

## AZBO Code Review and Development Committee

### AZBO ICC Code Committee Amendments recommended for the 2006 I - Codes

This report is a two year compilation of the AZBO amendments to the 2006 ICC codes that the Code Review and Development Committee have recommended to be included with the 2006 ICC codes to assist those jurisdictions in the adoption of the 2006 ICC codes. In addition, previous amendments that were not successful in the ICC code change process have been deleted. The items noted as "AZ only" have been determined by the committee to be items unique to Arizona in accordance with the guidelines approved by the AZBO Board of Directors.

The items are identified by the initials of the affected code, the original number assigned by the committee and the year the item was originally approved by the committee.

#### 2006 INTERNATIONAL BUILDING CODE

##### IBC-1-06 (AZ Only)

Revision to: Table 1607.1

**Committee Action: Approved as Submitted**

Revise as follows:

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs.)
28. Residential		-
One- and two-family dwellings		
Uninhabitable attics with limited storage		
Habitable attics and sleeping areas	<u>20 40</u>	
(no other changes in item 28)	<u>30 40</u>	

**Reason:** Industry standards in Arizona indicate designers based their calculations on the 40 psf for all second floor areas.

**Committee Reason:** Although this does exceed the minimum requirements set forth by the code, the committee members representing the building industry indicated the homebuilders and designers preferred to continue with the 40 psf in bed room areas. The increased design would lessen deflection in floor systems, provide a uniform design for headers and lessen complaints from buyers.

##### IBC-2-06 (AZ Only)

Revision to: 3109

**Committee Action: Approved as Submitted**

Revise as follows:

Section 3109 is hereby REPEALED

**Reason:** The requirements of this section do not comply with Arizona state law governing pool enclosure requirements.

**IBC-3-06 (AZ Only)**

**Revision to:** Chapter 11 Accessibility

**Committee Action:** Approved as Submitted

**Proposal:** Delete Chapter 11, Accessibility, in its entirety and substitute the following:

**ARIZONANS WITH DISABILITIES ACT**

"Arizonans with Disabilities Act" (Arizona Revised Statutes, Title 41, Chapter 9, Article 8), and the "Arizonans with Disabilities Act Implementing Rules" (Arizona Administrative Code, Title 10, Chapter 3, Article 4), which rules incorporate The federal "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities," be and the same is hereby adopted as the Arizonans with Disabilities Act of the Town, City or County, and shall apply to new construction and alterations and are not required in buildings or portions of existing buildings that do not meet the standards and specifications and this act is hereby referred to, adopted and made a part hereof as though fully set forth in this section.

**Reason:** The requirements of this chapter are superceded by Arizona state law which requires all jurisdictions within the state of Arizona to enforce the ARIZONAN'S WITH DISABILITIES ACT. his code change merely brings the International Building Code into compliance.

**IBC-4-06 (AZ only)**

**Revision to:** Sections 308.2,308.3,(new) 310.1(new), 310.2, (new) 419, (new) 309.2.9, 1003.3.1.2, 1003.3.1.8.2

**Committee Action:** Approved as Submitted

**308.2 Group I-1.** This occupancy shall include buildings, structures or parts thereof housing more than 10 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a residential environment that provides supervisory care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following:

- Residential board and care facilities
- Assisted living centers
- Halfway houses
- Group homes
- Congregate care facilities
- Social rehabilitation facilities
- Alcohol and drug abuse centers
- Convalescent facilities

A facility such as the above with 10 or fewer persons shall be classified as a Group R-4 Condition 1 or shall comply with the *International Residential Code* in accordance with Section 101.2 where the building is in compliance with Section 419 of this code.

**308.3 Group I-2.** This occupancy shall include buildings and structures used for medical,

surgical, psychiatric, nursing, custodial, personal, or directed care on a 24-hour basis of more than five persons who are not capable of self-preservation by responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following:

Hospitals

Nursing homes (both intermediate-care facilities and skilled nursing facilities)

Mental hospitals

Detoxification facilities

A facility such as the above with five or fewer persons shall be classified as Group R-3 or shall comply with the *International Residential Code* in accordance with Section 101.2.

