

Proposed Amendments to the 2012 International Building Code Section 105.3.1

#### Submitted by: Staff

#### **Code Section Proposed Information:**

**[A] 105.3.1 Action on application.** The *building official* shall examine or cause to be examined applications for *permits* and amendments thereto within a reasonable time after filing. If the application or the *construction documents* do not conform to the requirements of pertinent laws, the *building official* shall reject such application in writing, stating the reasons therefor. If the *building official* is satisfied that the proposed work conforms to the requirements of this code and laws and ordinances applicable thereto, the *building official* shall issue a *permit* therefor as soon as practicable.

#### [A] 105.3.1.1 Action for demolition permit.

Application for exterior demolition permits for buildings identified as individually eligible for historic designation and commercial buildings 50 years of age or older shall require public notice and shall be held for 30 calendar days from the date of application and evidence of such notice.

#### Reasons:

The Historic Preservation Commission is concerned that buildings that may have historical significance will be demolished without the knowledge of the public. Staff believes that the hold provides opportunities for the public to determine the potential historical significance of the building and discuss alternatives to demolition with the applicant.

#### Cost Impact:

Increase demolition permit cost by \$300 for review as well as cost increase associated with notification requirements and delayed development.

Approved in previous 2015 Code Adoption process:		NO NO
ACTION TAKEN:		
2015 Code Committee		Date: 7/26/16
Approved as submitted I Modified and approved	Denied	No action taken
Development Advisory Board Administrative Subcom	mittee	Date: 8/1/16
Approved as submitted Modified and approved	🗌 Denied	No action taken
Development Advisory Board		Date: 8/1/16
Approved as submitted Modified and approved	Denied	No action taken
Neighborhoods, Housing and Development Subcomm	ittee	Date: 10/5/16
Approved as submitted Double Modified and approved	Denied	No action taken
City Council Action		Date: 11/2/16
Approved as submitted I Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 202

Submitted by: Phoenix Planning and Development Code Committee

**BASE FLOOD.** The flood having a 1-percent chance of being equaled or exceeded in any given year. See design flood.

**BASE FLOOD ELEVATION.** The elevation of the base flood, including wave height, relative to the National Geodetic Vertical Datum (NGVD). North American Vertical Datum (NAVD) or other datum specified on the Flood Insurance Rate Map (FIRM). See design flood elevation.

#### Reasons:

The definitions for Base Flood and Base Flood Elevation are defined similarly to Design Flood and Design Flood Elevation.

**DESIGN FLOOD.** The flood associated with the greater of the following two areas:

- 1. Area with a flood plain subject to a 1-percent or greater chance of flooding in any year; or
- 2. Area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

**DESIGN FLOOD ELEVATION.** The elevation of the "design flood," including wave height, relative to the datum specified on the community's legally designated flood hazard map. In areas designated as Zone AO, the design flood elevation shall be the elevation of the highest existing grade of the building's perimeter plus the depth number (in feet) specified on the flood hazard map. In areas designated as Zone AO where a depth number is not specified on the map, the depth number shall be taken as being equal to 2 feet (610 mm).

ACTION TAKEN:			
2012 Code Committee			Date: 2/8/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 202

Submitted by: Phoenix Planning and Development Code Committee

**FLOOD DAMAGE-RESISTANT MATERIALS.** Any construction material capable of withstanding direct and prolonged contact with floodwaters without sustaining any damage that requires more than cosmetic repair. Any building product [material, component or system] capable of withstanding direct and prolonged contact [at least 72 hours] with floodwaters without sustaining significant damage [any damage requiring more than cosmetic repair consisting of cleaning, sanitizing, and resurfacing of the material]. The cost of cosmetic repair should be less than the cost of replacement of affected materials and systems. Individual materials that are considered flood damage-resistant must not cause degradation of adjacent materials or the systems of which the material is a part.

**Reasons:** 

Revised to match FEMA's definition in "Technical Bulletin 2/ August 2008."

Cost Impact: N/A.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 IBC

Section 202

Submitted by: Phoenix Planning and Development Code Committee

**Code Section Proposed Information:** 

FLOOD HAZARD AREA. The greater of the following two areas:

1. The area within a flood plain subject to a 1-percent or greater chance of flooding in any year.

2. The area designated as a flood hazard area on a community's flood hazard map, or otherwise legally designated.

Reasons:

The definitions for Flood Hazard Area and Special Flood Hazard Area are similar.

**SPECIAL FLOOD HAZARD AREA.** The land area subject to flood hazards and shown on a Flood Insurance Rate Map or other flood hazard map as Aone A, AE, A1-30, A99, AR, AO, AH, V, VO, VE OR V1-30.

<b>Cost Impact:</b> No cost impact.			
ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Board	d Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Board	d d d d d d d d d d d d d d d d d d d		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



## Proposed Amendments to 2012 IBC Section 202

Submitted by: Phoenix Planning and Development Code Committee

**COMMON AREA.** For the purposes of ADA compliance for visual notification, a common area shall be a room, space, or element made available for the use of a restricted group of people (for example, occupants of a homeless shelter; the occupants of an office building, or the guests of such occupants). Common areas shall include restrooms, hallways, lobbies, meeting and conference rooms, classrooms, cafeterias, filing and photocopy rooms, employee break rooms, open office areas exceeding 300 square feet, examination and treatment rooms, and similar areas that are not used solely as employee work areas in accordance with the U.S. Access Board Technical Bulletin on Visual Alarms. Mechanical, electrical and telephone closets, janitor's closets, and similar non-occupiable spaces that are not common areas or assigned work areas are not required to have visual alarms.

**MAINTENANCE.** The repair or replacement of defective or damaged equipment, systems or programming with an exact duplicate model. Maintenance also includes testing of equipment.

**MODIFICATION**. Any change or reprogramming of any existing equipment or system that is not the exact same model or programming. Also as the term modification is used in Section 104.10.3.

#### **Reasons:**

To match Phoenix Fire Code.

ACTION	TAKEN:

ACTION TAKEN.			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	rd Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	rd		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 202

Submitted by: Phoenix Planning and Development Code Committee

**Artist Gallery.** A space, up to 5,000 square feet, used to display the artist's work for sale, shall be viewed as a Mercantile Occupancy with an occupant load factor of 30 square feet per occupant. Occupant loads shall be posted in the space and noted in the body of the permit.

**Artist Studio.** A space, up to 5,000 square feet, used to produce the artist's work in various stages of completion, shall be viewed as a Business Occupancy with an occupant load factor of 100 square feet per occupant.

#### Reasons:

To define terms used for Business & Mercantile Occupancies.

Cost	Impact:	No cost impact.
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ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 304.1

Submitted by: Phoenix Planning and Development Code Committee

304.1 Business Group B

Add: Artist studio to list of business occupancies

#### Reasons:

This item was amended for the 2006 International Building Code to address these specific uses and shall be carried forward.

Cost Impact: N/A

ACTION TAKEN:			
2012 Code Committee			Date: 2/8/13
Approved as submitted	🛛 Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 309.1

Submitted by: Phoenix Planning and Development Code Committee

309.1 Mercantile Group M

Add: <u>Artist Gallery</u> to list of business occupancies

#### Reasons:

This item was amended for the 2006 International Building Code to address these specific uses and shall be carried forward.

Cost Impact: N/A

ACTION TAKEN:			
2012 Code Committee			Date: 2/8/13
Approved as submitted	🛛 Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



# CODE ADOPTION PROPOSAL

### Proposed Amendment to 2012 International Building Code Section 706.1.1 (also see next document)

Submitted by: Phoenix Planning and Development Code Committee

**706.1.1** Party Walls. Any wall located on a lot line between adjacent buildings, which is used or adapted for joint service between two buildings, shall be constructed as a fire wall in accordance with Section 706. Party walls shall be constructed without openings and shall create separate buildings.

**Exception:** Openings in a party wall separating an anchor building and a mall shall be in accordance with Section 402.7.3.1.

#### Reasons:

This section was originally amended out of the Phoenix Building Construction Code based on past practice. This code section will provide better service by not requiring an agreement between separate owners through a code modification.

This section distinguishes party walls from other fire walls in that it is on the property line and serves to separate buildings usually owned by two separate parties. When two separate structures are built up to the property line, the designer has the option of using two separate exterior walls with zero FSD or a party wall. Since there is a real property line involved, the prohibition for openings between the two buildings is important and even utilities cannot penetrate the party wall.

Cost Impact: Reduces cost -	- no code modification fee.		
ACTION TAKEN:			
2012 Code Committee			Date: 11/20/13
Approved as submitted	Modified and approved	🔲 Denied	No action taken
Development Advisory Boa	rd Technical Subcommittee		Date: 11/21/13
Approved as submitted	Modified and approved	🗌 Denied	No action taken
Development Advisory Boa	ırd		Date: 1/16/14
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 2/18/14
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 2/26/14
Approved as submitted	Modified and approved	Denied	No action taken



# CODE ADOPTION PROPOSAL

# Proposed Amendment to 2012 International Building Code Section 706.1.1

Submitted by: Phoenix Planning and Development Code Committee

**706.1.1 Party Walls.** Any wall located on a lot line between adjacent buildings, which is used or adapted for joint service between two buildings, shall be constructed as a fire wall in accordance with Section 706. Party walls shall be constructed without openings and shall create separate buildings.

**Exception:** Openings in a party wall separating an anchor building and a mall shall be in accordance with Section 402.7.3.1.

#### **Reasons:**

The Phoenix Building Construction Code as currently amended does not allow building or sewer or water service to be built across a recorded property line. This prohibition/amendment is being proposed in the current adoption process. The city of Phoenix has developed a template for a legal agreement between the property owners to allow building across a recorded property line. The agreement clarifies the permanent requirements and prohibitions for compliance of the structure.

**Cost Impact:** Fee for the city to process agreement, which is being collected now under the current fee schedule.

ACTION TAKEN:			
2012 Code Committee			Date: 12/12/12
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 901.1

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

**[F] 901.1 Scope.** The provisions of this chapter shall specify where *fire protection systems* are required and shall apply to the design, installation <del>and</del>, <u>inspection</u>, operation, <u>testing and maintenance</u> of <u>all</u> *fire protection systems*. <u>All fire protection systems where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.</u>

Reasons:

To match the Phoenix Fire Code.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 902.1

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

902.1 Definitions. The following terms are defined in Chapter 2:

[F] Common Area

[F] Maintenance

[F] Modification

### Reasons:

To match the Phoenix Fire Code.

ACTION TAKEN:			
2012 Code Committee			Date: 2/8/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 903.1 thru 903.1.10

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

## [F] 903.1 General. Bret Tarver Sprinkler Ordinance

Automatic sprinkler systems shall comply with this section. An approved automatic sprinkler system shall be installed throughout all levels of all new Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies of any size and throughout all R-3 including one- and two-family dwellings built under the International Residential Code, and U occupancies of more than 5,000 square feet (464 square meters).

The calculated area of Group R-3 occupancies shall include all livable space and the area of any attached garage and carports or areas located under living spaces.

Automatic sprinkler systems shall be installed in accordance with NFPA 13 for Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies. NFPA 13R for residential occupancies up to and including four stories in height, in Groups R-1, R-2, R-4 occupancies and NFPA 13D for one- and two-family dwellings and mobile homes in group R-3 and R-4 occupancies with 6-10 licensed beds. Exceptions to or reductions in code requirements are not allowed for the installation of residential sprinkler systems installed in accordance with NFPA 13R and NFPA 13D unless specifically allowed by the *International Building Code*. Exceptions to or reductions in code requirements for NFPA 13 systems allowed in the International Building Code are allowed.

## **EXCEPTIONS:**

- 1. Detached gazebos, temporary tents and ramadas for residential and public use.
- 2. Detached buildings of 700 square feet (65 square meters) or less other than Group E or H.
- 3. <u>Detached non-combustible carports or parking canopies regardless of size</u>, <u>Detached non-combustible canopies used exclusively for automotive motor fuel dispensing station not exceeding 5,000 square feet (464 square meters).</u>
- 4. Factory built buildings utilized as temporary office buildings similar to real estate leasing offices and construction offices.

### [F] 903.1.1. Retrofit.

Existing buildings are required to comply with the provisions of Section 903.2 when any of the following apply:

### [F] 903.1.2 Retrofit in R-3 occupancies.

One or more additions within any 3 year period are made to a Group R-3 occupancy and comply with all of the following:

- 1. <u>The aggregate of the additions exceeds 50% of the square footage of the house as of June 17,</u> 2002.
- 2. The new total area of the building is greater than 5,000 square feet (464 square meters).

The calculated area of Group R-3 occupancies shall include all livable space and the area of any attached garage, carports, aircraft hangar or basement.

**[F] 903.1.3 Building Additions.** Building additions in existing occupancies other than Group R-3 shall be protected by an automatic fire sprinkler when:

1. <u>Building additions that equal 50% or more of the existing building floor area, or exceed 10,000</u> square feet (929 square meters); whichever is less.

- 2. <u>Two or more building permits related to increased square footage are issued over any three</u> <u>consecutive years where:</u>
  - 2.1 The aggregate of the additions exceeds 50% of the square footage of the building as of June 17, 2002.
  - 2.2 The new total area of the building is greater than 10,000 square feet (929 square meters).
- 3. <u>Are required to be protected in accordance with the City of Phoenix Building Code or City of Phoenix Residential Code</u>.

### [F] 903.1.4 Building remodels.

An automatic fire sprinkler system shall be installed when 50% or more of the roof assembly structure is replaced or repaired or, when the removal of existing fire rated assemblies results in an increase of the original basic fire area.

#### [F] 903.1.5 Change of occupancy within hazard level 1.

An automatic fire sprinkler system shall installed when a building regardless of the building area, undergoes a change of occupancy within hazard level 1.

#### [F] 903.1.6 Change of occupancy over 2,500 square feet (232 square meters).

An automatic fire sprinkler system shall installed in any building 2,500 square feet (232 square meters) or greater that undergoes a change of occupancy.

#### [F] 903.1.7 Change of occupancy under 2,500 square feet (232 square meters)

An automatic fire sprinkler system shall installed in any building 2,500 square feet (232 square meters) or less that undergoes a change of occupancy to a higher hazard level as defined by Table 903.1.5.

### **EXCEPTIONS:**

An automatic fire sprinkler system is not required when:

- 1. <u>The occupancy is 1,500 square feet (139 square meters) or less and:</u>
- 2. There are openings entirely above the adjoining ground level totaling at least 20 square feet (1.86 square meters) in each 50 linear feet (15240 mm) or fraction thereof, of exterior wall in the story on at least one side. Openings shall have a minimum dimension of not less than 30 inches (762 mm). Such openings shall be accessible to the fire department from the exterior and shall not be obstructed in a manner that fire fighting or rescue cannot be accomplished from the exterior, and
- 3. <u>The occupancy is not classified as Group H.</u>

Hazard Level	1997 UBC	20IFC
	Occupancy Type	Occupancy Type
1 (highest)	H, I, A, R-1, R-2	H, I, A, R-1, R-2, R-4, S-3,
		B-(ACF) <sup>1</sup>
2	S-1, S-5, F-1	S-1, F-1
3	E, F-2, S-2, S-3, S-4	E, F-2, S-2
4 (lowest)	B, M, U, R-3	B, M, U, R-3

#### [F] Table 903.1.5 Hazard Level

<sup>1</sup> Business, Ambulatory Care Facility

### [F] 903.1.8 Sprinkler systems – partially sprinklered buildings.

When existing non-sprinklered buildings of mixed occupancy are required to install sprinklers based on a change of occupancy classification, sprinklers shall be installed throughout the fire area that includes the new occupancy. The fire resistance rating of fire barriers or horizontal assemblies separating sprinklered and non-sprinklered fire areas shall be a minimum of 2 hours. Fire Department connection signage shall be in accordance with Section 912.

#### [F] 903.1.9 Design Documents.

For fire sprinkler systems, the following are considered to be professional registrant activities in accordance with the requirements of the Arizona Board of Technical Registration:

- 1. Consider the range of hazards of the project;
  - 1.1 <u>Automatic sprinkler system design shall be based on the hazard classification of the building or area in accordance with NFPA 13.</u>
  - 1.2 <u>Automatic sprinkler system designs for high-piled storage shall be in accordance with</u> <u>Chapter 32 and Chapter 57 for Flammable/Combustible Liquids.</u>
- 2. <u>Prepare hazard analysis; identify the hazard classification of the intended occupancy, including any special hazards;</u>
- 3. Determine the applicable codes and standards and appropriate engineering practices;
- 4. Ascertain the availability and adequacy of the water supply for the project:
- 5. Determine the appropriate design density and area of operation for each hazard area.

<u>These activities shall be completed prior to development of construction documents to be</u> <u>submitted for permit.</u>

Exception: Automatic Sprinkler Systems installed in accordance with NFPA 13D.

#### [F] 903.1.9.1 Owner responsibilities.

The owner of a building or structure where the fire sprinkler system is going to be installed or their authorized agent shall provide the design professional with the following information prior to preparation of design documents.

- 1. Intended use of the building.
- 2. A description of the materials to be used or stored within the building.
- 3. A description of how the materials are to be used in the building.
- <u>4. A description of the commodity stored and proposed storage configuration including</u> <u>the maximum height.</u>
- 5. A preliminary plan of the building or structure along with the design concepts necessary to prepare the design documents listed in 903.1.1.
- 6. Speculative buildings shall be in accordance with Chapter 23.

These activities need to be completed prior to development of construction documents to be submitted for permit.

Exception: Automatic Sprinkler Systems installed in accordance with NFPA 13D.

**[F]** 903.1.1 903.1.10 Alternative protection. Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted in lieu of automatic sprinkler protection where recognized by the applicable standard and *approved* by the fire <u>Fire Marshal</u> code official.

Reasons:			
To match the Phoenix Fire C	ode.		
Cost Impact: No cost impact	xt.		
ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 903.2

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

[F] 903.2 Where required. Occupancy specific requirements.

Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.

**Exception:** Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour *fire barriers* constructed in accordance With Section 707 or not less than 2-hour *horizontal assemblies* constructed in accordance with Section 711 or both.

#### Reasons:

To match the Phoenix Fire Code.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 903.2.8

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

**[F] 903.2.8 Group R.** An *automatic sprinkler system* installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R *fire area*.

**Exception:** Detached one-family dwellings shall comply with the Bret Tarver Sprinkler Ordinance Section 903.2 of the Phoenix Fire Code.

#### **Reasons:**

A clarification, in accordance with Arizona Revised Statutes Title 9, Chapter 7, Article 1, Section 9-907, municipalities shall not adopt an ordinance that prohibits a person from choosing not to install fire sprinklers in a single family detached residence. This section does not apply to any ordinance requiring sprinklers that were adopted prior to December 31, 2009, so the existing Tarver Ordinance can remain in effect.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken
			Date: 5/15/13



Proposed Amendments to 2012 International Building Code Section 903.3 thru 903.3.1.3.4

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

#### [F] 903.3 Installation requirements.

Automatic sprinkler systems shall be designed and installed in accordance with Sections 903.3.1 through 903.3.6 903.3.7.

