#9

JUN 23 2011

Chandler • Arizona
Where Values Make The Difference

MEMORANDUM

DATE: JUNE 23, 2011

TO: MAYOR AND COUNCIL

THRU: RICH DLUGAS, CITY MANAGER
JEFF CLARK, FIRE CHIEF

FROM: MARC WALKER, FIRE MARSHAL

SUBJECT: ADOPTION OF 2009 INTERNATIONAL FIRE CODE

RECOMMEDATION: Staff recommends approval of Ordinance No. 4308 amending Chapter 28 of the Code of the City of Chandler to adopt the 2009 International Fire Code, as amended.

BACKGROUND: The City of Chandler previously adopted the 2006 International Fire Code, as amended, pursuant to Chapter 28 of the Code of the City of Chandler. The Fire Department is accredited through the Commission on Fire Accreditation International. A key for maintaining accreditation is to remain current with a nationally recognized Fire Code.

DISCUSSION: The International Fire and Building Codes have become the standard for design and construction. The Transportation and Development Department has already requested adoption of the 2009 International Building Code through another ordinance. The International Codes are a set of comprehensive, coordinated national model codes for fire safety and construction. The amendments to the 2009 International Fire Code set forth in Ordinance No. 4308 are consistent with those amendments to the 2006 International Fire Code previously adopted by Council in Ordinance 4074 and 4135. Ordinance No. 4308 restates those amendments previously adopted with minor modifications to clarify and re-align the amended sections with the 2009 International Fire Code. A specific change in the recommended ordinance details requirements for radio communications coverage inside commercial buildings for public safety radio systems. Both the Fire and Police Departments have moved to the 800 MHz Regional Wireless Cooperative radio system necessitating the review and recommended updates to this section of the International Fire Code 2009.

FINANCIAL IMPLICATIONS TO THE CITY: None

PROPOSED MOTION: Move to introduce and tentatively adopt Ordinance No. 4308 amending Chapter 28 of the Code of the City of Chandler to adopt the 2009 International Fire Code, as amended.

ORDINANCE NO. 4308

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CHANDLER, ARIZONA, AMENDING CHAPTER 28 OF THE CODE OF THE CITY OF CHANDLER BY ADOPTING THE 2009 EDITION OF THE INTERNATIONAL FIRE CODE AS AMENDED.

WHEREAS, Chapter 28 of the Code of the City of Chandler provides that the City of Chandler, Arizona has adopted the 2006 edition of the International Fire Code, subject to specified amendments thereto as set forth in Chapter 28 of the Code of the City of Chandler, and

WHEREAS, the City of Chandler Fire Department recommends that the City of Chandler adopt the 2009 edition of the International Fire Code and to clarify and amend the exception provisions to the Fire Code that are presently set forth in Chapter 28 of the Code of the City of Chandler.

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Chandler, Arizona as follows:

SECTION 1: That certain code designated as the International Fire Code, 2009 Edition, published by the International Code Council, three (3) copies of which shall remain on file in the office of the City Clerk, is hereby adopted by reference with the additions, insertions, deletions and changes set forth herein and is hereby declared to be a public record.

SECTION 2: That Chapter 28 of the Code of the City of Chandler is hereby deleted in its entirety and replaced with a new Chapter 28 to read as follows:

Chapter 28. Fire Prevention.

28-1. International Fire Code adopted.

That certain code designated and known as the International Fire Code, 2009 edition published by the International Code Council, three (3) copies of which are on file in the Office of the City Clerk, is hereby adopted by reference and made a part hereof as if fully set out in this Chapter with the additions, insertions, deletions and changes set forth herein. The term "code" when used in this Chapter shall mean the 2009 edition of the International Fire Code with the additions, insertions, deletions and changes set forth and adopted herein, except where the context clearly requires otherwise.

28-2. Jurisdiction.

Section 101.1 of the code is hereby amended by inserting the term "City of Chandler" as the name of the jurisdiction and adding a sentence to the end of such Section to read as follows:

The terms "City" and "City of Chandler" are used interchangeably in this code.

28-3. Appointment of fire code official.

Section 103.2 of the code is hereby deleted in its entirety and replaced with a new Section 103.2 to read as follows:

> **103.2. Appointment.** The City Fire Chief shall designate and appoint the City Fire Marshal to act as the fire code official.

28-4. Notice and orders.

Section 104.5 of the code is hereby deleted in its entirety and replaced with a new Section 104.5 to read as follows:

> **104.5. Notice and orders.** The fire code official is authorized to issue such notices and orders as are required to effect compliance with this code in accordance with Section 109.5.

28-5. Permits required.

Section 105.1.1 of the code is hereby deleted in its entirety and replaced with a new Section 105.1.1 to read as follows:

> **105.1.1. Permits required.** Permits required by this code shall be obtained from the fire code official prior to engaging in any of the activities, operations, practices or functions requiring a permit. Permit fees, if any, shall be adopted by the City by resolution and shall be paid prior to issuance of the permit.

