) of such structures.

2404.22 (Supp) Combustible waste material. The floor surface inside tents, ~~canopies~~ or membrane structures and the grounds outside and within a 30 foot (9144 mm) perimeter shall be kept clear of combustible waste and other combustible materials that could create a fire hazard. Such waste shall be stored in approved containers and shall be removed from the premises at least once a day during the period the structure is occupied by the public.

2. Revise as follows:

105.6.43 Temporary membrane structures, and tents ~~and canopies~~. An operational permit is required to operate an air-supported temporary membrane structure or a tent having an area in excess of ~~200~~ 400 square feet (~~49~~ 37 m²), ~~or a canopy in excess of 400 square feet (37 m²).~~

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. ~~Fabric canopies~~ Tents open on all sides which comply with all of the following:
 - 2.1. Individual ~~canopies~~ tents having a maximum size of 700 square feet (65 m²).
 - 2.2. The aggregate area of multiple ~~canopies~~ tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m²) total.
 - 2.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.

105.7.13 Temporary membrane structures, and tents ~~and canopies~~. A construction permit is required to erect an air-supported temporary membrane structure or a tent having an area in excess of ~~200~~ 400 square feet (~~49~~ 37 m²), ~~or a canopy in excess of 400 square feet (37 m²).~~

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains or extensions attached thereto, when used for funeral services.
3. ~~Fabric canopies~~ Tents and awnings open on all sides which comply with all of the following:
 - 3.1. Individual ~~canopies~~ tents shall have a maximum size of 700 square feet (65 m²).
 - 3.2. The aggregate area of multiple ~~canopies~~ tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m²) total.
 - 3.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.

SECTION 202 GENERAL DEFINITIONS

CANOPY. ~~See Section 2402.1. A structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration, and may be structurally independent or supported by attachment to a building on one end and by not less than one stanchion on the outer end.~~

**TABLE 906.1 [IBC [F] TABLE 906.1 (Supp)]
ADDITIONAL REQUIRED PORTABLE FIRE EXTINGUISHERS**

SECTION	SUBJECT
2404.12	Tents, canopies and membrane structures

(Portions of table not shown remain unchanged)

PART II – IBC GENERAL

Revise definitions as follows:

SECTION 202
DEFINITIONS

CANOPY. ~~An~~ A permanent structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration, and shall be structurally independent or ~~and is~~ supported by the attachment to a building to which it is attached and at the outer on one end and by not less than one stanchion on the outer end. A canopy is comprised of a rigid structure over which a covering is attached.

TENT (Supp). A structure, enclosure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported in any manner except by air or the contents it protects.

Reason: General:

The pivot point of this proposed code change affecting tents and canopies is the major difference in the way “tents” and “canopies” are defined between the building and fire codes. If it’s agreed the difference is significant and that the two codes need to be correlated, then the majority of changes needed are to be made to the fire code.

With some minor differences in the respective wording, a tent is a tent in either code. But that’s not the case with canopies.

To date, the building code definition of a canopy has been broad and general enough to encompass most everything thought of in the vernacular, be it a covered walkway or the structure that stands over fuel dispensing islands.

Using the current fire code verbiage of a tent or canopy, the following fits the definition of a tent:



This photo fits the definition of a canopy, and at the same time, fits the building code definition of a tent:



In the vernacular, the following are examples of canopies in the building code:



The above photo is also addressed in the fire code as a canopy but it doesn't fit the fire code definition.

Definitions:

The proposed change to the definition of canopy in both codes is to ensure what's being described still includes everything previously thought of in the vernacular but to the exclusion of the fire code's current definition of a canopy which is essentially a tent without sidewalls. Therefore, the definition of canopy is proposed for deletion and relocation in the fire code so as to cover the multiple applications currently found in the code.

By example, while the current definition of canopy in the fire code is found in Chapter 24 Tents, Canopies and Other Membrane Structures, the context and application of a canopy is totally out sync with how canopies are addressed in Chapter 22, Motor Fuel-Dispensing Facilities and Repair Garages. Unlike the temporary nature of tents and canopies in an unchanged Chapter 24, through Chapter 22, canopies are basically independent structures with some permanence expected. In addition, the building code uses the fire code as a reference for the design and construction of canopies at fueling stations. (See IBC Sections 406.5.2, 406.5.2.1 and 2606.10.) By redefining canopies as proposed and locating the revised definition in IFC Chapter 2, it will apply to all sections of the code where canopies are addressed.

Through this proposal, there is no attempt to change the current numerical values found in the code as they relate to exit discharge capacity, the number of exits, occupancy load, etc. What is desired is to change the definitions in both codes to ensure both codes comport with each other.

CODE CHANGES RESOURCE COLLECTION – INTERNATIONAL BUILDING CODE

Code side-by-side comparison:

Attached is a comparison of the building and fire code to help illustrate the need to revise and correlate the definitions of tents and canopies, and how the technical applications of the codes get applied.

IBC Definition	IFC Definition	Permit Thresholds		Proposed change to IBC and IFC	Webster's 3 rd New International Dictionary (as referenced in IFC Section 201.4)
		IBC	IFC		
AWNING. An architectural projection that provides weather protection, identity or decoration and is wholly supported by the building to which it is attached. An awning is comprised of a lightweight, rigid skeleton structure over which a covering is attached.	Silent. Not defined.				
CANOPY. An architectural projection that provides weather protection, identity or decoration and is supported by the building to which it is attached and at the outer end by not less than one stanchion. A canopy is comprised of a rigid structure over which a covering is attached.	CANOPY. A structure, enclosure or shelter constructed of fabric or pliable materials supported by any manner, except by air or the contents it protects, and is open without sidewalls or drops on 75 percent or more of the perimeter.	>0 sq. ft.	>400 sq. ft.	Canopy. A structure or architectural projection of rigid construction over which a covering is attached that provides weather protection, identity or decoration, and may be structurally independent or supported by attachment to a building on one end by not less than one stanchion on the outer end.	Canopy. 1: a covering usu. For shelter or protection a: a covering usu. of cloth suspended from the four high posts of a bed d: a temporary or permanent cover providing shelter and decoration (as over a door or window) f: an awning or marquee often stretching from doorway to curb or covering a section of grandstand.
TENT. Any structure, enclosure or shelter which is constructed of canvas or pliable material supported in any manner except by air or the contents it protects.	TENT. A structure, enclosure or shelter constructed of fabric or pliable material supported by any manner except by air or the contents that it protects.	>120 sq. ft. (Sec. 3103.1.1)	>200 sq. ft. Exception: Aggregate (w/ less than 12 ft. fire break) or individual fabric canopies = or <700 sq. ft.	TENT. A structure, enclosure or shelter, with or without sidewalls or drops, constructed of fabric or pliable material supported by any manner except by air or the contents that it protects.	Tent. 1: a collapsible shelter of canvas or other material stretched and sustained by poles, usu. made fast by ropes attached to pegs hammered into the ground, and used for camping outdoors (as by soldiers or vacationers) or as a temporary building (as for theatrical performance) 3: something that resembles a tent or that serves as a shelter

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES									
IBC Chapter and Subject	IBC				IFC Chapter and Subject	IFC			
	Canopy		Tents			Canopy		Tents	
1 Administration					1 Administration	105.6.43	Operational permit threshold	105.6.43	Operational permit threshold
						105.7.13	Construction permit threshold	105.7.13	Construction permit threshold
2 Definitions	202	Definition of canopy	202	Definition of tent	2 Definitions				
3 Use and Occupancy Classification					3 General precautions against fire	315.3.1	Storage prohibitions under unsprinklered "eaves, canopies or other projections or overhangs".		
4 Special detailed requirements based on use and occupancy	406.5.2	Motor fuel dispensing facilities							
	406.5.2.1	Motor fuel dispensing facilities for hydrogen							
					6 Building services and systems			604.2.9	Emergency power for exit signs in temporary tents
7 Fire-resistance rated construction	705.5.2	Fire walls to extend to outer edge of canopies							
					9 Fire protections systems	T903.2.13	Cross ref for add req fire ext for Hydrogen fueling area canopies		
						T906.1	Additional required fire extinguishers	T906.1	Additional required fire extinguishers
10 Means of egress	1025.6.2.2	Smoke protected seating; roof height			10 Means of egress	1025.6.2.2	Smoke protected seating; roof height		
16 Structural design	T1607.1 (30)	Uniform and concentrated live loads from canopies							
	1607.11.2.4	Ref to T1607.1, Sec 1608 & 1609 for uniform live loads of canopies							
					22 Motor fuel-dispensing and repair garages	2202.1	Motor fuel-dispensing facilities; definition of "dispensing device, overhead type" under canopies		
						2203.1(2) Exce	Location of fuel dispensing devices		
						2207.4 Excep	LP dispensing		