### [F] 903.3.1 Standards.

Sprinkler systems shall be designed and installed in accordance with Section 903.3.1.1 unless otherwise permitted by Sections 903.3.1.2 and 903.3.1.3 and other chapters of this code, as applicable.

### [F] 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. <u>Automatic sprinkler designs for high-piled storage shall be in accordance with Chapter 32 and Chapter 57 for Flammable/Combustible Liquids.</u>

### [F] 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.

- Any room where the application of water, or flame and water, constitutes a serious life or fire hazard. <u>When determined by a technical opinion and report prepared in</u> <u>accordance with Section 104.7.2 of the Phoenix Fire Code and approved by the Fire</u> <u>Marshal.</u>
- Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the fire code official when determined by a technical opinion and report prepared in accordance with Section 104.7.2 of the Phoenix Fire Code and approved by the Fire Marshal.
- 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.
- 6. Machine rooms and machinery spaces associated with occupant evacuation elevators designed in accordance with Section 3008.
- 7. Sprinklers may be omitted from electrical vaults where access to the vault is under control of the electrical utility company and the vaults are separated from the rest of

#### the building by fire resistive construction in accordance with the NFPA 70.

- 8. Linen closets or pantries that have multiple level shelving and cannot be walked into shall be considered cabinetry and shall not require sprinkler protection.
- 9. Dedicated pedestrian walkways meeting the criteria of NFPA 13.

**[F] 903.3.1.1.2 Changes in commodity hazard.** Changes of commodity to a higher hazard classification or storage configuration that exceeds the capabilities of the existing sprinkler system design shall require the sprinkler system to be modified. The sprinkler system shall be modified to provide an approved design in accordance with NFPA 13, or other applicable design standard, for the commodity present in the building or area.

## [F] 903.3.1.1.3 Canopies and patio protection. Industrial Shade Canopies

Industrial shade canopies shall be protected by an automatic sprinkler system.

## Exceptions:

- 1. Industrial shade canopies attached to buildings that are not otherwise required to be protected by an automatic sprinkler system.
- 2. Detached Industrial Shade Canopies which do not exceed 1,000 square feet (93 m<sup>2</sup>) in area.
- 3. Detached Industrial shade canopies that are made of noncombustible material with a flame spread index no greater than 25 when tests in accordance with ASME E84 which does not exceed 5,000 square feet (372 m<sup>2</sup>).
- 4. Where a slatted, lattice or louvered canopy roof system is not less than 50 percent open to the sky.

## [F] 903.3.1.1.4 Mercantile shade canopies.

Mercantile shade canopies shall be protected by an automatic sprinkler system.

## Exceptions:

- 1. <u>Where a slatted, lattice or louvered canopy roof system is not less than 50 percent</u> <u>open to the sky.</u>
- 2. <u>Where shade membrane fabric is used to cover garden, greenhouse, landscaping or plant nursery products or materials, not exceeding 5,000 square feet (372 square meters).</u>
- 3. <u>Mercantile shade canopies attached to buildings that are not otherwise required to be protected by an automatic sprinkler system.</u>
- 4. <u>Mercantile shade canopies that are made of noncombustible material with a</u> <u>flame spread index no greater than 25 when tested in accordance with ASME</u> <u>E84 not exceeding 1,000 square feet (93 square meters).</u>
- 5. <u>Where sprinklers are permitted to be omitted for noncombustible shaded walkway or pedestrian entry areas.</u>

## [F] 903.3.1.1.5 Nonresidential patios.

Nonresidential patio covers shall be protected by an automatic sprinkler system.

### Exceptions:

- 1. <u>Patio covers attached to buildings that are not otherwise required to be protected by an automatic sprinkler system.</u>
- 2. Patio covers which do not exceed 400 square feet (37 square meters) in area.
- 3. <u>Where aslatted, lattice or louvered patio roof system is not less than 50 percent open</u> to the sky.

- 4. <u>Where sprinklers are permitted to be omitted for noncombustible shaded walkway or pedestrian entry areas.</u>
- 5. <u>Nonresidential patio covers that is made of noncombustible material with a flame spread</u> index no greater than 25 when tested in accordance with ASME E84 not exceeding 1,000 square feet (93 square meters)

**[F] 903.3.1.2 NFPA 13R sprinkler systems.** Automatic sprinkler systems in Group R occupancies up to and including four stories in height shall be permitted to be installed throughout in accordance with NFPA 13R.

**[F] 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.

**[F] 903.3.1.2.2 Exterior storage closets.** Sprinkler protection shall be extended into attached exterior storage closets in R-1 and R-2 occupancies protected by sprinkler systems installed according to NFPA 13R.

**[F] 903.3.1.2.3 Attached garages, carports and balconies.** Attached garages, carports with living space directly above shall be provided with sprinkler protection. Open patios or balconies with living spaces directly above shall be provided with sprinkler protection.

**[F] 903.3.1.2.4 Residential combination services.** With Water Services Department approval a single combination water supply shall be permitted provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R.

**[F] 903.3.1.3 NFPA 13D sprinkler systems.** Automatic sprinkler systems installed in one and two-family *dwellings*, Group R-3 and R-4 congregate living facilities and *townhouses* shall be permitted to be installed throughout in accordance with NFPA 13D.

### [F] 903.3.1.3.1 Attached garages, carports and balconies.

Attached garages and carports shall be provided with sprinkler protection. Open patios or balconies with living spaces directly above shall be provided with sprinkler protection.

### [F] 903.3.1.3.2 Domestic services.

Where the domestic service provides the water supply for the automatic sprinkler system, the supply shall be in accordance with this section.

#### [F] 903.3.1.3.3 Residential combination services.

With Water Services Department approval a single combination water supply shall be permitted provided that the domestic demand is added to the sprinkler demand as required by NFPA 13D.

**[F] 903.3.1.3.4 Sizing of residential water meters for combined fire sprinkler and domestic sprinkler systems.** When a water meter is installed in a NFPA 13D sprinkler system, the meter shall be sized to meet the greater domestic or fire flow demand. All new 13D Sprinkler systems require a minimum one inch meter.

Fine Print Note (FPN): One and two family homes equipped with a sprinkler system installed in accordance with NFPA 13D utilizing a combined fire/domestic supply line are required by the City Water Services Department to be provided with a water meter. The flow allowed by the meter shall

be adequate to supply the system demand (see NFPA 13D, 2012 ed., Section 8.4.4). The meter shall be sized to provide for the required sprinkler flow according to the manufacturer's listing for the "Maximum Continuous Operation" given in gallons per minute and shall be a minimum of ¾"-inch. The meter is also required to be sized in a different manner for the domestic water flow demand (see PDD Technical Guideline – Water Meter Sizing, July 17, 2007). The meter shall be sized to meet the greatest flow demand (domestic or fire.

These meters are acceptable for sprinkler waterflow demand as follows:

- a) A 5/8 x <sup>3</sup>/<sub>4</sub> -inch meter is acceptable for flows up to 24 gpm, and
- b) A <sup>3</sup>/<sub>4</sub> -inch meter is acceptable for flows up to 35 gpm, and
- c) A 1-inch meter is acceptable for flows up to 50 gpm, and
- d) A 1  $\frac{1}{2}$ -inch meter is acceptable for flows of 51 70 gp

#### Reasons:

Needed to match the Phoenix Fire Code.

#### DAB Technical Subcommittee Modification:

#### [F] 903.3.1.1.3 Canopies and patio protection. Industrial Shade Canopies

Cost Impact: None

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	$oxedsymbol{\boxtimes}$ Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 903.3.2 thru 903.3.2.1

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department				
<b>[F] 903.3.2 Quick-response and residential sprinklers.</b> Where <i>automatic sprinkler systems</i> are required by this code, quick-response or residential automatic sprinklers shall be installed in the following areas in accordance with Section 903.3.1 and their listings:				
<ol> <li>Throughout all spaces within a smoke compartment containing care recipient <i>sleeping units</i> in Group I-2 in accordance with the <i>International Building Code</i>.</li> <li>Throughout all spaces within a smoke compartment containing treatment rooms in ambulatory care facilities.</li> <li><i>Dwelling units</i> and <i>sleeping units</i> in Group I-1 and R occupancies.</li> <li>Light-hazard occupancies as defined in NFPA 13.</li> </ol>				
<b>[F] 903.3.2.1 Installation of quick response spince</b> <b>occupancy sprinkler systems being modified.</b> Whe systems are being remodeled or renovated, existing s replaced with quick response sprinklers as follows:	n existing occupancies and sprinkler			
<u>1. When any tenant improvement, system repair or replacement is made to a existing fire area, existing standard response sprinklers shall be replaced with quick response sprinklers and</u>				
2. When an existing system with standard response sprinklers is being modified, the standard response sprinklers shall be replaced with quick-response sprinklers throughout the tenant space, floor or suite. When 50% of the floor sprinklers are replaced, all sprinklers on the entire floor shall be replaced with quick response sprinklers.				
Reasons: To match the Phoenix Fire Code.				
Cost Impact: No cost impact.				
ACTION TAKEN:				
2012 Code Committee	Date: 2/6/13			
Approved as submitted Modified and approved Deni				
Development Advisory Board Technical Subcommittee	Date: 2/12/13			
Approved as submitted I Modified and approved I Deni				
Development Advisory Board	Date: 2/21/13			
Approved as submitted I Modified and approved I Deni	ed 🛛 🗌 No action taken			
Council Subcommittee	Date: 4/16/13			
Approved as submitted Modified and approved Deni				
City Council Action	Date: 5/15/13			
Approved as submitted Modified and approved Deni	ed 🗌 No action taken			



Proposed Amendments to 2012 International Building Code Section 903.3.5 thru 903.3.7

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

## [F] 903.3.5 Water supplies.

Water supplies for *automatic sprinkler systems* shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with the requirements of this section and the *International City of Phoenix Plumbing Code*.

### [F] 903.3.5.1 Water supply tests.

Hydrant flow tests used to design sprinkler systems, standpipe systems, and fire supply mains shall be performed on public hydrants by the City of Phoenix Water Services Department within 180 days of fire plans submittal. A copy of the City's hydrant flow test report shall be submitted with the construction documents and calculations. When conducting a hydrant flow test for the design of automatic fire sprinkler systems the minimum flow volume of the test shall meet or exceed the system demand.

### [F] 903.3.5.2 Water supply tests on private hydrants.

Hydrant flow tests performed on private hydrants by the property owner or his representative to be used in the design of fire protection systems shall be witnessed by the Phoenix Fire Department. When conducting a hydrant flow test for the design of automatic fire sprinkler systems the minimum flow volume of the test shall meet or exceed the system demand.

### 903.3.5.3 Sprinkler design safety factor.

Sprinkler systems for NFPA 13, 13R and 13D systems shall be designed with a minimum safety factor as follows:

1. When the static pressure exceeds 90 psi, the maximum design static pressure shall be 80 psi regardless of actual test pressure. The slope of the original water supply curve shall be used even though the design pressure is reduced to 80 psi.

The actual flow test pressures shall be used to determine the need for sizing fire pumps, pressure reducing valves, and hanger requirements in accordance with NFPA 13, 13D and 13R.

2. When the static pressure is less than 90 psi, a minimum 10 psi safety factor shall be provided between the available water supply and the system flow and pressure demand and shall include hose stream allowances required by NFPA 13, 13D and 13R.

# 903.3.5.4 Protection of exterior exposed sprinkler system components.

Protection for exterior exposed sprinkler system components shall be as follows:

1. Sprinkler pipe and components located on the exterior of a building shall be either galvanized or painted to protect from corrosion.

2. Non-steel sprinkler pipe smaller than 2-inches in diameter shall be insulated to protect from freezing. Providing insulation on any exterior piping part of the sprinkler system or its supply smaller than 2 inches in diameter is an allowable alternative.

<u>3. Hydraulic design information signs shall be metal with the information maintained clearly and permanently stamped onto the sign.</u>

### [F] <del>903.3.5.1</del> 903.3.5.5 Domestic services.

Where the domestic service provides the water supply for the *automatic sprinkler system*, the supply shall be in accordance with this section.

### [F] 903.3.5.1.1 903.3.5.5.1 Limited area sprinkler systems.

Limited area sprinkler systems serving fewer than 20 sprinklers on any single connection are permitted to be connected to the domestic service where a wet automatic standpipe is not available. Limited area sprinkler systems connected to domestic water supplies shall comply with each of the following requirements:

1. Valves shall not be installed between the domestic water riser control valve and the sprinklers.

**Exception:** An *approved* indicating control valve supervised in the open position in accordance with Section 903.4.

2. The domestic service shall be capable of supplying the simultaneous domestic demand and the sprinkler demand required to be hydraulically calculated by NFPA 13, NFPA 13D or NFPA 13R.

#### [F] 903.3.5.1.2 903.3.5.5.2 Residential combination services.

A single combination water supply shall be allowed provided that the domestic demand is added to the sprinkler demand as required by NFPA 13R.

**[F]** 903.3.5.2 903.3.5.6 Secondary water supply. An automatic secondary on-site water supply having a capacity not less than the hydraulically calculated sprinkler demand, including the hose stream requirement, shall be provided for high-rise buildings in Seismic Design Category C, D, E or F as determined by the *International Building Code*. An additional fire pump shall not be required for the secondary water supply unless needed to provide the minimum design intake pressure at the suction side of the fire pump supplying the *automatic sprinkler system*. The secondary water supply shall have a duration of not less than 30 minutes as determined by the occupancy hazard classification in accordance with NFPA 13.

**Exception:** Existing buildings.

**[F] 903.3.6 Hose threads.** Fire hose threads and fittings used in connection with *automatic sprinkler systems* shall be <del>as prescribed by the *fire code official* installed according to NFPA 13 and Section 912 of the Phoenix Fire Code.</del>

**[F] 903.3.7 Fire department connections.** The location of fire department connections shall be installed according to NFPA 13 and Section 912 of the Phoenix Fire Code.

#### **Reasons:**

To match the Phoenix Fire Code.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
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Development Advisory Boa	ard		Date: 2/21/13
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Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 903.4.1 thru 903.4.1.5

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

### [F] 903.4.1 Monitoring.

Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an *approved* supervising station or, when *approved* by the *fire code official*, shall sound an audible signal at a constantly attended location.

#### **Exceptions:**

- 1. In building occupancies in Group A-2 that do not exceed 5,000 square feet (465m<sup>2</sup>)
- 2. In all other buildings occupancies other than Group H that do not exceed 12,000 square feet (1115m<sup>2</sup>).
- 3. Single- and multiple-station smoke alarms required by Section 907.2.10 of the *Phoenix* Building Construction Code.
- 4. Smoke detectors in Group I-3 occupancies.
- 5. Supervisory service is not required for automatic sprinkler systems in one- and two-family dwellings other than R-4.
- 6. A local signaling service that will initiate an audible signal at a constantly attended location.
- 4<u>7.</u> Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.
- 28. 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.

### [F] <u>903.4.1.1 Zones.</u>

Each floor shall be zoned separately and a zone shall not exceed 22,500 square feet (2090 m<sup>2</sup>). The length of any zone shall not exceed 300 feet (91 440 mm) in any direction.

Exception: Automatic sprinkler system zones shall not exceed the area permitted by NFPA 13.

### [F] 903.4.1.2 Zoning indicator panel.

A zoning indicator panel and the associated controls shall be provided in an *approved* location. The visual zone indication shall lock in until the system is reset and shall not be canceled by the operation of an audible alarm-silencing switch.

**[F] 903.4.1.3 Location.** In buildings greater than one story or 22,500 square feet, the fire alarm panel or a fire alarm annunciator panel shall be installed in a location that is visible from the lobby or area adjacent to the primary fire department response entrance. It shall be permissible to locate the fire alarm panel in a room immediately adjacent to this lobby provided the door to this room is accessible to the fire department, visible from the lobby and is provided with a permanent, visible placard noting the location of the fire alarm control panel.

When monitoring of sprinkler system is required per section 903.4.1 the facilities owner may request to monitor the system(s) at the facility site using facility personnel. Where the alarm monitoring station does not strictly comply with the NFPA 72 requirements for a proprietary supervising station, the following minimum provisions shall be met and approved by the fire code official.

- 1. The policies and procedures for monitoring the sprinkler system shall be written and submitted to the fire code official for approval prior to occupancy or terminating central station service or remote service. A copy of the approved fire alarm policies and procedures shall be maintained at the constantly attended location.
- 2. The alarm monitoring station shall be constantly attended by competent trained personnel. <u>At least one person shall monitor the fire alarm panel at all times</u>. Provisions shall be made to relieve the alarm monitor prior to shift changes, during breaks, or performance of other assigned duties outside of the alarm monitoring room.
- 3. A list of trained personnel qualified to monitor the sprinkler system shall be maintained at the alarm monitoring station. Documentation of the alarm monitoring training shall be approved by the fire code official and maintained at the alarm monitoring station and made available to the fire code official on request.
- <u>4. The policies and procedures shall address the dispensation of the various fire alarm signals.</u> <u>The fire department shall be immediately notified upon the activation of a fire alarm signal (smoke or heat detector, sprinkler water flow, manual pull station, special extinguishing system, etc.). Any investigation by the facility staff shall occur after or concurrent to notification of the fire department. If the investigation by facility staff determines that there is no emergency condition at the facility, the fire department shall be immediately notified to allow them to modify their response.</u>
- 5. The fire department shall not be summoned for emergency response upon receipt of a supervisory or trouble signal, but procedures shall address dispensation of those signals by facility personnel.
- 6. A log shall be maintained at the monitoring station that note all of the signals received and the dispensation of those signals. The log sheet shall be made available to the Phoenix Fire Department on request for one year.

#### [F] 903.4.1.5 Multi-tenant buildings with different addresses.

The alarm monitoring station shall identify all addresses of buildings or suites protected by the same sprinkler system and provide this information to the Phoenix Fire Department alarm room center.

#### **Reasons:**

To match the Phoenix Fire Code.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
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Development Advisory Boa	ard		Date: 2/21/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 903.4.2 thru 903.6

Submitted by: Planning & Development Code Committee

**[F] 903.4.2 Alarms.** An approved audible device, located on the exterior of the building in an *approved* location, shall be connected to each *automatic sprinkler system*. Such sprinkler water-flow alarm devices shall be activated by water flow equivalent to the flow of a single sprinkler of the smallest orifice size installed in the system. Where a fire alarm system is installed, actuation of the *automatic sprinkler system* shall actuate the building fire alarm system.

**[F] 903.4.2.1 Fire alarm systems.** Fire alarm systems required by the provisions of Section 903 of this code shall be monitored by an approved supervising station in accordance with Section 903.4.1.

#### **Exceptions:**

- <u>1. Single- and multiple-station smoke alarms required by Section 907.2.10 of the Phoenix</u> Building Construction Code.
- 2. Smoke detectors in Group I-3 occupancies.
- <u>3. Supervisory service is not required for automatic sprinkler systems in one- and two-family dwellings.</u>

#### [F] 903.4.3 Floor control valves/water flow switches.

Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor. in high-rise buildings.

#### Exception:

- 1. Residential occupancies three stories or less with a total building square footage less than 52,000 square feet (4831 m<sup>2</sup>).
- 2. All other occupancies two stories or less with a total building square footage less than 22,000 square feet (2044 m<sup>2</sup>).