This occupancy shall also include buildings and structures used for assisted living homes providing supervisory, personal, or directed care on a 24-hr basis of more than 10 persons who are not capable of self-preservation by responding to an emergency situation without physical assistance from staff. A facility such as the above with ten or fewer persons shall be classified as R-4 Condition 2.

**310.1...R-4** Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living homes including not more than 10 occupants, excluding staff.

**310.1.1 Condition 1.** This occupancy condition shall include facilities licensed to provide supervisory care services, in which occupants are capable of self preservation by responding to an emergency situation without physical assistance from staff. Condition 1 facilities housing more than 10 persons shall be classified as a Group I-1.

**310.1.2 Condition 2.** This occupancy condition shall include facilities licensed to provide personal or directed care services, in which occupants are incapable of self preservation by responding to an emergency without physical assistance from staff. Condition 2 facilities housing more than 10 persons shall be classified as Group I-2.

R-4 occupancies shall meet the requirements for construction as defined in Group R-3 except as otherwise provided for in this code, and Section 419 or shall comply with the *International Residential Code* in accordance with section 101.2 where the building is in compliance with Section 419 of this code

### 310.2 Definitions

**PERSONAL CARE SERVICE.** Assistance with activities of daily living that can be performed by persons without professional skills or professional training and includes the coordination or provision of intermittent nursing services and the administration of medications and treatments.

**DIRECTED CARE SERVICE.** Care of residents, including personal care services, who are incapable of recognizing danger, summoning assistance, expressing need, or making basic care decisions.

**SUPERVISORY CARE SERVICE.** General supervision, including daily awareness of resident functioning and continuing needs.

**RESIDENTIAL CARE/ASSISTED LIVING HOME.** A building or part thereof housing a maximum of 10 persons, excluding staff, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides supervisory, personal, or directed services. This classification shall include, but not be limited to, the following: residential board and care facilities, assisted living

homes, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug abuse centers and convalescent facilities.

#### **419 RESIDENTIAL CARE/ASSISTED LIVING HOMES**

**419.1 Applicability.** The provisions of this section shall apply to a building or part thereof housing not more than 10 persons, excluding staff, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides licensed care services. Except as specifically required by this division, R-4 occupancies shall meet all applicable provisions of Group R-3.

**419.2 General.** Buildings or portions of buildings classified as R-4 occupancies shall meet all the applicable provisions of Group R-3, may be constructed of any materials allowed by this code, shall not exceed two stories in height nor be located above the second story in any building, and shall not exceed 2000 square feet above the first story except as provided in Section 506.

**419.3 Special Provisions.** R-4 occupancies having more than 2000 square feet of floor area above the first floor shall be of not less than one-hour fire-resistive construction throughout.

**419.3.1 Mixed Uses.** R-4 occupancies shall be separated from other uses as provided in Table 302.3.2.

#### **419.4 Access and Means of Egress Facilities.**

**419.4.1 Accessibility.** R-4 occupancies shall be provided with at least one accessible route per the Arizonans with disabilities act. Sleeping rooms and associated toilets shall be accessible.

**Exception:** Existing buildings shall comply with Section 3409. Bathing and toilet facilities need not be made accessible, but shall be provided with grab bars in accordance with ICC/ANSI A 117.1.

#### **419.4.2 Exits**

**419.4.2.1 Number of Exits.** Every story, basement, or portion thereof shall have not less than two exits.

**Exception:** Basements and stories above the first floor containing no sleeping rooms may have one means of egress as provided in Chapter 10.

**419.4.2.2 Distance to Exits.** The maximum travel distance shall comply with Section 1004, except that the maximum travel distance from the center point of any sleeping room to an exit shall not exceed 75 feet.

**419.4.2.3 Emergency Exit Illumination.** In the event of a power failure, exit illumination shall be automatically provided from an emergency system powered by storage batteries or an onsite generator set installed in accordance with the ICC Electric Code.

**419.4.2.4 Emergency Escape and Rescue.** R-4 occupancies shall comply with the requirements of Section 1025, except that Exception 1 to Section 1025.1 does not apply to R-4 occupancies.