28-6. Information updates.

Section 105.3 of the code is hereby amended by adding a new Section 105.3.9 entitled "Information updates" to read as follows:

> **105.3.9. Information updates.** Permit holders shall update any information submitted with an application for a permit to be issued pursuant to this code within twenty-four (24) hours of any change materially impacting the accuracy of the information previously provided.

28-7. Hazardous materials.

Section 105.6.20 of the code is hereby amended by adding the following sentence to the end of such section to read as follows:

> The Hazardous Materials Management Plan (HMMP) and Hazardous Materials Inventory Statement (HMIS) to be submitted in conjunction with the operating permit shall be updated and submitted to the fire code official for approval annually.

28-8. Open burning.

Section 105.6.30 of the code is hereby deleted in its entirety and replaced with a new Section 105.6.30 to read as follows:

> **105.6.30. Open burning.** An operational permit is required for the handling and maintenance of an open fire or a fire on any public street, alley, road or other public or private ground. Instructions and stipulations of the permit shall be adhered to. An applicant for any open burning permit under this section shall establish compliance with the permitting requirements of the Maricopa County Department of Air Pollution Control prior to being issued an open burning permit by the fire code official.
>
> Exception: Recreational fires.

28-9. Places of assembly.

Section 105.6.34 of the code is hereby deleted in its entirety and replaced with a new Section 105.6.34 to read as follows:

> **105.6.34. Places of assembly.** An operational permit is required to operate a place of assembly classified as an Assembly Group A Occupancy.

28-10. Incinerators.

Section 105.6 of the code is hereby further amended by adding a new section 105.6.47 entitled "Incinerators" to read as follows:

> **105.6.47. Incinerators.** An operational permit is required to construct, operate or maintain an incinerator. Instructions and stipulations of the permit shall be adhered to. An applicant for any incinerator permit under this section shall establish compliance with the permitting requirements of the Maricopa County Department of Air Pollution Control prior to being issued an incinerator permit by the fire code official.

28-11. Fire protection equipment.

Section 105.6 of the code is hereby further amended by adding a new section 105.6.48 entitled "Fire protection equipment" to read as follows:

> **105.6.48. Fire protection equipment.** In addition to obtaining a City of Chandler privilege tax license, and an Arizona State Contractor's License, an operational permit is required for any person, corporation, partnership or other entity engaged in the primary business of selling, servicing or installing portable fire extinguishers, fire alarms and fire detection equipment or fixed fire-extinguishing equipment within the City of Chandler. Permittees shall provide and maintain a certificate of insurance showing proof of coverage in the amount of one million dollars ($1,000,000.00) in Commercial General

Liability insurance to include products and completed operations coverage to compensate its customers for any injury or financial loss as a result of negligence of the permittee, its employees or agents. Each certificate of insurance shall be issued by an insurance company or broker licensed to issue same in the State of Arizona and carry a provision for automatic notification to the fire code official thirty (30) days prior to termination or cancellation in coverage.

Further, permittees shall, to the fullest extent permitted by law, indemnify, defend, and save harmless the City of Chandler, its Mayor and Council, appointed boards and commissions, officials, officers, employees, individually and collectively, from all losses, claims, suits, actions, payments and judgments, demands, expenses, attorney's fees, defense costs or actions of any kind and nature resulting from personal injury to any person, including employees of the permittee or of any subcontractor employed by the permittee (including bodily injury an death) or damages to any property, arising or alleged to have arisen, out of the negligent performance of the permittee for the work done in connection with the permit, or on account of any act or omission by the permittee or his/her agents, or from any claims or amounts arising or recovered under Workers' Compensation laws or any other law, bylaw, ordinance, or order or decree, except any such injury or damages arising out of the sole negligence of the City, its officers, agents or employees. It is the intention of the parties that the City of Chandler, its Mayor and Council, appointed boards and commissions, officials, officers, employees, individually and collectively, are to be indemnified against their own negligence unless and except where their negligence is found to be the sole cause of the injury to persons or damages to property. The amount and type of insurance coverage requirements required of permittees in this Section will in no way be construed as limiting the scope of indemnity set forth herein. The City, by virtue of these permit provisions, does not warrant the equipment, business practices or status of insurance for any such entity and any person doing business with a fire protection equipment business should take their own precautions in dealing with such business.

28-12. Healthcare facilities.

Section 105.6 of the code is hereby further amended by adding a new Section 105.6.49 entitled "Healthcare facilities" to read as follows:

105.6.49. Healthcare facilities. An operational permit is required for the operation of a healthcare facility. A healthcare facility is a residential or institutional facility used in whole or in part for providing childcare, adult care or assisted living services for non-family members.

28-13. Self inspection.

Section 106 of the code is hereby amended by adding a new Section 106.5 entitled "Self inspection" to read as follows:

106.5. Self inspection. The fire code official is hereby authorized to establish procedures

regarding inspections of business, commercial and industrial facilities within the City. Any owner or occupant of a business, commercial or industrial facility who fails to perform a self inspection as requested by the fire code official in accordance with the procedures established may be charged the cost for the fire code official, or his/her designee, to perform such inspection.

