



**CITY OF SCOTTSDALE AMENDMENTS
TO THE INTERNATIONAL FIRE CODE,
2012 EDITION**

**ORDINANCE
4045**

SCOTTSDALE REVISED CODE

Amendments to

CHAPTER 36

ARTICLE II. FIRE CODE*

DIVISION 2

SECTION 36-18.1

Section 36-18.1 Amendments.

(a) The 2012 edition of the International Fire Code (2012 I.F.C.) is adopted by reference. It shall be the fire code of the city. Three (3) copies of it shall remain in the office of the city clerk and be open to inspection at all times.

(b) The amendments to the International Fire Code (2012 I.F.C.), 2012 edition, are adopted in the following respects

CHAPTER 1 ADMINISTRATION

SECTION 101 GENERAL

101.1 Title.

These regulations shall be known as the Fire Code of the City of Scottsdale, hereinafter referred to as “the code.”

101.2.1 Appendices.

Provisions in the appendices shall be deleted or adopted as follows:

1. Appendix A is deleted from adoption.
2. Appendix F is adopted as code.
3. Appendix B, C, D, E, F, G, H, I, and J are adopted as reference.
4. Appendix K, L are added.

SECTION 105 PERMITS

105.6.8 Compressed gases.

An operational permit is required for the storage, use or handling at normal temperature and pressure (NTP) of compressed gases in excess of the amounts listed in Table 105.6.8.

Exception:

1. Vehicles equipped for and using compressed gas as a fuel for propelling the vehicle.

2. Carbon Dioxide (Inert and simple asphyxiant) shall require a permit for 200 cubic feet or more at NTP.

105.6.27 LP-gas. An operational permit is required for:

1. Storage and use of LP-gas.
Exception: A permit is not required for individual containers with a 10 gallon (37.85L) water capacity or less serving occupancies in Group R-3.
2. Operation of cargo tankers that transport LP-gas.

SECTION 108 BOARD OF APPEALS

108.1 Board of appeals established. Reference to the "board" or "the board of appeals" in this code shall mean the building advisory board of appeals as established and referred to in Chapter 31, Article II of the Scottsdale Revised Code. All appeals of orders, decisions or determinations made by the fire code official relative to the application and interpretation of this code shall be heard by the building advisory board of appeals as provided in Chapter 31, Article II of the Scottsdale Revised Code. The rules and procedures of the board shall apply to all appeals, and the board shall render all decisions and findings in writing to the appellant with a copy to the fire code official.

SECTION 109 VIOLATIONS

109.4 Violation Penalties. Is deleted and substituted by the provisions of SRC 36-19.

109.4.1 Abatement of violation. In addition to the imposition of the penalties herein described, the fire code official is authorized to institute appropriate action to prevent unlawful construction or to restrain, correct or abate a violation; or to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.

SECTION 202 GENERAL DEFINITIONS

Access Challenged Residence. Single family homes with additional challenges including, but not limited to, access, or size, as determined by fire code official, shall be required to have sprinkler protection in accordance with NFPA Standards and Fire Department Interpretation and Applications manual.

Big Box Single Family Residence (BB-SFR). Single family residences over 12,000 square foot in area. These shall be provided with attic sprinkler protection per currently amended NFPA Standards and Fire Department Interpretation and Applications manual.

Hillside landform area. Any parcel of land or portion thereof with surface slope that can easily exceed fifteen (15) percent, where major collector streets have a maximum grade of nine (9) percent, and minor and local collector streets have a maximum grade twelve (12) percent, and local residential streets have a maximum grade of fifteen (15) percent.

Landlord. Shall have the meanings given in Arizona Revised Statutes.

Multiple single-family. Attached single family dwellings (townhouses) not more than three (3) stories in height with a separate means of egress constructed under the International Residential Code (IRC).

NICET. National Institute for the Certification of Engineering Technologies, 1420 King Street, Alexander, VA. 22314-2915

Rental Agreement. Shall have the meanings given in Arizona Revised Statutes.

Sky Lantern. A device designed to carry an open flame as an airborne light. Also known as kongming lantern, wish lantern, sky candle, fire balloon, etc.

Tenant. Shall have the meanings given in Arizona Revised Statutes.

OCCUPANCY CLASSIFICATION. For the purposes of this code, certain occupancies are defined as follows:

Institutional Group I

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 supervised residential environment that provides personal 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:

Alcohol and drug centers
Assisted living facilities
Congregate care (living) facilities
Convalescent facilities
Group homes
Half-way houses
Residential board and care facilities
Social rehabilitation facilities

A facility such as the above with five or fewer persons may be classified as Group R-3 or may comply with the International Residential Code in accordance with Section 101.2 of the International Building Code. A facility such as above, housing at least six and not more than 10 persons, may be classified as Group R-4.

Residential Group R. Residential, Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the International Residential Code in accordance with Section 101.2 of the International Building Code. Residential occupancies shall include the following:

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as R-1, R-2, R-4 or I, including:

Buildings that do not contain more than two dwelling units.

Adult care facilities that provide accommodations for 5 or fewer persons of any age for less than 24 hours

Child care facilities that provide accommodations for 5 or fewer persons of any age for less than 24 hours

Congregate living care facilities with 5 or fewer persons.

Adult and child care facilities that are within a single-family home are permitted to comply with the International Residential Code.

R-3 Residential Care/Assisted Living Facilities occupancies in existing structures with one (1) to five (5) clients shall meet the following requirements:

- a. Interconnected smoke detectors shall be installed in all livable areas in accordance with Scottsdale Building code.
- b. Posted evacuation map and emergency procedures.
- c. Portable fire extinguishers in accordance with NFPA 10.

R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 10 occupants, excluding staff:

1. Buildings that do not contain more than two dwelling units.
2. Adult care facilities that provide accommodations for more than five but not more than 10 occupants of any age for less than 24 hours.
3. Child care facilities that provide accommodations for more than five but no more than 10 occupants of any age for less than 24 hours.
4. Congregate living care facilities with 5 or fewer persons.
5. Adult and child care facilities that are within a single-family home are permitted to comply with the International Residential Code.

Occupancies providing care and accommodations for more than ten (10) occupants, excluding staff, shall be classified as defined in Group I occupancy types.