**419.4.2.5 Delayed egress locks.** In R-4 Condition 2 occupancies, delayed egress

locks shall be permitted in accordance with Sections 1008.1.3.4 and 1008.1.8.6, items 1, 2, 4, 5 and 6.

#### 419.5 Smoke Detectors and Sprinkler Systems

**419.5.1 Smoke Alarms.** All habitable rooms and hallways in R-4 occupancies shall be provided with smoke alarms installed in accordance with Section 907.2.10.

**419.5.2 Sprinkler Systems.** R-4 occupancies shall be provided with a sprinkler system installed in accordance with Section 903.2.9. Sprinkler systems installed under this Section shall be installed throughout, including attached garages, and in Condition 2 facilities shall include attics and concealed spaces of or containing combustible materials. Such systems may not contain unsupervised valves between the domestic water riser control valve and the sprinklers. In R-4 Condition 2 occupancies, such systems shall contain water-flow switches electrically supervised by an approved supervising station, and shall sound an audible signal at a constantly attended location.

**1008.1.2 Door swing.** Egress doors shall be side-hinged swinging.

Exceptions:

1. Private garages, office areas, factory and storage areas with an occupant load of 10 or less.
2. Group I-3 occupancies used as a place of detention.
3. Doors within or serving a single dwelling unit in Groups R-2, and R-3 as applicable in Section 101.2, and R-4.
4. (no other changes)

**Reason:** The purpose of this amendment is to bring the provisions of the code into agreement with the licensing rules of the Arizona Department of Health Services. DHS license categories have a threshold of 10 residents to move from a residential home setting to an institutional setting. DHS rules (R9-10-701) state, "Assisted living home" or "home" means an assisted living facility that provides resident rooms to (10) or fewer residents, as distinct from an "assisted living center", which provides services to more than (10) persons. In addition, the license classifications to provide "personal care services" and "directed care services" to residents allow for residents to be bed-bound. The use of "Condition" distinctions is reflective of similar distinctions in I-occupancies.

Each state has unique agency programs for assisted living occupancies, which establish license categories based on numbers of residents and the familiar ambulatory/non-ambulatory distinction. Uniformity could be accomplished by either trusting health service agencies nationally to agree to uniform thresholds and other licensing characteristics, or by amending building codes to allow each state to adapt to that state's unique rules. If numerical thresholds are provided on a "fill in the blanks" basis, condition categories can be added or deleted, and definitions can be customized to match licensure definitions, the hazards associated with these facilities can be addressed comprehensively on a state-by-state basis.

The most hazardous scenario is a facility in an ordinary, un-rated residential structure, occupied by (10) bed-bound residents, supervised by a single caregiver. Provisions for exiting, smoke detectors, emergency illumination, sprinklers, et al, can substantially increase the chances of survival in a fire or other emergency for these residents.

**IBC-1-01 Reason:** To bring the Building Code into agreement with Arizona Administrative Code, Title 9 Health Services, Article 7 Assisted Living Facilities. R9-10-701 states, "Assisted living home" or "home" means an assisted living facility that provides resident

rooms to ten or fewer residents.' An "Assisted living center" (rooms or residential units for eleven or more residents) is required to have "an individually keyed entry door" and "a kitchen area" by R9-10-720. Since the distinction for the state is between ten and eleven residents, it is felt that the Building Code should reflect the same distinction. See [http://www.sosaz.com/public\\_services/Title 09/9-10.htm](http://www.sosaz.com/public_services/Title_09/9-10.htm) for the entire rule.

It is felt that the word "abuse" was inadvertently omitted for the definition of Group I-1 Occupancy.

## IBC-5-06 (AZ Only)

### Revise Section 1503.4

#### Committee Action: Approved as Submitted

**[P] 1503.4 Roof drainage.** Design and installation of roof drainage systems shall comply with Section 1503.4 and the *International Arizona State Plumbing Code (1994 UPC)*.