28-14. Enforcement.

Sections 108 and 111 of the code are hereby deleted in their entirety, Section numbers 108 and 111 are hereby reserved, and Section 109 of the code is hereby deleted in its entirety and replaced with a new Section 109 entitled "Enforcement" to read as follows:

109. Enforcement.

109.1. Unauthorized tampering. Signs, tags or seals posted or affixed by the fire code official shall not be mutilated, destroyed or tampered with or removed without written authorization from the fire code official.

109.2. Unlawful acts. It shall be unlawful for a person, firm or corporation to violate any provisions of this code, or any order or decision rendered pursuant to this code, including, without limitation, erecting, constructing, altering, repairing, removing, demolishing or utilizing a building, occupancy, premises or system regulated by this code, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

109.3. Enforcement. Unlawful acts constitute a violation of the Code of the City of Chandler and shall be subject to enforcement pursuant to Section 1-8.7 and Chapter 26, Code of the City of Chandler.

109.4. Cease and Desist Order. Whenever the fire code official finds any work or activity regulated by this code being performed in a manner contrary to the provisions of this code or in a dangerous or unsafe manner, the fire code official is authorized to issue a cease and desist order. Absent an emergency, a cease and desist order shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work or activity. Upon issuance of a cease and desist order, the cited work or activity shall immediately cease. The cease and desist order shall state the reason for the order and the conditions under which the cited work or activity is authorized to resume. Where an emergency exists, the fire code official shall not be required to give a written notice prior to causing the work or activity to cease.

109.5. Notice of Violation. Upon finding a building, premises, vehicle, storage facility or outdoor area that is in violation of this code, the fire code official may, at his or her sole discretion, prepare a written notice of violation describing the violations prior to initiating the formal enforcement mechanisms for violations of this code set forth in Section 109.3 and, when compliance is not immediate,

specifying a time for such compliance and re-inspection. A notice of violation issued pursuant to this Section shall be served upon the owner, operator, occupant or other person responsible for the condition or violation, either by personal service, mail, or by delivering the same to, and leaving it with, some person of responsibility upon the premises. For unattended or abandoned locations, a copy of such notice of violation shall be posted on the premises in a conspicuous place at or near the entrance to such premises and the notice of violation shall be mailed with return receipt requested or a certificate of mailing, to the last known address of the owner, occupant or both. A notice of violation issued or served as provided by this Section shall be complied with by the owner, operator, occupant or other person responsible for the condition or violation to which the notice of violation pertains.

109.6. Abatement. Nothing in this Section 109 shall be deemed to preclude the City from seeking an abatement order pursuant to either Section 110 of this code or Section 26-10, Code of the City of Chandler. To the extent that the terms of any such abatement order are not complied with, the City may seek recovery of its expenses in abating the nuisance cited, including, without limitation, those expenses associated with orders issued pursuant to Section 304 of this code, pursuant to the procedures set forth in Section 26-11, Code of the City of Chandler.

28-15. Fire re-inspection fee and council action.

Section 113 of the code is hereby amended by adding a new Section 113.6 entitled "Fire re-inspection fee" and a new Section 113.7 entitled "Council action" to read as follows:

113.6. Fire re-inspection fee. Facilities that are re-inspected to ensure that a code violation has been properly addressed may be assessed a re-inspection fee for a second re-inspection for the same violation.

113.7. Council action. All fees identified in this code shall be adopted by the City Council by resolution.

28-16. Expense recovery.

Section 304.1.2 of the code is hereby amended by adding a new Sections 304.1.2.1 entitled "Expense recovery" to read as follows:

304.1.2.1. Expense recovery. Any owner, operator, occupant or other person responsible for property, who fails to correct a violation of Section 304 within fifteen (15) days of the fire code official issuing an order or notice which is served pursuant to the provisions of Section 109.5, shall be charged for any costs incurred by the City of Chandler in responding to any fire at the subject property while the violation continues to exist. The provisions of this Section are for the purpose of reimbursing the City of Chandler's costs and shall be in addition to any penalties that may apply. The fire code

official shall keep or cause to be kept an itemized account of the expenses involved in responding to each fire, including personnel, equipment and administrative costs, as well as the costs incurred by other fire departments responding to calls within the City of Chandler, due to City of Chandler fire crews being unavailable for service as a result of said fire. The collection and appeal provisions set forth in Section 26-11, Code of the City of Chandler, shall apply to this Section.

28-17. Premises identification.

Section 505.1 of the code is hereby deleted in its entirety and replaced with a new Section 505.1 to read as follows:

505.1. Address numbers. Approved numbers or addresses shall be placed on all new or existing buildings within the City in accordance with criteria specified in the latest version of the Street Naming and Addressing Procedures adopted by the City of Chandler, three (3) copies of which are on file in the Office of the City Clerk. Properties annexed into the City shall display only a city-assigned premises identification number. Said number shall be permanently affixed to all premises within thirty (30) days of notification of the City of the new address. No building address shall be changed except in the manner prescribed in the City of Chandler Street Naming and Addressing Procedures.