Group R-4 occupancies in existing structures with six (6) to ten (10) clients and all new structures shall meet the following requirements:

- a. Interconnected smoke detector shall be installed in all livable areas in accordance with Scottsdale Building code.
- b. Posted evacuation map and emergency procedures
- c. Portable fire extinguishers in accordance with NFPA 10.
- d. An automatic fire sprinkler system in accordance with NFPA 13D and fire department Interpretation and Applications Manual.

Group R-4 occupancies shall meet the requirements for construction as defined in the International Building Code for Group R-3, except as otherwise provided for in that code, or shall comply with the International Residential Code.

Uniform traffic complaint. The form approved by the State Supreme Court in their "*Rules of Procedure in Civil Traffic Violation cases*".

SECTION 308 OPEN FLAME

308.1 General. Open flame, fire and burning on all premises shall be in accordance with Sections 308.1.1 through 308.4.1 and with other applicable sections of this code.

308.1.1 Where prohibited. A person shall not take or utilize an open flame or light in a structure, vessel, boat or other place where highly flammable,

combustible or explosive material is utilized or stored. Lighting appliances shall be well-secured in a glass globe and wire mesh cage or a similar approved device.

308.1.1.1 Sky Lanterns. The lighting of, and the release of, sky lanterns shall be prohibited.

308.3.1 Open-flame cooking devices. Charcoal burners, chimineas, barbecues fixed or portable, and other open-flame cooking devices are prohibited on combustible balconies or within 10 feet (3048 mm) of combustible construction.

Exceptions:

1. One- and two-family dwellings.
2. When all of the following conditions are met:
 - a. Where buildings, balconies and decks are non- combustible construction,
 - b. Protected by an automatic sprinkler system,
 - c. Device(s) is only fueled by natural gas and
 - d. Device is not located under any attached covers or balconies.

308.3.1.2 Use of Liquefied-petroleum-gas-fueled cooking devices. No person shall use individual fixed or portable, LP-gas burners or barbecues on or under any attached covered patios, balconies, covered walkways, stairs, or roof overhangs and shall not be located within 10 feet (3048 mm) of combustible construction.

Exceptions: Detached one- and two-family dwellings.

308.3.1. 3 Storage of open-flame cooking devices and barbecues. Storage of barbecues on or under balconies shall be allowed in accordance with the written city fire department Interpretation and Applications Manual.

Exception: If the fire department receives complaints or suspect the cooking device or barbecue is being used, the fire department will require the cooking device or barbecue to be removed from the premises.

SECTION 503 FIRE APPARATUS ACCESS ROADS

503.1.1 Buildings and facilities. Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the exterior walls of the first story of the building as measured by an approved route around the exterior of the building or facility.

Exception: The fire code official is authorized to increase the dimension of 150 feet (45 720 mm) where:

1. The building is equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 the access road may be extended to a maximum of 300 feet (91,440 mm).
2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.
3. There are not more than two single-family dwelling (Group R-3 or IRC) or Group U occupancies.

503.2 Specifications. Fire apparatus access roads shall be installed and arranged in accordance with Sections 503.2.1 through 503.2.7 and the Scottsdale Design Standards and Policies Manual (DS&PM).

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 24 feet (7315 mm) except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

503.2.1.1 Temporary fire department access. Temporary fire department access roadway prior to and during construction of every facility, building or portion of a building shall install and maintain a roadway 16'-0" (4,877mm) wide, with minimum 0'-4" (101.6mm) thickness of aggregate base course or decomposed granite compacted to a 90% density where natural soil will not meet compaction requirements.

503.2.4 Turning radius. The required turning radius of a fire apparatus access road shall be determined by the fire code official and the Scottsdale Design Standards and Policies Manual (DS&PM).

503.2.5 Dead ends. Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) for non fire sprinklered structures and 300 feet (91,440 mm) for fully sprinklered structures in length shall be provided with an approved area for turning around fire apparatus.

503.2.7 Grade. The grade of the fire apparatus access road shall be within the limits established by the code official based on the fire department's apparatus. Access roads shall comply with the following.

1. The grade of access for non-sprinklered properties shall not exceed 12%.
2. The grade of access for sprinklered properties shall not exceed 15%.
3. All grades of access in excess of 15% require approval by the fire department.

503.3 Marking. Where required by the fire code official, approved signs or other approved notices shall be provided for fire apparatus access roads (fire lanes) to identify such roads or prohibit the obstruction thereof on public and private property. Signs or notices shall be maintained in a clean and legible condition at all times and shall be replaced or repaired when necessary to provide adequate visibility. All fire lanes shall be marked in the following manner:

1. Fire lane signs per City of Scottsdale standard detail, and / or
2. Curb, street or driveway painted red to indicate fire lane and labeled "FIRE LANE NO PARKING" in white block letters 3 inches (76.2mm) in height, 3/4 in. (19.5 mm) stroke, on the vertical face of the curb to indicate fire lane.
3. Lettering shall not be greater than 50'-0" (15.24m) apart and shall be posted at the beginning and end of the fire lane.

It shall be unlawful for any vehicle, equipment or device to park in or block the fire lane. Any vehicle, equipment or device found parked in or blocking a fire lane shall be cited by the police or the fire department.

503.4 Obstruction of fire apparatus access roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 shall be maintained at all times.

503.4.1. Traffic calming devices. Traffic calming devices shall be prohibited unless approved by the fire code official.

503.4.2 Traffic control spikes. Traffic control spike or similar devices that immobilize a vehicle shall be prohibited.

503.6.1 Key switch and sensor pre-emption location. A key switch and pre-emption sensor shall be required on all electric entry control gates. Key switch shall be installed in a location on the gate control panel that is readily visible and accessible. The pre-emption sensor shall be at or behind gate.

503.6.1.1 Single family residence. A key switch shall be installed in a location on the gate control panel that is readily visible and accessible. A pre-emption sensor is optional.

503.6.2 Manual gates. An approved dual padlock locking system shall be used on manual gates. An approved Fire Department Knox padlock shall be used on one side and the owners/ management on the other.

503.7 Retro-fit of security gates. The installation of a key switch and pre-emption sensor shall be required on all existing electric entry controlled security gates across a fire apparatus access road. All gates shall be in compliance on or before July 1, 2014.