**1503.4.1 Gutters.** Gutters and leaders placed on the outside of buildings, other than Group R-3 as applicable in Section 101.2, private garages and buildings of Type V construction, shall be of noncombustible material or a minimum of Schedule 40 plastic pipe.

**1503.4.2 Where required.** All roofs, paved areas, yards, courts and courtyards shall drain into a separate storm sewer system, or a combined sewer system, or to an approved place of disposal.

**1503.4.3 Roof design.** Roofs shall be designed for the maximum possible depth of water that will pond thereon as determined by the relative levels of roof deck and overflow weirs, scuppers, edges or serviceable drains in combination with the deflected structural elements. In determining the maximum possible depth of water, all primary roof drainage means shall be assumed to be blocked.

**1503.4.4 Overflow drainage required.** Overflow (emergency) roof drains or scuppers shall be provided where the roof perimeter construction extends above the roof in such a manner that water will be entrapped if the primary drains allow buildup for any reason.

**1503.4.4.1 Separate systems required.** Overflow roof drain systems shall have the end point of discharge separate from the primary system. Discharge shall be above grade, in a location, which would normally be observed by the building occupants or maintenance personnel.

**1503.4.4.2 Overflow drains and scuppers.** Where roof drains are required, overflow drains having the same size as the roof drains shall be installed with the inlet flow line located 2 inches (51 mm) above the low point of the roof, or overflow scuppers having three times the size of the roof drains may be installed in the adjacent parapet walls. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by the plumbing code. Scuppers shall not have an opening dimension of less than 4 inches (102 mm). The flow through the primary system shall not be considered when sizing the secondary roof drain system.

**REASON:** This is proposed as an Arizona only amendment to resolve the problem of using the UPC rather than the IPC. The I codes place roof drainage in the plumbing code. The U codes have drainage required in the UBC and piping system design is per the UPC and scuppers per the UBC. When the IBC is used with the UPC, there is a gaping hole in having sufficient requirements to obtain a safe roof drainage system.

New Section 1503.4.2 is from IPC 1101.2. Section 1503.4.3 is from IPC 1101.7. Section 1503.4.4 is from IPC 1107.1. Section 1503.4.4.1 is from IPC 1107.2. Section 1503.4.4.2 is a combination of IRC R903.4.1 and IPC 1107.3.

The text from the IRC provides the three times scupper sizing that existed in the UBC. Note that jurisdictions that have adopted the 2000 IPC without amendments will require overflow piping to be two times the size of the main piping but have no over sizing requirement for the scuppers. The 2003 no longer requires the overflow piping size to be doubled but still does not have the three times size for the scuppers.

**IBC-6-06 (Submitted for 09 proposal)**

**Revise Section 2902.7**

**Committee Action: Approved as Submitted**

**IBC 2902.7 DRINKING FOUNTAINS**

**2902.7.1 Approval.** Drinking fountains shall conform to ASME A112.19.1M ASME A11219.2M or ASME A112.19.19M and water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to nsf61, section 9. Where water is served in restaurants, drinking fountains shall not be required. In other occupancies, where drinking fountains are required, bottled water dispensers or water coolers shall be permitted to be substituted.

2902.7.2 Prohibited locations. Drinking fountains, water coolers and dispensers shall not be installed in public restrooms.

**IBC-6-06 (Submitted for 09 proposal)**

**Revise Section 1503.6**

**Committee Action: Approved as Submitted**

**1503.6 Crickets and saddles.** A cricket or saddle shall be installed on the ridge side of any chimney greater than 30 inches (762 mm) wide. Cricket or saddle coverings shall be sheet metal of the same material as the roof covering.

**2003 INTERNATIONAL RESIDENTIAL CODE**

**IRC-1-06 (AZ only)**

**Revision to: TABLE R 301.4**

**Committee Action: Approved as Modified**

USE	LIVE LOAD
Attics with storage <sup>b,e</sup>	<del>20</del> <u>40</u>
Sleeping rooms	<del>30</del> <u>40</u>

(No other changes to Table)

**Reason:** Industry standards in Arizona indicate designers based their calculations on the 40 psf for all second floor areas.