**[F] 903.5 Testing and maintenance**. Sprinkler systems shall be tested and maintained in accordance with the International Phoenix Fire Code.

#### [F] 903.6 Where required in existing buildings and structures.

An automatic sprinkler system shall be provided in existing buildings and structures where required in the Phoenix Fire Code.

#### **Reasons:**

To match the Phoenix Fire Code.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
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Council Subcommittee			Date: 4/16/13
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City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 904.2 and 904.3.4.1

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

[F] 904.2 Where required. Automatic fire-extinguishing systems installed as an alternative to the required automatic sprinkler systems of Section 903 shall be approved by the fire code official Fire Marshal. Automatic fire-extinguishing systems shall not be considered alternatives for the purposes of exceptions or reductions allowed by other requirements of this code.

[F] 904.3.4 Alarms and warning signs. Where alarms are required to indicate the operation of automatic fire-extinguishing systems, distinctive audible, visible alarms and warning signs shall be provided to warn of pending agent discharge. Where exposure to automatic-extinguishing agents poses a hazard to persons and a delay is required to ensure the evacuation of occupants before agent discharge, a separate warning signal shall be provided to alert occupants once agent discharge has begun. Audible signals shall be in accordance with Section 907.5.2.

[F] 904.3.4.1 Kitchen hood systems. When kitchen hood systems are installed in buildings equipped with a fire alarm system designed to notify the building occupants, actuation of the hood system shall initiate the fire alarm system.

Reasons:

To match the Phoenix Fire Code.

ACTIO	N TA	KEN:

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
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Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 905.1 and 905.3.1

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

**[F] 905.1 General.** Standpipe systems shall be provided in new buildings and structures in accordance with this section. Fire hose threads used in connection with standpipe systems shall be *approved* and shall be compatible with <u>Phoenix</u> Fire Department hose threads. The location of fire department hose connections shall be *approved* in accordance with Section 912 of the Phoenix Fire Code. In buildings used for *high-piled combustible storage*, fire protection shall be in accordance with <u>Chapter 32 of</u> the <u>International-Phoenix Fire Code</u>. Temporary standpipes installed during construction shall be in accordance with Chapter 33 of the Phoenix Fire Code.

**[F] 905.2 Installation standard**. Standpipe systems shall be installed in accordance with this section and NFPA 14.

**[F] 905.3 Required Installations**. Standpipe systems shall be installed where required by Sections 905.3.1 through 905.3.8. Standpipe systems are allowed to be combined with *automatic sprinkler systems*.

**Exception:** Standpipe systems are not required in Group R-3 occupancies.

**[F] 905.3.1 Height.** Class III I standpipe systems shall be installed throughout buildings where the floor level of the highest story is located more than 30 feet (9144 mm) above the lowest level of the fire department vehicle apparatus access, or where the floor level of the lowest story is located more than 30 feet (9144 mm) below the highest level of fire department vehicle access.

### Exceptions:

- 1. Group R-3 occupancies 4 stories or less shall not require a standpipe system.
- The residual pressure(s) as noted in NFPA 14 are not required to be maintained in buildings less than 75 feet in height which are equipped throughout with an approved automatic fire suppression system installed in accordance with NFPA 13. However the system shall be designed to accommodate the outlet pressures and water flows in accordance with NFPA 14 and inlet pressures consistent with Phoenix Fire Department equipment; 150 psi @ 1,500 gpm.
  - 1. Class I standpipes are allowed in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.
  - 2. Class I manual standpipes are allowed in open parking garages where the highest floor is located not more than 150 feet (45 720 mm) above the lowest level of fire department vehicle access.
  - Class I manual dry standpipes are allowed in open parking garages that are subject to freezing temperatures, provided that the hose connections are located as required for Class II standpipes in accordance with Section 905.5.
  - 4. Class I standpipes are allowed in *basements* equipped throughout with an *automatic* sprinkler system.
  - 5. In determining the lowest level of fire department vehicle access, it shall not be required to consider:
    - 5.1. Recessed loading docks for four vehicles or less, and
    - 5.2. Conditions where topography makes access from the fire department vehicle to the building impractical or impossible

### Reasons:

To match the Phoenix Fire Code.

Cost Impact: Significant cos	st savings to customers by elim	ninating the ma	aintenance of the hoses.
ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
<b>Development Advisory Boa</b>	ard Technical Subcommittee		Date: 2/12/13
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<b>Development Advisory Boa</b>	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken

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# Proposed Amendments to 2012 International Building Code Section 905.3.4, 905.3.4.1, 905.3.6, 905.5, 905.5.1 and 905.6

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

**[F] 905.3.4 Stages.** Stages greater than 1,000 square feet (93 m<sup>2</sup>) in area shall be equipped with a Class III Class I wet standpipe system with  $\frac{11}{2}$  -inch and <u>a</u> 2  $\frac{1}{2}$  -inch (<del>38 mm and</del> 64 mm) hose connections on each side of the stage.

**Exception:** Where the building or area is equipped throughout with an *automatic sprinkler system*, a 1½ inch (38 mm) hose connection shall be installed in accordance with NFPA 13 or in accordance with NFPA 14 for Class II or III standpipes.

#### [F] 905.3.4.1 Hose and cabinet.

The 1 ½ -inch (38 mm) hose connections shall be equipped with sufficient lengths of 1 ½ -inch (38 mm) hose to provide fire protection for the stage area. Hose connections shall be equipped with an *approved* adjustable fog nozzle and be mounted in a cabinet or on a rack.

**[F] 905.3.6 Helistops and heliports.** Buildings with a rooftop *helistop* or *heliport* shall be equipped with a Class I or III standpipe system extended to the roof level on which the *helistop* or *heliport* is located in accordance with Section 2007.5 of the Phoenix Fire Code.

#### [F] 905.5 Location of <u>Existing</u> Class II standpipe hose connections.

Class II standpipe hose connections shall be accessible <u>and maintained</u> and <u>shall be</u> located so that all portions of the building are within 30 feet (9144 mm) of a nozzle attached to 100 feet (30 480 mm) of hose.

**[F] 905.5.1 Groups A-1 and A-2.** In Group A-1 and A-2 occupancies <u>having with</u> occupant loads <u>of</u> <u>more than</u> exceeding 1,000 persons, <u>Class I</u> hose connections shall be located on each side of any stage, on each side of the rear of the auditorium, on each side of the balcony, and on each tier of dressing rooms. <u>Class I hose connections shall be installed in accordance with NFPA 14.</u>

#### [F] 905.6 Location of Existing Class III standpipe hose connections.

Class III standpipe systems shall have hose connections located as required for Class I standpipes in Section 905.4 and shall have Class II hose connections as required in Section 905.5.

#### **Reasons:**

To match the Phoenix Fire Code.

Cost Impact: Significant cost savings to customers regarding hose installation and maintenance.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
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Development Advisory Boa	ard		Date: 2/21/13
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Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
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Proposed Amendments to 2012 International Building Code Section 906.1 and 906.9.1

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

[F] 906.1 Where required. Portable fire extinguishers shall be installed in the following locations.

- In new and existing Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies. Exception: In Group R-2 occupancies, portable fire extinguishers shall be required only in locations specified in Items 2 through 6 where each *dwelling unit* is provided with a portable fire extinguisher having a minimum rating of 1-A:10-B:C.
- 2. Within 30 feet (9144 mm) of commercial cooking equipment.
- 3. In areas where flammable or *combustible liquids* are stored, used or dispensed.
- 4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section 3315.1.
- 5. Where required by the sections indicated in Table 906.1.
- 6. Special-hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the *fire code official*.
- 7. <u>Minimum 2A water portable fire extinguishers shall be provided in areas where oxidizers that can</u> release chlorine are stored. The placement and use of dry chemical extinguishers containing ammonium compounds (Class A:B:C) is prohibited in areas where oxidizers that can release chlorine are stored. Halon extinguishers shall not be used in areas where oxidizers are stored.

#### [F] 906.9.1 Extinguishers weighing 40 pounds or less.

Portable fire extinguishers having a gross weight not exceeding 40 pounds (18 kg) shall be installed so that their tops are not more than  $5 \frac{4}{4}$  feet (1524 1219 mm) above the floor.

#### **Reasons:**

To match the Phoenix Fire Code. Water base extinguishers are more effective on oxidizers and 4 foot height reflects ADA height requirements.

Cost Impact: No cost impact	st.		
ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
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Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
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Proposed Amendments to 2012 International Building Code Section 907.1, 907.1.1 and 907.1.1.1

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

**[F] 907.1 General.** This section covers the application, installation, performance and maintenance of fire alarm systems and their <u>components in new and existing buildings and structures</u>. The requirements of Section 907.2 are applicable to new buildings and structures. The requirements of Section 907.9 are applicable to existing buildings and structures.

**[F] 907.1.1 Construction documents.** Construction documents for fire alarm systems shall be 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 Phoenix Fire Code*, and relevant laws, ordinances, rules and regulations, as determined by the *fire code official*.

**[F] 907.1.1.1 Design documents.** For fire alarm and other code regulated alarm systems, the following are considered to be professional registrant activities in accordance with the requirements of the Arizona Board of Technical Registration:

1. Determine the system type;

2. Determine the applicable codes and standards and appropriate engineering practices;

3. Determine device types and locations;

4. Prepare generalized riser diagram;

5. Coordinate and interface with other systems;

6. Develop system specifications

### Exception:

Where the modification of fire protection systems does not require mathematical calculations or hazard analysis.

These activities need to be completed prior to the development of construction documents to be submitted for permit.

#### **Reasons:**

To match the Phoenix Fire Code and design documents, information provided to comply with State law for registrants responsibilities.

Cost Impact: Minimum savings in change orders as a result.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
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Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
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Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 907.2.13.1 and 907.3.1

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

**[F] 907.2.13.1 Automatic smoke detection.** Automatic smoke detection in high-rise buildings shall be in accordance with Sections 907.2.13.1.1 and 907.2.13.1.2. <u>Duct smoke detectors shall provide a supervisory signal.</u>

**[F] 907.3.1 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 Section 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. Access shall be provided to each detector for periodic inspection, maintenance and testing.

#### **Reasons:**

Cost Impact: No cost impact.

To match the Phoenix Fire Code. Maintenance is needed on duct detectors for false alarms.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Bo	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
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Council Subcommittee			Date: 4/16/13
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Proposed Amendments to 2012 International Building Code Section 907.5.2.1, 907.5.2.1.1, 907.5.2.2 and 907.5.2.3

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

**[F] 907.5.2.1** Audible alarms. Audible alarm notification appliances shall be provided and emit a distinctive sound that is not to be used for any purpose other than that of a fire alarm. <u>Group A, B, E, F, H, I, M, R, S and U occupancies shall meet Public Mode Audible Requirements of NFPA 72.</u>

### Exceptions:

- 1. Visible alarm notification appliances shall be allowed in lieu of audible alarm notification appliances in critical care areas of Group I-2 occupancies.
- 2. Where provided, audible notification appliances located in each occupant evacuation elevator lobby in accordance with Section <del>3008.5.1</del> <u>3008.10.1</u> of the *International Building Code* shall be connected to a separate notification zone for manual paging only.
- 3. Group I occupancies shall be allowed to use Private Mode Audible Requirements of <u>NFPA 72</u>, when approved. Registered design professionals shall specify on plans and in construction documents the specific mode for each area of the occupancy. When the Private Mode is specified, the designer shall provide written documentation for the use of this mode.

**[F] 907.5.2.1.1 Average sound pressure.** The audible alarm notification appliances shall provide and maintain a sound pressure level of 15 decibels (dBA) above the average ambient sound level or 5 dBA above the maximum sound level having duration of at least 60 seconds, whichever is greater, in every occupiable space within the building.

### [F] 907.5.2.2 Emergency voice/alarm communication systems.

Emergency voice/alarm communication systems required by this code 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 in accordance with the building's 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 <u>two</u> floors below. Speakers shall be provided throughout the building by paging zones. At 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 Chapter 2.

**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.

#### [F] 907.5.2.3 Visible alarms.

Visible alarm notification appliances shall be provided in accordance with Sections 907.5.2.3.1 through 907.5.2.3.4.

Exceptions:			
1. Visible alarm notification appliances are not required in alterations, that do not involve			
changing the floor plan by the addition, rer	noval, or relocation of walls or result in a		
change in occupancy classification except			
modified, upgraded or replaced, or a new t			
<ol><li>Visible alarm notification appliances shall r</li></ol>	not be required in <i>exits</i> as defined in		
Chapter 2.			
<ol><li>Visible alarm notification appliances shall n</li></ol>	ot be required in elevator cars.		
<ol> <li>Visual alarms are not required in operating</li> </ol>	rooms or treatment rooms of Group-I		
occupancies where patients are under supervi	sion by trained facility personnel.		
Reasons:			
To match the Phoenix Fire Code.			
Cost Impact: No cost impact.			
ACTION TAKEN:			
2012 Code Committee	Date: 2/6/13		
Approved as submitted Modified and approved	Denied No action taken		
Development Advisory Board Technical Subcommittee	Date: 2/12/13		
Approved as submitted Modified and approved	Denied No action taken		
Development Advisory Board	Date: 2/21/13		
Approved as submitted Modified and approved	Denied 🔄 No action taken		
Council Subcommittee	Date: 4/16/13		
Approved as submitted Modified and approved	Denied 🔄 No action taken		
City Council Action	Date: 5/15/13		
$\boxtimes$ Approved as submitted $\square$ Modified and approved $\square$	Denied No action taken		



Proposed Amendments to 2012 International Building Code Section 907.6.3.1.1 and 908.3

Submitted by: Planning and Development Code Committee and Fire Department

#### [F] 907.6.3.1.1 Location.

In buildings greater than one story or 22,500 square feet (2090 m<sup>2</sup>) the fire alarm panel or a fire alarm annunciator panel shall be installed in a location that is visible from the lobby or area adjacent to the primary fire department response entrance. It shall be permissible to locate the fire alarm panel in a room immediately adjacent to this lobby provided the door to this room is accessible to the fire department, visible from the lobby and is provided with a permanent, visible placard noting the location of the fire alarm control panel.

**[F] 908.3 Highly toxic and toxic materials.** A gas detection system shall be provided to detect the presence of *highly toxic* or *toxic* gas at or below the permissible exposure limit (PEL) or ceiling limit of the gas for which detection is provided. The system shall be capable of monitoring the discharge from the treatment system at or below one-half the immediately dangerous to life and health (IDLH) limit. <u>A gas</u> detection system shall be provided for indoor storage and use of highly toxic and toxic *compressed gases*.

**Exception:** A gas-detection system is not required for toxic gases when the physiological warning threshold level for the gas is at a level below the accepted PEL for the gas.

#### **Reasons:**

To match the Phoenix Fire Code and operational response requires information from which fire devices are activated.

Cost impact: No cost impact	л.			
ACTION TAKEN:				
2012 Code Committee			Date: 2/6/13	
Approved as submitted	Modified and approved	Denied	No action taken	
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13	
Approved as submitted	Modified and approved	Denied	No action taken	
<b>Development Advisory Boa</b>	ard		Date: 2/21/13	
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Council Subcommittee			Date: 4/16/13	
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City Council Action			Date: 5/15/13	
Approved as submitted	Modified and approved	Denied	No action taken	



Proposed Amendments to 2012 International Building Code Section 909.18.8, 910.2, 910.4.1, and 910.4.3

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

**[F] 909.18.8 Special inspections for smoke control.** Smoke control systems shall be tested by a special inspector <u>prior to the final acceptance test</u>. The City of Phoenix Fire Department shall witness and approve the final acceptance test of the system.

### [F] 910.2 Where required.

Smoke and heat vents shall be installed in the roofs of buildings or portions thereof occupied for the uses set forth in Sections 910.2.1 and 910.2.2. Smoke and heat vents shall be approved and labeled and shall be capable of being operated by approved automatic and manual means from inside the building or from the roof. Smoke and heat vents shall operate automatically by actuation of a heat-responsive device. The device shall be rated a minimum of 50°F above the rating of the automatic sprinklers but not more than 386°F above ambient.

**[F] 910.4.1 Location.** Exhaust fans shall be uniformly spaced within each draft-curtained area and the maximum distance between fans shall not be greater than 100 feet (30 480 mm). Exhaust fans shall be listed for the environmental conditions to which they will be subjected.

**[F] 910.4.3 Operation.** Mechanical smoke exhaust fans shall be automatically activated by the *automatic sprinkler system* or by *heat detectors* having operating characteristics equivalent to those described in Section 910.3.2. Individual manual controls for each fan unit shall also be provided <u>and shall be installed in an approved location</u>.

#### **Reasons:**

To match the Phoenix Fire Code and give good design guidance.

Cost Impact: No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
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Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
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Council Subcommittee			Date: 4/16/13
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Proposed Amendments to the 2012 International Building Code Section 909.21

Submitted by: Phoenix Planning & Development Department Code Committee

### 909.21 Elevator hoistway pressurization alternative.

Where elevator hoistway pressurization is provided in lieu of required enclosed elevator lobbies, the pressurization system shall comply with sections 909.21.1 through 909.21.11 and <u>ASME A17.1 -2.1.4</u>.

Reasons:

To reference ASME A17.1 2010 code edition

Cost Impact: No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 1/7/13
Approved as submitted	$oxedsymbol{\boxtimes}$ Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 1/8/13
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Proposed Amendments to 2012 International Building Code Sections 912.1 through 912.6

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

### [F] 912.1 Installation.

Fire department connections shall be installed in accordance with the NFPA standard applicable to the system design and shall comply with Sections 912.2 through <del>912.5</del> 912.6.

**[F] 912.1.1 Threads.** Fire department connection hose threads greater than 2½-inch (63.5 mm) shall be Phoenix threads. See Figure 912.1.1A and 912.1.1B.

**[F] 912.1.2 Inlet Connection.** The minimum size of a fire department inlet connection shall be 2 ½ inch (63.5 mm) with Phoenix threads.

**[F] 912.1.3 Underground pipe.** All fire department connection underground piping shall be installed as a minimum Class 200,

**[F] 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 <u>fire code official</u>. A site plan detail shall be submitted to the fire code official for approval as part of the construction documents. See Section 105 of the Phoenix Fire Code.

### [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 chief <u>fire code official</u>.

The location of fire department connections shall be approved and installed:

Within 50 feet (15 240 mm) of an approved roadway or driveway, and arranged so that hose lines can be readily attached to the inlets without interference from any nearby objects including buildings, fences, posts, plantings, or other fire department connections.

- 1. Within 200 feet (60 960mm) of an approved hydrant.
- 2. <u>So that the inlet height shall not be less than 18 inches (457 mm) nor more than 48 inches (1 219 mm)above grade.</u>

A site plan detail shall be submitted to the fire code official for approval as part of the construction documents. See Section 105 of the Phoenix Fire Code.

**[F] 912.2.2 Existing buildings.** On existing buildings, wherever the fire department connection is not visible to approaching fire apparatus, the fire department connection shall be indicated by an *approved* sign-mounted on the street front or on the side of the building. Such sign shall have the letters "FDC" at least 6 inches (152 mm) high and words in letters at least 2 inches (51 mm) high or an arrow to indicate the location. All such signs shall be subject to the approval of the *fire code official*. Signs shall be in accordance with Section 912.4.