EXCEPTION: Single Family Residence: A pre-emption sensor is optional.

SECTION 505 PREMISES IDENTIFICATION

505.1 Address numbers. New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. Address and building numbers for commercial properties shall be a minimum of 12 inches (305 mm) high with a minimum stroke width of 2.0 inch (51 mm). Units within a building shall be a minimum of 6 inches (152 mm) high with a minimum stroke width of 1.0 inch (25.4 mm). Individual unit or suite numbers shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm). One and two family dwelling shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm). Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address numbers shall be maintained.

505.1.1 Interior room numbers. New and existing buildings shall have an approved room and suite numbers identification placed in positions that are plainly legible and visible. Numbers shall contrast with their background; interior suite and room numbers shall be Arabic numeral or alphabet letters. Interior room and suite numbers shall be a minimum of 1.25 (1 ¼) inches (31.75 mm) high with a brush stroke width of 0.25 (1/4) inches (6.35 mm).

SECTION 506 KEY BOXES

506.1 Where required. A key box shall be required on all commercial structures that contain off-site monitored fire systems or where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box to be installed in an approved location. The key box shall be of an approved type listed in accordance with UL 1037, and shall contain keys to gain necessary access as required by the fire code official.

1. The first key box shall be installed at the main entrance of the structure. Additional key boxes may be required based on the size, layout, and location of fire sprinkler riser room. (Example: strip malls may have one centered on the front and at the riser room, large office, warehouses and big box retail buildings would have boxes at the main entry, rear or additional entry and the riser room.)

2. The key box shall be installed between 4'-0" (1.219 m) to 6'-0" (1.829 m) above finished grade. The key box shall be immediately visible to fire personnel from the emergency apparatus. Posts, fences, vehicles, vegetation, trash, storage and other materials shall not be placed or kept near the key boxes in a manner that would prevent the key boxes from being immediately discernible.

SECTION 507 FIRE PROTECTION WATER SUPPLIES

507.4 Water supply test. Testing of water supply system shall comply with the procedures in the Scottsdale DS&PM.

507.5 Fire hydrant systems. Fire hydrant systems shall comply with sections 507.5.1 through 507.5.6.

507.5.1 Where required. Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Exceptions:

1. For Group R-3 and Group U occupancies equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).
2. For buildings equipped throughout with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).

507.5.1. 2 Hydrant spacing. Fire hydrants shall be spaced on fire apparatus access roads as follows:

1. Commercial, multi-family (R-1 and R-2) and multiple single-family development hydrant spacing will be a maximum of 700 feet (213,360mm) on center.
2. Non-hillside. One and two family dwellings (IRC and R-3) development hydrant spacing will be a maximum of 1,200 feet (365,760mm) on center.
3. Hillside. One and two family dwellings (IRC and R-3) development hydrant spacing will be a maximum of 600 feet (182,880mm) on center.
4. Hillside cul-de-sacs. The maximum distance shall not exceed three hundred (300) feet (91,940mm) to any hydrant from the end of a cul-de-sac.

507.5.1.2 Dead ends. On cul-de-sacs in residential and commercial developments the maximum distance to a hydrant shall not exceed one half (½) of the maximum allowable distance between fire hydrants designated in *508.5.1 Exceptions*.

Exception: Hillside shall have a maximum of three hundred (300) feet (91,940mm) from a hydrant to the dead end.

507.5.7. Fire hydrant color. All fire hydrants shall have aboveground barrels painted with a primer coat plus two (2) coats of OSHA yellow paint.

507.5.7.1 Reclaimed water fire hydrant color. All fire hydrants using a reclaimed water supply shall have the caps and bonnet painted with a prime coat plus two (2) coats of purple paint. A placard shall be affixed to the hydrant in English and Spanish "DO NOT DRINK WATER."

507.5.8 Reflective markers. All fire protection equipment, fire department connections and hydrants shall be clearly identified by installation of reflective blue markers. See the Scottsdale supplement to MAG Uniform Standard Specifications, standard detail 2363.

SECTION 508 FIRE COMMAND CENTER

508.1 General.

Where required by other sections of this code and in all buildings classified as high-rise buildings by the International Building Code, a fire command center for fire department operations shall be provided and shall comply with Sections 508.1.1 through 508.1.5.

508.1.1 Location and access. The fire command center shall be in a location that is easily identifiable and accessible from the main lobby of the building and provide quick access to the building tower stairways. The location and accessibility of the fire command center shall be approved by the fire chief.

508.1.3 Size. The fire command center shall be a minimum of 96 square feet (19 m²) in area with a minimum dimension of 8 feet (3048 mm).

SECTION 607 ELEVATOR OPERATION, MAINTENANCE AND FIRE SERVICE KEYS

607.1.1 Elevator car to accommodate ambulance stretcher. Where elevators are provided in buildings four or more stories above grade plane or four or more stories below grade plane, at least one elevator shall be provided for fire department emergency access to all floors. Elevators designated as emergency access shall be measured on the inside face of the car and shall be not less than 6'-0" X 7'-0 (1830mm X 2135mm) nominal and shall be identified by the international symbol for emergency

medical services (star of life). The symbol shall not be less than 3 inches (76 mm) high and shall be placed inside on both sides of the hoist way door frame.

CHAPTER 9 FIRE PROTECTION SYSTEMS

SECTION 901 GENERAL

901.2 Construction documents. The fire code official shall have the authority to require construction documents and calculations for all fire protection systems and to require permits be issued for the installation, rehabilitation or modification of any fire protection system. Construction documents for fire protection systems shall be submitted for review and approval prior to system installation.

901.2.1 Statement of compliance. Before requesting final approval of the installation, where required by the fire code official, the installing contractor shall furnish a written statement to the fire code official that the subject fire protection system has been installed in accordance with approved plans and has been tested in accordance with the manufacturer's specifications and the appropriate installation standard. Any deviations from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement.

901.2.2 Plan certification for fire alarm systems and occupant notification. All fire alarm and occupant notification system plans submitted to the fire department for review and approval shall bear a qualified registrants seal or review certification of a minimum level III NICET in Fire Alarms (National Institute for the Certification of Engineering Technologies).

901.2.3 Plan certification for fire sprinkler systems. All fire sprinkler plans submitted to the fire department for review and approval shall bear a qualified registrant's seal or review certification of a minimum level III NICET in fire sprinklers, (National Institute for the Certification of Engineering Technologies), in accordance with fire department Interpretation and Applications Manual.

901.2.4 Plan certification for all other fire protection systems. Plan certification for all other fire protection systems will be accompanied by a certification of competence when required.

901.2.5 On-site plans. Plans and specifications shall be submitted to the fire department for review and approval prior to construction. One set of fire department approved plans shall be on the job site for each inspection.

SECTION 903
See Scottsdale Revised Code 36-18 AUTOMATIC SPRINKLER SYSTEMS

SECTION 905
STANDPIPE SYSTEMS

905.3.4 Stages. Stages greater than 1,000 square feet in area (93 m²) shall be equipped with a Class I wet standpipe system with 2.5 inch (64 mm) hose connections on each side of the stage supplied from the automatic fire sprinkler system and shall have a flow rate of not less than that required for class 1 standpipes.

905.3.4.1 Hose and cabinet. Hose and hose cabinets are deleted in their entirety.

905.12. Hose connections for access challenges. Buildings exceeding 10,000 square feet (929 m²) in area per story, and not otherwise required to be equipped with a standpipe system by section 905.3 of the 2012 IFC, shall be equipped with class I manual hose connections (2-1/2" NST) for fire department use as follows:

- (1) The locations shall be in accordance with Scottsdale Revised Code, NFPA 13, and 2012 IFC sec. 905.4, except item 1. 905.4, item 1 locations shall be at each floor-level landing, including grade level, within enclosed stairways, rather than located at intermediate floor level landings.
- (2) The hose connections are required when exterior ground floor walls exceed the required distance from fire apparatus access roads.
- (3) Single story structures are not required to have hose connections except in those interior portions of the building that exceed 200 feet (60.96 m) of travel from an emergency access road.
- (4) Where the most remote portion of a floor or story is more than 200 feet from a hose connection, additional hose connections are required.
- (5) The hose connections may be combined with the fire sprinkler system and sized to deliver 250 gallons per minute at 100 psi from the most hydraulically remote outlet, using 150 psi fire department pump-in pressure. Calculations for hose demand shall be submitted with sprinkler plans.

SECTION 907
FIRE ALARM AND DETECTION SYSTEMS

907.2 Where required—new buildings and structures. An approved manual, automatic or manual and automatic fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and fire department Interpretation and Applications Manual, and provide occupant notification in accordance with Section

907.5, unless other requirements are provided by another section of this code. Where automatic sprinkler protection installed in accordance with Section 903.3.1.1 or 903.3.1.2 is provided and connected to the building fire alarm system, automatic heat detection required by this section shall not be required.

The automatic fire detectors shall be smoke detectors. Where ambient conditions prohibit installation of automatic smoke detection, other automatic fire detection shall be allowed.

907.7 Activation. Where an alarm notification system is required by another section of this code, it shall be activated by:

1. Required automatic fire alarm system.
2. Sprinkler water-flow devices.
 - a. Multi-level structures: All multilevel structures are required to have a flow switch and tampered control valve per floor. See fire department Interpretation and Applications Manual.
3. Required manual fire alarm boxes.

SECTION 912 FIRE DEPARTMENT CONNECTIONS

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 912.6 and fire department Interpretation and Applications Manual.

912.2 Location. The fire department connection shall be located 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.

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

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.

912.2.3 Remote Fire Department Connections. Remote fire department connections shall be located within four (4) feet (1219.2mm) to eight (8) feet (2438.4mm) of the curb line of an access road or public street, or as otherwise specified. The fire department connection line shall be a wet line with the check valve at the hose connection above grade.

912.2.4 Wall mounted Fire Department Connections. Wall mounted fire department connections are permitted on systems not over ordinary hazard Group 2, when:

1. There are no glazed structural openings within 5 feet (1524mm) horizontally from inlet connection.
2. The structure is not classified as an "H" occupancy.
3. The fire department connection is within 50 feet 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, post, plantings or other fire department connections

(See fire department Interpretation and Applications Manual or as approved by the fire code official.)

SECTION 1004 OCCUPANT LOAD

1004.3 Posting of occupant load. Every room or space that is an assembly occupancy shall have the occupant load of the room or space posted in a conspicuous place, near the main exit or exit access doorway from the room or space. The sign shall be printed in letters not less than three-quarter (3/4) inch high on a contrasting background and read: "Maximum Occupant Load _____ People". Posted signs shall be maintained by the owner or authorized agent. The number of people occupying the room shall not exceed the maximum occupant load as posted on the sign.

CHAPTER 11 CONSTRUCTION REQUIREMENTS FOR EXISTING BUILDINGS

1103.7.8 Apartments, Condominiums and Conversions. All apartments and condominiums constructed without a sprinkler system and all conversions made in buildings without a sprinkler system shall install smoke alarms in compliance with the most current adopted fire code.

Exception: If no construction is being done or if construction does not include the removal of the ceiling membrane – exposing the building framing – the smoke alarms may be battery operated only, provided the battery is a long life Lithium battery or equal. All structures meeting the above requirements shall be in compliance on or before January 1, 2009.

1103.8.1.1 Owner landlord and occupant responsibilities. Devices provided and maintained. In a dwelling unit occupied under the terms of a rental agreement or under a month-to-month tenancy:

1. At the time of each occupancy the landlord shall provide smoke detection devices in working condition and, after written notification by the tenant, shall be responsible for replacement; and
2. The tenant shall keep the devices in working condition by keeping charged batteries in battery-operated devices, by testing the devices periodically, and by refraining from permanently disabling the devices.

1103.8.1.2 Definitions. In this section, 'dwelling unit,' 'landlord,' 'rental agreement,' and 'tenant' have the meanings given in Arizona Revised Statutes

1103.8.1.3 Records and maintenance. The landlord or owner of any rental property shall inspect all smoke detection devices as required under NFPA 72 annually and a record of all inspections and maintenance activities shall be kept by the landlord or owner and available for inspection upon request by fire code official. See fire department Interpretation and Applications Manual.

CHAPTER 23 MOTOR FUEL-DISPENSING FACILITIES AND REPAIR GARAGES

SECTION 2301 GENERAL

2301.4 Indoor motor fuel-dispensing facilities. Motor fuel-dispensing facilities located inside buildings are prohibited.

2301.7 Fire Protection. Fire sprinkler protection shall be designed in accordance with the building code as required for minimum Ordinary Group Hazard 2.

SECTION 2304 DISPENSING OPERATIONS

2304.3 Unattended self-service motor fuel-dispensing facilities. Unattended self-service motor fuel-dispensing facilities are prohibited.

Exception: Unattended self-serve stations may be allowed by special permit by the fire code official for private commercial use only. Written request and documentation shall be submitted showing compliance with two (2) way communications and cameras that are monitored off site at a 24 hour location and shall comply with sections 2304.3.1 through 2304.3.7 and all other applicable codes and ordinances.

**SECTION 2306
FLAMMABLE AND COMBUSTIBLE LIQUID MOTOR FUEL-DISPENSING
FACILITIES**

2306.2.2 Above-ground tanks located inside buildings. Above-ground tanks, located inside buildings and used for the storage of Class I, II and IIIA liquid fuels, are prohibited.

2306.2.3 Above-ground tanks located outside, above grade. Above-ground tanks, located outside of buildings and used for the storage of Class I, II or IIIA liquid motor fuels, are prohibited.

Exception: installation of 2000 gallons (7,570.8L) or less aggregate quantity may be approved by special permit by fire code official.

**CHAPTER 31
TENT AND OTHER MEMBRANE STRUCTURES**

3103.8.2 Location. Tents or membrane structures shall not be located within 20 feet (6096 mm) of lot lines, buildings, other tents or membrane structures, parked vehicles or internal combustion engines. For the purpose of determining required distances, support ropes and guy wires shall be considered as part of the temporary membrane structure or tent.

Exception:

2. Membrane structures, tents need not be separated from buildings protected throughout with an automatic sprinkler system when all of the following conditions are met:

2.1 The aggregate floor area of the membrane structure, tent shall not exceed 10,000 square feet (929m²).

2.2 The aggregate floor area of the building and membrane structure, tent shall not exceed the allowable floor area including increases as indicated in the *International Building Code*.

2.3 Required means of egress provisions are provided for the building and the membrane structure, tent, including travel distance.

2.4 Fire apparatus access roads are provided in accordance with Section 503.

**CHAPTER 33
FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION**

**SECTION 3308
OWNER'S RESPONSIBILITY FOR FIRE PROTECTION**

3308.1 Program superintendent. The owner shall designate a person to be, or the site superintendent shall be, the Fire Prevention Program Superintendent who shall be responsible for the fire prevention program and ensure that it is carried out through completion of the project. The fire prevention program superintendent shall have the authority to enforce the provisions of this chapter and other provisions as necessary to secure the intent of this chapter. Where guard service is provided, the superintendent shall be responsible for the guard service.

**SECTION 3310
ACCESS FOR FIRE FIGHTING**

3310.1 Required access. Approved vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet (30 480 mm) of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available. All open trenches shall have steel plates capable of maintaining the integrity of the access road design when these trenches cross an access road. These access roads may be temporary or permanent. This policy applies only during construction and/or demolition. Permanent access per the fire code shall be in place prior to any final inspection or certificate of occupancy.

**CHAPTER 57
FLAMMABLE AND COMBUSTIBLE LIQUIDS**

5704.2.9.5.1 Locations where above-ground tanks are prohibited. Storage of Class I and II liquids in above-ground tanks outside of buildings is prohibited.

Exception: Installations of 2000 gallons (7,570.8L) or less aggregate quantity may be approved by special permit by fire code official.

5704.2.13.1.4 Tanks abandoned in place. Tanks abandoned in place shall be prohibited within the entire city.

5706.2.4.4 Locations where above-ground tanks are prohibited. The storage of Class I and II liquids in above ground tanks is prohibited.

Exception: Installations of 2000 gallons (7,570.8L) or less aggregate quantity may be approved by special permit by fire code official.

5706.2.5.2 Tanks for gravity discharge. Tanks with a connection in the bottom or the end for gravity-dispensing of flammable or combustible liquids shall be prohibited.

CHAPTER 61 LIQUEFIED PETROLEUM GASES

6101.2 Permits. Permits shall be required as set forth in Sections 105.6 and 105.7. A permit is required for all containers over 10 gallons (37.85L) water capacity.

Distributors shall not fill an LP-gas container for which a permit is required unless a permit for installation has been issued for that location by the fire code official.

6104, table 6104.3

- e. The following shall apply to above-ground containers installed alongside buildings:
1. Containers of less than a 125-gallon water capacity are allowed next to the building they serve when in compliance with Items 2, 3 and 4.
 2. Department of Transportation (DOT) specification containers shall be located and installed so that the discharge from the container pressure relief device is at least 3 feet horizontally from building openings below the level of such discharge and shall not be beneath buildings unless the space is well ventilated to the outside and is not enclosed for more than 50 percent of its perimeter. The discharge from container pressure relief devices shall be located not less than 5 feet from exterior sources of ignition, openings into direct-vent (sealed combustion system) appliances or mechanical ventilation air intakes.
 3. ASME containers of less than a 125-gallon water capacity shall be located and installed such that the discharge from pressure relief devices shall not terminate in or beneath buildings and shall be located at least 5 feet horizontally from building openings below the level of such discharge and not less than 5 feet from exterior sources of ignition, openings into direct vent (sealed combustion system) appliances, or mechanical ventilation air intakes.
 4. The filling connection and the vent from liquid-level gauges on either DOT or ASME containers filled at the point of installation shall not be less than 10 feet from exterior sources of ignition, openings into direct vent (sealed combustion system) appliances or mechanical ventilation air intakes.
 5. A container less than 125 gallons (473.2l) may be located next to a block fence when the tank is not within 5 feet (1524mm) of a structure on adjoining property.

CHAPTER 45 REFERENCE STANDARDS

NFPA: National Fire Protection Association
Batterymarch Park
Quincy, MA 02269

1. **NFPA, National Fire Codes, the most recent editions in publication at time of ordinance approval.**

Section K101 **General**

K101.1 Scope. The unrestricted use of grass-, grain-, brush- or forest-covered land in hazardous fire areas is a potential menace to life and property from fire and resulting erosion. Safeguards to prevent the occurrence of fire and provide adequate fire-protection facilities to control the spread of fire which might be caused by recreational, residential, commercial, industrial, or other activities conducted in hazardous fire areas shall be in accordance with Appendix K.

Section K102 **Definitions**

K102.1 Definitions. For the purpose of Appendix K, certain terms are defined as follows:

Tracer is any bullet or projectile incorporating a feature which marks or traces the flight of said bullet or projectile by flame, smoke or other means which result in fire or heat.

Tracer charge is any bullet or projectile incorporating a feature designed to create a visible or audible effect which result in fire or heat and shall include any incendiary bullets or projectiles.

Section K103 **Permits**

K103.1 Permits. Fire code official is authorized to stipulate conditions for permits. Permits shall not be issued when public safety would be at risk, as determined by fire code official.

Section K104 **Restricted Entry**

K104.1 Restricted entry. Fire code official shall determine and publicly announce when hazardous fire areas shall be closed to entry and when such areas shall again be opened to entry. Entry on and occupation of hazardous fire areas, except public

roadways, inhabited areas or established trails and camps sites which have not been closed during such time when the hazardous fire is closed to entry, is prohibited.

Exception:

1. Residents and owners of private property within hazardous fire areas and their invitees and guests going to or being upon their land.
2. Entry, in the course of duty, by peace or police officer, and other duly authorized public officers, members of a fire department and members of the United States forest service.

**Section K105
Trespassing on Posted Property.**

K105.1 General. When fire code official determines that a specific area within a hazardous fire area presents an exceptional and continuing fire danger because of the density of natural growth, difficulty of terrain, proximity to structures or accessibility to public, such areas shall be closed until changed conditions warrant termination of closure. Such areas shall be posted as hereafter provided.

K105.2 Signs. Approved signs prohibiting entry by unauthorized persons and referring to Appendix H shall be placed on every closed area.

K105.3 Trespassing. Entering and remaining within areas closed and posted is prohibited.

Exception: Owners and occupiers of private or public property within closed and posted areas, their quest or invitees, and local state and federal public officers and their authorized agents acting in the course of duty.

**Section K106
Smoking**

K106.1 General. Lighting, igniting or otherwise setting fire to or smoking tobacco, cigarettes, pipes or cigars in hazardous fire areas is prohibited.

Exception: Places of habitation or within the boundaries of established smoking areas or campsites as designated by fire code official.

**Section K107
Spark Arresters**

K107.1 Spark arresters. Chimneys used in conjunction with fireplaces, barbecues, incinerators or heating appliances in which solid or liquid fuel is used, upon buildings, structures or premises located within 200 feet (60 960 mm) of hazardous fire areas, shall be provided with a spark arrester constructed with heavy wire mesh or other noncombustible material with openings not to exceed ½ inch (12.7mm).

Section K108
Tracer Bullets, Tracer Charges,
Discharge of Firearms, Rockets and Model aircraft.

K108.1 General. Tracer bullets and tracer charges shall not be possessed, fired or caused to be fired into or across hazardous fire areas.

Firearms, rockets, model planes, gliders and balloons powered with an engine, propellant or other features liable to start or cause fire shall not be fired or projected into or across hazardous fire areas.

Section K109
Explosives and Blasting

K109.1 Explosives and blasting Explosives shall not be possessed, kept, stored, sold, offered for sale, given away, used, discharged, transported or disposed of within hazardous fire areas except by permit from fire code official.

Section K110
Fireworks

K110.1 Fireworks. Fireworks shall not be used or possessed in hazardous fire areas. Fire code official is authorized to seize, take, remove or cause to be removed fireworks in violation of section 10.

Section K111
Apiaries

K111.1 Apiaries. Lighted and smoldering material shall not be used in connection with smoking bees in or upon hazardous fire areas except by permit from fire code official.

Section K112
Open-Flame Devices

K112.1 Open-flame devices. Welding torches, tar pots, decorative torches, sky lanterns and other devices, machines or processes liable to start or cause fire shall not be operated or used in or upon hazardous fire areas, except by permit from fire code official.

Exception: Use within habited premises or designated campsites which are a minimum of 30 feet (9144 mm) from grass, grain, brush, or forest-covered areas.

Flame-employing devices, such as lanterns or kerosene road flares, shall not be operated or used as a signal or marker in or upon hazardous fire areas

Exception: The proper use of fuses at the scene of emergencies or as required by standard operating procedures.

Section K113 Outdoor Fires

K113.1 Outdoor fires. Outdoor fires shall not be built, ignited or maintained in or upon hazardous fire areas, except by permit from fire code official.

Exception: Outdoor fires within habited premises or designated campsites where such fires are built in a permanent barbecue, portable barbecue, outdoor fireplace, incinerator or grill and are a minimum of 30 feet (9144 mm) from a grass, grain, brush, or forest-covered area.

Permits shall incorporate such terms and conditions which will reasonably safeguard public safety and property. Outdoor fires shall not be built, ignited or maintained in or upon hazardous fire areas under the following conditions:

1. When high winds are blowing,
2. When a person age 17 or over is not present at all times to watch and tend fire, or:
3. When public announcement is made that open burning is prohibited.
4. Permanent barbecue, portable barbecues, outdoor fireplaces or grills shall not be used for the disposal of rubbish, trash or combustible waste material.

Section K114 Incinerators and Fireplaces

K114.1 General: Incinerators, outdoor fireplaces, permanent barbecues and grills shall not be built, installed or maintained in hazardous fire areas without prior approval of fire code official.

Incinerators, outdoor fireplaces, permanent barbecues and grills shall be maintained in good repair and in a safe condition at all times. Openings in such appliances shall be provided with an approved spark arrester, screen or door.

Exception: When approved, unprotected openings in barbecues and grills are necessary for proper function.

Section K115

Clearance of Brush and Vegetative Growth from Electrical Transmission Lines

K115.1 General. Clearance of brush and vegetative growth from electrical transmission lines shall be in accordance with Section 115.

Exception: Section 115 does not authorize persons not having legal right of entry to enter upon or damage the property of others without consent of the owner.

K115.2 Support clearance. Persons owning, controlling, operating or maintaining electrical transmission lines upon hazardous fire areas shall, at all times, maintain around and adjacent to poles supporting a switch, fuse, transformer, lightning arrester, line junction, dead end, corner pole, towers, or other poles or towers at which power company employees are likely to work most frequently an effective firebreak consisting of a clearing or not less than 10 feet (3048 mm) in each direction from the outer circumference of such pole or tower.

Exception: Lines used exclusively as telephone, telegraph, messenger call, alarm transmission or other lines classed as communication circuits by a public utility.

K115.3 High tension line clearance. Persons owning, controlling, operating or maintaining electrical transmission lines upon hazardous fire areas shall maintain the clearance specified in Section 115.3 in all directions between vegetation and conductors carrying electrical current:

1. For lines operating at 2,400 volts and less than 68,000 volts, 4 feet (1219 mm).
2. For lines operating at 68,000 volts and less than 110,000 volts, 6 feet (1829 mm).
3. For lines operating at 110,000 volts and over, 10 feet (3048 mm).

Such distance shall be sufficiently great to furnish the required clearance from the particular wire or conductor to positions of such wire or conductor at temperatures of 120 F (48.9 C) or less. Forked, dead, old, decadent and rotten trees; trees weakened by decay or disease; and trees leaning toward the line, which could contact the line from the side or fall on the line, shall be felled, cut or trimmed to remove the hazard.

K115.4 Self-supporting aerial cable. Line clearance is not required for self-supporting aerial cable, except that forked trees, leaning trees and other growth which could fall across the cable and break it shall be removed.

Section K116

Clearance of Brush or Vegetation growth from Structures

K116.1 General. Persons owning, leasing, controlling, operating or maintaining buildings or structures in, upon or adjoining hazardous fire areas, and persons owning, leasing or controlling land adjacent to such buildings or structures, shall at all times:

1. Maintain an effective firebreak by removing and clearing away flammable vegetation and combustible growth from areas within 30 feet (9144 mm) of such buildings or structures;

Exception: Single specimens of trees, ornamental shrubbery or similar plants used as ground covers, provided that they do not form a means of rapidly transmitting fire from the native growth to any structure.

2. Maintain additional fire protection or firebreak by removing brush, flammable vegetation and combustible growth located from areas within 30 feet to 100 feet (9144 mm to 30 480 mm) from such buildings or structures, when required by fire code official because of extra-hazardous conditions causing a firebreak of only 30 feet (9144 mm) to be insufficient to provide reasonable fire safety;

Exception: Grass and other vegetation located more than 30 feet (9144 mm) from buildings or structures and less than 18 inches (457 mm) in height above the ground need not be removed where necessary to stabilize the soil and prevent erosion.

3. Remove portions of trees which extend within 10 feet (3048 mm) of the outlet of a chimney;

4. Maintain trees adjacent to or overhanging a building free of deadwood; and;

5. Maintain the roof of a structure free of leaves, needles or other dead vegetative growth.

K116.2 Corrective actions. The executive body is authorized to instruct fire code official to give notice to the owner of the property upon which conditions regulated by Section 16.1 exist to correct such conditions. If the owner fails to correct conditions, the executive body is authorized to cause the same to be done and make the expense of such correction a lien upon the property where such condition exists.

Section K117

Clearance of Brush or Vegetation Growth from Roadways

K117.1 Clearance of brush or vegetation. Fire code official is authorized to cause areas within 10 feet (3048 mm) on each side of portions of highways and private streets which are improved, designed or ordinarily used for vehicular traffic to be cleared of flammable vegetation and other combustible growth. Fire code official is authorized to enter upon private property to do so.

Exception: Single specimens of trees, ornamental shrubbery or cultivated ground such as green grass, ivy, succulents or similar plants used as ground cover, provided that they do not form a means of readily transmitting fire.

Section K118 Unusual Circumstances

K118.1 Unusual circumstances. If fire code official determines that difficult terrain, danger of erosion or other unusual circumstances make strict compliance with the clearance of vegetation provisions of Sections 115, 116, or 117 of Appendix K undesirable or impractical, enforcement thereof may suspended and reasonable alternative measures shall be provided.

Section K119 Dumping

K119.1 Dumping Garbage, cans, bottles, papers, ashes, refuse, trash, or rubbish or combustible waste material shall not be placed, deposited or dumped in or upon hazardous fire areas, in or upon or along trails, and roadways or highways in hazardous fire areas.

Exception: Approved public and private dumping areas

Section K120 Disposal of Ashes

K120.1 Disposal of ashes. Ashes and coals shall not be place, deposited or dumped in or upon hazardous fire areas.

Exceptions:

1. In the hearth of an established fire pit, camp stove or fireplace.
2. In a noncombustible container with a tight fitting lid, which is kept or maintained in a safe location not less than 10 feet (3048 mm) from combustible vegetation or structures.
3. Where such ashes or coals are buried and covered with 1 foot (304.8 mm) of mineral earth not less than 25 feet (7620 mm) from combustible vegetation or structures.

Section K121 Use of Fire Roads and Firebreaks

K121.1 Use of fire roads and firebreaks. Motorcycles, motor scooters and motor vehicles shall not be driven or parked upon, and trespassing is prohibited upon, fire roads or firebreaks beyond the point where travel is resisted buy a cable, gate or sign,

without the permission of the property owners. Vehicles shall not be parked in a manner which obstructs the entrance to a fire road or firebreak.

Exception: Public officers acting within their scope of duty.

Radio and television aerials, guy wires thereto, and other obstructions shall not be installed or maintained on fire roads or firebreaks unless located 16 feet (5877 mm) or more above such fire road or firebreak.

Section K122 Use of Motorcycles, Motor scooters and Motor Vehicles

K122.1 Use of motor vehicles. Motorcycles, motor scooters and motor vehicles shall not be operated within hazardous fire areas, without a permit by fire code official, except upon clearly established public or private roads. Permission from the property owner shall be presented when requesting a permit.

Section K123 Tampering with Fire Department Locks, Barricades and Signs

K123.1 Tampering with fire department locks, barricades and signs. Locks, barricades, seals, cables, signs and markers installed within hazardous fire areas, by or under the control of fire code official, shall not be tampered with, mutilated, destroyed or removed.

Gates, doors, barriers and locks installed by or under the control of fire code official shall not be unlocked.

Section K124 Liability for Damage

K124.1 Liability for damage. The expenses of fighting fires which result from a violation of Appendix K shall be a charge against the person whose violation of Appendix K caused the fire. Damages caused by such fires shall constitute a debt of such person and are collectable by fire code official in the same manner as in the case of an obligation under a contract, expressed or implied.

APPENDIX L101 EXCAVATION AND CONFINEMENT

SECTION L101 GENERAL

L101.1 Scope. The provisions of the appendix shall apply to any man-made cut, cavity, trench or depression in an earth surface formed by earth removal, and identify procedures to protect employees from the hazards of entry into confined spaces.

SECTION L102

Definitions

L102.1 Definitions. The following words and term shall, for the purpose of this appendix and as used elsewhere in this code, have the meaning shown herein.

CONFINED SPACE. Is a space that:

1. Is large enough and so configured that an employee can bodily enter and perform assigned work; and
2. Has limited or restricted means for entry or exit;
3. Is not designed for continuous employee occupancy.

EXCAVATION. Any man-made cut, cavity, trench or depression in an earth surface, formed by earth removal.

TRENCH. A narrow excavation made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet. If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the form or structures to the side of the excavation to 15 feet or less, the excavation is a trench.

SECTION L103

Excavation and trenches

L103.1 Excavation and trenches. Excavation and trenches shall be in accordance with the 29CFR, Parts 1926.650-652, Subpart P.

SECTION L104

Confined spaces

L104.1 Confined spaces. Confined spaces shall be in accordance with 29CFR, Part 1910.146. Other recognized standards that must be adhered to include 40CFR, Parts 280 and 281.

SECTION L105

Unsafe conditions

L105 Unsafe conditions. When in the opinion of the fire code official or his/her designee, an unsafe condition exists, excavation and confined space operations shall cease until such time as adequate means have been taken to provide for the safety of persons working in or around the excavation or confined space. Failure to do so may result in citations and fines.

NEW CONSTRUCTION DESIGN CRITERIA IN FULLY SPRINKLERED DEVELOPMENTS

Sec. 36-36. Street width.

The following apply to non-hillside R-3 and IRC developments: (see definitions section 36-16)

- (1) The minimum street width shall be twenty-eight (28) feet (8534mm) from back of curb to back of curb or larger.
- (2) Cul-de-sacs shall not be longer than two thousand (2,000) feet (609,600mm).
- (3) The maximum distance shall not exceed six hundred (600) feet (182,880mm) to any hydrant from the end of a cul-de-sac.
- (4) See City of Scottsdale design standards and policies for design and construction details.

Sec. 36-37. Cul-de-sacs main size in R-3 and IRC developments.

Main size in cul-de-sacs of one thousand two hundred (1,200) feet (365,760mm) or less in length may be reduced from eight (8) inches (203.2mm) to six (6) inches (152.4mm), based on minimum pressure and flow necessary to provide proper functioning of domestic and fire protection appliances. Further reductions may be permitted with written approval of the fire code official.

Sec. 36-38. Use of non-potable water for fire protection.

- (a) All commercial structures for which a building permit is issued after June 30, 1985, adjacent to golf courses using non-potable or reclaimed water for irrigation with sufficient storage capacity on site, may be sprinklered using this supply.
- (b) Irrigation systems shall be designed to meet the fire department's standards of gallons per minute flow and pressure necessary to supply adequate fire flow.
- (c) Standby power supply for pumping station supplying fire flow shall be provided.
- (d) Fire hydrants on domestic supply shall be placed in close proximity to the fire department connection for structural sprinkler systems to provide a secondary water supply.
- (e) Fire hydrants placed on approved non-potable, reclaimed water supply systems, shall have caps and bonnet painted with a prime coat plus two (2) coats of purple paint. A placard shall be affixed to the hydrant in English and Spanish, "DO NOT DRINK WATER". Non-potable water supplies shall use approved material for construction of all mains and supply lines and shall have the written approval of the fire code official.
- (f) All water inlets for non-potable systems shall be required to have sufficient straining and filtering capacity to eliminate all foreign objects from blocking sprinkler orifice. Chlorination of inlet lines shall be required.

Sec. 36-39 One Hour Construction.

One hour construction has been deleted for all Group R occupancies per IBC and Scottsdale amended building code ordinance with exceptions (see IBC for exceptions).

Sec. 36-40 Hydrant Spacing

1. Commercial, multifamily (R-1 and R-2) and multiple single-family (R3 and IRC) development hydrant spacing will be a maximum of 700 feet (213,360mm) on center.
2. Non-hillside. One and two family dwellings (R-3 and IRC) development hydrant spacing will be a maximum of 1,200 feet (365,760mm) on center.
3. Hillside. One and two family dwellings (R3 and IRC) development hydrant spacing will be a maximum of 600 feet (182,880mm) on center.
4. Hillside cul-de-sacs. The maximum distance shall not exceed three hundred (300) feet (91,940mm) to any hydrant from the end of a cul-de-sac.

Sec. 36-41 Fire Flows

Minimum fire flows shall be as follows:

1. Commercial, multifamily (R-1 and R-2) and multiple single-family dwellings (IRC) --- 1,500 gpm/ minimum (5678.1 l/min)
2. One and two family dwellings (R-3 and IRC) --- 500 gpm /minimum(1,892.7 l/min)
3. Fire code official may increase minimum flows based on review of hazard.

Sec. 36-42 Fire Department Access

1. Two (2) means of access to single family residential (R-3 and IRC) developments are not required.

Exception: The fire code official is authorized to require more than one fire apparatus access road based on the potential for impairment of a single road by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

2. 360 degree access from fire lane to ground floor walls may not be required in commercial and multifamily (R-1 and R-2) structures (except as may be required for a specific occupancy by other sections of the code).
3. See City of Scottsdale design standards and policies manual (DS&PM) for design and construction details.

Sec. 36-43. Fire extinguisher placement

1. In commercial occupancies without quick response sprinklers, fire extinguishers shall be installed at a maximum of 75 feet (22,860 mm), in accordance with I.F.C. standards.
2. In single-family (R-3 and IRC) and sprinklered multifamily (R-2) occupancies fire extinguishers are not required.
3. Fire extinguishers are not required in sprinklered, open parking garages.