28-18. Emergency radio communication.

Section 510 of the code is hereby deleted in its entirety and replaced with a new Section 510 entitled "Emergency radio communications" to read as follows:

510. Emergency radio communications.

510.1. General. Reliable emergency radio communications are critical for emergency response operations. Lack of radio communications within a structure presents dangerous conditions for both emergency response personnel and the occupants of the structure.

510.2. Applicability. Except as set forth in Section 510.3, the requirements of this Section 510 shall apply to all buildings and structures located in the City that satisfy any of the following characteristics:

1. Buildings or structures that are more than three (3) stories above ground level;

2. Buildings or structures totaling forty-five thousand (45,000) square feet or more on any single floor;

3. Buildings or structures that include a basement or other subterranean space totaling two hundred fifty (250) square feet or more; or

4. Buildings or structures that the fire code official has determined to have been constructed in a manner or with materials likely to limit the ability of emergency response personnel to effectively use radio communication while within that building or structure.

510.3. Exception. The requirements set forth in this Section 510 shall not apply to the following:

1. U occupancies and R3 occupancies that are single family detached residences;

2. Buildings and structures utilizing only wood framing; and

3. Buildings and structures that are less than thirty-five (35) feet above ground level and do not utilize any metal framing or metal roofing.

510.4. Adequate radio coverage.

510.4.1. Minimum requirements. Except as set forth in Section 510.4.2, all buildings or structures subject to the provisions of Section 510 shall meet all of the following minimum radio coverage requirements utilizing the 800 MHz and 700 MHz City public safety radio systems:

1. Radio coverage measuring a Delivered Audio Quality (DAQ) level of "3" or better must be achieved over ninety percent (90%) of the general floor area of the building or structure. A DAQ3 level means that speech is understandable with slight effort; requiring only occasional repetition due to background noise or voice distortion.

2. Radio coverage measuring a DAQ3 level or better must be achieved over ninety-nine percent (99%) of all "critical areas" of the building or structure. Critical areas include fire control rooms, fire pump rooms, exit stairs, exit passageways, areas that house fire sprinkler control valves and similar areas as determined by the fire code official.

3. A minimum signal strength of negative ninety-five (-95) decibels per milliwatt (dBm) shall be received over ninety percent (90%) of the general floor area of the building or structure, and over ninety-nine percent (99%) of all critical areas of the building or structure, when transmitted by the City's public safety radio systems.

510.4.2. Modified standard. For buildings or structures covered by this Section 510 solely because they include a basement or other subterranean space totaling two hundred fifty (250) square feet or more, the minimum requirements set forth in Section 510.4.1 shall apply only to that subterranean

space rather than the entire building or structure.

510.4.3. Amplification system. If initial compliance testing establishes that a building or structure covered by this Section 510 fails to meet minimum radio coverage requirements, an amplification system meeting the requirements of Section 510.5 will need to be installed in the building or structure by a technician holding a Federal Communication Commission (FCC) General Radiotelephone Operator's License to achieve those minimum radio coverage requirements.

510.5. Amplification system requirements. Any amplification system required to meet the minimum radio coverage standards set forth in Section 510.4 shall meet the following:

1. The system shall be FCC-certified, bi-directional and compatible with 800 MHz and 700 MHz public safety radio systems.

2. The system shall include multi-band pass filters.

3. All electrical components of the system shall be supplied with independent auxiliary battery power or a generator enabling them to operate at full capacity for at least twelve (12) hours. Such auxiliary power source shall be housed in a National Electrical Manufacturers Association (NEMA) 3 R (or equivalent) vented enclosure separate from the enclosures used to house the electrical components.

4. All electrical components of the system shall be FCC certified and housed in a NEMA 4 (or equivalent) dust proof and water proof case.

5. All frequency licensing associated with the system shall be coordinated with, and authorized by, all appropriate license holders.

6. The system shall be properly maintained in accordance with manufacturer's recommendations and properly repaired or replaced as necessary to ensure that minimum radio coverage requirements continue to be satisfied.

510.6. Compliance testing.

510.6.1. Qualifications. All testing to determine compliance with the back-up power supply associated with any amplification system and minimum radio coverage requirements set forth in this Section 510 shall be conducted by technicians holding an FCC General Radiotelephone Operators License.

510.6.2. Grid system utilized. All building areas to be tested for compliance with the minimum radio coverage requirements set forth in Section 510.4 shall

be divided into equal grids and tested on a grid by grid basis. All measurements taken in each grid will be recorded and the results averaged to determine compliance.

510.6.3. Initial testing. The test to determine compliance with the minimum radio coverage requirements set forth in Section 510.4 shall occur after all construction on the building or structure has been completed. Additional testing will be required, if applicable, after the installation of an amplification system necessary to achieve the minimum radio coverage requirements set forth in Section 510.4.