**Committee Reason:** Although this does exceed the minimum requirements set forth by the code, the committee members representing the building industry indicated the homebuilders and designers preferred to continue with the 40 psf in bed room areas. The increased design would lessen deflection in floor systems, provide a uniform design for headers and lessen complaints from buyers.

#### **IRC-2-06 (AZ only)**

**Revision to: APPENDIX**

**Committee Action: Approved as Modified**

**102.5 Appendices.** Provisions in the appendices shall not apply unless specifically adopted. The following appendices are adopted:

Appendix A SIZING AND CAPACITIES OF GAS PIPING

Appendix B SIZING OF VENTING SYSTEMS SERVING APPLIANCES EQUIPPED WITH DRAFT HOODS, CATEGORY I APPLIANCES, AND APPLIANCES LISTED FOR USE AND TYPE B VENTS

Appendix C EXIT TERMINALS OF MECHANICAL DRAFT AND DIRECT-VENT VENTING SYSTEMS

Appendix D RECOMMENDED PROCEDURE FOR SAFETY INSPECTION OF AN EXISTING APPLIANCE INSTALLATION

Appendix H PATIO COVERS

Appendix J EXISTING BUILDINGS AND STRUCTURES

Appendix K SOUND TRANSMISSION

**Reason:** Comply with State and Federal laws.

#### **IRC-3-06 (AZ only)**

**Revision to: M1307.6**

**Committee Action: Approved as Submitted**

Add new text as follows:

**M1307.6 Liquefied Petroleum Appliances.** LPG appliances shall not be installed in an attic, pit or other location that would cause a ponding or retention of gas.

**Reason:** Due to the nature of LP gas, being heavier than air, it should be a function of design to eliminate the hazard of gas being trapped. The attic location is a hazard due to the gas settling in insulated frame bays and the probability of an ignition source igniting the gas fuel. Any pit will hold LP gas until an appliance or other ignition source causes a fire or explosion.

Related sections include G2406.2 and M1703.2

This also provides consistency with the State plumbing code.

#### **IRC-4-06 (AZ only)**

**Revision to: G2406.4**

**Committee Action: Approved as Modified**

Add new section text as follows:

**G2406.4 Liquefied Petroleum Appliances.** LPG appliances shall not be installed in an attic, pit or other location that would cause a ponding or retention of gas.

**Reason:** To make text compatible with change to Section M1307.5 and to clarify that the exceptions do not apply to this text. This also provides consistency with the State plumbing code.

**IRC-5-06 (AZ only)**

**Revision to: Section G2415.9 & G2415.9.1**

**Committee Action: Approved as Modified**

**Proposal: G2415.9 (404.9) Minimum burial depth.** Underground piping systems shall be installed a minimum depth of 12 inches (305 mm) below grade for metal piping and 18 inches (457mm) for plastic piping.

**Reason:** The distinction between metal piping and plastic piping in regards to burial depth is because the plastic piping is more susceptible to damage and needs the increased depth for protection.

The elimination of the section addressing individual outside appliances is because the risks are the same whether the line serves multiple appliances or a single appliance. With similar risks, similar depths should be required.

**IRC-6-06 (Submitted for 09 proposal)**

**Revise Section 903.2.2**

**Committee Action: Approved as Submitted**

**R903.2.2 Crickets and saddles.** A cricket or saddle shall be installed on the ridge side of any chimney greater than 30 inches (762 mm) wide. Cricket or saddle coverings shall be sheet metal or of the same material as the roof covering.

**IRC-7-06 (Submitted for 09 proposal)**

**Revise Section 905.2.8.6**

**Committee Action: Approved as Submitted**

**R905.2.8.6 Drip edge.** Provide drip edge at eaves and gables of shingle roofs. Overlap to be a minimum of 2 inches (51 mm). Eave drip edges shall extend 0.25 (6.4 mm) below the sheathing and extend back on the roof a minimum of 2 inches (51 mm). Drip edge shall be mechanically fastened a maximum of 12 inches (305 mm) o.c.