**[F] 912.3 Access.** Immediate access to fire department connections shall be maintained at all times and without obstruction by fences, bushes, trees, walls, <u>mechanical equipment</u>, <u>retention ponds</u> or any other fixed or moveable object. Access to fire department connections shall be *approved* by the <u>fire chief fire code official</u>. <u>A minimum of 3 feet (914 mm) clearance shall be maintained around fire department connections in the approach path.</u>

**Exception:** Fences, where provided with an access gate equipped with a sign complying with the legend requirements of Section 912.4 and a means of emergency operation. The gate and the means of emergency operation shall be *approved* by the <u>fire chief <u>fire code</u> <u>official</u> and maintained operational at all times.</u>

**[F] 912.3.1 Locking fire department connection caps.** The *fire code official* is authorized to shall require locking caps on fire department connections for <u>new and tampered-with</u> water-based *fire protection systems* where the responding fire department carries appropriate key wrenches for removal.

**[F] 912.3.2 Clear space around connections.** A working space of not less than 36 inches (762 mm) in width, 36 inches (914 mm) in depth and 78 inches (1981 mm) in height shall be provided and maintained in front of and to the sides of wall-mounted fire department connections and around the circumference of free-standing fire department connections, except as otherwise required or *approved* by the fire chief.

**[F] 912.3.3 Physical protection.** Where fire department connections are subject to impact by a motor vehicle, vehicle impact protection shall be provided in accordance with Section 312 of the International Phoenix Fire Code. Guard posts or other approved means may be required to protect fire department inlet connections from vehicular damage. When guard posts are installed, the posts shall be in accordance with Chapter 5 of the Phoenix Fire Code.

**[F] 912.4 Signs.** A metal sign with raised letters at least 1 inch (25 mm) in size shall be mounted on all 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.

Each fire department connection (FDC) shall be identified by a permanent weather resistant sign. The sign face shall be a minimum 12" x 12" (309 x 309 mm) and fabricated from .080 (2.032 mm) aluminum sheet or equivalent. The sign face shall have a white 3M diamond grade sheeting or equivalent applied as background.

When the system supplied by the FDC does not supply the entire building or supplies multiple buildings the sign shall identify the buildings or areas of the building supplied by the FDC. The fire department connection sign shall identify the building address or area, where necessary, and type of systems the FDC supplies. See Figure 912.4.

### [F] 912.5 Backflow protection.

The potable water supply to automatic sprinkler and standpipe systems shall be protected against backflow as required by the *International City of Phoenix Plumbing Code*.

### [F] 912.6 Inspection, testing and maintenance.

All fire department connections shall be periodically inspected, tested and maintained in accordance with NFPA 25.

Development Advisory Boa	ard Technical Subcommittee	1	Date: 2/12/13
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Council Subcommittee			Date: 4/16/13
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City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 913.2

Submitted by: Phoenix Planning and Development Code Committee

#### [F] 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. Where the building, or a portion of the building, served by the fire pump is intended to remain occupied during a utility power outage through the use of an electrical standby power system, whether required or optional; the electric fire pump shall be connected to both the normal electrical service and the standby power system. A U.L. listed fire pump automatic transfer switch is required on the power supply to this pump.

#### **Reasons:**

The intent of this amendment is as follows:

The normal utility service is considered reliable and in most cases an alternate source of power to serve the fire pump would not be required. However, if the owner/tenant intends on using a standby power system to remain occupied; the standby system must also serve the fire pump. This affords the same level of fire protection to the occupied building under standby power as the building has under normal power. This amendment is not intended to require standby power to the fire pump in cases where the space is not remaining occupied during a power outage, such as standby power provided only to keep food from spoiling or data loss or for emergency power provided for emergency egress lighting.

Cost Impact: None			
ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
	ard Technical Subcommittee		Date: 2/12/13
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Development Advisory Boa	nrd		Date: 2/21/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
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### Proposed Amendments to 2012 International Building Code Section 1016.2.2, 1016.2.2.1, 1016.2.2.2, 1016.2.2.3, Table 1016.2

Submitted by: Phoenix Planning & Development Department Code Committee and Fire Department

**1016.2.2** Group F-1 and S-1 increase. The maximum exit access travel distance shall be 400 feet (122 m) in Group F-1 or S-1 occupancies where all of the following are met:

- 1. The portion of the building classified as Group F-1 or S-1 is limited to one story in height;
- 2. <u>The minimum height from the finished floor to the bottom of the ceiling or roof slab or deck is 24 feet (7315.2 mm); and</u>
- 3. <u>The building is equipped throughout with an automatic fire sprinkler system in accordance with</u> <u>Section 903.3.1.1.</u>
- 4. Additional building access shall be provided in accordance with the Phoenix Fire Code, Sections 3206.6 through 3206.6.1.3.

**1016.2.2.1** Group F-1 and S-1 with a storage area greater than 500,000 square feet (46451.52 square meters) shall have the following Special fire protection provisions including, but not limited:

1. Where fireproofing of building columns is not provided and storage heights are in excess of 15 feet (4572 mm) protection of building columns within the rack structure or vertical rack members supporting the building shall be protected in accordance with one of the following:

<u>1.1. Storage exceeding 15 feet (4572 mm) through 20 feet (6096 mm) in height — one sidewall</u> sprinkler directed to one side of the column at a 15 feet (4572 mm) level

<u>1.2 Storage exceeding 20 feet (6096 mm) in height — two sidewall</u> sprinklers, one at the top of the column and the other at a <u>15 ft (4.6 m) level, both directed to the side of the column</u>

<u>1.3 The flow from a column sprinkler(s) shall be permitted</u> to be omitted from the sprinkler system hydraulic calculations

2. Smoke and Heat vents install in accordance with section 910.3

2.1. Smoke and Heat vents shall be designed to operate automatically

2.2. Smoke and heat vents installed in areas of buildings with a control mode sprinkler system shall have operating elements with a higher temperature than the automatic fire sprinkler system in accordance with NFPA 13.

2.3. Smoke and heat vents installed in areas of buildings with early suppression fast response (ESFR) sprinkler system shall have operating elements with a minimum temperature rating of 360 F or 100 f above the operating temperature of the fire sprinkler, whichever is higher in accordance with NFPA 13.

**1016.2.2.2** When the designated storage height is great than 40 feet (12192 mm) a technical report shall be prepared by an Arizona Registered Design Professional and shall be submitted to the Phoenix Fire Marshal for approval.

<u>1016.2.2.3</u>. Additional fire department hose connections shall be provided when required by the fire code <u>official.</u>

### TABLE 1016.2 EXIT ACCESS TRAVEL DISTANCE a

OCCUPANCY	WITHOUT SPRINKLER SYSTEM (feet)	WITH SPRINKLER SYSTEM (feet)
A, E, F-1, M, R, S-1	200	250 b
I-1	Not Permitted	250 c
В	200	300 c
F-2, S-2, U	300	400 c
H-1	Not Permitted	75 c
H-2	Not Permitted	100 c
H-3	Not Permitted	150 c
H-4	Not Permitted	175 c
H-5	Not Permitted	200 c
I-2, I-3, I-4	Not Permitted	200 c

For SI: 1 foot = 304.8 mm.

a. See the following sections for modifications to *exit access* travel distance requirements:

Section 402.8: For the distance limitation in malls.

Section 404.9: For the distance limitation through an atrium space.

Section 407.4: For the distance limitation in Group I-2.

Sections 408.6.1 and 408.8.1: For the distance limitations in Group I-3.

Section 411.4: For the distance limitation in special amusement buildings.

Section 1015.4: For the distance limitation in refrigeration machinery rooms.

Section 1015.5: For the distance limitation in refrigerated rooms and spaces.

Section 1016.2.2 for increase distance limitation Group F-1 and Group S-1

Section 1021.2: For buildings with one exit.

Section 1028.7: For increased limitation in assembly seating.

Section 1028.7: For increased limitation for assembly open-air seating.

Section 3103.4: For temporary structures.

Section 3104.9: For pedestrian walkways.

b. Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where *automatic sprinkler systems* are permitted in accordance with Section 903.3.1.2.

c. Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1.

#### Reasons:

This code change proposal was approved to be in the 2015 IBC. The change is needed now to accommodate the larger Group F-1 and S-1 facilities. The travel distance of 400 feet is currently allowed in the 2006 IBC and needs to be allowed in the 2012 IBC to remain competitive in this market. Operationally venting larger warehouses is extremely more challenging for firefighters the larger the building is, therefore this requirement for venting is needed.

Technical subcommittee modified portion below:

4. <u>Additional building access shall be provided in accordance with the Phoenix Fire Code, Sections</u> 3206.6 through 3206.6.1.3.

Cost Impact: No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 1101.1

Submitted by: Phoenix Planning and Development Code Committee

**1101.1 Scope.** The provisions of this chapter <u>and Arizona Revised statutes</u>, <u>ARS sections 41-1492</u> <u>through 41-1492.12</u> shall control the design and construction of facilities for accessibility to physically disabled persons.

Reasons:

This is a current amendment to the 2006 IBC. This is a state law that must be enforced. It references the current ADA Standards which are more restrictive than the IBC and ICC/ANSI 2009.

Cost Impact: No cost impact	ct.		
ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken



### Proposed Amendments to the 2012 International Building Code Section 1101.2

Submitted by: Phoenix Planning and Development Code Committee

**1101.2 Design.** Buildings and facilities shall be designed and constructed to be *accessible* in accordance with this code and ICC A117.1 and in accordance with provisions State of Arizona Attorney General Administrative Rules R10-3-401 through R-10-3-404 (2010 ADA Standards for Accessible Design, referred to as "2010 Standards", adopted by the U.S. Department of Justice), whichever standard provides the greatest degree of accessibility.

#### Reasons:

This is a current amendment to the 2006 IBC. This is a state law that must be enforced. It references the current ADA Standards which are more restrictive than the IBC and ICC/ANSI 2009.

Cost Impact: No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
	rd Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	rd		Date: 2/21/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 1103.2.4

Submitted by: Phoenix Planning and Development Code Committee

**1103.2.4 Detached dwellings.** Detached one- and two- family dwellings and accessory structures, and their associated *dwellings* and accessory structures, and their associated sites and facilities, are not required to be *accessible*. Home Occupancies as defined in the Phoenix Zoning Ordinance are not required to be accessible.

#### Reasons:

This is a current amendment to the 2006 IBC. This is an issue, which had caused confusion in the past so addition of the clarification helps avoid that.

Cost Impact: No cost impact	xt.		
ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 1103.2.6

Submitted by: Phoenix Planning and Development Code Committee

**1103.2.6 Construction sites.** Structures....are not required to be *accessible*. The public portions of temporary sales offices/trailers are required to be accessible. There shall be accessible parking and an accessible route from the accessible parking aisle to the sales office/trailer and throughout the public portion of the sales office/trailer, including the design center. Accessible toilet rooms shall be provided according to this code.

#### **Reasons:**

This is a current amendment to the 2006 IBC. This is an issue, which had caused confusion in the past so addition of the clarification helps avoid that.

Cost Impact: No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



### Proposed Amendments to the 2012 International Building Code Sections 1106.1 through 1106.7

Submitted by: Phoenix Planning and Development Code Committee

### PARKING AND PASSENGER LOADING FACILITIES

	a <del>cility.</del> General. Where parkin ded in accordance with the Pho		or passenger loading zones are	
Standards for Accessible Des		Jernix Zerning O		
<del>1106.2</del>				
<del>1106.3</del>				
<del>1106.4</del>				
<del>1106.5</del>				
<del>1106.6</del>				
<del>1106.7</del>				
			rough 1106.5. Sections 1106.6 ne Zoning Ordinance and 2010	
Cost Impact: No cost impact	ot.			
ACTION TAKEN:				
2012 Code Committee		_	Date: 2/6/13	
Approved as submitted	Modified and approved	Denied	No action taken	
Development Advisory Board Technical Subcommittee Date: 2/12/13				
Approved as submitted	Modified and approved	Denied	No action taken	
Development Advisory Boa			Date: 2/21/13	
Approved as submitted	Modified and approved	Denied	No action taken	
Council Subcommittee			Date: 4/16/13	
Approved as submitted	Modified and approved	Denied	No action taken	
City Council Action		<u> </u>	Date: 5/15/13	
Approved as submitted	Modified and approved	Denied	No action taken	



Proposed Amendments to the 2012 International Building Code Sections 1107.6.2.1.1

Submitted by: Phoenix Planning and Development Code Committee

**1107.6.2.1.1 Type A units.** In Group R-2 occupancies containing more than 20 *dwelling units or sleeping units*, at least 2 percent but not less than one of the units shall be a type *A unit*. All R-2 units on a *site* shall be considered to determine the total number of units and the required number of *Type A units*. *Type A units* shall be dispersed among the various classes of units. In R-2 occupancies containing more than 20 dwelling units or sleeping units, which are located within thirteen hundred twenty feet of the light rail station platform, at least 6 percent, but not less than one, of the units shall be a type A unit.

#### Reasons:

This is a current amendment to the 2006 IBC, slightly reworded. This is a current COP Ordinance G-4509.

Cost Impact: No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Sections 1107.7.2

Submitted by: Phoenix Planning and Development Code Committee

**1107.7.2 Multistory units.** A multistory dwelling or sleeping unit which is not provided with elevator service is not required to be a <u>Type A or</u> Type B unit.

#### **Reasons:**

This is a current amendment to the 2006 IBC. This amendment complies with Fair Housing Act and is supported by Kim Paarlberg of ICC. Accessibility requirements for townhouses conforming to the requirements of the IRC are referred back to IBC section 1107.6.3 which has requirements for only the type B units and not type A unit. The same requirements should apply to two-story units complying with either the IRC or IBC.

Background: When COP was proposing this amendment for the 2006 IBC Kim Paarlberg of ICC wrote "When Type A (Adaptable) units were developed, the use group they were applied to was only apartment buildings. Two story apartments were exceptionally rare in 1975. With the development of the IBC, there are situations were townhouse configurations can end up being classified as Group R-2, thus requiring Type A units. I do not believe the original planners ever dreamed of that application." Regarding our proposal for the amendment for the 2012 IBC Kim said that this amendment matches a code change proposal that was submitted to ICC several times in the past but has been misunderstood and therefore was still not approved for the 2012 IBC. She wrote "This did not pass, but I think mostly due to not understanding that townhouses can end up under Group R-2. We have a similar proposal in this cycle that NHAB spoke against – which indicated definite misunderstanding since for them this, would be a "give". This would be consistent with FHA and the original requirements which only had Type A units in apartment buildings."

**Cost Impact:** Reduced cost for compliance.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
<b>Development Advisory Boa</b>	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 1204.1

Submitted by: Phoenix Planning and Development Code Committee

SECTION 1204 TEMPERATURE CONTROL

**1204.1 Equipment and systems.** <u>Habitable spaces</u><u>Interior spaces intended for human occupancy</u> shall be provided with active or passive space-heating <u>and space-cooling</u> systems capable of maintaining <del>a</del> minimum indoor temperatures <u>between 70-of 68</u>°F (20<u>1</u>°C) <u>and 90°F (32°C)</u> at a point 3 feet (914 mm) above the floor <del>on the design heating day</del>. <u>The installation of portable space heaters or coolers shall not be used to achieve compliance with this section.</u>

**Exception:** Space heating <u>and cooling</u> systems are not required for interior spaces where the primary purpose of the space is not associated with human comfort.

#### Reasons:

The 2012 IMC and IBC text covers heating concerns only and does not distinguish between residential or commercial buildings. The intent of this proposed amendment is to recognize that the cooling season in Phoenix is the dominant design condition. The City Council of Phoenix included provisions for space cooling in all residential dwellings during the update of the Neighborhood Preservation Ordinance approved on June 16, 1998. The cooling requirement for dwellings was incorporated into the adoption of the 1997 Uniform Building Code and was approved with an effective date of March 12, 1999. The adoption of the 2003 I-codes included mandatory heating and cooling for occupied interior spaces. An exception allowed for no heating and cooling when the primary purpose was not associated with human comfort, such as warehouses. The 2006 I-codes were amended by Phoenix to require heating and cooling in habitable spaces. This proposed amendment re-establishes the City Council mandate to provide heating and cooling in residential dwellings and allows for designers and building owners to determine if it is required in commercial buildings based on the definition of habitable spaces.

Cost Impact: No cost impact. **ACTION TAKEN:** 2012 Code Committee Date: 12/13/2012 Approved as submitted Modified and approved Denied No action taken **Development Advisory Board Technical Subcommittee** Date: 2/12/13  $\boxtimes$  Approved as submitted Modified and approved No action taken Denied **Development Advisory Board** Date: 2/21/13 Approved as submitted Modified and approved Denied □ No action taken **Council Subcommittee** Date: 4/16/13 Approved as submitted Modified and approved Denied No action taken **City Council Action** Date: 5/15/13 Approved as submitted Modified and approved Denied No action taken



### **INTERNATIONAL BUILDING CODE CHANGE PROPOSAL**

Proposed Amendments to 2012 IBC Section 1603.1.8

Submitted by: Michael Abegg

**Code Section Proposed Information:** 

**1603.1.8 Special loads.** Special loads that are applicable to the design of the building, structure or portions thereof shall be indicated along with the specified section of this code that addresses the special loading condition.

**1603.1.8.1 Photovoltaic panel systems.** The dead load of rooftop-mounted *photovoltaic panel systems*, including rack support systems, shall be indicated on the construction documents.

**Reasons:** With the increasing use of photovoltaic (solar) panels on rooftops, it has become clear that there is a need for specific code requirements related to these panels. IBC Sections 1603.1.8.1, 1607.12.5 and 1613.6 have been added to clarify design requirements.

### **Cost Impact: None**

Approved in previous 2012 Code Adoption process:		🗌 YES	⊠ NO
ACTION TAKEN:			
2015 Code Committee			Date: 1/14/16
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 1/21/16
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 5/19/16
Approved as submitted	Modified and approved	Denied	No action taken
	nd Development Subcommit	tee	Date: 6/21/2016
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 9/7/2016
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Table 1607.1

Submitted by: Phoenix Planning & Development Department Code Committee

Code Section Proposed Information: IBC Table 1607.1

OCCUPANCY OR USE	Uniform (psf)
25. Residential Habitable attics and sleeping areas <sup>k</sup>	<del>30</del> <u>40</u>

Reasons:

Habitable attics can be used as floor space and 40 psf more closely reflects floor live loading.

Cost Impact: Minimal cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 12/12/12
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	rd Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	Ird		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



### **INTERNATIONAL BUILDING CODE CHANGE PROPOSAL**

Proposed Amendments to 2012 IBC Section 1607.12.5

Submitted by: Michael Abegg

**Code Section Proposed Information:** 

**1607.12.5 Photovoltaic panel systems.** Roof structures that provide support for *photovoltaic panel systems* shall be designed in accordance with Sections 1607.12.5.1 through 1607.12.5.4, as applicable.