510.6.4. Auxiliary power. All auxiliary power systems used in conjunction with an amplification system to ensure that minimum radio coverage requirements are satisfied shall be tested under load for a period of one (1) hour to insure that the amplification system will operate properly in the event of a power outage.

510.6.5. Inspection and subsequent testing. The fire code official may periodically inspect any amplification system or ancillary power system installed to meet minimum radio coverage requirements including, without limitation, undertaking or requiring subsequent compliance testing.

510.6.6. City notice and participation. The fire code official shall be notified at least twenty-four (24) hours in advance of any compliance testing and shall be permitted to observe such testing.

510.7. Technical specifications. The fire code official may adopt technical specifications addressing the amplification system requirements and compliance testing requirements set forth in Sections 510.5 and 510.6 that are consistent with those Sections.

28-19. Fire extinguishing system installations, educational brochure.

Section 903 of the code is hereby amended by deleting Sections 903.2 through 903.2.10 in their entirety, reserving Section Number 903.2.10 and adding new Sections 903.2 through 903.2.9 to read as follows:

903.2. Where required. Subject to the exceptions set forth herein, approved automatic sprinkler systems shall be provided in the locations within the City described in this Section. Installation of fire sprinkler systems shall be performed by an Arizona licensed fire protection contractor.

Exception 1. An automatic sprinkler system is not required for 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 of the *International Building Code* or not less than 2-hour *horizontal assemblies* constructed in accordance with Section 712 of the *International Building Code,* or both.

Exception 2. An automatic sprinkler system is not required for buildings or structures which were constructed and in use prior to September 11, 1996. This exception shall not apply if, after such date, there is a discontinuation of use for a period to twelve (12) months or there is an enlargement or structural alteration of the building or structure.

Exception 3. In addition to the general authority granted to the fire code official pursuant to Section 104.9, the fire code official shall have discretion to exempt other facilities from automatic sprinkler system requirements where the size, intended use, and extent of use of the facility does not warrant the installation of fire sprinklers and alternate methods to secure public safety are provided. Such other facilities may include, but are not limited to: (1) enclosed structures which are less than three thousand (3,000) square feet in size, at least fifty (50) percent open on the sides and used to protect humans, animals, or property from the sun or elements; (2) structures which are less than three hundred (300) square feet in size used to monitor access to a larger facility, site, or area; and (3) structures temporarily used for a period not to exceed two (2) years for onsite storage or maintenance purposes provided that the structure is not used for Group A, E, F, H or I occupancies.

903.2.1 Group A. Subject to the exception set forth herein, an automatic sprinkler system shall be provided throughout all buildings and all portions of all Group A occupancies.

Exception: When any Group A-3 occupancy is constructed specifically as a church and used for regularly scheduled religious activities for not more than eight (8) hours per day or more than twenty-four (24) hours per week, calculated on an annual basis, including such buildings used for educational purposes and not classed as Group E or Group B occupancies, an automatic fire alarm system, employing a Class A circuit configuration and monitoring through a remote station, proprietary or central station facility, may be installed in lieu of the required automatic fire sprinkler system. Administrative and clerical offices and similar rooms which are ancillary to the church use and which do not exceed twenty-five (25) percent of the floor area of the major use group may be included in this exception, provided these areas are protected by the fire alarm system. Basements constructed as Group A-3, occupancies which are ancillary to the church use that are larger than one thousand five hundred (1,500) square feet, or any part of which is more than seventy-five (75) feet from openings required in this Section, shall be equipped with an automatic fire sprinkler system.

903.2.2 Group B An automatic sprinkler system shall be provided throughout all buildings and all portions of all Group B occupancies.

903.2.3 Group E. An automatic sprinkler system shall be provided throughout all buildings and all portions of all Group E occupancies.

903.2.4 Group F An automatic sprinkler system shall be provided throughout all buildings and all portions of all Group F occupancies.

903.2.5 Group H. An automatic sprinkler system shall be provided throughout all buildings and all portions of all Group H occupancies.

903.2.6 Group I. An automatic sprinkler system shall be provided throughout all buildings and all portions of all Group I occupancies.

903.2.7 Group M. An automatic sprinkler system shall be provided throughout all buildings and all portions of all Group M occupancies.

903.2.8 Group R. Subject to the exceptions set forth herein, an automatic sprinkler system shall be provided throughout all buildings and all portions of all Group R occupancies.

Exception 1. Subject to Section 903.2.8.1, an automatic sprinkler system is not required for Group R-3 occupancies that are single family detached residences or multiplexes that contain less than three (3) dwelling units within the structure.

Exception 2. An automatic sprinkler system is not required for Group R-4 occupancies occupied by less than six (6) persons not related by blood, marriage or adoption.