2006 INTERNATIONAL FUEL GAS CODE

IGC-1-06 (Submitted for 09 proposal)

Revise Section 2406.2

Committee Action: Approved as Submitted

**G2406.2 (303.3) Prohibited locations.** Appliances shall not be located in, or obtain combustion air from, any of the following rooms or spaces:

- 1) Sleeping rooms
- 2) Bathrooms
- 3) Toilet rooms
- 4) Storage Clothes closets

2006 INTERNATIONAL MECHANICAL CODE

IMC-1-06 (Submitted for 09 proposal)

Revise Section 307.2.2

Committee Action: Approved as Submitted

307.2.2 Drain pipe material and sizes.

Components of the condensate disposal system shall be.....size shall not be less than ¾" internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes for more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an approved method the following:

<u>EQUIPMENT CAPACITY</u>	<u>MINIMUM CONDENSATE PIPE DIAMETER</u>
<u>Up to 20 tons (70.3 kw) of refrigeration</u>	<u>¾ inch (19 mm)</u>
<u>Over 20 tons (70.3 kw) to 40 tons (141 kw) of refrigeration</u>	<u>1 inch (25 mm)</u>
<u>Over 40 tons (141 kw) to 90 tons (317 kw) of refrigeration</u>	<u>1 ¼ inch (32 mm)</u>
<u>Over 90 tons (317 kw) to 125 tons (440 kw) of refrigeration</u>	<u>1 ½ inc (38 mm)</u>
<u>Over 125 tons (440 kw) to 250 tons (879 kw) of refrigeration</u>	<u>2 inch (51 mm)</u>

Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than one-eighth unit vertical in 12 units horizontal (1-perceant slope)

IMC-2-06 (Submitted for 09 proposal)

Revise Section 307.2.2

Committee Action: Approved as Submitted

**M1305.1.1 ~~Central~~ Furnaces and air handlers.** ~~Central~~ Furnaces and air handlers within compartments or alcoves shall have a minimum working space clearance of 3 inches (76 mm)

along the sides, back, and top, with a total width of the enclosing space being at least 12 inches (305 mm) wider than the furnace or air handler. Furnaces having a firebox open to the atmosphere shall have at least a 6 inch (152 mm) working space along the front combustion chamber side. Combustion air openings at the rear and side of the compartment shall comply with the requirements of chapter 17.

**Exception:** This section shall not apply to replacement appliances installed in existing compartments and alcoves where the working space clearances are in accordance with the equipment or appliance manufacturer's installation instructions.

**M1305.1.5 Heating, Air Conditioning, and Refrigeration Equipment Outlet.** A 125-volt, single phase, 15 or 20 ampere rated receptacle outlet shall be installed in an accessible location for the servicing of heating, air conditioning, and refrigeration equipment. The receptacle shall be located on the same level and within 25 feet (7.5 meters) of the heating and air conditioning, and refrigeration equipment. The receptacle outlet shall not be connected to the load side of the equipment disconnecting means.

#### **IMC-3-06 (Submitted for 09 proposal)**

##### **Revise Section 2005.2**

**Committee Action: Approved as Submitted**

**M2005.2 Prohibited locations.** Fuel-fired water heaters shall not be installed in a ~~room-used-as-a-storage~~ clothes closet. Water heaters installed in a bedroom or bathroom shall be installed in a sealed enclosure so that the combustion air will not be taken from the living space. Direct-vent water heaters are not required to be installed within an enclosure.

### **2006 International Plumbing Code**

#### **IPC-1-06 AZ only**

**Revision to: 101**

**Committee Action: Approved as Submitted**

**Add a new section 101.5 to read as follows:**

**101.5 Appendices.** Provisions in the appendices shall not apply unless specifically adopted.

**Reason:.** This provision is included in all the other International codes and needs to be included in the International Plumbing Code to maintain uniformity among the codes.

#### **IPC-2-06 (Submitted for 09 proposal)**

**Revise Section 3005.2.10**

**Committee Action: Approved as Submitted**

**P3005.2.10 Cleanout equivalent.** A ~~fixture trap~~ or a fixture with an integral trap, readily removable without disturbing concealed piping shall be acceptable as a cleanout equivalent.