**1607.12.5.1 Roof live load.** Roof surfaces to be covered by solar photovoltaic panels or modules shall be designed for the roof live load, *L*<sub>r</sub>, assuming that the photovoltaic panels or modules are not present. The roof photovoltaic live load in areas covered by solar photovoltaic panels or modules shall be in addition to the panel loading unless the area covered by each solar photovoltaic panel or module is inaccessible. Areas where the clear space between the panels and the rooftop is not more than 24 inches (610 mm) shall be considered inaccessible. Roof surfaces not covered by photovoltaic panels shall be designed for the roof live load.

**1607.12.5.2 Photovoltaic panels or modules.** The structure of a roof that supports solar photovoltaic panels or modules shall be designed to accommodate the full solar photovoltaic panels or modules and ballast dead load, including concentrated loads from support frames in combination with the loads from Section 1607.12.5.1 and other applicable loads. Where applicable, snow drift loads created by the photovoltaic panels or modules shall be included.

**1607.12.5.3** Photovoltaic panels or modules installed as an independent structure. Solar photovoltaic panels or modules that are independent structures and do not have accessible/occupied space underneath are not required to accommodate a roof photovoltaic live load, provided the area under the structure is restricted to keep the public away. All other loads and combinations in accordance with Section 1605 shall be accommodated.

**1607.12.5.4 Ballasted photovoltaic panel systems.** Roof structures that provide support for ballasted *photovoltaic panel systems* shall be designed, or analyzed, in accordance with Section 1604.4; checked in accordance with Section 1604.3.6 for deflections; and checked in accordance with Section 1611 for ponding.

**Reasons:** With the increasing use of photovoltaic (solar) panels on rooftops, it has become clear that there is a need for specific code requirements related to these panels. IBC Sections 1603.1.8.1, 1607.12.5 and 1613.6 have been added to clarify design requirements.

Cost Impact: None

Approved in previous 2012 Code Adoption process:

YES

NO NO

ACTION TAKEN:		
2015 Code Committee		Date: 1/14/16
$\boxtimes$ Approved as submitted $\square$ Modified and approved	Denied	No action taken
<b>Development Advisory Board Technical Subcommittee</b>		Date: 1/21/16
Approved as submitted I Modified and approved	Denied	No action taken
Development Advisory Board		Date: 5/19/16
Approved as submitted I Modified and approved	Denied	No action taken

Neighborhoods, Housing and Development Subcommittee			Date: 6/21/2016
Approved as submitted Modified and approved Denied			No action taken
City Council Action			Date: 9/7/2016
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 1609.1.1

Submitted by: Masonry Guild

**1609.1.1 Determination of wind loads.** Wind loads on every building or structure shall be determined in accordance with Chapters 26 to 30 of ASCE 7 or provisions of the alternate all-heights method in Section 1609.6. The type of opening protection required, the ultimate design, wind speed, Vult, and the exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered.

### **Exceptions:**

1. Subject to the limitations of Section 1609.1.1.1, the provisions of ICC 600 shall be permitted for applicable Group R-2 and R-3 buildings.

2. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AF&PA WFCM.

3. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AISI S230.

4. Designs using NAAMM FP 1001.

5. Designs using TIA-222 for antenna-supporting structures and antennas, provided the horizontal extent of Topographic Category 2 escarpments in Section 2.6.6.2 of TIA-222 shall be 16 times the height of the escarpment.

6. Wind tunnel tests in accordance with Chapter 31 of ASCE 7.

7. For design wind loads on solid freestanding walls not over 7 feet, a net force coefficient, Cf = 1.2 may be used.

#### **Reasons:**

Amendment carried forward from previous code specifically for fences not over 7 feet.

#### Cost Impact: None

ACTION TAKEN:			
2012 Code Committee *			Date:
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee	*	Date:
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Board *			Date:
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee *			Date:
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken
*Initiated at City Council	Meeting		



Proposed Amendments to the 2012 International Building Code Table 1612.3

Submitted by: Phoenix Planning and Development Code Committee

**1612.3 Establishment of flood hazard areas.** To establish *flood hazard areas*, the applicable governing authority shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled "The Flood Insurance Study for **[INSERT NAME OF JURISDICTION]**," dated Maricopa County, Arizona and Incorporated Areas **[INSERT DATE OF ISSUANCE]**, revised on July 19, 2001, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

#### Reasons:

Jurisdiction specific section.

Cost Impact: None.

		Date: 12/12/13
Modified and approved	Denied	No action taken
ard Technical Subcommittee		Date: 2/12/13
Modified and approved	Denied	No action taken
ard		Date: 2/21/13
Modified and approved	Denied	No action taken
		Date: 4/16/13
Modified and approved	Denied	No action taken
		Date: 5/15/13
Modified and approved	Denied	No action taken
	Ard Technical Subcommittee Modified and approved Ard Modified and approved Modified and approved	ard Technical Subcommittee         Modified and approved         Denied         ard         Modified and approved         Denied         Modified and approved         Denied         Modified and approved         Denied



### Proposed Amendments to the 2012 International Building Code Section 1613.3.5.3

Submitted by: Phoenix Planning and Development Code Committee

1613.3.5.3 ASCE 7-10, Section 11.7. Modify ASCE 7-10, Section 11.7 to read:

**11.7 DESIGN REQUIREMENTS FOR SEISMIC DESIGN CATEGORY A.** Buildings and other structures assigned to Seismic Design Category A, excluding those assigned to Risk Categories III and IV, need only comply with the requirements of Section 1.4.

#### **Reasons:**

Buildings that are determined to be essential facilities, and that are expected to be operational during an emergency, should not be designed using non-conservative design methods.

**Cost Impact:** Possible cost of earthquake analysis.

ACTION TAKEN:			
2012 Code Committee			Date: 12/12/12
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



### **INTERNATIONAL BUILDING CODE CHANGE PROPOSAL**

Proposed Amendments to 2012 IBC Section 1613.6

#### Submitted by: Michael Abegg

**Code Section Proposed Information:** 

**1613.6 Ballasted photovoltaic panel systems.** Ballasted, roof-mounted *photovoltaic panel systems* need not be rigidly attached to the roof or supporting structure. Ballasted nonpenetrating systems shall be designed and installed only on roofs with slopes not more than one unit vertical in 12 units horizontal. Ballasted nonpenetrating systems shall be designed to resist sliding and uplift resulting from lateral and vertical forces as required by Section 1605, using a coefficient of friction determined by acceptable engineering principles. In structures assigned to *Seismic Design Category* C, D, E or F, ballasted nonpenetrating systems shall be designed to accommodate seismic displacement determined by nonlinear response-history analysis or shake-table testing, using input motions consistent with ASCE 7 lateral and vertical seismic forces for nonstructural components on roofs.

**Reasons:** With the increasing use of photovoltaic (solar) panels on rooftops, it has become clear that there is a need for specific code requirements related to these panels. IBC Sections 1603.1.8.1, 1607.12.5 and 1613.6 have been added to clarify design requirements.

#### **Cost Impact: None**

Approved in	previous 2	012 Code /	Adoption	process:
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□ YES

NO NO

ACTION TAKEN:			
2015 Code Committee			Date: 1/14/16
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 1/21/16
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 5/19/16
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Neighborhoods, Housing a	nd Development Subcommit	tee	Date: 6/21/2016
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 9/7/2016
Approved as submitted	Modified and approved	Denied	No action taken



## **CODE CHANGE PROPOSAL**

### Proposed Amendments to 2012 International Building Code Section 1704.1

Submitted by: Phoenix Planning and Development Code Committee

#### SECTION 1704 SPECIAL INSPECTIONS, CONTRACTOR RESPONSIBILITY AND STRUCTURAL OBSERVATIONS

**1704.1 General**. This section provides minimum requirements for special inspections, the statement of special inspections, contractor responsibility and <del>structural observations</del>.

Reasons:

Special Inspections and Observations for all disciplines: structural, mechanical and plumbing are to now be included in this chapter.

Cost Impact: None.

ACTION TAKEN:			
2012 Code Committee			Date: 2/8/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 1704.5.3

Submitted by: Phoenix Planning and Development Code Committee

**1704.5.3 Structural observations for special conditions**. Structural observations shall be provided for those structures where one or more of the following conditions exists:

- 1. The height of the structure is greater than 75 feet (22 860 mm), or greater than three stories above the base.
- 2. For elevated post-tensioned concrete structures.
- 3. Prefabricated deferred units and their connections, when such units are utilized structurally in the lateral-force-resisting systems of a structure.
- 4. When such observation is specifically required by the Building Official.

#### **Reasons:**

These requirements were previously amended in 2006 IBC.

**Cost Impact:** Increased costs associated with hiring a Special Inspector for special structural conditions. This amendment is carried forward from the 2006 IBC and has been in place for the past six years.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 1704.6

Submitted by: Phoenix Planning and Development Code Committee

**1704.6 Electrical Observations**. The owner shall employ the engineer responsible for the electrical design, or another engineer designated by the engineer responsible for the electrical design, to perform visual observation of complex electrical equipment and systems for general conformance to the approved plans and specifications, including but not limited to, placement and interconnection of equipment. Electrical observation shall be performed at significant stages of the construction and when the installation is complete and ready to be inspected. Electrical Observations are in addition to the inspections required by Section 110 of the *Phoenix Building Construction Code* and the special inspections required by Section 1705.18, and shall be provided when one of the following conditions exist:

- 1. <u>Installation or alteration of that portion of health care facility electrical systems which falls within</u> the scope of Article 517 of the National Electrical Code, including such systems installed in facilities where outpatient surgical procedures are performed.
- 2. <u>Installations or alteration of high voltage electrical systems which fall within the scope of Article</u> <u>490 of the National Electrical Code.</u>
- 3. <u>Installation or alteration of electrical systems within locations classified as hazardous by provisions</u> of the *National Electrical Code*, except for gasoline dispensing installations and systems located within storage garages, repair garages or lubritoriums.
- 4. When such observation is specifically required by the building official.

**1704.6.1 Procedures.** The engineer responsible for electrical observation shall personally visit the site prior to completion of the Certificate of Compliance and periodically during the course of construction requiring electrical observation as set forth in the inspection and observation program for each project.

The engineer responsible for performing electrical observation shall complete a signed written report after each site visit. A copy of each report shall be kept on the job site for review by an inspector at all times until the inspector has issued final approval. Any and all deviations from the approved plans or specifications shall be immediately reported to the contractor for correction and then, if uncorrected, shall be reported to the engineer or architect of record and to the building official.

In addition to individual reports, the engineer or architect of record shall file with the building official a written monthly progress report indicating the dates of each site visit, the special inspections or observations performed, any deviations noted from approved plans and specifications and any resulting instructions or change orders issued to the contractor.

**1704.6.2 Certificate of Compliance.** Upon completion of the portions of the work requiring electrical observation, a Certificate of Compliance shall be issued to the building official under the seal and signature of the engineer responsible for such observation. A Certificate of Occupancy will not be issued until the building official receives all required special inspection reports and the Certificates of Compliance.

The Certificate of Compliance for electrical observation shall read as follows:

"I certify to the best of my knowledge the electrical requirements of the *Phoenix Building* <u>Construction Code and approved plans and specifications have been complied with insofar as the</u> portion of the work requiring electrical observation is concerned, except for those deviations that have been previously reported. A guarantee that the contractor has constructed the building in full accord with the plans and specifications is neither intended nor implied."

#### Reasons:

These requirements were previously included in an amendment in 2006 IBC, Chapter 27 and specify the items in electrical design that require Electrical Observation. It is intended to consolidate all Observations to Chapter 17.

**Cost Impact:** Increased costs associated with hiring an engineer to perform electrical observations of the required electrical systems.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
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Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 1704.7

Submitted by: Phoenix Planning and Development Code Committee

**1704.7 Mechanical Observations.** The owner shall employ the engineer responsible for the Mechanical design, or another engineer designated by the engineer responsible for the Mechanical design, to perform visual observation of complex Mechanical equipment and systems for general conformance to the approved plans and specifications, including, but not limited to, placement and interconnection of equipment. Mechanical observation shall be performed at significant stages of the construction and when the installation is complete and ready to be inspected. These Mechanical Special Observations are in addition to the inspections required by Section 110 of the *Phoenix Building Construction Code* and the special inspections required by Section 1705.19, and shall be provided when one of the following conditions exist:

1. When such observation is specifically required by the building official.

**1704.7.1 Procedures.** The engineer responsible for Mechanical observation shall personally visit the site prior to completion of the Certificate of Compliance and periodically during the course of construction requiring Mechanical observation as set forth in the inspection and observation program for each project.

The engineer responsible for performing Mechanical observation shall complete a signed written report after each site visit. A copy of each report shall be kept on the job site for review by an inspector at all times until the inspector has issued final approval. Any and all deviations from the approved plans or specifications shall be immediately reported to the contractor for correction and then, if uncorrected, shall be reported to the engineer or architect of record and to the building official.

In addition to individual reports, the engineer or architect of record shall file with the building official a written monthly progress report indicating the dates of each site visit, the special inspections or observations performed, any deviations noted from approved plans and specifications and any resulting instructions or change orders issued to the contractor.

**1704.7.2 Certificate of Compliance.** Upon completion of the portions of the work requiring mechanical observation, a Certificate of Compliance shall be issued to the building official under the seal and signature of the engineer responsible for such observation. A Certificate of Occupancy will not be issued until the building official receives all required special inspection reports and the Certificates of Compliance.

The Certificate of Compliance for mechanical observation shall read as follows:

"I certify to the best of my knowledge the mechanical requirements of the *Phoenix Building* <u>Construction Code</u> and approved plans and specifications have been complied with insofar as the portion of the work requiring mechanical observation is concerned, except for those deviations that have been previously reported. A guarantee that the contractor has constructed the building in full accord with the plans and specifications is neither intended nor implied."

### Reasons:

These requirements were previously amended in 2006 IBC, Chapter 28 and specify the items in mechanical design that require mechanical Observation. It is intended to consolidate all Observations to

Chapter 17. Cost Impact: Increased costs associated with hiring an engineer to perform mechanical observation. This amendment is carried forward from the 2006 IBC and has been in place for the past six years. **ACTION TAKEN:** 2012 Code Committee Date: 2/6/13 Denied  $\boxtimes$  Approved as submitted Modified and approved No action taken **Development Advisory Board Technical Subcommittee** Date: 2/12/13 Approved as submitted Modified and approved Denied No action taken **Development Advisory Board** Date: 2/21/13  $\boxtimes$  Approved as submitted Modified and approved Denied No action taken **Council Subcommittee** Date: 4/16/13 Modified and approved  $\boxtimes$  Approved as submitted Denied No action taken **City Council Action** Date: 5/15/13 Approved as submitted ☐ Modified and approved Denied No action taken



Proposed Amendments to 2012 International Building Code Section 1704.8

Submitted by: Phoenix Planning and Development Code Committee

**1704.8 Plumbing Observations**. The owner shall employ the engineer responsible for the Plumbing design, or another engineer designated by the engineer responsible for the Plumbing design, to perform visual observation of complex Plumbing equipment and systems for general conformance to the approved plans and specifications, including, but not limited to, placement and interconnection of equipment. Plumbing observation shall be performed at significant stages of the construction and when the installation is complete and ready to be inspected. These Plumbing Observations are in addition to the inspections required by Section 110 of the *Phoenix Building Construction Code* and the special inspections required by Section 1705.20 and shall be provided when one of the following conditions exist:

- 1. When such observation is specifically required by the building official
- 2.

**1704.8.1 Procedures**. The engineer responsible for Plumbing observation shall personally visit the site prior to completion of the Certificate of Compliance and periodically during the course of construction requiring Plumbing observation as set forth in the inspection and observation program for each project.

The engineer responsible for performing Plumbing observation shall complete a signed written report after each site visit. A copy of each report shall be kept on the job site for review by an inspector at all times until the inspector has issued final approval. Any and all deviations from the approved plans or specifications shall be immediately reported to the contractor for correction and then, if uncorrected, shall be reported to the engineer or architect of record and to the building official.

In addition to individual reports, the engineer or architect of record shall file with the building official a written monthly progress report indicating the dates of each site visit, the special inspections or observations performed, any deviations noted from approved plans and specifications and any resulting instructions or change orders issued to the contractor.

**1704.8.2 Certificate of Compliance.** Upon completion of the portions of the work requiring plumbing observation, a Certificate of Compliance shall be issued to the building official under the seal and signature of the engineer responsible for such observation. A Certificate of Occupancy will not be issued until the building official receives all required special inspection reports and the Certificates of Compliance.

The Certificate of Compliance for plumbing observation shall read as follows:

"I certify to the best of my knowledge the plumbing requirements of the *Phoenix Building* <u>Construction Code and approved plans and specifications have been complied with insofar as the</u> portion of the work requiring plumbing observation is concerned, except for those deviations that have been previously reported. A guarantee that the contractor has constructed the building in full accord with the plans and specifications is neither intended nor implied."

### Reasons:

These requirements were previously amended in 2006 IBC, Chapter 29 and specify items in plumbing design that require plumbing observation. It is intended to consolidate all Observations to Chapter 17.

Cost Impact: Increased costs associated with hiring an engineer for plumbing systems. This amendment

is carried forward from the 2006 IBC and has been in place for the past six years.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



### Proposed Amendments to 2012 International Building Code Section 1705.18

Submitted by: Phoenix Planning and Development Code Committee

**<u>1705.18 Special Electrical Inspections.</u>** The types of equipment or installations noted below shall be tested or inspected by a special inspector.

- 1. Ground-fault protection performance tests for equipment provided with ground-fault protection.
- 2. Switchboards, panelboards, motor control centers and other equipment rated at 1,000 amperes or more, or over 600 volts.
- 3. Transformers rated 100 KVA or more, single phase, or 300 kVA or more, three phase.
- 4. Conductors that supply equipment rated at 1,000 amperes or more, or over 600 volts.
- 5. Emergency and standby power systems, including switchboards, panelboards, distribution boards, transfer equipment, power source, conductors, fire pumps and exhaust and ventilation fans. This also includes verification of the installation in accordance with the required selective coordination study.
- <u>6. Special cases Work which, in the opinion of the building official, involves unusual hazards or conditions.</u>

**Exception:** The building official may waive the requirement for the employment of a special inspector if the construction is of a minor nature.

#### **Reasons:**

These requirements were previously included in an amendment in 2006 IBC, Chapter 27 and specify the items in electrical design that require Special Inspection. It is intended to consolidate all Special Inspections to Chapter 17.