903.2.8.1. Educational brochure. Any person, including but not limited to sub-dividers, developers, sellers and/or realtors, offering single family detached homes for sale within the City through the use of a model home sales office, shall provide to each prospective homebuyer an educational brochure or handout explaining misconceptions and facts concerning residential automatic sprinkler systems, and, further, shall cause to be provided, as an available purchase option, to the homebuyer, an approved residential automatic sprinkler system, to be installed in the home as the home is constructed, at a competitive cost, by an Arizona State licenses fire protection contractor. The City of Chandler Fire Department will have available acceptable brochures for use by such sellers. Such sellers shall, at the time a purchase and construction contract is executed, obtain signed documentation from any homebuyer who chooses to decline an optional automatic sprinkler system.

903.2.9. Group S. An automatic sprinkler system shall be provided throughout all buildings and all portions of all Group S occupancies.

28-20. Specific Building Area Hazards.

Section 903.2.11 of the code is hereby amended by deleting the exception to the opening paragraph of Section 903.2.11 and replacing it with a new exception to read as follows:

Exception: An automatic sprinkler system shall be provided throughout all buildings and all portions of all Group U occupancies that are larger than three thousand (3,000) square feet.

28-21. Breathing air replenishment system.

Chapter 9 of the code is hereby further amended by adding a new Section 915 entitled "Breathing air replacement system" to read as follows:

915. Breathing air replenishment systems.

915.1. General. A breathing air replenishment system (BAR System) is a complete, self-contained high pressure breathing air replenishment system consisting of a fire department air connection panel, remote air fill panels and high pressure interconnected piping, permanently installed with a structure, allowing fire department personnel to replenish empty self-contained breathing apparatus cylinders within close proximity to the location of the incident requiring emergency response, thus reducing the amount of travel distance, time and support personnel needed at an emergency incident.

915.2. Applicability. The requirements of this Section 915 shall apply to all buildings and structures meeting the specifications set forth in Section 915.3 for which construction is completed after December 31, 2003 and to all expansions, alterations and modifications to existing buildings and structures meeting the specifications set forth in Section 915.3 completed after December 31, 2003 which required City of Chandler approval. The requirements of Section 915 shall apply to all buildings and structures meeting the specifications set forth in Section 915.3 commencing on January 1, 2009.

915.3. Buildings and structures requiring BAR System. A BAR System shall be installed in buildings and structures located in the City meeting either of the following criteria:

1. Buildings and structures five (5) floors or seventy-five (75) feet in height or more above grade or which are otherwise characterized as high rise buildings; and

2. Underground buildings and structures, or components thereof, totaling

ten thousand (10,000) square feet or more that are either more than two (2) floors below grade or more than thirty (30) feet below grade.

915.4. Plans. Two (2) sets of engineered stamped design drawings of the BAR System shall be submitted to the City building official and the fire code official. The plans shall include equipment/component drawings, system calculations, and manufacturer's technical product data, to include all piping, fittings, valves, gauges, cabinets, locking devices, hangers, supports and all other system components as may be necessary to install the BAR System. The installation of the BAR System shall not commence until the plans therefore have been approved. A fee for plan review and inspection shall be adopted by the City by resolution and shall be paid prior to plan review.

915.5. Contractor qualifications. The BAR system shall be installed, tested and maintained by contractor with an Arizona Registrar of Contractors license classification of:

L-5: Rescue Air Systems (Commercial)

C-5: Rescue Air Systems (Residential)

K-5: Rescue Air Systems (Dual)

Any contractor responsible for installation, testing, or maintenance of a BAR system shall also have a Chandler Fire Department Permit for Fire Protection Contractors pursuant to Section 105.6.48.

915.6. BAR System requirements. The BAR System shall allow fire department personnel to simultaneously replenish four (4), forty-five (45) cubic foot self-contained breathing apparatus cylinders at any one (1) time; two (2) at three thousand (3,000) psi and two (2) at four thousand five hundred (4,500) psi. Fire department personnel shall be able to connect into the BAR System's fire department air connection panel from a mobile air support apparatus thereby providing a constant source of breathing air supplied directly from the air support apparatus to the system's remote air fill panels.

915.7. BAR System components. The BAR System shall consist of the following minimum components:

1. Fire department air connection panel;

2. Remote air fill panels;

3. Interconnected piping; and

4. Low pressure monitoring switches and alarm.

915.8. Fire department air connection panel. A fire department air connection panel shall be installed on the exterior of the building or within a remote monument at a location approved by the fire code official and shall be interconnected to the building's interior remote air fill panels. The fill inlet and associated components of the air connection panel shall be contained in a lockable, weather tight enclosure.

The exterior fire department connection panel shall contain all of the necessary gauges, isolation valves, pressure relief valves, pressure regulating valves, check valves, tubing, fittings, supports, connectors, adapters and other necessary components as may be required to allow the fire departments mobile air unit to connect and augment the system with a constant source of breathing air.

The fire department air connection panel shall be installed in an area protected from physical damage. The panel shall be locked at all times, unless in use by fire department personnel. The locking mechanism for the panel cover shall be contained in an approved key box installed at a location approved by the fire code official. The key to unlocking the cover shall be stored in the approved key box.