CODE CHANGES RESOURCE COLLECTION – INTERNATIONAL BUILDING CODE

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES								
IBC Chapter and Subject	IBC				IFC Chapter and Subject	IFC		
	Canopy		Tents			Canopy		Tents
						under canopies		
					2208.3.1 Excep	CNG dispensing under canopies		
					T2209.3.1 Note c	Minimum separation for gaseous dispensers from other features		
					2209.3.2.6	Motor fuel-dispensing facilities; canopy tops – hydrogen		
					2209.3.2.6.1	Motor fuel-dispensing facilities; canopy top construction – hydrogen – refers to IBC 406.5		
					2209.3.2.6.2	Required automatic fire extinguishing system under fueling canopies		
					2209.3.2.6.2.1	Motor fuel-dispensing facility; Emergency hydrogen discharge from canopy		
					2209.3.2.6.3	Motor fuel-dispensing facility; hydrogen canopy signage		
					2209.3.3	Canopy design to prevent hydrogen gas accumulation		
					2209.5.4.1	Location of hydrogen vent not to be under canopy		
					2401.1	Scoping of Canopies	2401.1	Scoping of Tents
					2402.1	Definition of canopy	2402.1	Definition of tent
					2403.1	General statement of compliance to section	2403.1	General statement of compliance to section
					2403.2	Approval threshold and exceptions	2403.2	Approval threshold and exceptions
					2403.5	Limitation of 180 days for temporary canopies	2403.5	Limitation of 180 days for temporary tents
					2403.6	Construction documents	2403.6	Construction documents
					2403.8	Access location and parking for temporary canopies	2403.8	Access location and parking for temporary tents
					2403.8.2	Canopy location with	2403.8.2	Tent location with

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES

IBC Chapter and Subject	IBC		IFC Chapter and Subject	IFC	
	Canopy	Tents		Canopy	Tents
				exceptions	exceptions
					2403.8.4 Connecting corridors between tents
			2403.8.5	Required fire break around canopies	2403.8.5 Required fire break around tents
			2403.9	Adequate anchorage requirement	2403.9 Adequate anchorage requirement
			2403.11	Seating in canopies to comply w/ Chap 10	2403.11 Seating in tents to comply w/ Chap 10
			2403.12	Means of egress	2403.12 Means of egress
			2403.12.1	Means of egress distribution	2403.12.1 Means of egress distribution
			2403.12.2 & T 2403.12.2	Number of means of egress	2403.12.2 & T 2403.12.2 Number of means of egress
			2404.1	Temp canopies to comply w/ IFC Permanent canopies to also comply w/ IBC	2404.1 Temp tents to comply w/ IFC. Permanent tents to also comply w/ IBC
			2404.2	Canopy material to comply w/ 701	2404.2 Tent material to comply w/ 701
			2404.3	Canopy material label requirement	2404.3 Tent material label requirement
			2404.4	Certification requirement about fabric treatment	2404.4 Certification requirement about fabric treatment
			2404.5	Proximity of combustible materials	2404.5 Proximity of combustible materials
			2404.6	Smoking prohibition	2404.6 Smoking prohibition
			2404.7	Proximity of open flames	2404.7 Proximity of open flames
			2404.8	No fireworks w/in 100 feet of canopy	2404.8 No fireworks w/in 100 feet of tent
			2404.10	Restriction against showing movies under canopies unless using safety film	2404.10 Restriction against showing movies under tents unless using safety film
			2404.15.2	Venting of heating & cooking equip.	2404.15.2 Venting of heating & cooking equip.
			2404.15.5	Canopy separation from cooking tents	2404.15.5 Cooking tent separation from other tents
			2404.15.6	Proximity of outdoor cooking (grease & sparks)	2404.15.6 Proximity of outdoor cooking (grease & sparks)
			2404.16.2	Location of	2404.16.2 Location of

CODE CHANGES RESOURCE COLLECTION – INTERNATIONAL BUILDING CODE

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES								
IBC Chapter and Subject	IBC				IFC Chapter and Subject	IFC		
	Canopy		Tents			Canopy		Tents
						LP-gas containers		LP-gas containers
					2404.16.3	LP-gas container security	2404.16.3	LP-gas container security
					2404.17.1	Prohibition against using flammable liquid fueled equipment in canopies	2404.17.1	Prohibition against using flammable liquid fueled equipment in tents
					2404.17.2	Separation requirement between canopy and flammable liquid storage	2404.17.2	Separation requirement between tent and flammable liquid storage
					2404.18	Display of motor vehicles	2404.18	Display of motor vehicles
					2404.18.2	Prohibition of fueling vehicles in canopies	2404.18.2	Prohibition of fueling vehicles in tents
					2404.18.5	Fuel-fired vehicle competitions & demo under canopy	2404.18.5	Fuel-fired vehicle competitions & demo under tent
					2404.19	Separation of generators from canopies	2404.19	Separation of generators from tent
					2404.20	Standby personnel; fire watch	2404.20	Standby personnel; fire watch
					2404.21	Vegetation removal	2404.21	Vegetation removal
					2404.22	Required removal or clearance of waste material from canopies	2404.22	Required removal or clearance of waste material from tent
26 Plastic	2606.10	Criteria for light-transmitting plastics used in canopies at motor fuel-dispensing facilities						
			2702.2.9	Emergency power for exit signs				
31 Special construction	3101.1	Scoping for canopies						
			3103.1	Temp tents (<180 days) to comply w/ IFC. Permanent tents to comply w/ IBC provisions.				
			3103.4	Temporary structures to comply with Chap 10				
	3105.1	General						

LIST OF CODE SECTIONS AND TOPICS ADDRESSING TENTS OR CANOPIES									
IBC Chapter and Subject	IBC				IFC Chapter and Subject	IFC			
	Canopy		Tents			Canopy		Tents	
			reference for canopy requirements						
	3105.3	Reference to Chap 16 for wind or lateral loads and live loads for canopies							
	3105.4	Canopy materials; flame spread							
32 Encroachments into the public right-of-way	3201.4	Limit of drainage water from canopy to encroach upon public right-of-way							
	3202.3.1	Limit of encroachment of canopy structure to public right-of-way							
33 Safeguards during construction	3306.7	Canopy height over walkway							
Appendix D Fire Districts	D102.2.8	Permanent canopies in fire districts							

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

Public Hearing Results

PART I – IFC

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it provides a needed clarification and improved correlation between the tent and canopy provisions of the IBC and those of the IFC. It was observed, however, that the lack of a definition for canopy in the IFC may become problematic later on. The action is also consistent with the action of the IBC-General Committee on Part II.

Assembly Action:

None

PART II – IBC GENERAL

Committee Action:

Approved as Submitted

Committee Reason: Clarifies within the IBC the difference between a tent-like structure and permanent canopy structure such as those used in locations such as fuel service stations.

Assembly Action:

None

Final Hearing Results

F243-07/08, Part I AMPC
F243-07/08, Part II AS

Code Change No: **F245-07/08**

Original Proposal

Sections: 2701.2.2.1, 2702.1 (IBC [F] 307.2)

Proponent: Larry Fluer, Fluer, Inc., representing Compressed Gas Association

1. Revise as follows:

2701.2.2.1 Physical hazards. The material categories listed in this section are classified as physical hazards. A material with a primary classification as a physical hazard can also pose a health hazard.

1. Explosives and blasting agents.
2. Flammable and combustible liquids.
3. Flammable solids ~~and gases~~.
4. Organic peroxide materials.
5. Oxidizer materials.
6. Pyrophoric materials.
7. Unstable (reactive) materials.
8. Water-reactive solids and liquids.
9. Cryogenic fluids.
10. Compressed gases.

2. Revise definition as follows:

2702.1 (IBC [F] 307.2) Definitions. The following words and terms shall, for the purposes of this chapter, Chapters 28 through 44 and as used elsewhere in this code, have the meanings shown herein.

PHYSICAL HAZARD. A chemical for which there is evidence that it is a combustible liquid, compressed gas, cryogenic, explosive, ~~flammable gas~~, flammable liquid, flammable solid, organic peroxide, oxidizer, pyrophoric or unstable (reactive) or water-reactive material.

Reason: All compressed gases are physical hazards by definition. Those gases that are regulated as either physical or health hazards within the context of Chapter 27 are identified in Tables 2703.1.1(1) through 2703.1.1(4). Compressed gases with no listed MAQ are not regulated within Chapter 27; however, they are regulated by Chapter 30.

Deleting the term “and gases” from item 3 of Section 2701.2.2.1 and adding a general category of “compressed gases” and deleting the term “flammable gas” from the definition will correlate this section with the definition of physical hazard.

Revision of the term physical hazard has been made to delete “flammable gas” as it is redundant to the category of “compressed gas.”

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

Public Hearing Results

Committee Action:

Disapproved

Committee Reason: Disapproved at the request of the proponent who wishes to revise the proposal to reflect a consensus that has been reached on how to better deal with physical and health hazards since the proposal was first submitted.

Assembly Action:

None

Public Comments

Individual Consideration Agenda

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

Public Comment:

Larry Fluer, Fluer, Inc., representing Compressed Gas Association, requests Approval as Modified by this public comment.

Modify proposal as follows:

2701.2.2.1 Physical hazards. The material categories listed in this section are classified as physical hazards. A material with a primary classification as a physical hazard can also pose a health hazard.

1. Explosives and blasting agents.
2. ~~Flammable and~~ Combustible liquids.
3. Flammable solids, liquids and gases.
4. Organic peroxide ~~materials~~ solids or liquids.
5. Oxidizer ~~materials~~ solids or liquids.
6. Oxidizing gases.
- 6- ~~7.~~ Pyrophoric ~~materials~~ solids, liquids or gases.
- 7- ~~8.~~ Unstable (reactive) materials solids, liquids or gases.
- 8- ~~9.~~ Water-reactive ~~materials~~ solids and or liquids.
- 9- ~~10.~~ Cryogenic fluids.
- 10- ~~Compressed gases~~.

2702.1 (IBC [F] 307.2) Definitions. The following words and terms shall, for the purposes of this chapter, Chapters 28 through 44 and as used elsewhere in this code, have the meanings shown herein.

PHYSICAL HAZARD. A chemical for which there is evidence that it is a combustible liquid, ~~compressed gas~~, cryogenic fluid, explosive, flammable solid, liquid or gas, ~~flammable liquid, flammable solid~~, organic peroxide solid or liquid, oxidizer solid or liquid, oxidizing gas, pyrophoric solids, liquid or gas or unstable (reactive) materials solid, liquid or gas or water-reactive materials, solid or liquid.

Commenter's Reason: The original submittal was initially triggered by the introduction of a definition for oxidizing gases and changes in terminology to clarify the differences between "oxidizer, solids and liquids" vs. oxidizing gases. During discussion with participants at the committee hearings a concern was raised with the inclusion of a general category of "compressed gas" to the list of physical hazards even though the term was used within the definition itself.

The proposed modification adds oxidizing gases to the list of items in Section 2701.2.2.1 and correlates the terminology used in the definition with that used in the list of materials. The apparent inconsistency in terminology for unstable and water reactive materials is driven by the definitions as they appear in material specific chapters 43 and 44 respectively using the term "unstable (reactive) material" to include solids, liquids and gases and the term "water-reactive material" to describe the material regulated which is limited to the solid and liquid form of materials in this category.

Approval of this modification will bring consistency between the definition of physical hazard and the list of materials regulated as physical hazards within the context of the IFC.

Final Hearing Results

F245-07/08

AMPC

Code Change No: F247-07/08

Original Proposal

Table 2703.1.1(1) [IBC [F] Table 307.1(1)], Table 2703.1.1(3)

Proponent: Larry Fluor, Fluor, Inc., representing Compressed Gas Association

Revise tables as follows:

**TABLE 2703.1.1(1) [IBC [F] 307.1(1)](Supp)
MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF
HAZARDOUS MATERIAL POSING A PHYSICAL HAZARD^{a,j,m,n,p}**

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE ^b			USE-CLOSED SYSTEMS ^b			USE-OPEN SYSTEMS ^b	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)
Inert gas	Gaseous	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable
	Liquefied	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable
Cryogenic Inert	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable

(Portions of table and footnotes not shown remain unchanged)

TABLE 2703.1.1(3) (Supp)
MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIAL
POSING A PHYSICAL HAZARD IN AN OUTDOOR CONTROL AREA^{a,b,c}

MATERIAL	CLASS	GROUP WHEN THE MAXIMUM ALLOWABLE QUANTITY IS EXCEEDED	STORAGE ^b			USE-CLOSED SYSTEMS ^b			USE-OPEN SYSTEMS ^b	
			Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)	Gas cubic feet at NTP	Solid pounds (cubic feet)	Liquid gallons (pounds)
Inert gas	Gaseous	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable
	Liquefied	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable
Cryogenic Inert	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable	Not Limited	Not Applicable	Not Applicable

(Portions of table and footnotes not shown remain unchanged)

Reason: Permits are required for inert gases when exceeding the amounts indicated in Tables 105.6.8 and 105.6.10; however, occupancy is not determined based on a quantity of inert gas. With respect to the table inert gases should be treated in a manner similar to Unstable Reactive or Water Reactive Class 1 materials where the quantity is indicated as “unlimited.” This change will coordinate the MAQ tables with Section 2701.2.2.1 which lists cryogenics and the definition of physical hazard in Section 2702.1 which lists definitions and includes all “compressed gases.”

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that the additional table entries will provide needed guidance to the fire code official in determining occupancy Group H.

Assembly Action:

None

Final Hearing Results

F247-07/08

AS

Code Change No: F254-07/08

Original Proposal

Sections: 2704.7; IBC [F] 414.5.4

Proponent: Lance H. Edwards, The National Paint & Coatings Association

Revise as follows:

2704.7 (Supp) Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with NFPA 70 and Section 604.

Exceptions:

1. Standby or emergency power for mechanical ventilation for storage of flammable and combustible liquids in single story occupancies.
- ~~2.~~ Storage areas for Class 1 and 2 oxidizers.
- ~~3.~~ Storage areas for Class II, III, IV and V organic peroxides.
- ~~4.~~ Storage areas for asphyxiant, irritant and radioactive gases.
- ~~4.~~ For storage areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6.
- ~~5.~~ Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.

[F] 414.5.4 (Supp) Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with Section 2702.

Exceptions:

1. Standby or emergency power for mechanical ventilation for storage of flammable and combustible liquids in single story occupancies.
- ~~4-~~ 2. Storage areas for Class 1 and 2 oxidizers.
- ~~2-~~ 3. Storage areas for Class II, III, IV and V organic peroxides.
- ~~3-~~ 4. Storage areas for asphyxiant, irritant and radioactive gases.
- 4- 5. For storage, use and handling areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6 of the *International Fire Code*.
- ~~5-~~ 6. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.

Reason: This proposal will remove the requirement for standby power for flammable and combustible liquid storage ventilation. The requirement for standby power was originally not applicable to flammable and combustible liquids. NFPA 30 never required it for storage and still does not. When the Chapter 27 ventilation requirements were applied to flammable and combustible liquids storage the standby power requirement was inadvertently picked up. When enforced, it is a costly provision with very limited benefit. This proposal will coordinate the IFC and NFPA 30 requirements for standby power for flammable and combustible liquids storage ventilation. These materials are in sealed containers in storage so we do not see the need for the redundant requirement for standby power for ventilation for this condition.

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

Public Hearing Results

Committee Action:

Approved as Modified

Modify the proposal as follows:

2704.7 (Supp) Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with NFPA 70 and Section 604.

Exceptions:

1. ~~Standby or emergency power for m-~~ Mechanical ventilation for storage of Class IB and Class IC flammable and combustible liquids in closed containers not exceeding 6.5 gallons (25 L) capacity single story occupancies.
2. Storage areas for Class 1 and 2 oxidizers.
3. Storage areas for Class II, III, IV and V organic peroxides.
4. Storage areas for asphyxiant, irritant and radioactive gases.
5. For storage areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6.
6. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.

[F] 414.5.4 (Supp) Standby or emergency power. Where mechanical ventilation, treatment systems, temperature control, alarm, detection or other electrically operated systems are required, such systems shall be provided with an emergency or standby power system in accordance with Section 2702.

Exceptions:

1. ~~Standby or emergency power for m-~~ Mechanical ventilation for storage of Class IB and Class IC flammable and combustible liquids in closed containers not exceeding 6.5 gallons (25 L) capacity single story occupancies.
2. Storage areas for Class 1 and 2 oxidizers.
3. Storage areas for Class II, III, IV and V organic peroxides.
4. Storage areas for asphyxiant, irritant and radioactive gases.
5. For storage, use and handling areas for highly toxic or toxic materials, see Sections 3704.2.2.8 and 3704.3.2.6 of the *International Fire Code*.
6. Standby power for mechanical ventilation, treatment systems and temperature control systems shall not be required where an approved fail-safe engineered system is installed.

Committee Reason: The committee agreed that the proponent's reason statement accurately and adequately substantiates the need for the change. The modification correlates with industry treatment of portable container storage. Notably, FM Global recognizes that storage of small, closed containers does not pose a risk that warrants ventilation for these materials. FM Data Sheet 7-29, *Flammable and Combustible Liquid Storage in Portable Containers*, does not require mechanical ventilation for flammable liquids in closed containers of not greater than 6.5 gallons individual capacity, with a flash point of not greater than 100 °F and a boiling point equal to or greater than 100°F. NFPA 30, *Flammable and*

Combustible Liquids Code, also recognizes that closed container storage does not pose a risk that warrants ventilation (ventilation is required if there is open dispensing). These materials are in sealed containers in storage. Any loss of power would require an immediate cessation of operations, which would eliminate spill risk. By limiting the container size, the potential for accidental spills is significantly reduced.

Assembly Action:

None

Final Hearing Results

F254-07/08

AM

Code Change No: **F291-07/08**

Original Proposal

Sections: 4002.1 (IBC 307.2)

Proponent: Patrick A. McLaughlin, McLaughlin & Associates, representing Arch Chemicals, Inc., and PPG Industries, Inc.

Revise definition as follows:

4002.1 (IBC 307.2) Definitions. The following words and terms shall, for the purposes of this chapter and as used elsewhere in this code, have the meanings shown herein.

OXIDIZER. A material that readily yields oxygen or other oxidizing gas, or that readily reacts to promote or initiate combustion of combustible materials and, if heated or contaminated, can result in vigorous self-sustained decomposition ~~Examples of other oxidizing gases include bromine, chlorine and fluorine.~~

Class 4. An oxidizer that can undergo an explosive reaction due to contamination or exposure to thermal or physical shock and that causes a severe increase in the burning rate of combustible materials with which it comes into contact. In addition, the oxidizer ~~will enhance~~ causes a severe increase in the burning rate and can cause spontaneous ignition of combustibles.

Class 3. An oxidizer that ~~will~~ causes a severe increase in the burning rate of combustible materials with which it comes in contact ~~or that will undergo vigorous self-sustained decomposition caused by contamination or exposure to heat~~.

Class 2. An oxidizer that will cause a moderate increase in the burning rate ~~or that causes spontaneous ignition~~ of combustible materials with which it comes in contact.

Class 1. An oxidizer ~~that does not moderately increase the burning rate of whose primary hazard is that it slightly increases the burning rate but which does not cause spontaneous ignition when it comes in contact with~~ combustible materials.

Reason: This proposal updates the IFC (IBC) definition of oxidizer to be consistent with the current definition of an oxidizer. The definition of an oxidizer in the IFC (IBC) is based on the definition in the Uniform Fire Code which came from NFPA 430.

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

Public Hearing Results

Committee Action:

Approved as Submitted

Committee Reason: The proposal was approved because the committee felt that it provides an appropriate update to the definition oxidizer consistent with OSHA regulations and NFPA 40.

Assembly Action:

None

Final Hearing Results

F291-07/08

AS