**Cost Impact:** Increased costs associated with hiring a Special Inspector for electrical systems.

### ACTION TAKEN:

Aorion Tanen.		
2012 Code Committee		Date: 2/6/13
Approved as submitted I Modified and approved	Denied	No action taken
Development Advisory Board Technical Subcommittee		Date: 2/12/13
Approved as submitted I Modified and approved	Denied	No action taken
Development Advisory Board		Date: 2/21/13
Approved as submitted I Modified and approved	Denied	No action taken
Council Subcommittee		Date: 4/16/13
$\square$ Approved as submitted $\square$ Modified and approved	Denied	No action taken
City Council Action		Date: 5/15/13
Approved as submitted Dodified and approved	Denied	No action taken



### Proposed Amendments to the 2012 International Building Code Section 1705.19

Submitted by: Phoenix Planning and Development Code Committee

**1705.19 Mechanical Special Inspections**. The types of equipment or installations noted below shall be tested or inspected by a special inspector in accordance with regulations established by the building official:

<u>1. Duct smoke detectors for air distribution systems as required by *International Mechanical Code* section 606.5.</u>

2. Fire and smoke damper operation for dampers required by *International Mechanical Code* section 607.2.

<u>3. Installation of grease duct enclosure alternative systems allowed under the exceptions to the *International Mechanical Code* section 506.3.11.</u>

<u>4. Special cases—Work which, in the opinion of the building official, involves unusual hazards or conditions.</u>

**Exception:** Special inspections are not required for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official.

#### **Reasons:**

These requirements were previously amended in 2006 IBC, Chapter 28 and specify the items in mechanical design that require Special Inspection. It is intended to consolidate all Special Inspections to Chapter 17.

**Cost Impact:** Increased costs associated with hiring a Special Inspector for mechanical systems. This amendment is carried forward from the 2006 IBC and has been in place for the past six years.

ACTION TAKEN:			
2012 Code Committee			Date: 2/5/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



### Proposed Amendments to the 2012 International Building Code Section 1705.20

Submitted by: Phoenix Planning and Development Code Committee

**1705.20 Plumbing Special Inspections**. The types of equipment or installations noted below shall be tested or inspected by a special inspector.

<u>1. Medical Gas and Vacuum Systems as required by International Plumbing Code section 1202 and Uniform Plumbing Code Chapter 13.</u>

2. Special cases - Work which, in the opinion of the building official, involves unusual hazards or conditions.

**Exception:** Special inspections are not required for work of a minor nature or as warranted by conditions in the jurisdiction as approved by the building official.

#### **Reasons:**

These requirements were previously amended in 2006 IBC, Chapter 29 and specify the items in plumbing design that require Special Inspection. It is intended to consolidate all Special Inspections to Chapter 17.

**Cost Impact:** Increased costs associated with hiring a Special Inspector for plumbing systems. This amendment is carried forward from the 2006 IBC and has been in place for the past six years.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 1803.5.13

Submitted by: Phoenix Planning and Development Code Committee

**1803.5.13 Post-tensioned slabs on ground.** A soil investigation is required for the design of all posttensioned slabs on ground. The investigation report shall include all soil parameters as outlined in the applicable design manuals published by the Post-Tensioning Institute. Information required on the drawings includes, but is not limited to, slab type, soil parameters, bearing value and depth, coefficient of subgrade friction, soil subgrade modulus, em and ym for expansive soils and all special inspection requirements.

#### **Reasons:**

Post-tensioned slabs are structured slabs the design of which requires specific information about the soil on which it is supported. The IBC does not provide presumptive values as they are site specific and require testing and analysis by a registered design professional qualified to perform such tests.

**Cost Impact:** A geotechnical investigation and report is required for all locations that include a post-tensioned slab on ground.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
<b>Development Advisory Boa</b>	rd Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
<b>Development Advisory Boa</b>	rd		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
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Proposed Amendments to the 2012 International Building Code Section 1806.1

Submitted by: Phoenix Planning and Development Code Committee

**1806.1 Load combinations.** The presumptive load-bearing values provided in Table 1806.2 shall be used with the allowable stress design load combinations specified in Section 1605.3. The values of vertical foundation pressure and lateral bearing pressure given in Table 1806.2 shall be permitted to be increased by one-third where used with the alternative basic load combinations of Section 1605.3.2 that include wind or earthquake loads.

**Exception:** Allowable foundation and lateral pressure values for Class 1, 2 and 3 soils shall be determined as classified by a soil investigation or in accordance with ASTM D 2487.

#### **Reasons:**

Soils bearing in soil class 1, 2 and 3 soils vary greatly depending on the actual values versus the presumptive values. The values provided in Table 1806.2 are conservative and not consistent with values provided in investigation reports.

**Cost Impact:** Projects where foundations are bearing in soil class 1, 2 and 3 materials require a soil investigation and report.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Table 1806.2

Submitted by: Phoenix Planning and Development Code Committee

### Table 1806.2 changes to Vertical Foundation Pressure (psf) column for the Class of Materials 4 & 5:

- 4. <del>2,000</del> <u>1,500</u>
- 5. <del>1,500</del> <u>1,000</u>

#### Added footnote to table:

c. Where the Building Official determines that in-place soils with an allowable bearing capacity of less than the values shown are likely to be present at the site, the allowable bearing capacity shall be determined by a soils investigation.

#### **Reasons:**

The geography of Phoenix incorporates native desert as well as previously farmed land that exhibit inconsistent bearing values. Geotechnical engineers practicing in the Phoenix area have provided their professional opinions and recommend the adjustment in the bearing values.

Cost Impact: Nominal footing size increases in the absence of a soils investigation and report.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
	ard Technical Subcommittee		Date: 2/12/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken



### Proposed Amendments to the 2012 International Building Code Section 1905.1.8

Submitted by: Phoenix Planning and Development Code Committee

#### 1905.1.8 ACI 318, Section 22.10.

22.10 – Plain concrete in structures assigned to Seismic Design Category C, D, E or F.

22.10.1 – Structures assigned to Seismic Design Category C, D, E or F shall not have elements of plain concrete, and structures of any seismic design category shall not have any new elements of structural plain concrete, except as follows:

#### Reasons:

Phoenix has historically required minimal reinforcing in concrete structures as prescribed in the seismic design forces to provide structural integrity and minimize cracking during microbursts.

#### Cost Impact: Minimal

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
	rd Technical Subcommittee		Date: 2/12/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	rd		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 1907.2

Submitted by: Phoenix Planning and Development Code Committee

**1907.2 Post-tensioned slabs on ground.** All post-tensioned slabs on ground shall be stamped, marked or otherwise identified in a conspicuous location indicating the slab is a post-tensioned slab. Conspicuous locations include, but are not limited to, entrance porches, slabs at garage doors or patio slabs.

#### Reasons:

Many residential structures have been, and continue to be, constructed with post-tensioned slabs on ground. If a tendon is cut from during repair or remodel work, it can cause serious injury to people in the area. The stamp provides a rapid identification that the slab is constructed with tendons and the contractor will know to identify tendon locations prior to cutting or drilling into the slab.

Cost Impact: No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 2106.1

Submitted by: Phoenix Planning and Development Code Committee

**2106.1 Seismic design requirements for masonry.** Masonry structures and components shall comply with the requirements in section 1.18 of TMS 402/ACI 530/ASCE 5 depending on the structure's seismic design category. All new masonry elements, regardless of seismic design category, shall meet the following minimum reinforcement requirements:

1. Connections to columns shall comply with Section 1.18.4.3.2.1 of TMS 402/ACI 530/ASCE 5. 2. Vertical wall reinforcement of at least 0.20 square inch (130 mm<sup>2</sup>) in cross-sectional area shall be provided continuously from support to support at each corner, at each side of each opening, at the ends of walls and at maximum spacing of 4 feet (1219 mm) apart horizontally throughout the wall.

3. Horizontal wall reinforcement not less than 0.20 square inch (130 mm<sup>2</sup>) in cross-sectional area shall be provided (1) at the bottom and top of wall openings and extend not less than 24 inches (610 mm) or less than 40 bar diameters past the opening, (2) continuously at structurally connected roof and floor levels and at the top of walls, (3) at the bottom of walls or in the top of foundations when doweled in walls, and (4) at maximum spacing of 10 feet (3048 mm) unless uniformly distributed joint reinforcement is provided.

4. Where anchor bolts are used to connect horizontal elements to the tops of columns, anchor bolts shall be placed within lateral ties. Lateral ties shall enclose both the vertical bars in the column and the anchor bolts. There shall be a minimum of two No. 4 (M #13) or three No. 3 (M #10) in the top 5 inches (127 mm) of the column.

#### **Reasons:**

Phoenix has historically required minimal reinforcing in masonry structures as prescribed in the seismic design forces to provide structural integrity and minimize cracking during microbursts.

#### Cost Impact: Minimal

### ACTION TAKEN:

ACTION TAKEN:	
2012 Code Committee	Date: 2/6/13
Approved as submitted I Modified and approv	
Development Advisory Board Technical Subcomm	hittee Date: 2/12/13
Approved as submitted Dodified and approv	ved 🗌 Denied 🗌 No action taken
Development Advisory Board	Date: 2/21/13
Approved as submitted Dodified and approv	ved 🗌 Denied 🗌 No action taken
Council Subcommittee	Date: 4/16/13
Approved as submitted I Modified and approv	ved 🗌 Denied 🗌 No action taken
City Council Action	Date: 5/15/13
Approved as submitted Modified and approv	ved 🗌 Denied 🗌 No action taken



Proposed Amendments to 2012 International Building Code Section 2702

Submitted by: Phoenix Planning & Development Code Committee

**2702.1 Installation.** Emergency and standby power systems required by this code or the *International* <u>*Phoenix*</u> Fire Code shall be installed in accordance with this code, <u>the National Electrical Code (NFPA 70)</u>, NFPA 110, and 111. <u>Emergency power systems shall be as defined in the National Electrical Code</u> <u>Section 700.2</u>. Standby power systems shall be as defined in the <u>National Electrical Code</u> Section 701.2.

**2702.2.1 Group A occupancies.** Emergency power shall be provided for emergency voice/alarm communication systems in Group A occupancies in accordance with Section 907.5.2.2.4-5

**Section 2702.2.9 Membrane Structures.** Standby power shall be provided for auxiliary inflation systems in accordance with Section 3102.8.2. Emergency power shall be provided for *exit* signs in temporary tents and membrane structures in accordance with the *International Phoenix Fire Code*.

**Section 2702.2.11 Highly toxic and toxic materials.** Emergency power shall be provided for occupancies with highly *toxic* or *toxic* materials in accordance with the *International Phoenix* Fire Code.

**Section 2702.2.12 Organic peroxides.** Standby power shall be provided for occupancies with silane gas in accordance with the *International Phoenix Fire Code.* 

**Section 2702.2.13 Pyrophoric materials.** Emergency power shall be provided for occupancies with silane gas in accordance with the *International Phoenix* Fire Code.

Section 2702.3 Maintenance. Emergency and standby power systems shall be maintained and tested in accordance with the *International Phoenix Fire Code*.

#### **Reasons:**

Clarifies referenced codes to the adopted versions.

Clarifies the definition of emergency and standby power systems consistent with the installation code covering these systems, the National Electrical Code.

Corrects errant code reference in 2702.2.1 from 907.5.2.2.4 to 907.5.2.2.5. **Cost Impact:** No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
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Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



### Proposed Amendments to the 2012 International Building Code Table 2902.1 and footnotes

Submitted by: Phoenix Planning and Development Code Committee

#### [P] Table 2902.1 MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES<sup>a</sup> (See Sections 2902.2 and 2902.3)

#### Delete all service sink requirements from Table 2902.1

f. Drinking fountains are not required for an occupant load of <del>15-50</del> or fewer.

g. For business and mercantile occupancies with an occupant load of 15 or fewer, service sinks shall not be required.

#### **Reasons:**

These revisions are made to provide consistency between the UPC and IPC and the minimum plumbing fixture table found in the 2012 International Building Code.

**Cost Impact:** Savings from removing the requirement for service sinks in all occupancies.

ACTION TAKEN:			
2012 Code Committee			Date: 2/8/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 2902.2

Submitted by: Phoenix Planning & Development Department Code Committee

**[P] 2902.2 Separate Facilities.** Where plumbing fixtures are required, separate facilities shall be provided for each sex.

**Exceptions:** 

- 1. Separate facilities shall not be required for dwelling units and sleeping units.
- 2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 15 or fewer.
- 3. Separate facilities shall not be required in mercantile <u>and business</u> occupancies in which the maximum occupant load is <u>50</u> <del>100</del> <del>or</del> fewer.

#### Reasons:

These revisions are made to provide consistency between the 2012 IBC, 2012 UPC section 422.2 and 2012 IPC section 403.2 to allow for small business and mercantile occupancies to provide a single toilet facility for up to 50 occupants.

<b>Cost Impact:</b>	Cost savings	for small m	ercantile and	business	occupancies.
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ACTION TAKEN:			
2012 Code Committee			Date: 12/13/2012
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 3002.4

Submitted by: Phoenix Planning & Development Department Code Committee

**3002.4 Elevator car to accommodate ambulance stretcher.** Where elevators are provided in buildings four or more stories above or four or more stories below, grade plane, at least one elevator shall be provided for fire department emergency access and emergency medical access to all floors. All elevators that require emergency medical access shall be in accordance with 3002.4.1 through 3002.4.5.

<u>3002.4.1 Size of the emergency access elevator (EMS) cab.</u> The elevator car shall be of such a size and arrangement to accommodate ambulance stretcher 24-inch by 84-inch (610mm by 2134mm) with not less than 5-inch (127mm) radius corners, in the horizontal, open position. and

<u>3002.4.2 Identification of the emergency access elevator.</u> <u>All EMS elevators</u> shall be identified by the international symbol for emergency medical services (star of life). The symbol shall not be less than 3 inches (76mm) in height and shall be placed on both sides of the elevator hoistway door frames at all floors.

#### 3002.4.3 Emergency medical access (EMS) key switches and markings.

- The medical service operation shall be activated and or controlled by a two position on/off keyed switch, mounted near the elevator at every elevator floor landing and in the elevator cab enclosure. Key shall be removable only in the off position at the lobbies and in the elevator cab enclosure.
- 2. Keys for EMS shall be of tubular 7 pin style 137 construction and shall have a bitting code of 6143521. The key shall be coded "EMS"
- 3. All fixtures for EMS shall be provided with a jewel light which will illuminate when activated and shall be identified with the words "MEDICAL EMERGENCY".
- 4. The "MEDICAL EMERGENCY" lettering shall be a minimum of 6 mm (0.25 in.) ( in height with a color blue background.

#### 3002.4.4 Lobby Medical emergency operation.

- 1. When any of the elevator lobby EMS key switch are turned to the "on" position it shall activate a continuous audible signal in the car. It shall also activate a visual "MEDICAL EMERGENCY" signal in the car and at the floor landing where initiated.
- After turning the switch to the "on" position the elevator shall return non-stop to the floor where activated. All car calls shall be cancelled and unable to be registered. An elevator on ems shall not respond to hall calls.
- 3. Upon arrival to a floor in response to the EMS call the elevator audible signal shall cease and the doors shall remain open until the lobby key switch is turned to the "off" position. If the key switch is turned to the "off" position the visual indication shall remain illuminated for 60 seconds. During this time emergency personnel must activate the car ems key switch to retain control of the car. Upon expiration of the delay without activation of the car ems switch the car shall return to normal service.

#### 3002.4.5 Car Operation.

 Upon entering the car it shall not accept a car call until the in car EMS key switch is turned to the "on" position. After turning the key on and registering a call, the car shall automatically close and proceed to the call. All door zone detection devices shall be operative. If more than one call is registered it shall stop at the nearest call and cancel all others at which time a second choice can be made.

- 2. Upon arriving at the desired floor, the doors shall open automatically and the elevator shall remain on EMS until the key is turned to the "off" position.
- 3. If the car is on any other form of special service such as inspection, fire fighters, etc. when EMS service is initiated the audible and visual signal shall be activated but the elevator shall not respond to the EMS call.
- 4. If the car has responded to a medical emergency call prior to a fire fighters service call the EMS service shall not be overridden by fire fighters service call until the car returns to the main floor but the fireman service audible and visual signal shall be activated.

#### Reasons:

Original request in 2006 from Phoenix Fire Department. 2012 request for clarification from elevator companies.

**Cost Impact:** Cost for software and hardware.

ACTION TAKEN:			
2012 Code Committee			Date: 12/14/12
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 1/8/13
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Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 3003.1.4

Submitted by: Phoenix Planning & Development Department Code Committee

#### 3003.1.4 Venting

Where standby-power is connected to elevators, the machine room, ventilation or air conditioning machine space, control room or control space air conditioning shall be connected to the stand-by power.

#### Reasons:

(1) To prevent elevator equipment from overheating while on building stand-by power. (2) To clarify existing policy.

Cost Impact: Cost of independent air conditioning system.

ACTION TAKEN:			
2012 Code Committee			Date: 12/14/12
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 1/8/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 3006.1

Submitted by: Phoenix Planning & Development Department Code Committee

#### 3006.1 ACCESS

An approved means of access shall be provided to elevator machine rooms, <u>control rooms, machine</u> <u>spaces</u>, and <u>control spaces</u> and overhead machinery spaces.

Reasons:

To provide safe access to elevator equipment and to harmonize with A17.1.

Cost Impact: Cost of lockbox.

ACTION TAKEN:			
2012 Code Committee			Date: 12/14/12
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 1/8/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 3006.2

Submitted by: Phoenix Planning & Development Department Code Committee

#### 3006.2 Machine room venting

Elevator machine rooms, <u>control rooms</u>, <u>machine spaces</u>, and <u>control spaces</u> that contain solid state equipment for elevator operation shall be provided with independent <del>ventilation or</del> air conditioning system to protect against the overheating of the electrical equipment. The system shall be capable of maintaining temperatures within the range established for the elevator equipment. Not greater than 90 degrees to ensure safe and normal operation of the elevator.

#### **Reasons:**

(1) Experience with existing elevator equipment that have been installed with air conditioning set to the upper limit of the manufactures operating range has shown a higher percentage of equipment failures and shortened life cycle occur due to the extreme temperatures in Phoenix. (2) This results in unsafe conditions as controller doors are left open and extra fans are brought into equipment rooms to try and solve the problem. (3) To avoid shut downs.

(Related amendments A17.1-2.7.9.2, A17.1-2.7.6.3.2, A17.1-2.8.5, and IBC 3003.1.4, IBC 3006.2)

Cost Impact: Cost of independent air conditioning system.

ACTION TAKEN:			
2012 Code Committee			Date: 12/14/12
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
	ard Technical Subcommittee		Date: 1/8/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
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Proposed Amendments to the 2012 International Building Code Section 3006.3

Submitted by: Phoenix Planning & Development Department Code Committee

#### 3006.3 pressurization

The <u>atmospherically connected</u> elevator machine room, <u>control room</u>, <u>machine space</u>, <u>and control space</u> serving a pressurized elevator hoistway shall be pressurized upon activation of a heat or smoke detector located in the elevator machine room, <u>control room</u>, <u>machine space</u>, <u>and control space</u>.

Reasons:

For further clarification.

Cost Impact: No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 12/14/12
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 1/8/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
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$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 3006.5

Submitted by: Phoenix Planning & Development Department Code Committee

#### 3006.5 Shunt trip

Where elevator hoistway or elevator machine rooms, <u>machine spaces</u>, <u>control rooms or control spaces</u> containing elevator control equipment are protected with automatic sprinklers, a means installed in accordance with NFPA 72, Section 3-9.4 Elevator Shutdown, shall be provided to disconnect automatically the mainline power supply to the affected elevator prior to the application of water. This means shall not be self-re-setting. The activation of sprinklers outside the hoistway, machine room, <u>machine space</u>, <u>control</u> <u>room or control space</u> shall not disconnect the main power supply.

#### Reasons:

Added: machine space, control room or control space, to harmonize with A17.1.

Cost Impact: No cost impact.		
ACTION TAKEN:		
2012 Code Committee		Date: 12/14/12
$\boxtimes$ Approved as submitted $\square$ Modified and approved	Denied	No action taken
<b>Development Advisory Board Technical Subcommittee</b>		Date: 1/8/13
$\boxtimes$ Approved as submitted $\square$ Modified and approved	Denied	No action taken
Development Advisory Board		Date: 2/21/13
Approved as submitted I Modified and approved	Denied	No action taken
Council Subcommittee		Date: 4/16/13
$\boxtimes$ Approved as submitted $\square$ Modified and approved	Denied	No action taken
City Council Action		Date: 5/15/13
Approved as submitted I Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 3105

Submitted by: Phoenix Planning and Development Department Code Committee

SECTION 3105 AWNINGS, AND CANOPIES, AND SHADE STRUCTURES

**3105.1 General.** *Awnings*, <u>shade structures</u> or *canopies* shall comply with the requirements of <u>Sections</u> <del>3105.2 through 3105.4 this section</del> and other applicable sections of this Code. <u>All provisions of this Code</u> <u>shall apply to nonresidential shade structures except as specifically modified by this section</u>. The intent of this section is to provide less restrictive construction standards than this Code would otherwise require, provided all of the special design and construction requirements of these sections are met.

**3105.2 Definitions.** The following terms is defined in Chapter 2: **RETRACTABLE AWNING** for the purposes of this section and as used elsewhere in this Code, shall have the meanings shown herein.

**INDUSTRIAL SHADE CANOPY.** An industrial shade canopy is an awning, canopy or roof structure which provides solar protection for outdoor Group F or Group S factor, industrial or storage uses or equipment. Industrial shade canopies shall be classified as to Occupancy Group in accordance with Chapter 3 of this Code.

**MERCANTILE SHADE CANOPY.** A mercantile shade canopy is an awning, canopy or roof structure which provides solar protection for the outdoor storage, display or sale of merchandise as part of a Group M occupancy and includes the following:

<u>1. A roof structure with not less than 50 percent of its perimeter wall area unenclosed; or</u> 2. A slatted, lattice or louvered roof structure with not less than 25 percent of the roof area open to the sky;

or

3. An open structural framework covered with shade cloth fabric as specified in Section 3105.4.

Mercantile shade canopies shall not apply to motor fuel dispensing facilities.

**NON-RESIDENTIAL PATIO COVER.** A non-residential patio cover is an awning, canopy or roof structure which provides solar protection for outdoor seating, dining, walkway or pedestrian entry areas accessory to a building of any occupancy and includes the following:

1. A roof structure with not less than 50 percent of its perimeter wall area unenclosed; or

2. A slatted, lattice or louvered roof structure with not less than 25 percent of the roof area open to the sky; or

3. An open structural framework covered with shade cloth fabric as specified in Section 3105.4.

Non-residential patio covers shall not apply to canopies or roof structures over vehicle drive-through lanes or porte-cocheres used by motor vehicles.

**PARKING LOT SHADE STRUCTURE.** A parking lot shade structure is a modified Group S-2 open parking garage. A parking lot shade structure is a freestanding roof supported on columns and entirely open on all sides with no enclosures beneath the roof.

**RETRACTABLE AWNING.** A retractable awning is a cover with a frame that retracts against a building or other structure to which it is entirely supported.

**3105.3 Design and construction.** *Awnings*, <u>shade structures</u> and <u>canopies</u> shall be designed\_and constructed to withstand wind or other lateral loads and live loads as required by Chapter 16\_with due allowance for shape, open construction and similar features that relieve the pressures or loads. Structural members shall be protected to prevent deterioration. *Awnings* shall have frames of noncombustible material, *fire-retardant-treated wood*, wood of Type IV size, or 1-hour construction with combustible or noncombustible covers and shall either be fixed, retractable, folding or collapsible.

**3105.4 Canopy** <u>and shade structure</u> materials. *Canopies* <u>and shade structures</u> shall be\_constructed of a rigid frame work with an *approved* covering that meets the fire propagation performance criteria of NFPA 701 or has a *flame spread index* not greater than 25 when tested in accordance with ASTM E 84 or UL723.

<u>3105.5 Industrial shade canopies.</u> Industrial shade canopies shall comply with the provisions of Chapter <u>3 for their designated occupancy except as specifically modified below.</u>

**3105.5.1 Construction and Height.** Industrial shade canopies shall be limited to one story in height and shall be entirely of Type I or Type II non-combustible construction. Industrial shade canopies shall meet the design requirements of Chapter 16.

**3105.5.2 Location on Property.** Industrial shade canopies shall comply with Table 601 and 602 for the fire-resistive protection. Shade canopies attached to unlimited area buildings shall not encroach within the required 60 foot (18288 mm) open yard area. Not less than 50 percent of the shade canopy perimeter area shall be unenclosed.

**3105.5.3 Allowable Area.** Industrial shade canopies may be attached to a Group F or a Group S occupancy building of any construction type when the total combined area of the building and the shade canopy does not exceed the area limits specified in Sections 503 and 506 for the type of construction for the building.

<u>3105.5.4 Sprinkler Systems.</u> Industrial shade canopies shall be protected by an automatic sprinkler system as specified in this code and the Phoenix Fire Code.

**3105.5.5 Special Hazards.** Outdoor hazardous material storage areas including compressed gas storage tanks, portable tanks or cylinders and related equipment, required by the Phoenix Fire Code to be weather protected, may be covered by a non-combustible industrial shade canopy when all of the following additional conditions are met. In all cases, the most restrictive requirement of the building code or the fire code shall apply:

**3105.5.1 Fire code requirements.** The location of outdoor hazardous material storage areas and weather-protection shade canopies shall comply with the Phoenix Fire Code for distance to buildings, property lines, streets, alleys, public ways and exits to a public way based upon the type and quantity of material stored. No hazardous material shall be stored or used under an industrial shade canopy except in compliance with the fire code.

**3105.5.5.2 Building code requirements.** In addition to fire code requirements, weather-protection shade canopies attached to buildings shall also comply with Table 601 and 602 for the fire-resistive protection. Weather-protection shade canopies shall not encroach into or obstruct any yard area, fire access or exit path required by this code.

**3105.5.3 Extent of enclosure.** Weather-protection shade canopy supports and walls shall not obstruct more than 25 percent of the perimeter wall area of the canopy or storage area. Openings shall be arranged to permit natural ventilation and air flow through the space.

1. Where a weather-protection shade canopy is located less than 5 feet (1524 mm) from a building or a property line, a four-hour fire-resistive concrete or masonry separation wall without openings shall be provided.

- 2. Where a weather-protection shade canopy is located 5 feet (1524 mm) or more but less than 20 feet (6096 mm) from a building or a property line, a two-hour fire-resistive concrete or masonry separation wall without openings shall be provided. Where allowed by the Phoenix Fire Code, this two-hour separation wall may be a line of sight shield or protective structure less than the full height of the canopy.
- 3. Where a weather-protection shade canopy is located 20 feet (6096 mm) or more from a building or a property line, the requirement for installation of a fire-resistive separation wall, shield or protective structure shall be as determined by the Phoenix Fire Code.

**3105.5.4 Sprinkler Systems.** Weather-protection shade canopies shall be protected by an automatic sprinkler system when required in this code and the Phoenix Fire Code.

<u>3105.6 Mercantile shade canopies and non-residential patio covers.</u> Mercantile shade canopies and non-residential patio covers shall comply with the provisions of Chapter 3 for their designated occupancy except as specifically modified below.

**3105.6.1 Construction and Height**. Mercantile shade canopies and non-residential patio covers shall be limited to one story in height and shall be entirely of type I or type II non-combustible construction. Tables 601 and 602 shall not apply for these structures.

### Exceptions:

1. Shade membrane fabric compliant with Section 3105.4.

Mercantile shade canopies and non-residential patio covers including the supporting framework for membrane fabric shall meet the design requirements of Chapter 16.

**3105.6.2 Location on Property.** Mercantile shade canopies and non-residential patio covers shall be located not less than 5 feet (915 mm) from the property line.

Mercantile shade canopies and non-residential patio covers attached to unlimited area buildings shall not encroach within the required 60 foot (18 288 mm) open yard area.

**3105.6.3 Allowable Area.** Mercantile shade canopies may be attached to a Group M occupancy building and non-residential patio covers may be attached to any non-residential building when the total combined area of the building and the shade canopy does not exceed the area limits specified in Sections 503 and 506 for the occupancy and type of construction of the building. Mercantile shade canopies and non-residential patio covers with a roof covering of shade membrane fabric shall not exceed 5,000 square feet in area.

**3105.6.4 Sprinkler Systems.** Mercantile shade canopies and non-residential patio covers shall be protected by an automatic sprinkler system as specified in this code and the Phoenix Fire Code.

**3105.7** Parking lot shade structures. Parking lot shade structures shall be used exclusively for the solar protection of parked motor vehicles and shall not be used to shelter any other use.

**3105.7.1 Construction and Height.** Parking lot shade structures shall be entirely of type I or type II noncombustible construction.

### Exceptions:

1. <u>Shade membrane fabric compliant with Section 3105.4 can only be used with a maximum allowable area of 12,000 square feet in compliance with Section 3105.7.3.</u>

Parking lot shade structures shall meet the design requirements of Chapter 16.

Parking lot shade structures shall have a clear height of not less than 7 feet (2134 mm). Where van accessible shaded parking is required by this code or by the Phoenix Zoning Ordinance, the clear height shall be not less than 98 inches (2490 mm).

**3105.7.2 Location on Property.** Parking lot shade structures shall be located not less than 3 feet (915 mm) from any building or property line. Parking lot shade structures which meet all the requirements of this section shall be permitted in any required yard without affecting any of the general building limitations specified in Chapter 5 of this code.

**3105.7.3 Allowable Area.** Parking lot shade structures shall not exceed 300 feet (91440 mm) in length or 40 feet (12192 mm) in width. A clear separation of not less than 20 feet (6096 mm) shall be maintained between shade structures on the same property. No shade structure shall cover or encroach into any required fire lane.

<u>3105.7.3.1</u> Allowable area for minimum 21 feet clear high parking lot shade structures. The allowable area may be determined by Section 406.5.5 of this code provided the site fire apparatus access is approved by the Fire Marshal.

**3105.7.4 Roof-top Shade Structures.** Parking lot shade structures complying with the provisions of this section may be installed to shade open parking on the roof of Group S-2 parking garages. This installation shall not be construed as affecting the construction type, allowable area, height, or number of tiers of the parking garage. Where the parking garage is required to be protected by an automatic sprinkler system, all parking lot shade structures on the roof shall also be so protected.

<u>3105.7.5 Sprinkler Systems.</u> Parking lot shade structures shall be protected by an automatic sprinkler system as specified in this code and the Phoenix Fire Code.

#### **Reasons:**

Mercantile shade canopies and non-residential shade structures may be located 5 feet from a property line for following reason:

The framework is of non-combustible construction, open on all sides and limiting the fire loading area to 5,000 square feet, it seemed rational that the radiant heat from either a fire in the structure or from an adjacent structure would affect the frame in the same way. Therefore the allowance of an unrated frame at 5 feet versus the 10 feet required by strict adherence to the code, seems reasonable since the code would allow the a combustible roof overhang to project within 5 feet of a property line. The fire loading underneath the overhang would be allowed by code. The columns in these structures are not considered exterior walls, per the definition of wall in the code, opening protection would not be required.

Limiting the area to 5,000 square feet was based on Group M occupancies used for display and sale of upholstered furniture or mattresses where an automatic sprinkler system would not be required under base code.

Parking lot shade structures meeting the following criteria have been allowed in the City of Phoenix for over a decade: maximum 40 feet by 300 feet in area, non-combustible framework, a minimum of 3 feet from a property line with a non-combustible or shade membrane fabric roof. The need to expand the area is a result of solar industry utilizing established parking lots for their product. By placing the minimum height and fire apparatus access requirements to increase the area of non-combustible construction it seemed rational the effect on building safety would be no more severe than the original uncovered parking lot. The setback of 3 feet is allowed for a non-combustible roof overhang with the same reasoning as above for not rating the frame.

Cost Impact: No cost impact.

ACTI	ON	TA	KEN:	

2012 Code Committee			Date: 2/6/13	
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken	

Development Advisory Boa	ard Technical Subcommittee	1	Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 3107.1

Submitted by: Phoenix Planning & Development Department Code Committee

**3107.1 General.** Signs shall be designed, constructed and maintained in accordance with this code <u>and</u> <u>the Phoenix Zoning Ordinance</u>.

#### **Reasons:**

This item was amended for the 2006 International Building Code to refer applicants to the Phoenix Zoning Ordinance for additional requirements for signs.

Cost Impact: N/A

ACTION TAKEN:			
2012 Code Committee			Date: 1/31/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



### Proposed Amendments to 2012 International Building Code Section 3109

Submitted by: Phoenix Planning & Development Department Code Committee

DELETE ENTIRE SECTION 3109 AND REPLACE WITH THE FOLLOWING:

SECTION 3109 SWIMMING POOL ENCLOSURES AND SAFETY DEVICES

**3109.1 General.** The provisions of this Section shall control the design and construction of swimming pools, spas and hot tubs.

<u>3109.2 Definitions.</u> For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

ABOVE-GROUND/ON-GROUND POOL. See Swimming pool.

**BARRIER.** A fence, wall, building wall or combination thereof that completely surrounds the swimming pool and obstructs access to the swimming pool.

HOT TUB. See Swimming pool.

**IN-GROUND POOL.** See Swimming pool.

SPA, NONPORTABLE. See Swimming pool.

**SPA, PORTABLE.** A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product.

**SWIMMING POOL.** Any structure intended for swimming or recreational bathing that contains water over 24 inches (610mm) deep. This includes in-ground, above ground and on-ground swimming pools, hot tubs, spas, and fixed in place wading pools.

**SWIMMING POOL, INDOOR.** A swimming pool which is totally contained within a structure and surrounded on all four sides by walls of said structure.

SWIMMING POOL, OUTDOOR. Any swimming pool which is not an indoor pool.

3109.3 SWIMMING POOLS

**3109.3.1 In-ground pools.** In-ground pools shall be designed and constructed in conformance with ANSI/NSPI-5 as listed in Section 3109.7

**3109.3.2 Above-ground and on-ground pools.** Above-ground and on-ground pools shall be designed and constructed in conformance with ANSI/NSPI-4 as listed in Section 3109.7.

### 3109.4 SPAS AND HOT TUBS

<u>3109.4.1 Permanently installed spas and hot tubs.</u> Permanently installed spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-3 as listed in Section 3109.7.

3109.4.2 Portable spas and hot tubs. Portable spas and hot tubs shall be designed and constructed in conformance with ANSI/NSPI-6 as listed in Section 3109.7.

### 3109.5 BARRIER REQUIREMENTS

**3109.5.1 Application.** The provisions of this chapter shall control the design of barriers for all swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near drownings by restricting access to swimming pools, spas and hot tubs.

The swimming pool barrier detail requirements of this section apply to all new swimming pools installed on or after May 4, 1990, and to all additions, alterations, repairs or replacements made to existing swimming pool barriers. All swimming pools installed prior to May 4, 1990, shall be completely enclosed as required in this section on or before May 4, 1991 except as provided in Section 3109.5.5.3.

**3109.5.2 Outdoor swimming pool.** It is the responsibility of the property owner and any other person in responsible charge of a swimming pool to ensure that the required swimming pool barrier, including all gates, doors, locks, latches, and other portions of the barrier are maintained safe and in good working order at all times. No person shall alter or remove any portion of a swimming pool barrier except to repair, reconstruct, or replace the barrier in compliance with the provisions of this section. All barriers shall be installed, inspected, and approved prior to plastering or filling with water. An outdoor swimming pool, including an in-ground, aboveground or on-ground pool, hot tub or spa shall be provided with a barrier that shall comply with the following:

- The top of the barrier shall be at least 5 feet (1524 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier which faces away from the swimming pool. The maximum clearance at the bottom of the barrier may be increased to 4 inches (102 mm) when grade is a solid, non-removable surface. Where the top of the pool structure is above grade, such as an aboveground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
- 2. <u>Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.</u>
- 3. <u>Solid barriers which do not have openings, such as a masonry or stonewall, shall not contain</u> indentations or protrusions except for normal construction tolerances and tooled masonry joints.
- 4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1.75 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.
- 5. <u>Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1.75 inches (44 mm) in width.</u>
- 6. <u>Maximum mesh size for chain link fences shall be a 2.25-inch (57 mm) square and provided with</u> slats fastened at the top or the bottom which reduce the openings to not more than 1.75 inches (44 mm). The mesh shall not be less than 11 gage.
- 7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1.75 inches (44 mm).
- 8. <u>Access gates shall comply with the requirements of Section 3109.4.2 3109.5.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other</u>

than pedestrian access gates need not be self-closing or self-latching and shall be equipped with a padlock or similar locking device. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the gate, the release mechanism and openings shall comply with the following:

- 8.1. <u>The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate, and</u>
- 8.2. The gate and barrier shall have no opening greater than 0.5 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.
- 9. Where a building wall serves as part of the barrier, one of the following conditions shall be met:
  - 9.1. <u>The pool shall be equipped with a key operated powered safety cover in compliance with ASTM F1346</u>. <u>The keyed pool cover switch shall be located not less than 54 inches (1372 mm) above the floor or adjacent ground level and where the entire pool cover can be visually inspected; or</u>
  - 9.2. All doors leading from the building, directly into a yard with a swimming pool, shall swing away from the pool, shall be self-closing and self-latching, and shall be equipped with a locking device. The release mechanism for the latch or a secondary locking device, shall be located not less than 54 inches (1372 mm) above the floor. A locking latch which uses a key, electronic opener, or integral combination lock may be located at any height on the door. Sliding doors shall not form any part of a required barrier unless the self-closing and self-latching mechanism is specifically approved.

Windows used for emergency escape or rescue which face into a yard with a swimming pool shall be equipped with a latching device located not less than 54 inches (1372 mm) above the floor. All other operable windows facing into a yard with a swimming pool shall be equipped with a screwed in place wire mesh screen, a keyed lock that prevents opening the window more than 4 inches (102 mm), or a latching device not less than 54 inches (1372 mm) above the floor.

- <u>9.3 Required exit doors or means of egress serving an occupant load of 50 or more shall not open</u> into or pass through a swimming pool enclosure.
- 10. Where an aboveground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then:
  - 10.1 The ladder or steps shall be capable of being secured in an inaccessible position with a lock or latch located 54 inches (1372 mm) above the adjacent ground level, or
  - <u>10.2</u> The ladder or steps shall be surrounded by a barrier that meets the requirements of Section 3109.4.2, Items 1 through 9. When the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.
- 11. Where there are natural barriers between properties, such as lakes and solid rock vertical cliffs not less than 10 feet (3050 mm) in height and a slope of not less than 1 horizontal to 10 vertical, fence barriers shall not be required between properties where the natural barriers exist. To ensure proper natural barriers are maintained, barrier fences shall project a minimum of 24 inches (610 mm) into lakes to where there is at least 24 inches (610 mm) depth from the lake surface to the top of the submerged horizontal member or the lake bottom when there is no submerged horizontal member. There shall be no horizontal member less than 45 inches above the lake surface. Where the solid rock cliff extends above the property, the intersecting barriers, with the solid rock cliff, shall not allow passage of a 4 inch diameter (102 mm) sphere.

<u>3109.5.3</u> Indoor swimming pool. All walls surrounding an indoor swimming pool shall comply with Section 3109.4.2, Item 9.

**3109.5.4 Prohibited locations.** Barriers shall be located not less than 45 inches (1143 mm), measured horizontally from permanent structures, equipment or similar objects from being used to climb the barriers.

### 3109.5.5 Barrier exceptions.

- 1. For portable spas and hot tubs with a safety cover which complies with ASTM F 1346, as listed in Section 3109, shall be exempt from the provisions of this appendix.
- 2. For spas and hot tubs, a hard safety cover that is latched or locked may be used provided the spa or hot tub is not more than 8 feet (2.44 m) in width at any point.
- 3. Existing swimming pools located on one-family dwelling property on or before May 4, 1990, need not be retroactively fitted with a barrier between the dwelling and the pool provided all occupants of the dwelling are at least six years of age or older. All other portions of the swimming pool barrier separating properties shall be installed and maintained as in this section.
  - 1. <u>This exception does not eliminate an owner's responsibility for providing a temporary barrier</u> or otherwise physically restricting visiting children's direct access from the dwelling to the <u>swimming pool.</u>
  - 2. This exception shall expire and the required permanent barrier shall be retroactively installed between the dwelling and the swimming pool whenever:
    - 1. One or more children under six years of age become occupants of the property
    - 2. There is a change of use or character to the primary building occupancy on the property
    - 3. A new pool or spa is being installed on the same property including spa additions to the existing swimming pool.

#### 3109.6 PROTECTION FOR SWIMMING POOL AND SPA SUCTION OUTLETS

**3109.6.1 Suction Entrapment Avoidance.** Pools, spas, hot tubs, catch basins and other similar bather accessible bodies of water associated with swimming pool construction shall be designed to produce circulation throughout the body of water and provide means to protect against user suction entrapment.

**3109.6.2** Surface skimming or perimeter overflow system. To avoid suction entrapment, fully submerged suction outlets (main drains) shall not be required is swimming pools, wading pools, spas, hot tubs and catch basins. Surface skimming or perimeter overflow system shall be permitted in lieu of fully submerged suction outlet fittings and shall provide 100% of the required system flow.

<u>3109.6.3 Fully submerged suction outlets (main drains).</u> Fully submerged manufactured suction outlets (main drains) for use in swimming pools, wading pools, hot tubs and catch basins shall be listed by a nationally recognized testing laboratory in accordance with ASME/ANSI A112.19.9M.</u>

**Exception:** Custom designed suction outlet fittings certified by a licensed professional engineer that conform to Section3. General requirements of ASME/ANSI A112.19.8M.

<u>3109.6.4 Methods of entrapment avoidance.</u> Entrapment avoidance of fully submerged suction outlets can be achieved by one of the following methods:

**3109.6.4.1 Dual Drains.** A minimum of two (2) suction outlets shall be provided for each pump or pumps in the suction outlet system, separated by a minimum of three feet (3') [91.44 cm] measured from center to center of suction pipes or located on two (2) different planes; i.e. one (1) on the bottom and one (1) on the vertical wall, or one (1) each on two (2) separate vertical walls. These suction outlets shall be plumbed such that water is drawn through them simultaneously through a common line to the system. Each suction outlet fitting shall be rated for the maximum system flow.

<u>3109.6.4.2 Channel Drain System.</u> One or more channel gates shall be acceptable as protection against suction entrapment if they are 3 inches or greater in width and 31 inches or greater in length and fastened to prevent removal as specified in ASME/ANSI A112.19.8M.

**3109.6.4.3 Gravity flow system.** A Gravity Flow system shall be acceptable as protection against suction entrapment if it has one or more submerged suction outlet(s) with approved cover/grates in

any combination fed by gravity into a collection tank vented to atmosphere. However, a modulating float valve allowing direct suction is not permitted.

3109.6.4.4 Combination Inlet/Outlet Fixtures for Swim Jets. Combination Inlet/Outlet Fixtures shall be acceptable as protection against suction entrapment for a Swim Jet system not related to the filtration system, if they are manufactured and have their own dedicated pump(s), and the suction outlet and the return are located in a single fitting.

**3109.6.4.5 Venturi Debris Removal Systems**. Venturi Debris Removal Systems shall be acceptable as protection against suction entrapment if they are intended to remove debris through a single, floor mount suction outlet where low pressure is created by the entrainment of water within a deck mount canister that is not directly or indirectly connected to a pump's suction. The single action outlet shall have an approved cover/gate.

<u>3109.6.5 Shallow Water Suction Outlets.</u> Where all suction fittings are located less than 24 inches below normal operating water level, one of the following shall be required:

- 1. gravity flow system
- 2. <u>one (1) additional drain</u>
- 3. vent system to atmosphere
- 4. <u>suction vacuum release device tested and approved for the purpose by a nationally</u> recognized testing laboratory in accordance with ASME A112.19.17.

**3109.6.6 Wall Vacuum Fittings.** Where provided, the vacuum cleaner fitting(s) shall be located in an accessible position(s) at least 6 inches and no greater than 18 inches below the water level and shall comply with IAPMO SPS 4.

#### SECTION 3109.7 ABBREVIATIONS

#### 3109.7.1 General.

ANSI. American National Standards Institute 11 West 42nd Street, New York, NY 10036

ASTM. American Society for Testing and Materials 1916 Race Street, Philadelphia, PA 19103

NSPI. National Spa and Pool Institute 2111 Eisenhower Avenue, Alexandria, VA 22314

#### SECTION 3109.8 STANDARDS

#### 3109.8.1 General.

#### <u>IAPMO</u>

#### ASME

ASME A112.19.17	' Manuf	acture	rs Safety	Vacu	uum					
Release Systems	(SVRS)	for R	esidential	and	Commercial	Swimming	Pool,	Spa,	Hot 7	Tub and
Wading Pool	<u></u>				3109. <u>6</u>	-				

#### Reasons:

The 2006 International Building Code was amended by the city of Phoenix to include this revised section on Swimming Pool Enclosures and Safety Devices.

Cost Impact: N/A			
ACTION TAKEN:			
<b>2012 Code Committee</b> Approved as submitted	Modified and approved	Denied	Date: 2/5/13
Development Advisory Bo	ard Technical Subcommittee	Denied	Date: 2/12/13
Development Advisory Bo	ard	Denied	Date: 2/21/13
Council Subcommittee	Modified and approved	Denied	Date: 4/16/13
City Council Action	Modified and approved	Denied	Date: 5/15/13



Proposed Amendments to 2012 International Building Code Section 3110.1

Submitted by: Phoenix Planning & Development Department Code Committee

**3110.1 General.** Automatic vehicular gates shall comply with the requirements of Sections 3110.2 through 3110.4, other applicable sections of this code and the Phoenix Fire Code.

Reasons:

This item shall be amended to refer applicants to the Phoenix Fire Code for additional requirements.

Cost Impact: N/A		
ACTION TAKEN:		
2012 Code Committee		Date: 1/31/13
$\square$ Approved as submitted $\square$ Modified and approved	Denied	No action taken
Development Advisory Board Technical Subcommittee		Date: 2/12/13
Approved as submitted I Modified and approved	Denied	No action taken
Development Advisory Board		Date: 2/21/13
Approved as submitted I Modified and approved	Denied	No action taken
Council Subcommittee		Date: 4/16/13
$\square$ Approved as submitted $\square$ Modified and approved	Denied	No action taken
City Council Action		Date: 5/15/13
Approved as submitted I Modified and approved	Denied	No action taken



Proposed Amendments to 2012 International Building Code Section 3111.1

Submitted by: Phoenix Planning & Development Department Code Committee

**3111.1 General.** Solar photovoltaic panels/modules shall comply with the requirements of this code and the International Fire Code Phoenix Fire Code.

**Reasons:** 

This item shall be amended to refer applicants to the Phoenix Fire Code for additional requirements.

Cost Impact: No cost impact.		
ACTION TAKEN:		
2012 Code Committee		Date: 1/31/13
$\square$ Approved as submitted $\square$ Modified and approved	Denied	No action taken
Development Advisory Board Technical Subcommittee		Date: 2/12/13
Approved as submitted Dodified and approved	Denied	No action taken
Development Advisory Board		Date: 2/21/13
Approved as submitted I Modified and approved	Denied	No action taken
Council Subcommittee		Date: 4/16/13
$\square$ Approved as submitted $\square$ Modified and approved	Denied	No action taken
City Council Action		Date: 5/15/13
Approved as submitted I Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Section 3112

Submitted by: Phoenix Planning & Development Department Code Committee

#### SECTION 3112 FACTORY-BUILT BUILDINGS

**3112.1 General.** Factory-built buildings, manufactured homes and mobile homes shall comply with applicable laws of the State of Arizona and this code. The provisions of this section for factory-built buildings, manufactured homes and mobile homes take precedence over other code provisions which are inconsistent therewith. The general provisions of this code shall apply in all areas where there are not specific provisions in this section.

**3112.1.1 Arizona law.** The construction of factory-built buildings and manufactured homes is regulated by the State of Arizona, Arizona Revised Statutes ARS 41-2142 et seq, and is not included in this Code.

**3112.1.2 Manufactured home installation.** The installation of manufactured homes and mobile homes, including connection to utilities, is regulated by the State of Arizona and is not included in this code, except that a City of Phoenix On-Site Permit is required for Zoning Code administration purposes. Connection to a City water or sewer tap requires a separate permit from the Planning and Development Department.

**3112.1.3 Factory-built building installation.** The installation of factory-built buildings including their foundations and direct connection to sewer, water, gas or electric utilities, is regulated by the State of Arizona and is not included in this code, except that a City of Phoenix On-Site Permit is required for compliance with Zoning Code requirements and with Building Code requirements pertaining to location on property and setback from other buildings or structures on the property. A City of Phoenix building permit is required for all on-site construction (except foundations) including connection to or alteration of existing on-site sewer, water, gas or electrical systems, and for construction of all site improvements required by the Zoning Code such as design review elements, signs, parking, landscaping, site amenities and disabled accessibility. Connection to a City water or sewer tap requires a separate permit from the Planning and Development Department.

<u>3112.1.4 Alterations and additions.</u> Repairs, alterations and site-built additions to factory-built buildings, mobile homes and manufactured homes are regulated by this code and by the Phoenix Zoning Ordinance and require City of Phoenix permits.

**3112.1.5 Occupancy and Use.** Occupancy and use of a factory built-building, manufactured home or mobile home is prohibited without first obtaining inspection approval and a certificate of occupancy from the building official, to verify compliance with the Phoenix Zoning Ordinance and other applicable city codes and ordinances.

3112.2 Definitions. For the purpose of this Section, the following definitions shall apply:

**FACTORY BUILT BUILDING** is a residential or non-residential building including a dwelling unit or habitable room thereof which is either wholly or in substantial part manufactured at an off-site location to be assembled on-site, except it does not include a manufactured home, recreational vehicle or mobile home (ARS 41-2142).

**MANUFACTURED HOME** is a structure built in accordance with the National Manufactured Home Construction and Safety Standards Act. **MOBILE HOME** is a structure built prior to June 15, 1976, on a permanent chassis, capable of being transported in one or more sections and designed to be used with or without a permanent foundation as a dwelling when connected to on-site utilities except that it does not include recreational vehicles or factory-built buildings.

**ON-SITE PERMIT** is the permit issued by the building official which authorizes the placement of a factorybuilt building, manufactured home or mobile home on a site. The on-site permit shall authorize only the placement, foundation or unit tie-down, and specific connections to utility services which are authorized by a permit issued by the State of Arizona Office of Manufactured Housing. All other work on the site shall require a building permit issued by the building official in accordance with Section 105 of this code. Connection to a City water or sewer tap requires a separate permit from the Planning and Development Department.

<u>3112.3 Installation Requirements.</u> No factory-built building, manufactured home or mobile home shall be moved onto or installed on any lot or site in the City of Phoenix except in compliance with these provisions.

<u>3112.3.1 State insignia required.</u> No person, firm or corporation shall move onto any site any factorybuilt building or manufactured home building unless such building bears a current, valid insignia of approval of the State of Arizona.

<u>3112.3.2 State permit required.</u> No person, firm or corporation shall move onto any site any factory-built building, manufactured home or mobile home unless and until a permit for such installation has been obtained from the State of Arizona.

**3112.3.3 On-site permit required.** No person firm or corporation shall move onto any site, or relocate on any site, any factory-built building, manufactured home or mobile home until an On-Site Permit has been issued by the City of Phoenix building official.

A site plan shall be submitted to the building official which shows all utility connections and all other information necessary to ascertain compliance with the separation and area restrictions of other sections of this code and with all provisions of the Phoenix Zoning Ordinance. If the building official is satisfied that the work described by the documents submitted conform to this section and other applicable law, the On-Site Permit shall be issued to the owner of the site or his authorized agent.

<u>3112.3.4 Building permit required.</u> The person, firm or corporation obtaining the On-Site Permit shall also apply for and obtain a building permit from the building official when one or more of the following conditions apply:

- 1. For all on-site construction which connects to or alters existing buildings or existing on-site sewer, water, gas or electrical systems.
- 2. For all on-site construction which is required by or regulated by the Phoenix Zoning Ordinance, such as for design review elements, signs, parking, landscaping, site amenities and accessibility.
- 3. For all construction or alteration which is not part of the State-approved factory-built building, manufactured home, or mobile home including all interior fit-up, tenant improvement or remodeling work which is not specifically included in such State permit.
- 4. When a City of Phoenix inspection is requested by the installer for work otherwise included in the State of Arizona installation permit, including but not limited to requests for utility clearance inspections.

**3112.4 Repairs, Alterations, and Additions.** No person shall repair, alter or add on to a factory-built building, manufactured home or a mobile home after the unit has been installed without first having obtained a permit from the building official for the specific work to be performed. All such work shall comply with the requirements of this Code.

3112.5 Fire Protection. Factory-built buildings shall be protected pursuant to the Phoenix Fire Code.

### Reasons:

The 2006 International Building Code was amended by the city of Phoenix to add Factory Built Buildings.

Cost Impact: No cost impact	t.		
ACTION TAKEN:			
2012 Code Committee			Date: 1/31/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



### BUILDING CONSTRUCTION CODE CHANGE PROPOSAL Proposed Amendments to the 2012 International Building Code

Sections 3411.8.11

Submitted by: Phoenix Planning and Development Code Committee

**3411.8.11 Toilet rooms.** Where it is *technically infeasible* to alter existing toilet and bathing rooms to be *accessible*, an *accessible* family or assisted-use toilet or bathing room constructed in accordance with section 1109.2.1 is permitted. The family or assisted-use toilet or bathing room shall be located on the same floor and in the same area as the existing toilet or bathing rooms. <u>In existing construction, one of two or more fixtures (water closets and/or urinals) may be removed to create space for one accessible stall in each existing toilet room. This may result in the reduction of one required water closet which shall be permitted when this reduction is needed to create a conforming accessible toilet stall. Any alteration under this section shall not reduce other accessibility requirements including, but not limited to required clear floor spaces and maneuvering spaces.</u>

#### **Reasons:**

This is a current amendment to the 2006 IBC. This supports barrier removal, an important part of the ADA law.

Cost Impact: No cost impact.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



## CODE CHANGE PROPOSAL

### Proposed Amendments to 2012 International Building Code Section 3412.2

Submitted by: Phoenix Planning and Development Code Committee

**3412.2 Applicability**. Structures existing prior to <u>January 1, 1965</u>, in which there is work involving additions, alterations or changes or occupancy shall be made to comply with the requirements of this section or the provisions of Sections 3403 through 3409. The provisions in Sections 3412.2.1 through 3412.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, M, R, S and U. These provisions shall not apply to buildings with occupancies in Group H and I.

#### **Reasons:**

This requirement was previously amended in 2006 IBC.

**Cost Impact:** Cost may include minimum code-required life systems, accessibility upgrades and structural building upgrades.

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



Proposed Amendments to the 2012 International Building Code Sections 3412.2.5

Submitted by: Phoenix Planning and Development Code Committee

**3412.2.5 Accessibility requirements.** All portions of the buildings proposed for change of occupancy shall conform to the accessibility provisions of chapter 11. For accessibility requirements see Section 3409 of this code.

Reasons:

This is a current amendment to the 2006 IBC, section 3410.2.5. Without this, the "Compliance Alternatives" section would be more restrictive than the standard requirements. This was passed by ICC for the 2015 IBC.

Cost Impact: Reduced cost for compliance

ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	rd Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	Ird		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken



## **CODE ADOPTION PROPOSAL**

### Proposed Amendments to the 2012 International Building Code Appendices A-M

Submitted by: Phoenix Planning and Development Code Committee

#### Recommendation for the following appendices:

#### Not Adopt

Appendix A: Employee Qualifications.

- Appendix B: Board of Appeals.
- Appendix C: Group U-Agricultural Buildings.
- Appendix D: Fire Districts.
- Appendix F: Rodentproofing.
- Appendix G: Flood-resistant Construction.
- Appendix H: Signs.
- Appendix I: Patio Covers
- Appendix J: Grading
- Appendix K: Administrative Provisions.
- Appendix L: Earthquake Recording Instrumentation
- Appendix M: Tsunami-Generated Flood Hazard.

#### Adopt

Appendix E: Supplemental Accessibility Requirements.

#### Reasons:

Appendices A, B, C, D, F, G, H, I, J, K, L, M where needed are already covered by existing ordinances.

Appendix E was added to address items that were not typically enforceable through the traditional code enforcement process but were in the drafts of the 2004 ADAAG. The approved 2004 ADAAG is part of the 2010 ADA Standards. The requirements of this appendix do not match the 2010 ADA Standards and includes sections not subject to enforcement by the Phoenix Building Construction Code such as laundry equipment, mailboxes, telephones and clocks. The 2010 ADA Standards were adopted as part of the Phoenix Building Construction Code and those requirements are adequate.

Coot Impost: NI/A			
Cost Impact: N/A			
ACTION TAKEN:			
2012 Code Committee			Date: 2/6/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard Technical Subcommittee		Date: 2/12/13
Approved as submitted	Modified and approved	Denied	No action taken
Development Advisory Boa	ard		Date: 2/21/13
Approved as submitted	Modified and approved	Denied	No action taken
Council Subcommittee			Date: 4/16/13
$\boxtimes$ Approved as submitted	Modified and approved	Denied	No action taken
City Council Action			Date: 5/15/13
Approved as submitted	Modified and approved	Denied	No action taken