915.9. Remote air fill panels. Unless otherwise approved by the fire code official, the remote air fill panels shall be installed in the above grade portion of applicable structures in stairwells commencing on the third floor above grade level and every other floor above grade level thereafter. Unless otherwise approved by the fire code official, the remote air fill panels shall be installed in the below grade portion of applicable structures in stairwells, or other areas of ingress or egress approved by the fire code official, commencing on the third floor below ground level and every other floor below grade level thereafter or, if there are less than three (3) floors below ground level, the lowest floor.

The remote air fill panels shall contain all of the necessary gauges, isolation valves, pressure relief valves, pressure regulating valves, check valves, tubing, fittings, supports, connectors, adapters and other necessary components as may be required to allow firefighters and other first responders to safely and reliably replenish a minimum of two (2) forty-five (45) cubic feet breathing air cylinders simultaneously.

915.10. Piping, valves and fittings. Unless otherwise approved by the fire code official, all piping, valves and fitting shall be compatible and support a minimum working pressure of five thousand (5,000) psi with a safety factor of 4 to 1.

Piping shall be supported at not less than five-foot intervals. The entire system shall be protected by a minimum of two-hour rated fire wall that protects the system from possible damage.

When piping must pass through a fire rated or solid material, the piping shall be protected by a sleeve that is at least three (3) times the pipe diameter. Both ends of the sleeve shall be filled with an approved fire stop.

915.11. Low pressure monitoring and alarm. When not being utilized by fire department personnel, the BAR System shall maintain a constant pressure of at least four thousand five hundred (4,500) psi. An alarm or monitoring system capable of detecting, and that is set to detect, a pressure drop of one thousand (1,000) psi shall be included and maintained with the BAR System. A building or structure owner, or his or her designee, shall notify the fire department of any alarm signaling a loss of pressure to the system and of any scheduled test of the system to be conducted by the owner of the building or structure. Unless otherwise approved by the fire code official, the low pressure alarm shall be tied into the fire and smoke alarm system for the building or structure.

915.12. Markings and record keeping. The fire department air connection panel and the remote air fill panels shall be clearly identified by means of permanently installed signage stating FIREFIGHTER AIR SYSTEM in minimum one and one-half (1½) inch letters and be located where plainly visible. The owner and/or occupant of the building or structure shall keep the area in and around the fire department air connection panel and the remote air fill panels free of objects that may block use of these panels.

915.13. Initial testing requirements. When fabrication, assembly and installation of the Bar System is complete, the entire system shall be tested in accordance with the following:

1. The system shall be inspected for leaks by pneumatically pressure testing the system to five thousand (5,000) psi using oil-free, dry air. An approved solution shall be used on each joint and fitting in the system. All leaks or failure to maintain five thousand (5,000) psi pneumatic pressure shall be documented by the system installer and forwarded to the system manufacturer for inspection, repair and/or replacement.

2. Upon successful completion of the five thousand (5,000) psi pressure testing, the entire system shall be pneumatically pressure tested to one and one-half (1 1/2) times the working pressure (seven thousand five hundred (7,500) psi) using oil free, dry air for at least one (1) hour. All leaks or failure to maintain seven thousand five hundred (7,500) psi pneumatic pressure shall be documented by the system installer and forwarded to the system manufacturer for inspection, repair and/or replacement.

3. Upon successful completion of the seven thousand five hundred (7,500) psi pressure testing, the entire system shall be retested for a period of twenty-four (24) hours. All leaks or failure to maintain five thousand (5,000) psi pneumatic pressure shall be documented by the system installer and

forwarded to the system manufacturer for inspection, repair and/or replacement.

915.14. On-going testing and maintenance requirements. Breathing air samples from the BAR System shall be taken by an independent, qualified entity on an annual basis and shall be analyzed by an accredited testing laboratory in the manner specified in NFPA 1989, Section 5.3. Testing pursuant to this Section and Section 915.13 shall also be required after the BAR System is utilized or upon determination by the fire code official that contamination of the air in the BAR System may be contaminated. The BAR System shall otherwise be tested and maintained in accordance with NFPA Standards and manufacturer specifications.

915.15. Inspection and record keeping. Records of all maintenance and testing of the BAR System shall be kept on-site for a minimum of three (3) years and be available to fire department personnel upon request. Fire department personnel shall either in conjunction with a fire inspection of the building or structure or, after providing reasonable notice to the owner or occupant of the building or structure, or his or her designee, have the right to enter onto the property to inspect the BAR System and the records relating to the maintenance and testing of that system.

28-22. Door swing.

Section 1008.1.2 of the code is hereby amended by adding Group E, I and S occupancies to Group H occupancies in Exception 9 of such Section.

28-23. Water supply for fire protection.

Section 1412.1 of the code is hereby deleted in its entirety and replaced with a new Section 1412.1 to read as follows:

1412.1. When required. A City approved permanent water supply for fire protection shall be made available prior to the time that combustible material arrives on the site.

28-24. Electronic filing.

Section 2701.5 of the code is hereby amended by adding a new Section 2701.5.3 entitled "Electronic filing" to read as follows:

2701.5.3. Electronic filing. The fire code official is hereby authorized to establish procedures requiring the electronic filing of HMMP and HMIS. An approved HMMP and/or HMIS must remain on site.

28-25. Stationary containers location.

Section 3204.3.1.1.3 of the code is hereby amended by adding new language to the end of such Section to read as follows:

> In addition to any other location restrictions that may apply, stationary containers shall be located in accordance with Section 3204.3 and, for stationary containers first utilized after November 23, 1993, shall be located at least one thousand (1,000) feet from any residence, church, school, hospital or similar facility and at least one-half (1/2) mile from any bulk storage facility for liquefied petroleum gases. Stationary containers first utilized prior to November 23, 1993 must comply with all such restrictions if, after such date, there is a discontinuance of the use for a period of twelve (12) months, there is, in the opinion of the fire code official, a change in use to a less restrictive use or there is an enlargement of the use. Containers of cryogenic fluids shall not be located within diked areas containing other hazardous materials. The fire code official may reduce the location restrictions set forth above upon request based on best available hazard analysis modeling approved by the fire code official.

28-26. Fireworks Preemption.

Section 3301.1 of the code is hereby amended by deleting *Exception 9* in its entirety and adding new *Exceptions 9 and 10* to read as follows:

> *Exception 9.* Items preempted by federal or state regulations.
>
> *Exception 10.* The possession, manufacture, storage, handling, sale and use of fireworks in accordance with other City ordinances.

28-27. Above ground tanks location.

Section 3404.2.9.6.1 entitled "Locations where above-ground tanks are prohibited and *Section 3406.2.4.4* entitled "Locations where above-ground tanks are prohibited" are hereby amended by adding new language to the end of such Sections to read as follows:

> In addition to any other location restrictions that may apply, storage of Class I and Class II liquids in above-ground tanks, located outside a building, that were first utilized after November 23, 1993, shall be located at least one thousand (1,000) feet from any residence, church, school, hospital or similar facility and at least one-half (1/2) mile from any bulk storage facility for liquefied petroleum gases. Tanks first utilized prior to November 23, 1993 must comply with all such restrictions if, after such date, there is a discontinuance of the use for a period of twelve (12) months, there is, in the opinion of the fire code official, a change in use to a less restrictive use or there is an enlargement of the use. The fire code official may reduce the location restrictions set forth above upon request based on best available hazard analysis modeling approved by the fire code official.

28-28. LP-gas containers location.

Section 3804.3 of the code entitled "Container location" is hereby amended by adding new language to the end of that Section to read as follows:

> Additionally, any storage of LP gas initiated after November 23, 1993, shall be located at least one thousand (1,000) feet from any residence, church, school, hospital or similar facility and at least one-half (1/2) mile from any bulk storage facility for liquefied petroleum gases. Such storage initiated prior to November 23, 1993 must comply with all such restrictions if, after such date, there is a discontinuance of the use for a period of twelve (12) months, there is, in the opinion of the fire code official, a change in use to a less restrictive use or there is an enlargement of the use. The fire code official may reduce the location restrictions set forth above upon request based on best available hazard analysis modeling approved by the fire code official.

28-29. Appendices.

This code is hereby further amended by deleting Appendix A in its entirety and specifying that Appendix E is included for informational purposes only and is not adopted by the City as part of this code. All other Appendices set forth in this code are hereby adopted as part of this code.

SECTION 3: Any person violating any section of the code adopted by reference in Chapter 28, Code of the City of Chandler may be punished by imposition of a civil sanction not to exceed five hundred dollars ($500.00), unless another penalty is specified. Any person who commits a violation of the code adopted by reference in Chapter 28, Code of the City of Chandler, after previously having been found responsible for committing two (2) or more infractions of this code within any thirty-six (36) month period, whether by admission, by payment of the fine, by default, or by judgment after hearing, shall be guilty of a Class I criminal misdemeanor punishable by a fine not exceeding two thousand five hundred dollars ($2,500.00), by imprisonment for a term not exceeding six (6) months, by probation for a term not exceeding three (3) years, or by any combination thereof. Each day a violation continues shall constitute a separate offense.

INTRODUCED AND TENTATIVELY APPROVED by the City Council of the City of Chandler, Arizona, this _____ day of _____, 2011.

ATTEST:

_____ _____

CITY CLERK MAYOR

PASSED AND ADOPTED by the City Council of the City of Chandler, Arizona this _____ day of _____, 2011.

ATTEST:

_____ _____
CITY CLERK MAYOR

Approved as to form:

_____
CITY ATTORNEY

CERTIFICATION

I HEREBY CERTIFY that the above and foregoing Ordinance No. 4308 was duly passed and adopted by the City Council of the City of Chandler, Arizona, at a regular meting held on the _____ day of _____, 2011, and that a quorum was present thereat.

_____
CITY CLERK

Published: