

City of Las Vegas

**RECOMMENDING COMMITTEE MEETING
CITY HALL, 400 STEWART AVENUE
CITY MANAGER'S EIGHTH FLOOR CONFERENCE ROOM
CITY OF LAS VEGAS INTERNET ADDRESS: www.lasvegasnevada.gov
MARCH 15, 2011
9:00 A.M.**

THE RECOMMENDING COMMITTEE WILL RECEIVE PUBLIC INPUT ON EACH ITEM OF LEGISLATION BEING CONSIDERED. THE RECOMMENDING COMMITTEE MAY, THEREAFTER, CONTINUE THE HEARING TO A FUTURE DATE OR FORMULATE A RECOMMENDATION TO THE CITY COUNCIL FOR PASSAGE, REJECTION OR AMENDMENT OF THE PROPOSED BILL. ANY MEMBER OF THE CITY COUNCIL MAY SUBSTITUTE FOR A MEMBER OF THE RECOMMENDING COMMITTEE AT ANY TIME.

DUPLICATE AUDIO CDS MAY BE AVAILABLE AT A COST OF \$5.00 EACH THROUGH THE CITY CLERK'S OFFICE.

1. CALL TO ORDER
2. ANNOUNCEMENT RE: COMPLIANCE WITH OPEN MEETING LAW
3. Bill No. 2011-10 – Adopts the 2009 Edition of the International Building Code, together with amendments thereto. Sponsored by: Councilman Steven D. Ross
4. Bill No. 2011-11 – Updates the City's Administrative Code, relating to the administration of the various building and technical codes. Sponsored by: Councilman Steven D. Ross
5. Bill No. 2011-12 – Adopts the 2009 Edition of the Uniform Plumbing Code, together with amendments thereto, as the City's Plumbing Code. Sponsored by: Councilman Steven D. Ross
6. Bill No. 2011-13 – Adopts the 2009 Edition of the Uniform Mechanical Code, together with amendments thereto, as the City's Mechanical Code. Sponsored by: Councilman Steven D. Ross
7. Bill No. 2011-14 – Adopts the 2008 Edition of the National Electrical Code, together with local amendments thereto. Sponsored by: Councilman Steven D. Ross
8. Bill No. 2011-15 – Adopts an updated version of the Southern Nevada Amendments to the 2009 International Energy Conservation Code. Sponsored by: Councilman Steven D. Ross
9. Bill No. 2011-16 – Adopts the 2009 Edition of the Southern Nevada Pool Code. Sponsored by: Councilman Steven D. Ross
10. Bill No. 2011-17 – Adopts the 2010 Edition of the City of Las Vegas Amusement and Transportation Rides Code as a replacement for the 1993 Edition of that Code. Sponsored by: Councilman Steven D. Ross
11. CITIZENS PARTICIPATION: Public comment during this portion of the agenda must be limited to matters within the jurisdiction of the committee. No subject may be acted upon by the committee unless that subject is on the agenda and is scheduled for action. If you wish to be heard, come to the podium and give your name for the record. The amount of discussion on any single subject, as well as the amount of time any single speaker is allowed, may be limited

City of Las Vegas

12. ADJOURNMENT

ALL INTERESTED PERSONS ARE INVITED TO ATTEND: Copies of the above Bills may be obtained through the Office of the City Clerk, Monday through Thursday, 7:00 A.M. to 5:30 P.M.

Facilities are provided throughout City Hall for the convenience of disabled persons. Reasonable efforts will be made to assist and accommodate physically handicapped persons. If you need an accommodation to attend and participate in this meeting, please call the City Clerk's office at 229-6311 and advise of your need at least 48 hours in advance of the meeting.

THIS MEETING HAS BEEN PROPERLY NOTICED AND POSTED AT THE FOLLOWING LOCATIONS:

City Clerk's Bulletin Board, City Hall Plaza, 2nd Floor Skybridge
Bulletin Board, City Hall Plaza, (next door to Metro Records)
Las Vegas Library, 833 Las Vegas Boulevard North
Clark County Government Center, 500 S. Grand Central Parkway
Grant Sawyer Building, 555 E. Washington Avenue

AGENDA SUMMARY PAGE

RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY CLERK

DIRECTOR: BEVERLY K. BRIDGES

SUBJECT:

CALL TO ORDER



AGENDA SUMMARY PAGE
RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY CLERK

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SUBJECT:

ANNOUNCEMENT RE: COMPLIANCE WITH OPEN MEETING LAW



AGENDA SUMMARY PAGE
RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY ATTORNEY

DIRECTOR: BRADFORD R. JERBIC

☐ Consent ☒ Discussion

SUBJECT:

Bill No. 2011-10 – Adopts the 2009 Edition of the International Building Code, together with amendments thereto. Sponsored by: Councilman Steven D. Ross

Fiscal Impact

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No Impact

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Augmentation Required

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Budget Funds Available

Amount:

Funding Source:

Dept./Division:

PURPOSE/BACKGROUND:

This bill will adopt the 2009 Edition of the International Building Code, together with amendments thereto. The amendments primarily represent adaptations agreed upon by local area jurisdictions.

RECOMMENDATION:

This bill should be submitted to a Recommending Committee for review, hearing and recommendation to the City Council for final action.

BACKUP DOCUMENTATION:

1. Bill No. 2011-10
2. Southern Nevada Amendments to the 2009 International Building Code
3. Business Impact Statement

1 **BILL NO. 2011-10**

2 **ORDINANCE NO. _____**

3 AN ORDINANCE TO ADOPT THE 2009 EDITION OF THE INTERNATIONAL BUILDING
4 CODE, TOGETHER WITH AMENDMENTS THERETO, AND TO PROVIDE FOR OTHER
RELATED MATTERS.

5 Sponsored by: Councilman Steven D. Ross

Summary: Adopts the 2009 Edition of the
International Building Code, together with
amendments thereto.

7 THE CITY COUNCIL OF THE CITY OF LAS VEGAS DOES HEREBY ORDAIN
8 AS FOLLOWS:

9 SECTION 1: Title 16, Chapter 4, Section 10, of the Municipal Code of the City of
10 Las Vegas, Nevada, 1983 Edition, is hereby amended to read as follows:

11 **16.04.010:** A building code is established and adopted for the City. The building code adopted
12 by this Section, to be known as the City's Building Code, shall consist of the following documents,
13 which are adopted by this reference and [a copy] copies of which shall be maintained on file in the
14 Office of the City Clerk:

15 (A) The publication entitled ["International Building Code, 2006 Edition,"]
16 "International Building Code, 2009 Edition," as modified herein, including all Appendices, except as
17 otherwise specified. This publication, as modified, is designated as Part 1 of this Chapter.

18 (B) The document entitled ["Southern Nevada Amendments to the 2006
19 International Building Code,] "Southern Nevada Amendments to the 2009 International Building
20 Code," which amends, by adding to and deleting from, certain sections of the International Building
21 Code, [2006] 2009 Edition. This document is adopted as Part 2 of this Chapter.

22 (C) The publication entitled the "International Residential Code for One- and Two-
23 Family Dwellings, 2006 Edition" (also known as the "International Residential Code, 2006 Edition"),
24 as modified herein, including all chapters and Appendices, except as otherwise specified. This
25 publication, as modified, is designated as Part 3 of this Chapter.

26 (D) The document entitled "Southern Nevada Amendments to the 2006
27 International Residential Code," which amends, by adding to and deleting from, certain sections of
28 the International Residential Code, 2006 Edition. This document is adopted as Part 4 of this Chapter.

1 SECTION 2: The document entitled "Southern Nevada Amendments to the 2009
2 International Building Code" referred to in Section 1 of this Ordinance is hereby amended by adding
3 thereto a new Section 421 and a new Subsection 421.1, to read as follows:

4 **Section 421 Live/Work Units**

5 **421.1 Live/Work Units.** In accordance with Title 19 of the Las Vegas Municipal Code, live/work
6 units, as defined therein, are permitted in the Live/Work Overlay District. For purposes of addressing
7 fire and life safety issues raised by that type of occupancy, live/work units are permitted in accordance
8 with Title 19, subject to the following limitations:

- 9 a. The minimum floor area of a live/work unit shall be 750 square feet.
- 10 b. A maximum of 50 percent of the floor area of a live/work unit may be used or arranged
11 for residential purposes such as sleeping, kitchen, bathroom and closet area.
- 12 c. No interior wall separating the living portion from the work portion of a unit is required
13 if automatic fire alarm systems are installed throughout the building.
- 14 d. Each live/work unit shall be separated from other live/work units or other uses in the
15 building by a two-hour rated fire wall.
- 16 e. Access to live/work units shall be provided only from common access areas (halls or
17 corridors) and shall not be from other live/work units or other uses in the building.
- 18 f. Each live/work unit shall be fully sprinklered. Units of less than 1500 square feet may
19 use an NFPA 13R system. Units 1500 square feet or larger require a full NFPA 13 system.
- 20 g. An emergency mode of egress directly to the outside (other than through the work
21 portion) shall be provided from the sleeping portion of the live/work unit.
- 22 h. Live/work units shall not be used for storage of flammable liquids or hazardous
23 materials, welding or any open flame work.
- 24 i. Gas appliances, including gas stoves and water heaters shall be separated from the
25 sleeping areas per applicable codes.

26 SECTION 3: The document entitled "Southern Nevada Amendments to the 2009
27 International Building Code" referred to in Section 1 of this Ordinance, is attached hereto.

28 SECTION 4: The documents entitled "International Building Code, 2006 Edition"

1 and "Southern Nevada Amendments to the 2006 International Building Code," are hereby repealed.

2 SECTION 5: This Ordinance shall become effective on July 5, 2011.

3 SECTION 6: If any section, subsection, subdivision, paragraph, sentence, clause or
4 phrase in this ordinance or any part thereof is for any reason held to be unconstitutional or invalid or
5 ineffective by any court of competent jurisdiction, such decision shall not affect the validity or
6 effectiveness of the remaining portions of this ordinance or any part thereof. The City Council of the
7 City of Las Vegas hereby declares that it would have passed each section, subsection, subdivision,
8 paragraph, sentence, clause or phrase thereof irrespective of the fact that any one or more sections,
9 subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional,
10 invalid or ineffective.

11 SECTION 7: Whenever in this ordinance any act is prohibited or is made or declared
12 to be unlawful or an offense or a misdemeanor, or whenever in this ordinance the doing of any act is
13 required or the failure to do any act is made or declared to be unlawful or an offense or a
14 misdemeanor, the doing of such prohibited act or the failure to do any such required act shall
15 constitute a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than
16 \$1,000.00 or by imprisonment for a term of not more than six months, or by any combination of such
17 fine and imprisonment. Any day of any violation of this ordinance shall constitute a separate offense.

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1 SECTION 8: All ordinances or parts of ordinances or sections, subsections, phrases,
2 sentences, clauses or paragraphs contained in the Municipal Code of the City of Las Vegas, Nevada,
3 1983 Edition, in conflict herewith are hereby repealed.

4 PASSED, ADOPTED and APPROVED this _____ day of _____, 2011.

5 APPROVED:

6
7 By _____
 OSCAR B. GOODMAN, Mayor

8 ATTEST:

9
10 _____
 BEVERLY K. BRIDGES, MMC
 City Clerk

11 APPROVED AS TO FORM:

12 Val Steed 2-16-11
 Date

1 The above and foregoing ordinance was first proposed and read by title to the City Council on the
2 ____ day of _____, 2011, and referred to the following committee composed of
3 _____ and _____ for recommendation;
4 thereafter the said committee reported favorably on said ordinance on the ____ day of
5 _____, 2011, which was a _____ meeting of said Council; that at said
6 _____ meeting, the proposed ordinance was read by title to the City Council
7 as first introduced and adopted by the following vote:

8 VOTING "AYE": _____

9 VOTING "NAY": _____

10 ABSENT: _____

11

12 APPROVED:

13

14 By _____
OSCAR B. GOODMAN, Mayor

15 ATTEST:

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17 BEVERLY K. BRIDGES, MMC
City Clerk

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Southern Nevada Building
Officials
c/o City of Las Vegas
Building & Safety Dept
713 S. 4th Street
Las Vegas, NV 89101

Phone: 702-229-6257
Fax: 702-382-1731
Email:
chknight@lasvegasnevada.gov

MEMBERS

Chris Knight, Chair
City of Las Vegas

Greg Blackburn
City of North Las Vegas

Ron Nybo
City of Boulder City

Ron Lynn
Clark County

Kurt Sawyer
City of Mesquite

Brent Steed
Pahrump Regional
Planning District
(Nye County)

Michael Bouse
City of Henderson

Lisa Conner
Clark County School District

SOUTHERN NEVADA AMENDMENTS TO THE 2009 INTERNATIONAL BUILDING CODE

**Approved by SNBO
September 21, 2010**

Chapter 1 Administration.

Delete Part 2 (“Administration and Enforcement”), including Sections 103 through 116 in their entirety, from Chapter 1.

Section 202 Definitions.

Revise Section 202, definition of “High-Rise Building”, as follows:

HIGH-RISE BUILDING. A building with an occupied floor located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access.

Revise Section 202 to include the following new definitions:

FIRE CODE OFFICIAL. The fire chief or other designated authority charged with the administration and enforcement of the *International Fire Code*, or a duly authorized representative.

INTERNATIONAL ELECTRICAL CODE. The Electrical Code as amended and adopted by the local jurisdiction.

INTERNATIONAL ENERGY CONSERVATION CODE. The Energy Conservation Code as amended and adopted by the local jurisdiction.

INTERNATIONAL EXISTING BUILDING CODE. The Existing Building Code as amended and adopted by the local jurisdiction.

INTERNATIONAL FIRE CODE. The Fire Code as amended and adopted by the local jurisdiction.

INTERNATIONAL FUEL GAS CODE. The Fuel Gas Code as amended and adopted by the local jurisdiction.

INTERNATIONAL MECHANICAL CODE. The Mechanical Code as amended and adopted by the local jurisdiction.

INTERNATIONAL PLUMBING CODE. The Plumbing Code as amended and adopted by the local jurisdiction.

INTERNATIONAL PRIVATE SEWAGE DISPOSAL CODE. The Private Sewage Disposal Code as amended and adopted by the local jurisdiction.

INTERNATIONAL PROPERTY MAINTENANCE CODE. The Property Maintenance Code as amended and adopted by the local jurisdiction.

INTERNATIONAL RESIDENTIAL CODE. The Residential Code as amended and adopted by the local jurisdiction.

INTERNATIONAL WILDLAND-URBAN INTERFACE CODE. The Wildland-Urban Interface Code as amended and adopted by the local jurisdiction.

Section 303.1 Assembly Group A.

Revise Section 303.1 Subsection A-2, as follows:

A-2 Assembly uses intended for food and/or drink consumption including, but not limited to:

- Banquet halls
- Night clubs
- Restaurants
- Taverns and bars
- Casinos

Remainder of Section 303.1 to remain unchanged.

Section 308.3.1 Definitions.

Revise Sections 308.3.1, as follows:

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

CHILD CARE FACILITIES. Facilities that provide care on a 24-hour basis to more than six children, 2½ years of age or less.

Other definitions remain unchanged.

Section 308.5 Group I-4, day care facilities.

Revise Section 308.5, as follows:

308.5 Group I-4, day care facilities. This group shall include buildings and structures occupied by persons of any age who receive custodial care for less than 24 hours by individuals other than parents or guardians, relatives by blood, marriage or adoption, and in a place other than the home of the person cared for. A facility such as the above with six or fewer persons shall be classified as a Group R-3 or shall comply with the *International Residential Code* in accordance with Section 101.2. Places of worship during religious functions are not included.

Section 308.5.1 remains unchanged.

Section 308.5.2 Child care facility.

Revise Section 308.5.2, as follows:

308.5.2 Child care facility. A facility that provides supervision and personal care on less than a 24-hour basis for more than six children 2½ years of age or less shall be classified as a Group I-4.

Exception: A child day care facility that provides care for more than six but no more than 100 children 2½ years or less of age, where the rooms in which the children are cared for are located on a *level of exit discharge* serving such rooms and each of these child care rooms has an *exit* door directly to the exterior, shall be classified as Group E.

Section 310.1 Residential Group R.

Revise Section 310.1, as follows:

310.1 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. Residential occupancies shall include the following:

R-1 Residential occupancies containing *sleeping units* where the occupants are primarily transient in nature, including:

- Boarding houses* (transient)
- Hotels (transient)
- Motels (transient)

Congregate living facilities (transient) with 10 or fewer occupants are permitted to comply with the construction requirements for Group R-3.

R-2 Residential occupancies containing *sleeping units* or more than two *dwelling units* where the occupants are primarily permanent in nature, including:

- Apartment houses
- Boarding houses* (non-transient)
- Condominiums (non-transient)
- Convents
- Dormitories
- Fraternities and sororities
- Hotels (non-transient)
- Live/work units
- Monasteries
- Motels (non-transient)
- Vacation timeshare properties

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as Group 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 five or fewer persons of any age for less than 24 hours.
- Child care facilities that provide accommodations for six or fewer persons of any age for less than 24 hours.
- Congregate living facilities* with 16 or fewer persons.

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

Remainder of Section 310.1 to remain unchanged.

Section 311.2 Moderate-hazard storage, Group S-1.

Revise Section 311.2, as follows:

311.2 Moderate-hazard storage, Group S-1. Buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:

- Aerosols, Levels 2 and 3
- Aircraft hangar (storage and repair)
- Bags; cloth, burlap and paper
- Bamboos and rattan
- Baskets
- Belting; canvas and leather
- Books and paper in rolls or packs
- Boots and shoes
- Buttons, including cloth covered, pearl or bone
- Cardboard and cardboard boxes
- Clothing, woolen wearing apparel
- Cordage
- Dry boat storage (indoor)
- Furniture
- Furs
- Glues, mucilage, pastes and size
- Grains
- Horns and combs, other than celluloid
- Leather
- Linoleum
- Lumber
- Motor vehicle repair garages complying with the maximum allowable quantities of hazardous materials listed in Table 307.1(1) (see Section 406.6)
- Photo engravings
- Resilient flooring
- Self-Service Storage Facility
- Silks
- Soaps
- Sugar
- Tires, bulk storage of
- Tobacco, cigars, cigarettes and snuff
- Upholstery and mattresses
- Wax candles

Section 402.5.1 Minimum width.

Revise Section 402.5.1, as follows:

402.5.1 Minimum width. The minimum width of the mall shall be 20 feet (6096 mm). The mall width shall be sufficient to accommodate the *occupant load* served. There shall be a minimum of 10 feet (3048 mm) clear exit width to a height of 8 feet (2438 mm) in front of, adjacent to, and parallel to the store front of a tenant space bordering the mall. Kiosks, vending machines, benches, display openings, food courts or other obstructions to *means of egress* travel shall not be permitted to be located within the minimum required clear exit width to a height of 8 feet.

Section 402.9 Automatic sprinkler system.

Revise Section 402.9, as follows:

[F] 402.9 Automatic sprinkler system. The *covered mall building* and buildings connected shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, which shall comply with the following:

1. The *automatic sprinkler system* shall be complete and operative throughout occupied space in the *covered mall building* prior to occupancy of any of the tenant spaces. Unoccupied tenant spaces shall be similarly protected unless provided with *approved* alternative protection.
2. Sprinkler protection for the mall shall be independent from that provided for tenant spaces or anchors. Where tenant spaces are supplied by the same system, they shall be independently controlled and the control valve shall be electrically supervised through the fire alarm system.

Exception: An *automatic sprinkler system* shall not be required in spaces or areas of:

1. *Open parking garages* constructed in accordance with Section 406.3.
2. *Open malls* as defined in Section 402.2.

Section 402.11 Kiosks.

Revise Section 402.11, as follows:

402.11 Kiosks. Kiosks and similar structures (temporary or permanent) shall meet the following requirements:

1. *Unchanged.*
2. Kiosks or similar structures located within the mall shall be provided with *approved* fire suppression and detection devices.
3. *Unchanged.*
4. *Unchanged.*

Section 403.1 Applicability.

Revise Section 403.1, as follows:

403.1 Applicability. High-rise buildings shall comply with Sections 403.2 through 403.6.

Exception: The provisions of Sections 403.2 through 403.6 shall not apply to the following buildings and structures:

1. Airport traffic control towers in accordance with Section 412.3.
2. Open parking garages in accordance with Section 406.3.
3. Special industrial occupancies in accordance with Section 503.1.1.

Section 403.3 Automatic sprinkler system.

Revise Section 403.3, as follows:

[F] 403.3 Automatic sprinkler system. Buildings and structures shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 903.3.5.2.

Exception: An *automatic sprinkler system* shall not be required in *open parking garages* in accordance with Section 406.3.

Section 403.4 Emergency systems.

Revise Section 403.4, as follows:

403.4 Emergency systems. The detection, alarm and emergency systems of high-rise buildings shall comply with Sections 403.4.1 through 403.4.9.

Section 403.4.6 Smoke removal.

Revise Section 403.4.6, as follows:

403.4.6 Smoke removal. To facilitate smoke removal in post-fire salvage and overhaul operations, buildings and structures shall be equipped with natural or mechanical ventilation for removal of products of combustion in accordance with one of the following:

1. Easily identifiable, manually operable windows or panels shall be distributed around the perimeter of each floor at not more than 50-foot (15 240 mm) intervals. The area of operable windows or panels shall not be less than 40 square feet (3.7 m²) per 50 linear feet (15 240 mm) of perimeter.

Exceptions:

1. In Group R-1 occupancies, each *sleeping unit* or suite having an *exterior wall* shall be permitted to be provided with 2 square feet (0.19 m²) of venting area in lieu of the area specified in Item 1.
 2. Where permitted by the fire code official, windows of tempered glass shall be permitted to be fixed provided that no coating or film is applied and the glazing can be cleared by firefighters.
 3. Manually operable windows or panels are not required in Group R-1 and R-2 residential units provided the residential units comply with the passive requirements of Section 909 and all corridors between the residential units and the exit enclosures serving the residential units comply with Section 403.4.6, Item 3.
2. Mechanical air-handling equipment providing one exhaust air change every 15 minutes for the area involved. Return and exhaust air shall be moved directly to the outside without recirculation to other portions of the building. The volume of air shall be calculated based upon the volume of the space between the floor and the floor or roof structure above. The exhaust air quantity shall be as measured at the exhaust fan.

Exception: Smoke removal is not required for normally unoccupied areas such as mechanical equipment rooms, electrical rooms, storage rooms that do not exceed 500 square feet in area, elevator equipment rooms, or similar areas as approved by the *building official*.

3. A smoke control system in accordance with Section 403.4.9 that provides a minimum of one exhaust air change every 15 minutes for the area involved upon manual activation of the smoke removal feature at the smoke control graphics panel. The volume of air shall be calculated based upon the volume of the space between the floor and the floor or roof structure above. The exhaust air quantity shall be as measured at the exhaust fan.
4. Any other *approved* design that will produce equivalent results where permitted by the Authority Having Jurisdiction.

403.4.6.1 Design requirements. Smoke removal systems shall be capable of manual activation and shall be designed in accordance with Sections 403.4.6.1.1 through 403.4.6.1.4.

403.4.6.1.1 Fans. Fans shall be selected for stable performance based on normal temperature. Calculations and manufacturer's fan curves shall be part of the documentation procedures. Fans shall be supported and restrained by noncombustible devices in accordance with the requirements of Chapter 16.

403.4.6.1.1.1 Fan belts. Belt-driven fans shall have 1.5 times the number of belts required for the design duty, with the minimum number of belts being two.

403.4.6.1.1.2 Fan motors. Motors driving fans shall not be operated beyond their nameplate horsepower (kilowatts), as determined from measurement of actual current draw, and shall have a minimum service factor of 1.15.

403.4.6.1.2 Ducts. Ducts shall be constructed and supported in accordance with the *International Mechanical Code*. Exhaust ducts shall be leak tested to 1.5 times the maximum design pressure in accordance with nationally accepted practices. Measured leakage shall not exceed 5 percent of design flow. Results of such testing shall be a part of the special inspections report in accordance with Section 403.4.6.3.3.

Exception: Leakage testing shall not be required where the exhaust ducts are contained completely within the smoke removal zone they serve.

403.4.6.1.3 Power. The smoke removal system shall be supplied with two sources of power. Primary power shall be from the normal building power systems. Secondary power shall be from an *approved* standby source complying with Chapter 27 of this code.

Exception: Secondary power for the smoke removal system is not required where normal power can be automatically restored from the fire command center following a normal power shunt.

403.4.6.1.3.1 Standby power source enclosure. The standby power source and its transfer switches shall be in a room separate from the normal power transformers and switch gears and ventilated directly to and from the exterior. The room shall be enclosed with not less than 1-hour *fire barriers* constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 712, or both.

403.4.6.1.3.2 Power sources and power surges. Elements of the smoke removal system relying on volatile memories shall be supplied with uninterruptable power sources of sufficient duration to span a 15-minute primary power interruption. Elements of the smoke removal system susceptible to power surges shall be suitably protected by conditioners, suppressors or other *approved* means.

403.4.6.1.3.3 Secondary power supply. The secondary power supply shall be sized to accommodate the electrical requirements of the two largest adjacent smoke removal zones simultaneously.

403.4.6.1.4 Status indicators and controls. Status indicators and controls for the smoke removal system shall be provided on a graphic control panel in the fire command center. The graphic control panel shall be designed in accordance with the *International Fire Code* and shall provide status of smoke removal fans and controls for the smoke removal systems. The control panel for the smoke removal system shall be permitted to operate through the building HVAC management system or the fire alarm system. The control panel for the smoke removal system shall not be required to be listed as smoke control equipment.

403.4.6.2 Control diagrams. The *construction documents* shall provide sufficient information and detail to adequately describe the elements of the design necessary for the proper implementation of the smoke removal systems. The construction documents shall include smoke removal system control diagrams that show all devices in the system and identify their location and function. The smoke removal system drawings shall be permitted to be combined with smoke control system drawings, where applicable. Approved copies of the smoke removal system control diagrams shall be maintained current and kept on file with the Authority Having Jurisdiction and in the fire command center in an *approved* format and manner.

403.4.6.3 Special inspections for smoke removal. Smoke removal systems shall be tested by a special inspector.

Exception: Special inspections shall not be required where smoke removal is achieved by natural ventilation in accordance with Section 403.4.6, Item 1.

403.4.6.3.1 Scope of testing. *Special inspections* shall be conducted in accordance with the following:

1. During erection of ductwork and prior to concealment for the purposes of leakage testing and recording device location.
2. Prior to occupancy and after sufficient completion for the purposes of exhaust air change rate measurements and control verification.

403.4.6.3.2 Qualifications. *Special inspection* agencies for smoke removal shall have expertise in fire protection engineering, mechanical engineering and certification as air balancers.

403.4.6.3.3 Reports. A complete report of testing shall be prepared by the special inspector or *special inspection* agency. The report shall include identification of all devices by manufacturer, nameplate data, design values, measured values and identification tag or *mark*. The report shall be reviewed by the responsible *registered design professional* and, when satisfied that the design intent has been achieved, the responsible *registered design professional* shall seal, sign and date the report with a statement as follows:

“I have reviewed this report and by personal knowledge and on-site observation certify that the smoke removal system is in substantial compliance with the design intent, and to the best of my understanding complies with the requirements of the code.”

403.4.6.3.3.1 Report filing. A copy of the final report shall be filed with the Authority Having Jurisdiction and an identical copy shall be maintained in the *fire command center*.

Section 403.4.7.2 Standby power loads.

Revise Section 403.4.7.2, as follows:

[F] 403.4.7.2 Standby power loads. The following are classified as standby power loads:

1. Power and lighting for the fire command center required by Section 403.8;
2. Ventilation and automatic fire detection equipment for smokeproof enclosures;
3. Standby power shall be provided for elevators in accordance with Sections 1007.4, 3003, 3007 and 3008; and
4. Smoke control systems.

Section 403.4.9 Smoke control.

Add a new Section 403.4.9, as follows:

403.4.9 Smoke control. A smoke control system shall be provided for all Group R-1 or R-2 occupancies. The smoke control system shall be in accordance with Section 909 except as modified in Section 403.4.9.1.

Exceptions:

1. Compliance with Sections 909.6, 909.7, 909.8, 909.9, and 909.12.3 shall not be required.
2. The preprogrammed test sequence for smoke control systems required by Section 909.12 shall be permitted to be performed on a quarterly basis and shall be permitted to only test manually restorable components on an individual basis, such that no single component shall be required to activate more than once during the test sequence.

403.4.9.1 Design criteria. Corridors serving Group R-1 sleeping units or Group R-2 dwelling units shall be provided with mechanical ventilation that achieves a minimum of one exhaust air change each 10 minutes for the area involved (6 air changes per hour). The exhaust rate for the smoke control system shall exceed the supply (makeup) air rate by a minimum of 20 percent to ensure that the corridor is maintained slightly negative relative to adjacent areas. All Group R-1 sleeping units and Group R-2 dwelling units shall be passive smoke control zones.

Exception: Where approved by the *building official*, passive smoke control shall be permitted for the corridors.

403.4.9.1.1 System activation. The smoke control system shall be automatically activated upon smoke detection in the corridor.

Exception: Where corridor smoke detection is not required by other sections of this code, activation of the smoke control system by activation of sprinkler systems shall be permitted. The sprinkler system used to initiate the smoke control system shall protect only the corridor for which active smoke control is provided and shall be separately zoned from sprinkler systems protecting all rooms and areas that are not part of the active smoke control zone.

403.4.9.1.2 Arrangement of supply and exhaust openings. The supply and exhaust openings serving the smoke control system shall be sufficiently separated from each other, but not less than a horizontal distance equal to two-thirds of the overall length of the corridor served. The entire exhaust opening shall be within the upper one-third of the average height of the corridor. The entire supply opening shall be within the lower one-third of the average height of the corridor.

403.4.9.1.3 Sequence of operation. Upon activation, the corridor smoke control system shall exhaust air directly to the exterior without recirculation. Recirculating fan-coil units serving the corridor and air-handling equipment serving residential units shall be permitted to continue to operate in normal mode. All other exhaust systems, including those serving toilets, kitchens, vending rooms, or other similar spaces shall be permitted to continue to operate in normal mode.

403.4.9.1.4 Number of zones. Where doors are provided to divide the corridors into multiple sections, each section shall be provided with the required ventilation rate.

Section 403.5.2 Additional exit stairway.

Add new Sections 403.5.2.1 and 403.5.2.2, as follows:

403.5.2 Additional exit stairway. For buildings other than Group R-2, that are more than 420 feet (128 m) in *building height*, one additional *exit stairway* meeting the requirements of Sections 1009 and 1022 shall be provided in addition to the minimum number of *exits* required by Section 1021.1. The total width of any combination of remaining *exit stairways* with one *exit stairway* removed shall not be less than the total width required by Section 1005.1. *Scissor stairs* shall not be considered the additional *exit stairway* required by this section.

403.5.2.1 Access. Access into the additional exit stairway shall be provided on every floor level equal to the exit stairways serving those areas of the building greater than 420 feet (128 m) in building height. The additional exit stairway shall not be required to be provided for redundancy to stairs serving only those portions of the building less than 420 feet (128 m) in building height.

403.5.2.2 Multiple towers. For buildings containing multiple towers, the additional exit stairway shall only be required for those towers exceeding 420 feet (128 m) in building height.

Exception: An additional *exit stairway* shall not be required to be installed in buildings having elevators used for occupant self-evacuation in accordance with Section 3008.

Section 403.5.3 Stairway door operation.

Revise Section 403.5.3, as follows:

403.5.3 Stairway door operation. Stairway doors other than the *exit discharge* doors shall be permitted to be locked from stairway side. Stairway doors that are locked from the stairway side shall be unlocked simultaneously without unlatching upon any of the following: a signal from the fire command center; activation of a fire alarm signal in an area served by the stairway; or failure of the power supply.

Exception: Upon approval of the *building official*, stairway doors opening directly into privately owned residential units or leased tenant spaces are permitted to unlock without unlatching only upon signal from the fire command center.

Section 403.5.4 Smokeproof exit enclosures.

Revise Section 403.5.4, as follows:

403.5.4 Smokeproof exit enclosures. Every required level *exit stairway* serving floors more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access shall comply with Sections 909.20 and 1022.9.

Section 403.6.1 Fire service access elevator.

Revise Section 403.6.1, as follows:

403.6.1 Fire service access elevator. In buildings with an occupied floor more than 120 feet (36 576 mm) above the lowest level of fire department vehicle access, a minimum of one fire service access elevator shall be provided in accordance with Section 3007.

Exception: Where a building is provided with multiple elevators in accordance with Section 3002.4 and Table 3002.4, a fire service access elevator shall not be required.

Section 404.3 Automatic sprinkler protection.

Delete Exception No. 1 and No. 2 in Section 404.3, as follows:

[F] 404.3 Automatic sprinkler protection. An approved automatic sprinkler system shall be installed throughout the entire building.

Section 404.6 Enclosure of atriums.

Revise Section 404.6, as follows:

404.6 Enclosure of atriums. Atrium spaces shall be separated from adjacent spaces by a 1-hour *fire barrier* constructed in accordance with Section 707 or a *horizontal assembly* construction in accordance with Section 712, or both.

Exceptions:

1. A glass wall forming a smoke partition where a separately zoned system of automatic sprinklers are spaced 6 feet (1829 mm) or less along both sides of the separation wall, or on the room side only if there is not a walkway on the atrium side, and between 4 inches and 12 inches (102 mm and 305 mm) away from the glass and designed so that the entire surface of the glass is wet upon activation of the sprinkler system without obstruction. The glass shall be installed in a frame so that the framing system deflects without breaking (loading) the glass before the sprinkler system activates.
2. *Unchanged.*
3. *Unchanged.*

Section 405.8.1 Standby power loads.

Revise Section 405.8.1, as follows:

[F] 405.8.1 Standby power loads. The following loads are classified as standby power loads:

1. Smoke control system.
2. Ventilation and automatic fire detection equipment for smokeproof enclosures.

Standby power shall be provided for elevators in accordance with Section 3003.

Section 405.9.1 Emergency power loads.

Revise Section 405.9, as follows:

[F] 405.9.1 Emergency power loads. The following loads are classified as emergency power loads:

1. Emergency voice/alarm communication systems.
2. Fire alarm systems.
3. Automatic fire detection systems.
4. Elevator car lighting.
5. *Means of egress* and exit sign illumination required by Chapter 10.
6. Electrically powered Fire Pimps.

Section 406.1.2 Area increase.

Add a new exception after last paragraph of Section 406.1.2, as follows:

406.1.2 Area increase. Group U occupancies used for the storage of private or pleasure-type motor vehicles where no repair work is completed or fuel is dispensed are permitted to be 3,000 square feet (279 m²) when the following provisions are met:

1. For a mixed occupancy building, the *exterior wall* and opening protection for the Group U portion of the building shall be as required for the major occupancy of the building. For such a mixed occupancy building, the allowable floor area of the building shall be as permitted for the major occupancy contained therein.
2. For a building containing only a Group U occupancy, the *exterior wall* shall not be required to have a *fire-resistance rating* and the area of openings shall not be limited when the *fire separation distance* is 5 feet (1524 mm) or more.

More than one 3,000-square-foot (279 m²) Group U occupancy shall be permitted to be in the same building, provided each 3,000-square-foot (279 m²) area is separated by *fire walls* complying with Section 706.

Exception: Noncombustible carports may be of unlimited area when they are open on all sides, not over twelve feet (3658 mm) in height, and located a minimum of 5 feet (1524 mm) from any property line or assumed property line, measured from the roof edge.

Section 406.1.4 Separation.

Revise Section 406.1.4 by adding new Item Nos. 4 and 5, as follows:

406.1.4 Separation. Separations shall comply with the following:

1. *Unchanged.*
2. *Unchanged.*
3. *Unchanged.*
4. Noncombustible carports do not require exterior wall and opening protection when they are open on all sides, not over twelve feet (3658 mm) in height, and located a minimum of 5 feet (1524 mm) from any property line or assumed property line, as measured from the roof edge.
5. When a Group B, F, M, R, or S occupancy structure and a noncombustible carport are located on the same property with a minimum separation of ten feet (3048) between the structure and the carport, as measured from the roof edges, exterior wall and opening protection is not required for either structure.

Section 406.2.6.1 Floor drains.

Add a new Section 406.2.1, as follows:

406.2.6.1 Floor drains. Where provided, floor drains installed in enclosed parking garages or repair garages shall drain to an *approved* sand/oil separator in accordance with the *International Plumbing Code*.

Section 406.4.2 Ventilation.

Revise Section 406.4.2, as follows:

406.4.2 Ventilation. A mechanical ventilation system shall be provided in accordance with the *International Mechanical Code*.

Exceptions:

1. A mechanical ventilation system shall not be required in an enclosed parking garage when openings complying with Section 406.3.3.1 are provided.
2. A mechanical ventilation system shall not be required in an enclosed parking garage having a floor area of 1,000 ft² or less and used for the storage of five (5) or less private motor vehicles.

406.4.2.1 Minimum ventilation. The mechanical ventilation system shall be capable of producing a ventilation rate of 0.75 cfm per square foot (0.0038 m³/s·m²) of floor area.

Exception: When approved by the *building official*, the mechanical ventilation system may be designed to exhaust a minimum of 14,000 cfm (6.61 m³/s) for each operating vehicle. Such system shall be based on the anticipated instantaneous movement rate of vehicles, but not less than 2.5 percent of the garage capacity, or one vehicle, whichever is greater.

406.4.2.2 Intermittent operation. The mechanical ventilation system shall not be required to operate continuously where *approved* automatic carbon monoxide sensing devices are provided to operate the system automatically to maintain a maximum average concentration of carbon monoxide of 50 parts per million during any eight-hour period, with a maximum concentration not greater than 200 parts per million for a period not exceeding one hour.

406.4.2.3 Occupied spaces accessory to public garages. Connecting offices, waiting rooms, ticket booths and similar uses that are accessory to a public garage shall be supplied with conditioned air and maintained at a positive pressure.

Section 406.6.3 Ventilation.

Revise Section 406.6.3, as follows:

406.6.3 Ventilation. Repair garages shall be mechanically ventilated in accordance with the *International Mechanical Code*. The ventilation system shall be controlled at the entrance to the garage.

406.6.3.1 Minimum ventilation. The mechanical ventilation system shall be capable of producing a ventilation rate of 1.5 cfm per square foot (0.0076 m³/s·m²) of floor area. Each engine repair stall shall be equipped with an exhaust pipe extension duct, extending to the outside of the building, which, if over 10 feet (3048 mm) in length, shall mechanically exhaust 300 cfm (0.142 m³/s).

406.6.3.2 Occupied spaces accessory to repair garages. Connecting offices, waiting rooms and similar uses that are accessory to a repair garage shall be supplied with conditioned air and maintained at a positive pressure.

Section 410.3.4 Proscenium wall.

Add a new Exception to Section 410.3.4, as follows:

410.3.4 Proscenium wall. Where the stage height is greater than 50 feet (15 240 mm), all portions of the stage shall be completely separated from the seating area by a proscenium wall with not less than a 2-hour *fire-resistance rating* extending continuously from the foundation to the roof.

Exception: Where a stage is located in a building of Type I construction, the proscenium wall is permitted to extend continuously from the 2-hour *fire-resistance-rated* floor slab of the space containing the stage to the roof or a 2-hour *fire-resistance-rated* floor deck above. This exception shall not apply to buildings of Type IB construction in which the minimum fire-resistance ratings of the building elements in Table 601 have been reduced in accordance with Section 403.2.1.1.

Section 410.3.5.1 Activation.

Add a new Section 410.3.5.1, as follows:

410.3.5.1 Activation. When provided, a fire curtain shall be activated by manual emergency operation, fusible link, rate-of-rise heat detection installed in accordance with Section 907.3 operating at a rate of temperature rise of 15 to 20°F per minute (8 to 11°C per minute), or signal of water flow from any sprinkler system covering the stage as required by Section 410.6.

Section 410.6 Automatic sprinkler system.

Delete Exceptions No. 1 and 2 in Section 410.6, as follows:

[F] 410.6 Automatic sprinkler system. Stages shall be equipped with an automatic fire-extinguishing system in accordance with Chapter 9. Sprinklers shall be installed under the roof and gridiron and under all catwalks and galleries over the stage. Sprinklers shall be installed in dressing rooms, performer lounges, shops and storerooms accessory to such stages.

Exception: Sprinklers are not required within portable orchestra enclosures on stages.

Section 410.8 Special effects.

Add a new Section 410.8, as follows:

410.8 Special effects. Special effects are regulated by the *International Fire Code*.

Section 412.4.6 Fire suppression.

Delete the Exception in Section 412.4.6, as follows:

412.4.6 Fire suppression. Aircraft hangars shall be provided with a fire suppression system designed in accordance with NFPA 409, based upon the classification for the hangar given in Table 412.4.6.

Section 419.5 Fire Protection.

Revise Section 419.5, as follows:

419.5 Fire Protection. The live/work unit shall be provided with a monitored fire alarm system where required by Section 907.2.9 and an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2

Section 420.4 Visual access.

Add a new Section 420.4, as follows:

420.4 Visual access. The primary entrance door of individual units in motels, hotels, apartment houses, condominiums, and vacation timeshare properties shall contain a means to allow the occupant to visually identify a visitor without opening the unit entry door.

Section 421.5 Ventilation.

Revise Section 421.5, as follows:

421.5 Ventilation. Cutoff rooms shall be provided with mechanical ventilation.

Exception: Where approved by the *building official*, natural ventilation shall be permitted in lieu of mechanical ventilation.

421.5.1 Ventilation rate. Mechanical ventilation of hydrogen cutoff rooms shall be provided at a minimum rate of 1 cubic foot per minute per 12 cubic feet [$0.00138 \text{ m}^3/(\text{s}\cdot\text{m}^3)$] of room volume.

421.5.2 Inlets and outlets. Hydrogen cutoff rooms shall be ventilated utilizing air supply inlets and exhaust outlets arranged to provide uniform air movement to the extent practical. Inlets shall be uniformly arranged on exterior walls near floor level. Outlets shall be located at the high point of the room in exterior walls or the roof.

421.5.3 Operation. Ventilation shall be by a continuous mechanical ventilation system.

Exception: Where approved by the *building official*, ventilation shall be permitted to be by a mechanical ventilation system activated by a continuously monitoring flammable gas detection system that activates at a gas concentration of 25 percent of the lower flammable limit (LFL).

421.5.4 Shutdown. The gaseous hydrogen system shall be automatically shut down in the event of failure of the ventilation system.

Section 505.1 General.

Revise Section 505.1, as follows:

505.1 General. A *mezzanine* or *mezzanines* in compliance with Section 505 shall be considered a portion of the *story* in which it is contained. Such *mezzanines* shall not contribute to either the *building area* or number of *stories* as regulated by Section 503.1. The area of the *mezzanine* shall be included in determining the *fire area* defined in Section 902. The clear height above and below the *mezzanine* floor construction shall not be less than 7 feet-6 inches (2286 mm).

Exception: The clear height above and below the mezzanine shall not be less than 7 feet for any of the following conditions:

1. For Group A, B, E, F, M and U occupancies, where the occupant load does not exceed 49.
2. For Group H-1, H-2, and H-3 occupancies, where the occupant load does not exceed 3.
3. For Groups H-4, H-5, I-1, I-3, I-4, and R, where the occupant load does not exceed 10.
4. For Group S, where the occupant load does not exceed 29.

Section 507.2 Group F-2 or S-2, one story.

Revise Section 507.2, as follows:

507.2 Group F-2 or S-2, one story. The area of a Group F-2 or S-2 building no more than one *story* in height shall not be limited when the building is surrounded and adjoined by *public ways* or *yards* not less than 60 feet (18 288 mm) in width and the building is provided with an automatic sprinkler system throughout when required by Section 903.2 or the *International Fire Code*.

Section 507.3 Sprinklered, one story.

Delete Exception No. 2 in Section 507.3, as follows:

507.3 Sprinklered, one story. The area of a Group B, F, M or S building no more than one *story above grade plane*, or a Group A-4 building no more than one *story above grade plane* of other than Type V construction, shall not be limited when the building is provided with an *automatic sprinkler system* throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by *public ways* or *yards* not less than 60 feet (18 288 mm) in width.

Exception: Buildings and structures of Type I and II construction for rack storage facilities that do not have access by the public shall not be limited in height, provided that such buildings conform to the requirements of Sections 507.3, 903.3.1.1 and Chapter 23 of the *International Fire Code*.

Table 508.2.5 Incidental Accessory Occupancies.

Revise Table 508.2.5, as follows:

**TABLE 508.2.5
INCIDENTAL ACCESSORY OCCUPANCIES**

ROOM OR AREA	SEPARATION AND/OR PROTECTION
Rooms containing fire pumps in nonhigh-rise buildings	2 hours

All other parts of Table 508.2.5 to remain unchanged.

Section 603.1.2 Piping.

Revise Section 603.1.2, as follows:

603.1.2 Piping. The use of combustible piping materials shall be permitted when installed in accordance with the limitations of the *International Mechanical Code* and the *International Plumbing Code*; or the following:

603.1.2.1 Equipment rooms. Combustible piping shall be permitted to be installed in an equipment room that is enclosed by 2-hour fire-resistance rated construction and protected throughout by automatic sprinklers. The combustible piping shall be permitted to be extended from the equipment room to other rooms provided the piping is encased in an approved, dedicated 2-hour fire-resistance rated assembly. Where such combustible piping penetrates a fire-resistance rated wall and/or floor/ceiling assembly, the penetration shall be protected by a through-penetration firestop system that is listed for the specific piping material and that has F and T ratings not less than the required fire-resistance rating of the penetrated assembly. The combustible piping shall not penetrate more than a single floor.

603.1.2.2 Chemical waste systems. Combustible piping shall be permitted to be installed for chemical waste and vent systems when the chemical waste would otherwise react with noncombustible piping. Combustible piping serving such systems shall be protected as required in Section 603.1.2.1.

603.1.2.3 Medical water systems. Combustible piping shall be permitted to be installed for purified water systems that are used in conjunction with medical treatment systems, such as dialysis. Combustible piping serving such systems shall be protected as required in Section 603.1.2.1.

603.1.2.4 Bars and soda fountains. Combustible piping shall be permitted to be installed for distribution/process systems that serve bars and soda fountains. Combustible piping serving such systems shall either be installed below a fire-resistance rated slab-on-grade, protected as required in Section 603.1.2.1, or sleeved within noncombustible EMT conduit or metal piping from the room of origin to the area of end use. Where combustible piping serving bars and soda fountains is sleeved within noncombustible EMT conduit or metal piping, the end points of the conduit or pipe shall be sealed in accordance with Southern Nevada Health District requirements.

603.1.2.5 Fire sprinkler systems. CPVC piping that is specifically listed and labeled for fire protection use shall be permitted to be installed for fire sprinkler system piping provided that it is installed in accordance with its listing, the manufacturer's installation requirements, and the *International Building Code*.

603.1.2.6 Under slab-on-grade. Combustible piping shall be permitted to be installed under a fire-resistance rated slab-on-grade provided the transition from combustible to noncombustible piping occurs entirely below the slab-on-grade. The transition from combustible to noncombustible piping shall be permitted to occur within an equipment room directly above the slab-on-grade when the room is protected as required in Section 603.1.2.1.

Section 703.6 Marking and identification.

Revise Section 703.6, as follows:

703.6 Marking and identification. Fire walls, fire barriers, fire partitions, smoke barriers and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling in all accessible concealed floor, floor-ceiling or attic spaces. Such identification shall:

1. Be located within 15 feet (4572 mm) of the end of each wall, and at intervals not exceeding 30 feet (9144 mm) measured horizontally along the wall or partition; and
2. Include lettering not less than 2 inches (50.8 mm) in height with a minimum 3/8 inch stroke (9.5 mm) in a contrasting color, incorporating the suggested wording: “FIRE AND/OR SMOKE BARRIER—PROTECT ALL OPENINGS,” or other wording.

Exception: Walls in group R-2 occupancies that do not have a removable decorative ceiling allowing access to the concealed space

Table 705.8 Maximum Area of Exterior Wall Openings Based on Fire Separation Distance and Degree of Opening Protection

Revise Table 705.8, as follows:

TABLE 705.8 MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION		
FIRE SEPARATION DISTANCE (feet)	DEGREE OF OPENING PROTECTION	ALLOWABLE AREA^a
0 to less than 3 ^{b,c}	Unprotected, Nonsprinklered (UP, NS)	Not Permitted
	Unprotected, Sprinklered (UP, S) ⁱ	Not Permitted
	Protected (P)	Not Permitted
3 to less than 5 ^{d,e}	Unprotected, Nonsprinklered (UP, NS)	Not Permitted
	Unprotected, Sprinklered (UP, S) ⁱ	15%
	Protected (P)	15%
5 to less than 10 ^{e,f,j}	Unprotected, Nonsprinklered (UP, NS)	10% ^h
	Unprotected, Sprinklered (UP, S) ⁱ	25%
	Protected (P)	25%
10 to less than 15 ^{e, f, g, j}	Unprotected, Nonsprinklered (UP, NS)	15% ^h
	Unprotected, Sprinklered (UP, S) ⁱ	45%
	Protected (P)	45%
15 to less than 20 ^{f, g, j}	Unprotected, Nonsprinklered (UP, NS)	25%
	Unprotected, Sprinklered (UP, S) ⁱ	75%
	Protected (P)	75%
20 to less than 25 ^{f, g, j}	Unprotected, Nonsprinklered (UP, NS)	45%
	Unprotected, Sprinklered (UP, S) ⁱ	No Limit
	Protected (P)	No Limit
25 to less than 30 ^{f, g, j}	Unprotected, Nonsprinklered (UP, NS)	70%
	Unprotected, Sprinklered (UP, S) ⁱ	No Limit
	Protected (P)	No Limit
30 or greater	Unprotected, Nonsprinklered (UP, NS)	No Limit
	Unprotected, Sprinklered (UP, S) ⁱ	No Limit
	Protected (P)	No Limit

Notes and Footnotes remain unchanged except for the addition of j, as follows.

- j. For special requirements for Group U occupancies, see Sections 406.1.2 and 406.1.4.

Section 708.13.3 Refuse and laundry chute access rooms.

Revise Section 708.13.3, as follows:

708.13.3 Refuse and laundry chute access rooms. Access openings for refuse and laundry chutes shall be located in rooms or compartments enclosed by not less than 1-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with 712, or both. Openings into the access rooms shall be protected by opening protectives having a fire protection rating of not less than $\frac{3}{4}$ hour. Doors shall be self- or automatic-closing upon the detection of smoke in accordance with Section 715.4.8.3. The room or compartment shall be sized to allow the access door to the room or compartment to close and latch with the access panel to the refuse or laundry chute in any position.

Section 708.13.4 Termination room.

Revise Section 708.13.4, as follows:

708.13.4 Termination room. Refuse and laundry chutes shall discharge into an enclosed room separated from the remainder of the building by fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 712, or both. Construction shall be a minimum of 1-hour, but not less than the fire-resistance rating of the shaft enclosure. Openings into the termination room shall be protected by opening protectives having a fire protection rating of not less than $\frac{3}{4}$ hour for 1-hour termination rooms and $1\frac{1}{2}$ -hour for 2-hour termination rooms. Doors shall be self- or automatic-closing upon the detection of smoke in accordance with Section 715.4.8.3. Refuse chutes shall not terminate in an incinerator room. Refuse and laundry rooms that are not provided with chutes need only comply with Table 508.2.5.

Section 710.4 Continuity.

Revise Section 710.4, as follows:

710.4 Continuity. *Smoke barriers* shall form an effective membrane continuous from the top of the foundation or floor/ceiling assembly below to the underside of the floor or roof sheathing, deck or slab above, including continuity through concealed spaces, such as those found above suspended ceilings, and interstitial structural and mechanical spaces. The supporting construction shall be protected to afford the required *fire-resistance rating* of the wall or floor supported in buildings of other than Type IIB, IIIB or VB construction.

Exception: Smoke-barrier walls are not required in interstitial spaces where such spaces are designed and constructed with ceilings that provide resistance to the passage of fire and smoke equivalent to that provided by the smoke-barrier walls.

Table 715.4 Fire Door and Shutter Fire Protection Ratings

Revise Table 715.4 by adding a new Note, at the bottom of the Table, as follows:

Note: As specified in Section 909.20, 20-minute fire rated door opening protectives are allowed in *fire barrier* walls separating a vestibule and the stairway.

Footnotes "a" and "b" remain.

Section 715.4.8 Door Closing.

Revise Section 715.4.8, as follows:

715.4.8 Door Closing. *Fire doors* in fire walls shall be automatic-closing in accordance with this section. *Fire doors in other than fire walls* shall be self- or automatic-closing in accordance with this section.

Exceptions:

1. *Fire doors* located in common walls separating sleeping units in Group R-1 and between dwelling units of transient nature in Group R-2 shall be permitted without automatic- or self-closing devices.
2. The elevator car doors and the associated hoistway enclosure doors at the floor level designated for recall in accordance with Section 3003.2 shall be permitted to remain open during Phase I emergency recall operations.

Section 717.3.2 Groups R-1, R-2, R-3 and R-4.

Revise Section 717.3.2, as follows:

717.3.2 Groups R-1, R-2, R-3 and R-4. Draftstopping shall be provided in floor/ceiling spaces in Group R-1 buildings, in Group R-2 buildings with three or more dwelling units, in Group R-3 buildings with two dwelling units and in Group R-4 buildings. Draftstopping shall be located above and in line with the dwelling unit and sleeping unit separations.

Exceptions:

1. Draftstopping is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
2. Draftstopping is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.2, provided that automatic sprinkler systems in accordance with Section 903.3.1.1 are also installed in the combustible concealed spaces.

Section 717.4.2 Groups R-1 and R-2.

Revise Section 717.4.2, as follows:

717.4.2 Groups R-1 and R-2. Draftstopping shall be provided in attics, mansards, overhangs or other concealed roof spaces of Group R-2 buildings with three or more dwelling units and in all Group R-1 buildings. Draftstopping shall be installed above, and in line with, sleeping unit and dwelling unit separation walls that do not extend to the underside of the roof sheathing above.

Exceptions:

1. Where corridor walls provide a sleeping unit or dwelling unit separation, draftstopping shall only be required above one of the corridor walls.
2. Draftstopping is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

3. In occupancies in Group R-2 that do not exceed four stories in height, the attic space shall be subdivided by draftstops into areas not exceeding 3,000 square feet (279 m²) or above every two dwelling units, whichever is smaller.
4. Draftstopping is not required in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.2, provided that automatic sprinkler systems in accordance with Section 903.3.1.1 are also installed in the combustible concealed spaces.

Section 717.5 Combustible materials in concealed spaces in Type I or II construction.

Revise Section 717.5, as follows:

717.5 Combustible materials in concealed spaces in Type I or II construction. Combustible materials shall not be permitted in concealed spaces of buildings of Type I or II construction.

Exceptions:

1. Combustible materials in accordance with Section 603.
2. Combustible materials exposed within plenums complying with the *International Mechanical Code*.
3. Class A interior finish materials classified in accordance with Section 803 where the concealed space is protected with fire sprinklers as required by the Fire Code when fire sprinklers are required in the building by another section in this code.
4. Combustible insulation and covering on pipe and tubing, installed in concealed spaces other than plenums, complying with Section 719.7.
5. CPVC fire sprinkler system piping listed and labeled for fire protection use. Piping shall have a peak optical density not greater than 0.50, an average optical density of not greater than 0.15, and a flame spread of not greater than 5 feet when tested in accordance with UL 1887.

Section 721.6.2.3 Exterior Walls.

Revise Section 721.6.2.3, as follows:

721.6.2.3 Exterior Walls. For an *exterior wall* with a *fire separation distance* greater than 10 feet (3048 mm), the wall is assigned a rating dependent on the interior membrane and the framing as described in Tables 721.6.2(1) and 721.6.2(2). The membrane on the outside of the non-fire-exposed side of the *exterior walls* with a *fire separation distance* greater than 10 feet (3048 mm) may consist of sheathing, sheathing paper and siding as described in table 721.6.2(3).

Section 802.1 General.

Revise Section 802.1, as follows:

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

DECORATIVE MATERIALS. See Section 202.

EXPANDED VINYL WALL COVERING. Wall covering consisting of a woven textile backing, an expanded vinyl base coat layer and a nonexpanded vinyl skin coat. The expanded base coat layer is a homogeneous vinyl layer that contains a blowing agent. During processing, the blowing agent decomposes, causing this layer to expand by forming closed cells. The total thickness of the wall covering is approximately 0.055 inch to 0.070 inch (1.4 mm to 1.78 mm).

The remainder of this section remains unchanged.

Section 803.11.2 Set-out construction.

Revise Section 803.11.2, as follows:

803.11.2 Set-out construction. Where walls and ceilings are required to be of fire-resistance-rated or noncombustible construction and walls are set out or ceilings are dropped distances greater than specified in Section 803.11.1, noncombustible materials, in accordance with Section 703.4 shall be used except where *interior finish* materials meet one of the following:

1. Protected on both sides by an automatic sprinkler system in accordance with Section 903.3.1.1, or
2. The combustible void is filled with fiberglass or noncombustible insulation, or
3. Attached to a noncombustible backing, or
4. Attached to furring strips installed as specified in Section 803.11.1.

The hangers and assembly members of such dropped ceilings that are below the main ceiling line shall be of noncombustible materials, except that in Types III and V construction, *fire-retardant-treated wood* shall be permitted. The construction of each set-out wall shall be of fire-resistance-rated construction as required elsewhere in this code.

Section 803.13 Site-fabricated stretch systems.

Add a new Section 803.13.1, as follows:

803.13 Site-fabricated stretch systems. Where used as interior wall or ceiling finish materials, site-fabricated stretch systems shall be tested in the manner intended for use, and shall comply with the requirements of Section 803.1.1 or 803.1.2. If the materials are tested in accordance with ASTM E 84 or UL 723, specimen preparation and mounting shall be in accordance with ASTM E 2573.

803.13.1 Site-fabricated stretch ceiling systems. Where used as a dropped ceiling, the following shall apply:

1. In Types I and II construction, frames shall be of non-combustible materials.
2. Where automatic sprinkler protection in accordance with Section 903.3.1.1 or 903.3.1.2 is required beneath the panel, core materials shall be of non-combustible materials.

Section 806.1 General requirements.

Add a new sentence to the end of the fourth paragraph of Section 806.1, as follows:

[F] 806.1 General requirements. In occupancies in Groups A, E, I and R-1 and dormitories in Group R-2, curtains, draperies, hangings and other *decorative materials* suspended from walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 806.2 or be noncombustible.

In Groups I-1 and I-2, combustible *decorative materials* shall meet the flame propagation criteria of NFPA 701 unless the *decorative materials*, including, but not limited to, photographs and paintings, are of such limited quantities that a hazard of fire development or spread is not present. In Group I-3, combustible decorative materials are prohibited.

Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered *interior finish* if they cover 10 percent or more of the wall or of the ceiling area, and shall not be considered *decorative materials* or furnishings.

In Group B and M occupancies, fabric partitions suspended from the ceiling and not supported by the floor shall meet the flame propagation performance criteria in accordance with Section 806.2 and NFPA 701 or shall be noncombustible. In other than Group B and M occupancies, fabric partitions shall be in accordance with the type of construction required for the building.

Section 903.1.1 Alternative protection.

Delete Section 903.1.1, in its entirety.

Section 903.2 Where required.

Revise Section 903.2, as follows:

903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided throughout all buildings, regardless of occupancy type, exceeding 5,000 sq ft (464 m²) in building area, and additionally in locations described in Section 903.2.1 through 903.2.12.

Exceptions:

1. Open parking garages with no other occupancy above any part of the open parking garage structure are not required to be protected with automatic sprinklers.
2. Buildings, structures, or service equipment and installations directly used in utility generation or distribution which are installed on properly recorded easements belonging to water, gas, power, telephone, or other utility companies that are preemptively regulated by the Nevada Public Service Commission, a State of Nevada charter, or other public franchise. This exception does not apply to non-exempted buildings or structures containing occupiable spaces such as offices, meeting rooms, service counters, public restrooms, or other normally occupied space.

If any fire area in a building or structure is provided with fire sprinklers, whether required or not, all fire areas in the building or structure shall be provided with fire sprinklers.

Exceptions:

1. Where a building is subdivided into separate buildings, each having a total building area of less than 5,000 sq ft (464 m²), by 4-hour rated fire walls with no openings constructed in accordance with the IBC.
2. Special hazard areas that require sprinklers for certain uses, such as medical gas rooms, may be fire sprinklered without requiring additional fire sprinklers, when approved by the code official.

For new construction expanding existing buildings, where an addition to any existing non-sprinklered building or structure expands the total area to greater than 5,000 square feet (464 m²), the entire building, including the existing portions, shall be provided with fire sprinklers.

Exceptions:

1. Group R-3 occupancies with fire flow in accordance with the International Fire Code.
2. Where the area of the addition does not exceed 25% of the original building area at the time of construction and the area of the addition does not exceed 5,000 square feet (464 m²).

Section 903.2.3 Group E.

Revise Section 903.2.3, as follows:

903.2.3 Group E. An *automatic sprinkler* system shall be provided for Group E occupancies where one of the following conditions exists:

1. The Group E *fire areas have an occupant load of 50 or more.*
2. Any portion of the Group E fire areas is below the lowest *level of exit discharge.*
3. Rooms used for kindergarten, first or second-grade pupils or for child care purposes, are located above or below the first story.
4. Daycare facilities used for child care between the hours of 12:00 a.m. and 6:00 a.m.

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

Section 903.2.9 Group S-1.

Revise Section 903.2.9, as follows:

903.2.9 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 fire area exceeds 12,000 square feet (1115 m²)
2. A Group S-1 fire area is located more than three stories above grade plane.
3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m²)
4. A Group S-1 fire area used for the storage of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m²)
5. A Group S-1 fire area used for self-storage where the fire area exceeds 2,500 square feet (279 m²)

Section 903.3.1.1.1 Exempt locations.

Revise Section 903.1.1.1, as follows:

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

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when *approved* by the *fire code official*
3. Fire service access elevator machine rooms and machinery spaces

Section 903.3.1.2 NFPA 13R sprinkler systems.

Revise Section 903.3.1.2, as follows:

903.3.1.2 NFPA 13R sprinkler systems. Where allowed in buildings of Group R, up to and including two stories in height, automatic sprinkler systems shall be installed in accordance with NFPA 13 or NFPA 13R.

Section 903.3.1.3 NFPA 13D sprinkler systems.

Revise Section 903.3.1.3, as follows:

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

Section 903.3.5.2 Secondary water supply.

Revise Section 903.3.5.2, as follows:

903.3.5.2 Secondary water supply. A dedicated secondary on-site water supply equal to the hydraulically calculated sprinkler demand, including a 100 gpm inside hose stream requirement, but not less than 15,000 usable gallons, shall be provided for high-rise buildings. The secondary water supply shall have a duration of not less than 30 minutes.

Section 903.4 Sprinkler system supervision and alarms.

Revise Section 903.4, as follows:

903.4 Sprinkler system supervision and alarms. Sprinkler system supervision and alarms are regulated by the *International Fire Code*.

Section 904.2 Where required.

Revise Section 904.2, as follows:

904.2 Where required. Automatic fire-extinguishing systems shall be approved by the fire code official. Automatic fire-extinguishing systems shall not be considered an alternative to the required automatic sprinkler systems of Section 903 or for the purpose of exceptions or reductions allowed by other requirements of this code.

Section 905.3.1 Height.

Revise Section 905.3.1, as follows:

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

Section 905.3.2 Group A.

Revise Section 905.3.2, as follows:

905.3.2 Group A. Class I automatic wet standpipes shall be provided in nonsprinklered Group A buildings having an occupant load exceeding 1,000 persons.

Exceptions:

1. Open-air seating spaces without enclosed spaces
2. Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings where the highest floor surface used for human occupancy is 55 feet (16 764 mm) or less above the lowest level of fire department vehicle access.

Section 905.4 Location of Class I standpipe hose connections.

Revise Section 905.4, as follows:

905.4 Location of Class I standpipe hose connections. Class I standpipe hose connection shall be provided in all of the following locations:

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

Exception: Where floor areas adjacent to a horizontal exit are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the horizontal exit.

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

Exception: Where floor areas adjacent to an exit passageway are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the entrance from the exit passageway to other areas of the building.

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall.

5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a hose connection located either on the roof or at the highest landing of a stairway with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.
6. Throughout the entire building so that all portions of each floor level are provided with hose valve coverage utilizing 100 feet (30 480 mm) of hose and 30-foot (9144 mm) stream from any hose connection located on that floor or intermediate landing. The length of hose shall be along normal walking routes, and the stream shall not be expected to penetrate walls or windows.

Section 905.4.1 Protection.

Revise Section 905.4.1, as follows:

905.4.1 Protection. Risers and laterals of Class I standpipe systems not located within an enclosed stairway or pressurized enclosure shall be protected by a degree of fire resistance equal to that required for vertical enclosures in the building in which they are located.

Exception: In buildings constructed of Type I or Type II construction in accordance with the Building Code or in buildings equipped throughout with an approved automatic sprinkler system, standpipes that are not located within an enclosed stairway or pressurized enclosure are not required to be enclosed within fire-resistance-rated construction.

Revise Section 905.5, as follows:

905.5 Location of Class II standpipe hose connections. Class II standpipe hose connections are regulated by the *International Fire Code*.

Section 905.5.3 Class II system 1-inch hose.

Delete Section 905.5.3 in its entirety.

Section 906 Portable Fire Extinguishers

Delete 906.1 in its entirety and replace, as follows:

906.1 General. Portable fire extinguishers are regulated by the *International Fire Code*.

Section 907.1.2 Fire alarm shop drawings.

Revise Section 907.1.2, as follows:

907.1.2 Fire alarm shop drawings. Fire alarm shop drawings are regulated by the *International Fire Code*.

Section 907.2.7.1 Occupant Notification.

Delete Section 907.2.7.1 in its entirety.

Section 907.2.9.1 Manual fire alarm system.

Revise Section 907.2.9.1, as follows:

907.2.9.1 Manual fire alarm system. A manual fire alarm system that activates the occupant notification system in accordance with Section 707.6 shall be installed in Group R-2 occupancies where:

1. Any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge;
2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit; or
3. The building contains 15 or more dwelling units or sleeping units.

Exceptions:

1. A fire alarm system is not required in buildings not more than two stories in height where all dwelling units or sleeping units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least 1-hour fire partitions and each dwelling unit or sleeping unit has an exit directly to a public way, exit court or yard.
2. Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2 and the occupant notification appliances will automatically activate throughout the notification zones upon a sprinkler water flow. At least one manual fire alarm box is installed at an approved location.
3. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units and are protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that dwelling units either have a means of egress door opening directly to the exits or are served by open-ended corridors designed in accordance with Section 1026.6, Exception 4

Section 907.2.9.1.1 Automatic smoke detection system.

Add a new section 907.2.9.1.1, as follows:

907.2.9.1.1 Automatic smoke detection system. When a fire alarm system is required, an automatic smoke detection system that activates the occupant notification system in accordance with Section 907.6 shall be installed throughout all interior corridors serving sleeping units.

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

Section 907.2.13 High-rise buildings.

Revise Section 907.2.13, as follows:

907.2.13 High-rise buildings. Buildings with a floor used for human occupancy located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access shall be provided with an automatic smoke detection system in accordance with Section 907.2.13.1, a fire department communication system in accordance with Section 907.2.13.2 and an emergency voice/alarm communication system in accordance with Section 907.5.2.2.

Exceptions:

1. Airport traffic control towers in accordance with Section 907.2.22 and Section 412 of the IBC.
2. Open parking garages in accordance with Section 406.3 of the IBC.
3. Low-hazard special occupancies in accordance with Section 503.1.1 of the IBC.

Section 907.2.13.1.1 Area smoke detection.

Revise item #1, add two new items #3 and #4 and a new exception to Section 907.2.13.1.1, as follows:

907.2.13.1.1 Area smoke detection. Area smoke detectors shall be provided in accordance with this section. Smoke detectors shall be connected to an automatic fire alarm system. The activation of any detector required by this section shall operate the emergency voice/alarm communication system in accordance with Section 907.5.2.2. Smoke detectors shall be located as follows:

1. In each mechanical equipment, or similar room which is not provided with sprinkler protection.
2. In each elevator machine room and in elevator lobbies.
3. In each transformer, telephone equipment and information technology equipment room.
4. In each electrical room (i.e., a room designed and dedicated to electrical distribution).

Exception: Mechanical equipment and similar rooms containing electrical equipment necessary for the operation of that equipment, such as motor control centers, variable frequency drives, service disconnects, building automation controls, and other similar electrical equipment are not required to be provided with smoke detection.

Section 907.4.1 Protection of fire alarm control unit.

Revise Section 907.4.1, as follows:

907.4.1 Protection of fire alarm control unit. In areas that are not continuously occupied, automatic smoke detection shall be provided at the location of each fire alarm control unit, notification appliance circuit power extenders and supervising station transmitting equipment.

Exceptions:

1. Where ambient conditions prohibit installation of smoke detector, a heat detector shall be permitted.
2. Dedicated function fire alarm systems shall not have smoke detectors installed.

Section 907.5.2.1.1 Average sound pressure.

Revise Section 907.5.2.1.1, as follows:

907.5.2.1.1 Average sound pressure. The audible alarm notification appliances shall provide a sound pressure level of 15 decibels (15 dBA) above the average ambient sound level or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater, in every occupiable space within the building. The minimum sound pressure levels shall be: 90 dBA in mechanical equipment rooms; and 80 dBA in other occupancies. One of the two methods below shall be utilized to ensure that the minimum sound level will be achieved:

- (1) Audible notification devices shall be installed in each occupied area, including but not limited to spaces such as bathrooms, walk-in closets, storage rooms, and walk-in coolers/freezers.

- (2) In lieu of providing audible notification devices within certain spaces, calculations may be performed in order to prove that the alarm signals from the proposed adjacent audible devices will achieve a minimum of 80 decibels inside and throughout that space, where doors or other barriers between the space and the adjacent audibility device(s) are closed.

Section 907.5.2.1.1.1 Average sound pressure.

Add new Section, 907.5.2.1.1.1, as follows:

907.5.2.1.1.1 Where occupants are incapable of evacuating themselves because of age, physical or mental disabilities, or physical restraint, the private mode as described in NFPA 72, National Fire Alarm Code, shall be permitted to be used when allowed by the AHJ. Only the attendants and other personnel required to evacuate occupants from a zone, area, floor, or building shall be required to be notified when allowed by the AHJ. The notification shall include means to readily identify the zone, area, floor, or building in need of evacuation

Section 907.5.2.1.2 Maximum sound pressure.

Revise Section 907.5.2.1.2, as follows:

907.5.2.1.2 Maximum sound pressure. The maximum sound pressure level for audible alarm notification appliances shall be 110 dBA at the minimum hearing distance from the audible appliance. Where the average ambient noise is greater than 95 dBA, visible alarm notification appliances shall be provided in accordance with NFPA 72.

Section 907.5.2.3 Visible Alarms.

Revise Section 907.5.2.3, as follows:

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

Exceptions:

1. Visible alarm notification appliances are not required in alterations, when the building does not have visible alarm notification appliances installed anywhere within the building, except where an existing fire alarm system is upgraded or replaced, or a new fire alarm system is installed.
2. Visible alarm notification appliances shall not be required in exits as defined in Section 1002.1.
3. Visible alarm notification appliances shall not be required in elevator cars.

Section 907.6.3.1 Alarm Annunciator.

Revise Section 907.6.3.1, as follows:

907.6.3.1 Alarm Annunciator. All required annunciation means shall be readily accessible to responding personnel to facilitate an efficient response to a fire situation. A remote annunciator shall be provided inside the building at the main entrance of all buildings. The location of an operated initiating device shall be displayed by alphanumeric display at the annunciator. The alphanumeric display shall state the device type, the floor level (if applicable), the device address and a descriptive location for the operated device(s). The visible annunciation of the location of operated initiating devices shall not be canceled by the means used to deactivate alarm notification appliances.

Section 909.4.6 Duration of operation.

Revise Section 909.4.6, as follows:

[F] 909.4.6 Duration of operation. All portions of active or passive smoke control systems shall be capable of continued operation after detection of the fire event for a period of not less than 20 minutes.

Exception: An engineered analysis utilizing twice the estimated egress time to demonstrate that all occupants can safely evacuate shall be permitted.

Section 909.5.2 Opening protection.

Add a new Exception #6 to Section 909.5.2, as follows:

909.5.2 Opening protection. Openings in *smoke barriers* shall be protected by automatic-closing devices actuated by the required controls for the mechanical smoke control system. Door openings shall be protected by *fire door assemblies* complying with Section 715.4.3.

Exceptions:

1. *Unchanged.*
2. *Unchanged.*
3. *Unchanged.*
4. *Unchanged.*
5. *Unchanged.*
6. Door openings in *smoke barriers* shall be permitted to be protected by *self-closing* fire doors in the following locations:
 - 6.1 Guest rooms.
 - 6.2 Individual dwelling units.
 - 6.3 Mechanical rooms.
 - 6.4 Elevator machine rooms.
 - 6.5 Electrical rooms used exclusively for that purpose.
 - 6.6 Doors typically maintained in a closed position as approved by the Building Official.

Section 909.16 Fire-fighter's smoke control panel.

Revise Section 909.16, 909.16.1, 909.16.2, 909.16.3, as follows:

909.16 Fire-fighter's smoke control panel. The Fire-fighter's smoke control panels are regulated by the *International Fire Code*.

Section 909.17 System response time.

Revise Section 909.17, as follows:

909.17 System response time. Smoke-control system activation shall be initiated immediately after receipt of an appropriate automatic or manual activation command. Smoke control systems shall activate individual components (such as dampers and fans) in the sequence necessary to prevent physical damage to the fans, dampers, ducts and other equipment. For purposes of smoke control, the fire-fighter's smoke control panel response time shall be the same for automatic or manual smoke control action initiated from any other building control point. The total response time, including that necessary for detection, shut-down of operating equipment and smoke control system startup, shall allow for full operational mode to be achieved before the conditions in the space exceed the design smoke condition. Upon receipt of an alarm condition at the fire alarm control panel, fans, dampers and automatic doors shall have achieved their proper operating state and final status shall be indicated at the smoke control panel within 90 seconds. Verification –shall be reported in the required final report.

Section 909.18.8.3 Reports.

Revise Section 909.18.8.3 and 909.18.8.3.1, as follows:

909.18.8.3 Reports. A complete report of testing shall be prepared by the special inspector or special inspection agency. The report shall include identification of all devices by manufacturer, nameplate data, design values, measured values and identification tag or mark. The report shall be reviewed by the responsible registered design professional and, when satisfied that the design intent has been achieved, the responsible registered design professional shall seal, sign and date the report with a statement as follows:

“I have reviewed this report and by personal knowledge and on-site observation certify that the smoke-control system is in substantial compliance with the design intent, and to the best of my understanding complies with requirements of the code.”

909.18.8.3.1 Report filing. A copy of the final report shall be filed with the code official and an identical copy shall be maintained in an approved location at the building.

Section 909.18.10 Alternative testing method.

Add a new Section 909.18.10, as follows:

909.18.10 Alternative testing method. When required by the Code Official, theatrical smoke or other approved tracer gases shall be used during final acceptance testing to visually verify air movement.

Section 909.20 Smokeproof enclosures.

Revise Section 909.20, as follows:

909.20 Smokeproof enclosures. Where required by Section 1022.9, a smokeproof enclosure shall be constructed in accordance with this section. A smokeproof enclosure shall consist of an enclosed interior *exit stairway* that conforms to Section 1022.1 and an open exterior balcony or pressurized stairway enclosure and vestibule meeting the requirements of this section. Where access to the roof is required by the *International Fire Code*, such access shall be from the smokeproof enclosure where a smokeproof enclosure is required.

Sections 909.20.1 through 909.20.3.3 remain with no changes.

Section 909.20.4 Stair and vestibule pressurization alternative.

Delete Section 909.20.4 in its entirety and replace, as follows:

909.20.4 Stair and vestibule pressurization alternative. The provisions of Sections 909.20.4.1 through 909.20.4.3 shall apply to smokeproof enclosures using a pressurized stairway enclosure and pressurized entrance vestibule.

909.20.4.1 Vestibule doors. The door assembly from the building into the vestibule shall be a fire door assembly complying with Section 715.4. The door assembly from the vestibule to the pressurized stairway enclosure shall not have less than a 20-minute fire protection rating and meet the requirements for a smoke door assembly in accordance with Section 715.4.3. The door shall be installed in accordance with NFPA 105.

909.20.4.2 Pressure difference. The stair enclosure shall be pressurized to a minimum of 0.05 inch of water gage (12.44 Pa) positive pressure relative to the vestibule with all stairway doors closed under the maximum anticipated stack pressures. The vestibule with doors closed shall have a minimum of 0.05 inch of water gage (12.44 Pa) positive pressure relative to the fire floor. The pressure difference across doors shall not exceed 30 lbs (133-N) maximum force to begin opening the door.

909.20.4.3 Dampered relief opening. A controlled relief vent discharging a minimum of 2,500 cfm (1180 L/s) of air at the design pressure difference shall be located in the upper portion of the pressurized stairway enclosure.

Section 909.20.5 Stair pressurization alternative.

Revise Section 909.20.5 and add a new subsection 909.20.5.1, as follows:

909.20.5 Stair pressurization alternative. Where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, the vestibule is not required, provided that interior *exit stairways* are pressurized to a minimum of 0.10 inches of water (25Pa) and a maximum of 0.35 inches of water (87Pa) in the shaft relative to the building measured with all *stairway* doors closed under maximum anticipated conditions of stack effect and wind effect. The pressure difference across doors shall not exceed 30 lbs (133-N) maximum force to begin opening the door.

909.20.5.1 Dampered relief opening. A controlled relief vent discharging a minimum of 2,500 cfm (1180 L/s) of air at the design pressure difference shall be located in the upper portion of the pressurized exit enclosure.

Section 910.3.2.2 Sprinklered buildings.

Revise Section 910.3.2.2, as follows:

910.3.2.2 Sprinklered buildings. Where installed in buildings provided with an approved automatic sprinkler system, smoke and heat vents shall be designed to operate automatically by actuation of a heat-responsive device rated at a minimum temperature of 360° F (182° C).

Section 910.3.5 Draft curtains.

Revise Section 910.3.5, as follows:

910.3.5 Draft curtains. Where required by Table 910.3, draft curtains shall be installed only in non-sprinklered buildings on the underside of the roof in accordance with this section.

Section 911.1.3 Size.

Revise Section 911.1.3, as follows:

911.1.3 Size. The fire command center shall be a minimum of 0.015 percent of the total building area of the facility served or 200 square feet (19m²) in area, whichever is greater, with a minimum dimension of 0.7 times the square root of the room area, or 10 feet (3048 mm), whichever is greater.

Section 911.1.5 Required features.

Revise Section 911.1.5, as follows:

911.1.5 Required features. The fire command center shall comply with NFPA 72 and shall contain the following features:

1. The emergency voice/alarm communication control unit.
2. The fire department communication system.
3. Fire detection and alarm system annunciator.
4. Annunciator unit visually indicating the location of the elevators and whether they are operational.
5. Status indicator and controls for air distribution systems, including smoke removal systems where required by Section 403.4.6.
6. The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.
7. Controls for unlocking stairway doors simultaneously.
8. Sprinkler valve and waterflow detector display panels.
9. Emergency and standby power status indicators.
10. A telephone for fire department use with controlled access to the public telephone system.
11. Fire pump status indicators.
12. Current approved building plans including the Master Egress Plans, approved fire protection system shop drawings, approved Smoke Control Diagrams, the approved Fire Protection Report, fire/emergency preplans for the facility and manufacturers' operation manuals for all fire protection and life safety systems.
13. A new work table with a minimum size of three (3) feet by seven (7) feet capable of holding plans in an open position.
14. Generator supervision devices, manual start and transfer features.
15. Public address system, where specifically required by other sections of this code.
16. Elevator fire recall switch in accordance with ASME A17.1.

17. Elevator emergency or standby power selector switch(es), where emergency or standby power is provided.
18. An approved white board with a minimum size of three (3) feet by four (4) feet capable of easy erasure, with a marking device and an eraser attached.
19. Separate shunt trip switches for normal and emergency power.

Section 916 Fire Riser Rooms

Add a new Section 916, as follows:

Section 916 Fire Riser Rooms

916.1 Where required. A dedicated fire riser room shall be required in accordance with Section 916 of the International Fire Code.

916.2 Exterior Access Door. Fire riser rooms shall have an exterior access door with a minimum width of 36 inches (914 mm) and a minimum height of 80 inches (2032 mm).

Exception: For high-rise, terminal, and covered mall buildings, secondary fire risers may be contained in fire riser rooms that are located in dedicated rooms with direct corridor access inside the building without direct access from the exterior.

916.3 Protection. Fire riser rooms shall be separated from the rest of the building by 1-hour fire partitions.

916.4 Conditioning. Fire riser rooms shall be conditioned to maintain a minimum temperature of 40° F and a maximum temperature of 100° F. Heating and cooling units shall be permanently wired.

Exception: Where the riser room does not contain a Fire Alarm Control Unit or spare sprinklers heads, the riser room shall not be required to be conditioned for maximum temperature.

916.5 Lighting. Permanently installed artificial lighting with back-up power shall be provided for the riser room.

916.6 Size. The riser room shall have a minimum area of 16 square feet (1.49 m²), with a minimum dimension of 4 feet, for the first sprinkler riser, plus an additional 9 square feet (0.84 m²) for each additional riser contained.

916.7 Clearances for a fire alarm control unit. Where a fire alarm control unit is located in the fire riser room, the unit shall be located so that there is a minimum clearance in accordance with the electrical code.

Section 1006.3 Illumination emergency power.

Revise Section 1006.3, as follows:

1006.3 Illumination emergency power. The power supply for *means of egress* illumination shall normally be provided by the premises' electrical supply.

In the event of power failure, an emergency electrical system shall automatically illuminate all of the following areas:

1. *Aisles* and unenclosed egress *stairways* in rooms and spaces that require two or more *means of egress*.
2. *Corridors*, *exit enclosures* and *exit passageways* in buildings required to have two or more *exits*.
3. Exterior egress components at other than their *levels of exit discharge* until *exit discharge* is accomplished for buildings required to have two or more *exits*.
4. Interior *exit discharge* elements, as permitted in Section 1027.1, in buildings required to have two or more *exits*.
5. Exterior landings as required by Section 1008.1.6 for *exit discharge* doorways in buildings required to have two or more *exits*.
6. Electrical equipment rooms, *fire command centers*, fire pump rooms, PBX rooms, and generator rooms.
7. Public restrooms which are greater than 64 square feet (5.9 square meters) and accessed by *means of egress* components which are required to have emergency illumination.

The emergency power system shall provide power for a duration of not less than 90 minutes and shall consist of storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Chapter 27.

Section 1007.1 Accessible means of egress required.

Revise Section 1007.1, as follows:

1007.1 Accessible means of egress required. *Accessible means of egress* shall comply with this section. *Accessible* spaces shall be provided with not less than one *accessible means of egress*. Where more than one *means of egress* are required by Section 1015.1 or 1021.1 from any *accessible* space, each *accessible* portion of the space shall be served by not less than two *accessible means of egress*.

Exceptions:

1. *Accessible means of egress* are not required in alterations to existing facilities.
2. One *accessible means of egress* is required from an *accessible mezzanine* level in accordance with Section 1007.3, 1007.4 or 1007.5.
3. In assembly areas with sloped or stepped *aisles*, one *accessible means of egress* is permitted where the common path of travel from the wheelchair space is *accessible* and meets the requirements in Section 1028.8.

Section 1008.1.4.5 Security grilles.

Revise Section 1008.1.4.5, as follows:

1008.1.4.5 Security grilles. In Groups A-2 and A-3 with occupant loads less than 300, and Groups B, F, M, and S, horizontal sliding or vertical security grilles are permitted at the main exit and shall be openable from the inside without the use of a key or special knowledge or effort during periods that the space is occupied. The grilles shall remain secured in the full-open position during the period of occupancy by the general public. Where two or more *means of egress* are required, not more than one-half of the *exits* or *exit access doorways* shall be equipped with horizontal sliding or vertical security grilles.

Section 1008.1.5 Floor elevation.

Revise Section 1008.1.5, as follows:

1008.1.5 Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 unit vertical in 12 units horizontal (2-percent slope).

Exceptions:

1. *Unchanged.*
2. *Unchanged.*
3. *Unchanged.*
4. *Unchanged.*
5. *Unchanged.*
6. A single step with a maximum height of 7 inches (178 mm) is permitted for doors serving building equipment rooms that are not normally occupied and are not required to be accessible by Chapter 11.

Section 1008.1.8 Door arrangement.

Revise Section 1008.1.8, as follows:

1008.1.8 Door arrangement. Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors.

Exceptions:

1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm).
2. Storm and screen doors serving individual dwelling units in Groups R-2 and R-3 need not be spaced 48 inches (1219 mm) from the other door.
3. Doors within individual dwelling units in Groups R-2 and R-3 other than within Type A dwelling units.
4. The space between doors serving access vestibules of smokeproof enclosures shall be permitted to be in accordance with Section 909.20.1.

Section 1008.1.9.7 Delayed egress locks.

Revise Section 1008.1.9.7, as follows:

1008.1.9.7 Delayed egress locks. *Approved, listed,* delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings which are equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved* automatic smoke detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an *exit*.

1. The doors unlock upon actuation of the *automatic sprinkler system* or automatic smoke detection system.
2. The door unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center.
4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.
5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 SECONDS.
6. Emergency lighting shall be provided at the door.

Section 1008.1.9.10 Stairway doors.

Revise Section 1008.1.9.10, as follows:

1008.1.9.10 Stairway doors. *Interior stairway means of egress* doors shall be operable from both sides without the use of a key or special knowledge or effort.

Exceptions:

1. *Stairway* discharge doors shall be openable from the egress side and shall only be locked from the opposite side.
2. This section shall not apply to doors arranged in accordance with Section 403.5.3.
3. In *stairways* serving buildings other than high-rise buildings, doors are permitted to be locked from the side opposite the egress side, provided they are openable from the egress side. Except for exit discharge doors, the stairway doors shall be automatically unlocked simultaneously without unlatching upon any of the following: a signal from the fire command center, if present, or a signal by emergency personnel from an approved location inside the building; activation of a fire alarm system or a fire sprinkler system in an area served by the stairway; or failure of the power supply.
4. Upon approval of the *building official*, stairway doors opening directly into privately owned residential units or leased tenant spaces are permitted to be locked from the side opposite the egress side, provided they are openable from the egress side. The doors are permitted to unlock without unlatching only upon signal from the fire command center, if present, or a signal by emergency personnel from an approved location inside the building.

Section 1008.3 Turnstiles.

Revise Section 1008.3, as follows:

1008.3 Turnstiles. Turnstiles or similar devices that restrict travel to one direction shall not be placed so as to obstruct any required *means of egress*.

Exception: Each turnstile or similar device shall be credited with no more than a 50-person capacity where all of the following provisions are met:

1. Each device shall turn free in the direction of egress travel when primary power is lost.
2. Such devices are not given credit for more than 50 percent of the required egress capacity.
3. Each device is not more than 39 inches (991 mm) high.
4. Each device has at least 16½ inches (419 mm) clear width at and below a height of 39 inches (991 mm) and at least 22 inches (559 mm) clear width at heights above 39 inches (991 mm).
5. Buildings are protected throughout by an approved automatic sprinkler system or an approved automatic smoke detection system.
6. Each device shall automatically turn free in the direction of egress travel upon activation of the automatic sprinkler system or the smoke detection system. The device shall remain unlocked until the fire protection system is reset.

Where located as part of an *accessible route*, turnstiles shall have at least 36 inches (914 mm) clear at and below a height of 34 inches (864 mm), at least 32 inches (813 mm) clear width between 34 inches (864 mm) and 80 inches (2032 mm) and shall consist of a mechanism other than a revolving device.

Section 1011.6 Floor proximity exit signs.

Add a new Section 1011.6, as follows:

1011.6 Floor proximity exit signs. Where exit signs are required by Section 1011.1, additional approved floor proximity exit signs that are internally or externally illuminated shall be provided in all corridors serving residential units in Group R-1 occupancies and Group R-2 occupancies with transient use. The bottom of each such sign shall not be less than 6 inches (152 mm) nor more than 18 inches (455 mm) above the floor level and shall indicate the path of exit travel. For exit and exit-access doors, the sign shall be mounted on the door or adjacent to the door, with the nearest edge of the sign within 4 inches (102 mm) of the door frame.

Section 1012.9 Intermediate handrails.

Add new Exception to Section 1012.9, as follows:

1012.9 Intermediate handrails. *Stairways* shall have intermediate *handrails* located in such a manner that all portions of the *stairway* width required for egress capacity are within 30 inches (762 mm) of a *handrail*. On monumental *stairs*, *handrails* shall be located along the most direct path of egress travel.

Exception: Stairs less than 88 inches in width.

Section 1015.2.2 Three or more exits or exit access doorways.

Revise Section 1015.2.2, as follows:

1015.2.2 Three or more exits or exit access doorways. Where access to three or more *exits* is required, at least two *exit* doors or *exit access doorways* shall be arranged in accordance with the provisions of Section 1015.2.1. Additional *exits* or *exit access doorways* shall be distributed so that if one becomes blocked, the others will be available.

Section 1016.3 Corridor increases.

Add a new Section 1016.3, as follows:

1016.3 Corridor increases. The travel distances specified in Table 1016.1 may be increased up to an additional 100 feet (30 480 mm) provided that the last portion of exit access leading to the exit occurs within a minimum one-hour fire-resistance rated corridor. The length of such corridor shall not be less than the amount of increase taken, in feet (mm).

Section 1021.1 Exits from stories.

Revise Section 1021.1, as follows:

1021.1 Exits from stories. All spaces within each *story* shall have access to the minimum number of *approved* independent *exits* as specified in Table 1021.1 based on the *occupant load* of the *story*. For the purposes of this chapter, occupied roofs shall be provided with *exits* as required for stories.

Exceptions:

1. *Unchanged.*
2. *Unchanged.*
3. *Unchanged.*
4. In Group R-1, R-2 and R-3 occupancies, one *means of egress* is permitted within and from individual sleeping or dwelling units with a maximum *occupant load* of 20 where the sleeping or dwelling unit is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.

Section 1022.3 Openings and penetrations.

Revise Section 1022.3, as follows:

1022.3 Openings and penetrations. *Exit enclosure* opening protectives shall be in accordance with the requirements of Section 715.

Openings in *exit enclosures* other than unprotected exterior openings shall be limited to those necessary for *exit access* to the enclosure from normally occupied spaces and for egress from the enclosure.

Elevators shall not open into an *exit enclosure*.

Exceptions:

1. In buildings required to comply with Section 403 or 405, each of the *exit enclosures* serving a *story* with a floor surface located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access or more than 30 feet (9144 mm) below the finished floor of the lowest level of exit discharge, and accessed by way of a vestibule in accordance with Section 1022.9.2 are permitted to provide a second vestibule providing access into the required vestibule for areas considered normally non-occupied spaces. The second vestibule is required to be constructed in accordance with Section 909.20 and provided with automatic closing opening protection in accordance with Section 715. Smoke detection connected to the building fire alarm system shall be provided within the second vestibule.
2. In buildings not required to comply with Sections 403 or 405, each of the *exit enclosures* are permitted to provide a vestibule between the floor and the *exit enclosure* for areas considered normally non-occupied spaces. The vestibule is required to be constructed in accordance with Section 909.20 and provided with automatic closing opening protection in accordance with Section 715. Smoke detection connected to the building fire alarm system shall be provided within the vestibule.

Section 1022.9 Smokeproof enclosures and pressurized stairways.

Revise Section 1022.9, as follows:

1022.9 Smokeproof enclosures and pressurized stairways. In buildings required to comply with Section 403 or 405, each of the *exit enclosures* serving a *story* with a floor surface located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access or more than 30 feet (9144 mm) below the finished floor of a *level of exit discharge* serving such stories shall be a *smokeproof enclosure* or *pressurized stairway* in accordance with Section 909.20. Pressurization shall occur automatically upon activation of an *approved* fire alarm system.

Section 1024.1 General.

Revise Section 1024.1, as follows:

1024.1 General. *Approved* luminous egress path markings delineating the exit path shall be provided in exit enclosures in buildings of Groups A, B, E, I, M and R-1 having occupied floors located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access in accordance with Sections 1024.1 through 1024.5.

Exceptions:

1. Luminous egress path markings shall not be required on the *level of exit discharge* in lobbies that serve as part of the exit path in accordance with Section 1027.1, Exception 1.
2. Luminous egress path markings shall not be required in areas of *open parking garages* that serve as part of the exit path in accordance with Section 1027.1, Exception 3.
3. Luminous egress path markings shall not be required in exit enclosures that do not serve a *story* located more than 55 feet above the lowest level of fire department vehicle access.

Section 1026.2 Use in a means of egress.

Revise Section 1026.2, as follows:

1026.2 Use in a means of egress. *Exterior exit stairways* shall not be used as an element of a required *means of egress* for Group I-2 occupancies. For occupancies in other than Group I-2, *exterior exit ramps* and *stairways* shall be permitted as an element of a required *means of egress* for buildings not exceeding six stories above *grade plane* or having occupied floors more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access.

Section 1028.6.2.3 Automatic sprinklers.

Revise Section 1028.6.2.3, as follows:

1028.6.2.3 Automatic sprinklers. Enclosed areas with walls and ceilings in buildings or structures containing *smoke-protected assembly seating* shall be protected with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1.

Exception: Outdoor seating facilities where seating and the *means of egress* in the seating area are essentially open to the outside.

Section 1102.1 Definitions.

Revise Section 1102.1, “Self-Service Storage Facility” definition, as follows:

SELF-SERVICE STORAGE FACILITY. Real property designed and used for the purpose of renting or leasing individual storage spaces to customers for the purpose of storing and removing property on a self-service basis.

Section 1107.6.2.1 Apartment houses, condominiums, monasteries and convents.

Revise Section 1107.6.2.1, as follows:

1107.6.2.1 Apartment houses, condominiums, monasteries and convents. *Type A units* and *Type B units* shall be provided in apartment houses, condominiums, monasteries and convents in accordance with Sections 1107.6.2.1.1 and 1107.6.2.1.2.

Section 1203.1 General.

Revise Section 1203.1, as follows:

1203.1 General. Buildings shall be provided with natural ventilation in accordance with Section 1203.4, or mechanical ventilation in accordance with the *International Mechanical Code* or Section 1203.6.

Section 1203.2 Attic spaces.

Revise Section 1203.2, as follows:

1203.2 Attic spaces. Where determined necessary by the *building official* due to atmospheric or climatic conditions, enclosed attics and enclosed rafter spaces formed where ceiling are applied directly to the underside of roof framing members shall have cross ventilation openings for each separate space by ventilating openings protected against the entrance of rain and snow. Blocking and bridging shall be arranged so as not to interfere with the movement of air. A minimum of 1 inch (25 mm) of airspace shall be provided between the insulation and the roof sheathing. The net free ventilating area shall not be less than $\frac{1}{300}$ of the area of the space ventilated, with 50 percent of the required ventilating area provided by ventilators located in the upper portion of the space to be ventilated at least 3 feet (914 mm) above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents.

Section 1203.4.1.3 Guest rooms and habitable rooms.

Add new Sections 1203.4.1.3, 1203.4.1.4, and 1203.4.1.5, as follows:

1203.4.1.3 Guest rooms and habitable rooms. Guest rooms and habitable rooms within a dwelling unit or congregate residence in R occupancies, when provided with natural ventilation by means of openable exterior openings, shall be provided with a minimum ventilation area of 5 square feet (0.46 m²).

1203.4.1.4 Bathrooms, water closets, laundry rooms and similar rooms in R occupancies. Bathrooms, water closet compartments, laundry rooms and similar rooms in R occupancies, when provided with natural ventilation by means of openable exterior openings, shall be provided with a minimum ventilation area of 1.5 square feet (0.14 m²).

1203.4.1.5 Toilet rooms. Toilet rooms, when provided with natural ventilation by means of openable exterior openings, shall be provided with a minimum ventilation area of 3 square feet (0.28 m²), or a vertical duct not less than 100 square inches (64 516 mm²) in area for the first water closet plus 50 square inches (32 258 mm²) of additional area for each additional water closet.

Section 1203.4.2.1 Bathrooms.

Delete Section 1203.4.2.1 in its entirety.

Section 1203.6 Mechanical ventilation.

Add new Section 1203.6 through 1203.6.5.2, as follows:

1203.6 Mechanical ventilation. Mechanically operated ventilation systems shall be in accordance with the *International Mechanical Code* or Sections 1203.6.1 through 1203.6.5.

1203.6.1 General. In all enclosed portions of Groups A, B, E, F, H, I, M and S Occupancies customarily occupied by human beings, when mechanically operated ventilation systems are provided in lieu of required exterior openings for natural ventilation, such system shall be capable of supplying a minimum of 15 cubic feet per minute (7 L/s) of outside air per occupant in all portions of the building during such time as the building is occupied. If the velocity of the air at a register exceeds 10 feet per second (3 m/s), the register shall be placed more than 8 feet (2438 mm) above the floor directly beneath. Such exterior openings shall open directly onto a public way or a yard or court as set forth in Section 1206.

In toilet rooms, if mechanically operated systems are to be utilized for required ventilation, such systems shall be capable of providing a complete change of air every 15 minutes. Such mechanically operated exhaust systems shall be connected directly to the outside, and the point of discharge shall be at least 3 feet (914 mm) from any opening that allows air entry into occupied portions of the building.

1203.6.2 Groups B, F, M and S Occupancies. In all buildings classified as Groups B, F, M and S Occupancies or portions thereof where Class I, II or III-A liquids are used, a mechanically operated exhaust ventilation system shall be provided sufficient to produce a minimum of six air changes per hour. Such exhaust ventilation shall be taken from a point at or near the floor level.

1203.6.3 Group H Occupancies. All Group H Occupancies shall comply with the *International Fire Code*, *International Mechanical Code* and Section 415. In Group H, Division 5 Occupancies, mechanical exhaust ventilation shall be provided in accordance with 415.8.2.6, 415.8.4.3, 415.8.5.7, 415.8.10.2 and other appropriate Sections of this code. Rooms, areas or spaces of Group H Occupancies in which explosive, corrosive, combustible, flammable or highly toxic dusts, mists, fumes, vapors or gases are or may be emitted due to the processing, use, handling or storage of materials shall be mechanically ventilated as required by Section 414.3, the *International Fire Code*, and the *International Mechanical Code*.

1203.6.4 Group R Occupancies. In Group R Occupancies, in lieu of required exterior openings for natural ventilation, a mechanically operated ventilation system may be provided. Such system shall be capable of providing two air changes per hour in guest rooms, dormitories, habitable rooms and in public corridors with a minimum of 15 cubic feet per minute (7 L/s) of outside air per occupant during such time as the building is occupied.

In lieu of required exterior openings for natural ventilation in bathrooms containing a bathtub, shower or combination thereof, laundry rooms, and similar rooms, a mechanically operated ventilation system capable of providing a minimum of five air changes per hour shall be provided. Such systems shall be connected directly to the outside, and the point of discharge shall be at least 3 feet (914 mm) from any opening that allows air entry into occupied portions of the building. Bathrooms that contain only a water closet, lavatory or combination thereof and similar rooms may be ventilated with an approved mechanical re-circulating fan or similar device designed to remove odors from the air.

1203.6.5 Motor Vehicle Related Occupancies.

1203.6.5.1 Repair garage. Ventilation in repair garages shall be in accordance with Section 406.6.3.

1203.6.5.2 Enclosed parking garages. Ventilation in enclosed parking garages shall be in accordance with Section 406.4.2.

Section 1603.1 General.

Add new Exception #7 to Section 1603.1, as follows:

(...)

7. Average dead loads for roofing and flooring materials.

Table 1607.1 Minimum Uniformly Distributed Live Loads, and Minimum Concentrated Live Loads

Add footnote “m” for item #27 in Table 1607.1, as follows:

(Remainder of Table and footnotes remain unchanged)

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs)
27 Residential		
One- and two- family dwellings		
Uninhabitable attics without storage i, m	10	
Uninhabitable attics with limited storage i, j, k, m	20	
Habitable attics and sleeping areas	40	----
All other areas	40	
Hotels and multiple-family dwellings		
Private rooms and corridors serving them	40	
Public rooms and corridors serving them	100	

^m. Attics, designed per uniform loads described for uninhabitable attics, are not required to be designed for the additional concentrated load of Item 31

Section 1609.1.1 Determination of wind loads.

Add a new exception #7 to Subsection 1609.1.1, as follows:

Exceptions:

(...)

7. Solid and freestanding walls up to and including 10' (3.05m) above the highest adjacent grade and designed using the provisions of ASCE 7 section 6.5.14 need only consider CASE A of Figure 6-20 with a C_f factor equal to 1.40 and the resultant applied at the mid-height of the wall.

Section 1610.1 General.

Revise Section 1610.1 and add a new Subsection 1610.1.1, as follows:

1610.1 General. Foundation walls and retaining walls shall be designed to resist lateral soil loads. When a geotechnical report is not required by the building official the design active pressure shall be 45 psf/ft and the at-rest pressure shall be 60 psf/ft. Foundation walls and other walls in which horizontal movement is restricted at the top shall be designed for at-rest pressure, unless specified otherwise in a soil investigation report approved by the building official. Retaining walls free to move and rotate at the top shall be permitted to be designed for active pressure. Design lateral pressure from surcharge loads shall be added to the lateral earth pressure load. Design lateral pressure shall be increased if soils at the site are expansive. Foundation walls shall be designed to support the weight of the full hydrostatic pressure of undrained backfill unless a drainage system is installed in accordance with Sections 1805.4.2 and 1805.4.3.

1610.1.1 Seismic load due to lateral earth pressure. All basement, foundation, and retaining walls in seismic design categories D, E, or F shall be designed to resist the seismic load due to the lateral earth pressure based on the following equations.

For yielding walls: $\frac{3}{8} (k_H) (H)^2$ (Equation 16-35a)

For nonyielding walls: $(k_H) (H)^2$ (Equation 16-35b)

Where k_H (peak ground acceleration) = $S_{DS} / 2.5$

H = the height of the backfill behind the wall

These equations represent the dynamic (seismic) lateral thrust. The point of application of the resultant dynamic thrust is taken at a height of 0.6H above the base of the wall. This is represented as an inverted trapezoidal pressure distribution.

Section 1612.3 Establishment of flood hazard areas.

Revise Section 1612.3, as follows:

1612.3 Establishment of flood hazard areas. To establish *flood hazard areas*, the applicable governing authority shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineering report entitled “The Flood Insurance Study for Clark County, Nevada and Incorporated Areas,” most current edition, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section.

Section 1613.1. Scope.

Revise Exception #1 to Section 1613.1, as follows:

1613.1. Scope. Every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7, excluding Chapter 14 and Appendix 11A. The seismic design category for a structure is permitted to be determined in accordance with Section 1613 or ASCE 7.

Exceptions:

1. Detached one- and two-family dwellings, assigned to Seismic Design Category A or B
2. The seismic-force-resisting system of wood-framed buildings that conform to the provisions of Section 2308 are not required to be analyzed as specified in this section.
3. Agricultural storage structures intended only for incidental human occupancy.
4. Structures that require special consideration of their response characteristics and environment that are not addressed by this code or ASCE 7 and for which other regulations provide seismic criteria, such as vehicular bridges, electrical transmission towers, hydraulic structures, buried utility lines and their appurtenances and nuclear reactors.

Section 1613.5.1 Mapped acceleration parameters.

Revise Subsection 1613.5.1, as follows:

1613.5.1 Mapped acceleration parameters. The parameters S_s and S_1 shall be determined from the 0.2 and 1-second spectral response accelerations shown on Figures 1613.5(1) through 1613.5(14) or from the 0.2 and 1-second spectral response accelerations with 2% probability of exceedance in 50 years using the latest probabilistic maps or data made available by the United States Geological Survey. Where S_1 is less than or equal to 0.04 and S_s is less than or equal to 0.15, the structure is permitted to be assigned to Seismic Design Category A.

Section 1613.5.2 Site class definitions.

Add new paragraph at the end of Subsection 1613.5.2, as follows:

Additionally, where allowed by the Building Official, the Registered Design Professional may determine the site class by utilizing values from the Clark County Shear Wave Velocity Profile Map (CCSWVPM). The CCSWVPM may not provide coverage in all areas and is not intended to preclude the use of other site specific testing methods to determine site class.

Section 1613.5.5 Site classification for seismic design.

Revise the last paragraph in Subsection 1613.5.5, as follows:

The rock categories, Site Classes A and B, shall not be used if there is more than 10 feet (3048 mm) of soil between the rock surface and the bottom of the spread footing or mat foundation. This provision shall be required when the average soil shear wave velocity, v_{ss} , within 10 feet of the foundation bottoms is less than 2,500 fps.

Section 1613.5.5.1 Steps for classifying a site.

Add a new item #4 to Subsection 1613.5.5.1, as follows:

4. To classify a site as a site class A, B, or C per Table 1613.5.2 a minimum of one exploration to a depth of 100 feet is required per 40 acres or any portion thereof. The 100-foot exploration can be accomplished using any of the three methods outlined in Section 1613.5.5. A 100-foot exploration within 1,000 feet of the proposed site may be included in the total number of required explorations, but at least one 100-foot exploration must be located within the site boundaries. 100-foot exploration locations shall be determined by the registered design professional, but should be adequately spaced to classify the entire site. Additional 100-foot explorations may be required by the building official if soil conditions are variable across the site. Unless the soil shear wave velocity test is utilized, one test, N_i or s_{ui} , must be performed at ten foot intervals for the entire 100-foot exploration. Each distinctly different soil layer must also be tested. The same test used for a distinct soil layer may also be used for the ten foot interval provided the test interval does not exceed ten feet.

Section 1704.1 General.

Revise Section 1704.1, Exception #3, as follows:

3. Unless otherwise required by the building official, special inspections are not required for detached 1 & 2 family dwellings as applicable in Section 101.2 and occupancies in Group U that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1”

Section 1704.1.2 Report requirement.

Revise Subsection 1704.1.2, as follows:

1704.1.2 Report requirement. Special inspectors shall keep records of required special inspections. The special inspector shall furnish inspection reports to the *building official*, and to the *registered design professional in responsible charge*. Reports shall indicate that work inspected was or was not completed in conformance to *approved construction documents*. Discrepancies shall be brought to the immediate attention of the contractor for correction. If they are not corrected, the discrepancies shall be brought to the attention of the *building official* and to the registered design professional in responsible charge in writing prior to the completion of that phase of the work. A final report documenting required *special inspections* and correction of any discrepancies noted in the inspections shall be submitted to the *building official* prior to the final inspection.

Section 1704.4 Concrete construction.

Revise the exceptions in Section 1704.4, as follows:

1704.4 Concrete construction. The *special inspections* and verifications for concrete construction shall be as required by this section and Table 1704.4.

Exception: *Special inspections* shall not be required for:

1. Isolated spread and/or continuous concrete footings supporting walls of buildings three stories or less above *grade plane* that are fully supported on earth or rock where:
 - 1.1 The footings are designed in accordance with Table 1809.7; or
 - 1.2 The structural design of the footing is based on a specified compressive strength, f'_c , no greater than 2,500 pounds per square inch (psi) (17.2 MPa), regardless of the compressive strength specified in the *construction documents* or used in the footing construction.
2. Nonstructural concrete slabs supported directly on the ground, including prestressed slabs on grade, where the effective prestress in the concrete is less than 150 pounds per square inch (1.03 MPa).
3. Concrete patios, driveways and sidewalks, on grade.

Section 1704.5 Masonry construction.

Revise the exceptions in Section 1704.5, as follows:

1704.5 Masonry construction. Masonry construction shall be inspected and verified in accordance with the requirement of Section 1704.5.1 through 1704.5.3, depending on the *occupancy category* of the building or structure.

Exception: *Special inspections* shall not be required for:

1. Empirically designed masonry, glass unit masonry or masonry veneer designed by Section 2109, 2110, or Chapter 14, respectively, or by Chapter 5, 6, or 7 of TMS 402/ACI 530/ASCE 5, respectively, when they are part of structures classified as *Occupancy Category* I, II, or III in accordance with Section 1604.5.
2. Masonry fireplaces, masonry heaters or masonry chimneys installed or constructed in accordance with Section 2111, 2112, or 2113, respectively.

3. Masonry fences less than or equal to 8'-0" in height, retaining walls less than or equal to 6'-0" in height or combined masonry fences and retaining walls less than or equal to 14'-0" in overall height with the retaining wall portion less than or equal to 6'-0" in height and the fence portion less than or equal to 8'-0" in height provided that the walls are designed in accordance with Chapter 2 of TMS 402/ACI 530/ASCE 5 with allowable stresses for masonry reduced by one half and f'_m does not exceed 1500 psi. Wall heights shall be measured from the top of footing to top of wall.

Section 1704.7 Soils.

Revise the exception in Section 1704.7, as follows:

Exception: Where Section 1803 does not require reporting of materials and procedures for fill placement, the in-place dry density of the compacted fill shall not be less than 90 percent of the maximum dry density at optimum moisture content determined in accordance with ASTM D 1557.

Table 1704.7 Required Verification and Inspection of Soils.

Revise Table 1704.7, as follows:

**Table 1704.7
REQUIRED VERIFICATION AND INSPECTION OF SOILS**

Verification and Inspection Task	Continuous During Task Listed	Periodically During Task Listed
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	—	X
2. Verify excavations are extended to proper depth and have reached proper material.	—	X
3. Perform classification and testing of compacted fill materials.	—	X
4. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill and other grading activities requiring special inspection.	—	X
a. All soils not meeting the requirements of category b.	—	X
b. Moderately, highly or critically expansive soils, hydrocollapsible soils, soluble soils, and/or soils requiring chemical or mechanical (geosynthetics) stabilization are encountered. Construction or stabilization of cut or fill slopes exceeding 5 feet in height, or any site requiring that fill be placed on a natural slope, an existing cut slope, or an existing fill slope steeper than 5:1.	X	—
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	—	X

Section 1704.17 Amusement and transportation systems special cases.

Add a new Section 1704.17, as follows:

1704.17 Amusement and transportation systems special cases. When testing or verification is required by the manufacturer or specified by the building official, the testing and verification shall occur during the initial installation, operational testing and annual renewal of the certificate of operation.

Section 1710.2 Structural observations for seismic resistance.

Revise item #5 in Section 1710.2, as follows:

1710.2 Structural observations for seismic resistance. Structural observations shall be provided for those structures assigned to Seismic Design category D, E, or F, as determined in Section 1613, where one or more of the following conditions exist:

1. The structure is classified as Occupancy Category III or IV in accordance with Table 1604.5.
2. The height of the structure is greater than 75 feet (22,860 mm) above the base.
3. The structure is assigned to Seismic Design Category E, is classified as Occupancy Category I or II in accordance with Table 1604.5, and is greater than two stories above grade plane.
4. When so designated by the registered design professional responsible for the structural design.

Additionally, structural observations shall be provided when such observation is specifically required by the building official, regardless of the seismic design category.

Section 1803.1 General.

Revise Section 1803.1, as follows:

1803.1 General. Geotechnical investigations shall be conducted in accordance with Section 1803.2 and reported in accordance with Section 1803.6. Where required by the building official or where geotechnical investigations involve in-situ testing, laboratory testing or engineering calculations, such investigations shall be conducted by a registered design professional.

All projects exempt from a geotechnical report shall assume a maximum presumptive load bearing value of 1,000 psf for the vertical foundation pressure, 100 psf/ft for the lateral bearing pressure, 0.25 for the coefficient of friction for lateral sliding resistance, and an Exposure Class S2 (severe sulfate exposure level).

Section 1803.2 Investigations required.

Revise Section 1803.2, as follows:

1803.2 Investigations required. Geotechnical investigations shall be conducted in accordance with Sections 1803.3 through 1803.5.

Geotechnical investigations shall be prepared by a registered design professional. Recommendations included in the report and approved by the building official shall be incorporated in the construction documents. Geotechnical investigations shall be required for all projects that require new foundations.

Exemptions. At the option of the building official, the following projects may be exempted from having a geotechnical investigation:

1. Single story structures, additions, or remodels with a footprint less than 600 square feet.
2. Fences.
3. Site retaining walls less than 4 feet in retained height.

4. Mobile homes, trailers, modular buildings that do not have concrete or masonry foundations.
5. Pre-engineered carports.
6. Signs, light poles, and communication towers less than 40 feet in height.

Section 1803.3.2 Minimum Exploration Requirements.

Add a new Subsection 1803.3.2, Minimum Exploration Requirements, as follows:

1803.3.2 Minimum Exploration Requirements. The minimum exploration requirements are as follows:

1. For areas less than or equal to one acre, a minimum of two explorations.
2. For areas greater than one acre, but less than five acres, a minimum of one exploration for the first acre and one for each additional two acres, or portion thereof.
3. For areas greater than five acres, but less than twenty acres, a minimum of three explorations plus one additional exploration for each three acres or fraction thereof above five.
4. For areas greater than twenty acres, a minimum of eight explorations plus one additional exploration for each five acres or fraction thereof above twenty.
5. Building additions of less than 2,000 square feet shall require a minimum of one exploration.
6. For signs, light poles, and communication towers whose locations are known and only that area of the site is to be developed, a minimum of one exploration is required.
7. The minimum depth of the exploration shall be fifteen feet. Exploration depth shall be increased as necessary to evaluate the suitability of the material within the foundation's depth of influence as determined by the registered design professional. The explorations can be terminated should refusal be encountered. However, at least three-fourths of the required explorations shall be to the minimum depth. The geotechnical report shall clearly state the refusal criteria. When information regarding the proposed structure and the final grades is made available, the registered design professional shall determine if the explorations originally documented in the geotechnical report meet the depth requirements.

Section 1803.5.3 Expansive soil.

Revise Subsection 1803.5.3, and add two (2) new Subsections, 1803.5.3.1 and 1803.5.3.2, as follows:

1803.5.3 Expansive soil. In areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist.

Soils meeting all provisions of 1 through 4 shall be considered expansive, except that tests to show compliance with Items 1, 2, and 3 shall not be required if the test prescribed in Item 4 or 5 is conducted. All soils determined to be expansive by items 1 through 4 shall also conduct item 5 to determine the expansion classification level.

1. Plasticity index (PI) of 15 or greater, determined in accordance with ASTM D 4318.
2. More than 10 percent of the soil particles pass a No. 200 sieve (75 μ m), determined in accordance with ASTM D 422.
3. More than 10 percent of the soil particles are less than 5 micrometers in size, determined in accordance with ASTM D 422.
4. Expansion index greater than 20, determined in accordance with ASTM D 4829.
5. Soils may be determined to be expansive or non-expansive by the preceding methods or the standard 60 psf swell test.

1803.5.3.1 Expansion classification level. Expansive soils shall be classified in accordance with Table 1808.6.1.1. When soils are determined to be expansive special design consideration are required. In the event that expansive soil properties vary with depth the variation shall be included in the engineering analysis of the expansive soil's effect on the structure. The foundation design and special inspection for grading/foundations shall be based upon results obtained from the standard 60 pound swell test. Refer to Section 1808.6 for additional requirements.

1803.5.3.2 Standard 60 pound swell test. The swell test samples shall be remolded to the in-place density required for the particular soil type as called for in the geotechnical report. The test samples shall be one inch thick and laterally confined by placing them in a consolidometer retaining ring constructed in accordance with ASTM D 2435. The swell test sample shall be oven dried at 60° C, and the sample shall be dried a minimum of eight (8) hours. The test samples shall be inundated with water and kept in a saturated moisture condition until measurable swelling or vertical movement ceases. The swell test shall use a 60 pounds per square foot surcharge load. The balance of the swell test will be per ASTM D 2435. Swell test results shall be interpreted using Table 1808.6.1.1

Section 1803.5.8 Compacted fill material.

Add new items #8 and #9 to Subsection 1803.5.8, as follows:

(...)

8. Flooding or jetting shall not be used to compact fill material that will support footings or foundation systems.
9. Placement procedure for oversized fill material. No rock or similar irreducible material with a maximum dimension greater than 12 inches shall be buried or placed in fills within five feet, measured vertically, from the bottom of the footing or lowest finished floor elevation, whichever is lower, within the building pad. Oversized fill material shall be placed so as to assure the filling of all voids with well-graded soil. Specific placement and inspection criteria shall be stated in the geotechnical investigation. Continuous special inspection will be required during placement of any oversized fill material.

Section 1803.6 Reporting.

Revise Section 1803.6 and add new items 5, 7, 13 through 28, as follows:

1803.6 Reporting. Where geotechnical investigations are required, a written report of the investigation shall be submitted to the building official by the owner or authorized agent at the time of permit application. The geotechnical report shall include, but need not be limited to, the following information:

1. A plot showing the location of the test borings, excavations, and/or investigations. The plot shall be dimensioned and shall show the approximate location of all existing and proposed structures.
2. A complete record of the soil boring and penetration test logs and soil samples.
3. A record of the soil profile.
4. Depth to the water table, if encountered.
5. Anticipated approximate cut and fill depths.
6. Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or compacted soil; provisions to mitigate the effects of expansive soils; mitigation of the effects of liquefaction, differential settlement, and varying soil strength; and the effects of adjacent loads. Provide provisions to mitigate the effects of collapsible soils, soluble soils, uncontrolled fill, chemical heave, and corrosive soils. Provide supporting test data.
7. Caliche and cemented soils considerations, if encountered. Recommendations for the removal of caliche and cemented soils and/or the preparation and grading for foundations on caliche and cemented soils.

8. Expected total and differential settlement. Provide all test data and supporting calculations when the allowable foundation bearing pressure exceeds 4,000 psf.
9. Deep foundation information in accordance with Section 1803.5.5.
10. Special design and construction provisions for foundations of structures founded on expansive soils, as necessary.
11. Compacted fill material properties and testing in accordance with Section 1803.5.8. Provide provisions to mitigate the effects of collapsible soils, soluble soils, uncontrolled fill, chemical heave, and corrosive soils.
12. Controlled low-strength material properties and testing in accordance with Section 1803.5.9.
13. Soil classification by the Unified Soil Classification System (ASTM D 2487). As an alternative, classification may be performed on a visual-manual basis (ASTM D 2488) in the field by an individual with a degree in civil engineering, engineering geology, geologic engineering, or geology. Backup data shall be included for at least one sample for every two (2) excavations and/or borings distributed among the prominent horizons in the soil profile.
14. Classify the expansion level of the soil and specify the minimum embedment depth per Table 1808.6.1.1.
15. Address, if applicable, the possible impacts on adjoining properties and mitigating measures to be undertaken.
16. Suitability of onsite soils for use as fill material.
17. Provide grading requirements for onsite and import soils (where applicable) including, but not limited to, swell, solubility, and sulfates.
18. Geotechnical design considerations for drainage structures, as applicable.
19. Trenching or other special procedures for determining fault and fissure(s) locations. The potential for differential movement across a fault and fissuring should be evaluated.
20. Procedures for mitigation for geological hazards.
21. Erosion control requirements, as applicable.
22. Anticipated structural loads and type of proposed structure.
23. When a post-tensioned slab-on-ground is recommended the geotechnical report must specify all of the soil parameters as required by Section 1808.6.2.
24. All lateral earth pressures and seismic forces shall be reported in psf/ft and distributions expressed in graphical form. All resulting forces must have a recommendation on wall placement location. Call out the mapped spectral response accelerations, S_s and S_1 , and spectral response coefficients, S_{DS} and S_{D1} assumed to calculate the distribution.
25. Site class per Table 1613.5.5, including all test data and supporting calculations.
26. Specify the soils category, and the level of special inspection required per Table 1704.7. The specified level of special inspection cannot be less than that required by Table 1704.7.
27. All geotechnical reports must be current within the last 12 months. Any report older than 12 months must be accompanied by a wet sealed update letter addressing the current site conditions based on a recent site visit.
28. At the option of the building official, a completed copy of a geotechnical report checklist shall be included with every submittal.

Section 1804.3 Site Grading.

Revise Section 1804.3, as follows:

1804.3 Site Grading. The ground immediately adjacent to the foundation shall be sloped away from the building at a slope of not less than one unit vertical in 20 units horizontal (5-percent slope) for a minimum distance of 10 feet (3048 mm) measured perpendicular to the face of the wall. If physical obstructions or lot lines prohibit 10 feet (3048mm) of horizontal distance, a 5-percent slope shall be provided to an approved alternative method of diverting water away from the foundation. Swales used for this purpose shall be sloped a minimum of 1 percent along the flow line where located within 10 feet (3048mm) of the building foundation. Impervious surfaces within 10 feet (3048mm) of the building foundation shall be sloped a minimum of 2 percent away from the building.

Exception: Where low expansive, low collapsible, low soluble soil conditions occur or where an exterior asphalt or concrete surface abuts a building, the slope of the ground away from the building foundation is permitted to be reduced to not less than one unit vertical in 48 units horizontal (2-percent slope).

The procedure used to establish the final ground level adjacent to the foundation shall account for additional settlement of the backfill.

Section 1804.3.1 Low collapsible and low soluble soil.

Add a new Subsection 1804.3.1 and a new Table 1804.3.1, as follows:

1804.3.1 Low collapsible and low soluble soil. Soils, after grading, shall be classified as low collapsible and low soluble in accordance with the table below. Soils shall be classified as low expansive in accordance with Table 1808.6.1.1.

Table 1804.3.1

Soil Condition	Criteria	Applicable Test Method
Low Collapsible	0 to < 3%	ASTM D 2435-04
Low Soluble	0 to < 2%	AWWA Standard Method 2540

If, after the grading is completed, the anticipated total settlement (collapse, consolidation, and/or compression) exceeds 1 inch, then the soil cannot be classified as low collapsible.

Section 1804.5 Compacted fill material.

Revise the exception in Section 1804.5, as follows:

Exception: When a geotechnical investigation is not required by the building official the in-place dry density within the building pad shall not be less than 90 percent of the maximum dry density at near optimum moisture content determined in accordance with ASTM D 1557.

Section 1805.2.1 Floors.

Revise Subsection 1805.2.1, as follows:

1805.2.1 Floors. Dampproofing materials for floors shall be installed between the floor and the base course required by Section 1805.4.1, except where a separate floor is provided above a concrete slab.

Where installed beneath the slab, dampproofing shall consist of not less than 10-mil (.010 inch; 0.254 mm) polyethylene with joints lapped not less than 6 inches (152 mm) or other approved methods or materials. Where permitted to be installed on top of the slab, dampproofing shall consist of mopped-on bitumen, not less than 4-mil (.004 inch; 0.012 mm) polyethylene, or other approved methods or materials. Joints in the membrane shall be lapped and sealed in accordance with the manufacturer's installation instructions.

Section 1807.2.3 Safety factor.

Revise the exception in Subsection 1807.2.3, as follows:

Exception: Where earthquake loads are included, the minimum safety factor for retaining wall sliding and overturning shall be 1.1. Where wind loads are included, the minimum safety factor for retaining wall sliding and overturning shall be 1.3.

Section 1807.2.4 Slope Stability Analysis.

Add a new Subsection 1807.2.4 Slope Stability Analysis, as follows:

1807.2.4 Slope Stability Analysis. Retaining walls greater than ten (10) feet (3.05m) in height shall be required to submit a slope stability analysis performed by a registered design professional. Multiple terraced (also sometimes referred to as stacked or tiered) retaining walls with a total height of sixteen feet or more shall require a slope stability analysis. Total height shall be measured from the bottom of the foundation to the top of the retaining wall(s). The minimum factor of safety of 1.5 is required for all failure modes under static loading conditions.

Section 1808.6.1.1 Minimum Foundation Depth in Expansive Soils.

Add a new Subsection 1808.6.1.1 and a new Table 1808.6.1.1, as follows:

1808.6.1.1 Minimum Foundation Depth in Expansive Soils. The minimum foundation depth requirements when placing foundations in expansive soil shall be per Table 1808.6.1.1.

**Table 1808.6.1.1
Minimum Thickened Edge or Foundation Depth¹**

Expansion	Percent Swell under 60 psf Surcharge	Minimum Thickened Edge or Foundation Depth (inches)
Low	> 0 to <4	12
Moderate	≥ 4 to < 8	15
High	≥ 8 to < 12	18
Critical 12	≥ 12 to < 16	24
Critical 16	≥ 16 to < 20	30
Critical 20+	20 or greater	36

Footnote:

¹. Thickened edge embedment depth shall be measured from the top of the lowest adjacent final compacted subgrade to the bottom of the footing.

Section 1808.6.2 Slab-On-Ground Foundations.

Revise Subsection 1808.6.2 and add a new Table 1808.6.2, as follows:

1808.6.2 Slab-On-Ground Foundations. Moments, shears, and deflections for use in structural design of slab-on-ground, mat or raft foundations on expansive soils shall be determined in accordance with *WRI/CRSI Design of Slab-on-Ground Foundations* or *PTI Standard Requirements of Analysis of Shallow Concrete Foundation on Expansive Soils*. Using the moments, shears and deflections determined above, nonprestressed slabs-on-ground, mat or raft foundations on expansive soils shall be designed in accordance with *WRI/CRSI Design of Slab-on-Ground Foundations* and post-tensioned slab-on-ground, mat or raft foundations on expansive soils shall be in accordance with *PTI Standard Requirements of Analysis of Shallow Concrete Foundation on Expansive Soils*. The criteria for determining the expansive nature of soils are given in section 1803.5.3. The minimum design criteria for post-tensioned slabs are defined in Table 1808.6.2. It shall be permitted to analyze and design such slabs by other methods that

account for soil-structure interaction, the deformed shape of the soil support, the plate or stiffened plate action of the slab as well as both center lift and edge lift conditions. Such alternate methods shall be rational and the basis for all aspects and parameters of the method shall be available for peer review.

Table 1808.6.2 Post Tensioned Slab Criteria

Expansion	Percent Swell under 60 psf Surcharge	Design Values Ym (inches) for PT slabs	
		Edge Lift	Center Lift
Low	> 0 to <4	1/8 to 1/4	-----
Moderate	≥ 4 to < 8	1/4 to 1/2	1/8 to 3/8
High	≥ 8 to < 12	½ to 1	3/8 to 1
Critical 12	≥ 12 to < 16	See Note No. 11	
Critical 16	≥ 16 to < 20	See Note No. 11	
Critical 20+	20 or greater	See Note No. 11	

Notes:

1. This chart is intended to address expansive soil. The presence of collapsible soil or other geologic conditions may require different design criteria.
2. Foundations shall be designed to meet design criteria of the Post-Tensioning Institute manual "Design and Construction of Post-Tensioned Slabs-on-Ground, Third Edition." Both edge lift and center lift conditions need to be evaluated.
3. Edge moisture variation distance (Em) shall be a minimum of 2.5 feet for edge lift and 4.75 feet for center lift.
4. CA for prefabricated roof truss clear spans shall be 360 for center lift and 800 for edge lift.
5. Typical systems using stiffener beams may be equated to a flat slab of equivalent stiffness. Stiffening beams in ribbed foundations shall be as required by the Post-Tensioning Institute manual "Design and Construction of Post-Tensioned Slabs-on-Ground, Third Edition." Conventionally reinforced designs may also be used.
6. Modulus of elasticity of the soil (Es) shall be taken as 1000 psi unless tests indicate otherwise.
7. All concrete in the foundation system must be a minimum of 2500 psi and shall comply with ACI 318-08 Table 4.2.1. Lean concrete shall not be permitted in slabs or beams.
8. The calculated differential deflection of the foundation slab shall not exceed the limitations of "Design and Construction of Post-Tensioned Slabs-on-Ground, Third Edition" nor 1/2 inch for edge lift.
9. Perimeter loading of slab (P) shall be limited to dead load.
10. Expansion (swell) test shall be performed in accordance with Section 1803.5.3.
11. Specific recommendations from geotechnical engineer required. Design value (Ym) shall be a minimum of 1 inch.
12. For soil conditions where a low swell potential is determined, a BRAB Type II may be used if specifically recommended by the geotechnical engineer.

Section 1809.4 Depth and width of footings.

Revise Section 1809.4, as follows:

1809.4 Depth and width of footings. The minimum depth of footings below the undisturbed ground surface shall be 12 inches (305 mm). Where applicable, the requirements of Section 1809.5 shall also be satisfied. All excavations and the depth of any footing must be made below the lowest adjacent compacted subgrade to facilitate full embedment of the footing into the compacted subgrade prior to concrete placement unless otherwise recommended in the approved geotechnical investigation. The minimum width of footings shall be 12 inches (305 mm).

Section 1904.3 Concrete properties.

Delete the Exception in Section 1904.3, as follows:

1904.3 Concrete properties. Concrete mixtures shall conform to the most restrictive maximum water-cementitious materials ratios and minimum specified concrete compressive strength requirements of ACI 318, Section 4.3, based on the exposure classes assigned in Section 1904.2.

Section 1910.1 General.

Revise Section 1910.1, as follows:

1910.1 General. The thickness of concrete floor slabs supported directly on the ground shall not be less than 3-1/2 inches (89mm). A 10-mil (.010 inch;0.254 mm) polyethylene vapor retarder with joints lapped not less than 6 inches (152 mm) shall be placed between the base course or subgrade and the concrete floor slab, or other approved equivalent methods shall be used to retard vapor transmission through the floor slab.

Exception: The vapor retarder is not required:

1. For detached structures accessory to occupancies in Group R-3, such as garages, utility buildings or other unheated facilities.
2. For unheated storage rooms having an area of less than 70 square feet (6.5m²) and carports attached to occupancies in Group R-3.
3. For buildings of other occupancies where migration of moisture through the slab from below will not be detrimental to the intended occupancy of the building.
4. From driveways, walks, patios and other flatwork which will not be enclosed at a later date.
5. Where approved based on local site conditions.

Section 2304.9.5.2 Fastenings for wood foundations.

Revise Subsection 2304.9.5.2, as follows:

2304.9.5.2 Fastenings for wood foundations. Fastenings for wood foundations shall be as required in AF&PA PWF. Where field conditions preclude the placement of the minimum sill plate anchors, a registered design professional may provide a design for the attachment in accordance with accepted engineering practice.

Section 2308.9.8 Pipes in walls.

Revise Subsection 2308.9.8, as follows:

2308.9.8 Pipes in walls. Stud partitions containing plumbing, heating or other pipes shall be so framed and the joists underneath so spaced as to give proper clearance for the piping. Where a partition containing such piping runs parallel to the floor joists, the joists underneath such partitions shall be doubled and spaced to permit the passage of such pipes and shall be bridged. Where plumbing, heating or other pipes are placed in or partly in a partition, necessitating the cutting of the soles or plates, a metal tie not less than 0.058 inch (1.47mm) (16 galvanized gage) and 1 1/2 inches (38mm) wide shall be fastened to each plate across and to each side of the opening with not less than six 1 1/2" x 0.148" minimum nails.

Section 2606.7.4 Fire suppression system.

Revise Section 2606.7.4, as follows:

2606.7.4 Fire suppression system. In buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, plastic light-diffusing systems shall be protected both above and below unless the sprinkler system has been specifically approved for installation only above the light-diffusing system. Areas of light-diffusing systems that are protected in accordance with this section shall be limited to a maximum panel size of 10 feet by 10 feet. Adjacent panels shall be separated by at least 8 feet vertical and 4 feet horizontal.

Section 2606.7.5 Electrical luminaires.

Revise Section 2606.7.5, as follows:

2606.7.5 Electrical luminaires. Light-transmitting plastic panels and light-diffuser panels that are installed in approved electrical luminaires shall comply with the requirements of Chapter 8 unless the light-transmitting plastic panels conform to the requirements of Section 2606.7.2. The area of approved light-transmitting plastic materials that are used in required exits or corridors shall not exceed the limitations listed in Sections 2606.7.3 and 2606.7.4 as applicable.

Section 2611 Light-Transmitting Plastic Interior Signs.

Revise Section 2611, as follows:

2611.1 General. Light-transmitting plastic interior signs shall be limited as specified in Sections 2611.2 through 2611.5. Light-transmitting plastic interior signs shall also comply with Section 2606.

Exception: Light-transmitting plastic interior wall signs in covered mall buildings shall comply with Section 402.16.

2611.2 Aggregate area. The aggregate area of signs shall not exceed 20 percent of the wall area.

Exception: Hanging or base supported signs.

2611.3 Separation. Signs shall be separated from each other by at least 4 feet horizontally or 8 feet vertically.

2611.4 Maximum area. The aggregate area of all light-transmitting plastics in each individual sign shall not exceed 24 square feet (2.23 m²).

Exceptions:

1. Signs are permitted to exceed an aggregate area of 24 square feet of light-transmitting plastics, provided the light-transmitting plastic meets all the following:
 - a. does not exceed 100 square feet,
 - b. is a minimum CC1 material,
 - c. is installed in a building fully protected by automatic sprinklers in accordance with Section 903.3.1.1, and
 - d. is installed in a sign that is listed and labeled in accordance with nationally recognized standards.
2. Signs exceeding the 100 square foot limitation of Exception 1 are permitted provided the sign meets all the following:

- a. the height does not exceed 10 feet,
- b. the length does not exceed 60 feet,
- c. the area does not exceed 500 square feet,
- d. the light-transmitting plastic is a minimum CC1 material,
- e. is listed and labeled in accordance with nationally recognized standards,
- f. the space in which the sign is installed is protected with an automatic sprinkler system of at least Ordinary Hazard Group 2, and
- g. a Fire Protection Report is provided to substantiate the preceding requirements are met.

2611.5 Encasement. Backs of wall mounted signs and non-illuminated portions of all signs regulated by this section shall be fully encased in metal.

Section 2612.6 Exterior use.

Delete Exceptions No. 1 and No. 2 from Section 2612.6, as follows:

2612.6 Exterior use. Fiber reinforced polymer or fiberglass reinforced polymer shall be permitted to be installed on the exterior walls of buildings of any type of construction when such polymers meet the requirements of Sections 2603.5 and is fireblocked in accordance with Section 717. The fiber reinforced polymer or the fiberglass reinforced polymer shall be designed for uniform live loads as required in Table 1607.1 as well as for snow loads, wind loads and earthquake loads as specified in Sections 1608, 1609 and 1613 respectively.

Table 2902.1 Minimum Number of Required Plumbing Fixtures.

Revise Table 2902.1, by adding A-2 Casinos, revising the column titles and footnote “f”, and by adding new footnotes “g” and “h”, as follows:

[P] Table 2902.1
MINIMUM NUMBER OF REQUIRED PLUMBING FIXTURES^a
(See Sections 2902.2 and 2902.3)

(See Sections 1702.2 and 1702.3)

No.	CLASSIFICATION	OCCUPANCY	DESCRIPTION	WATER CLOSETS (URINALS ^h)		LAVATORIES		BATHTUBS/ SHOWERS	DRINKING FOUNTAINS ^{e,f,g}	OTHER ^f
				MALE	FEMALE	MALE	FEMALE			
1	Assembly	A-2 ^d	Casinos	1:1-100	3:1-50	1:1-200		--	--	1 service sink
				----	4:51-100	2:201-400				
				2:101-200	6:101-200	3:401-750				
				3:201-400	8:201-400	Over 750, add one fixture for each additional 500 persons				
				Over 400, add one fixture each additional 250 males, and one for each 150 females.						
Remainder of rows 1 through 8 to remain unchanged.										

- a. The fixtures are based on one fixture being the minimum required for the number of persons indicated or any fraction of the number of persons indicated. The number of occupants shall be determined by this code.
- b. Toilet facilities for employees shall be separate from facilities for inmates or patients.
- c. A single-occupant toilet room with one water closet and one lavatory serving not more than two adjacent patient sleeping units shall be permitted where such room is provided with direct access from each patient sleeping unit and with provisions for privacy.

- d. The occupant load for seasonal outdoor seating and entertainment areas shall be included when determining the minimum number of facilities required.
- e. The minimum number of required drinking fountains shall comply with Table 2902.1 and Chapter 11.
- f. Drinking fountains and service sinks are not required for an occupant load of 30 or fewer.
- g. Where water is served in restaurants and similar occupancies, drinking fountains shall not be required. In other occupancies, where drinking fountains are required, water coolers or bottled water dispensers that provide water to occupants free of charge shall be permitted to be substituted for not more than 50 percent of the required drinking fountains.
- h. In each bathroom or toilet room, urinals shall not be substituted for more than 67 percent of the required water closets in assembly and educational occupancies. Urinals shall not be substituted for more than 50 percent of the required water closets in all other occupancies.

Section 3002.4 Elevator car to accommodate ambulance stretcher.

Revise Section 3002.4 and add a new Table 3002.4, as follows:

3002.4 Elevator car to accommodate ambulance stretcher. Where elevators are provided in buildings four or more stories above grade or four or more stories below grade plane, at least one elevator, and no less than the minimum number specified in Table 3002.4, shall be provided for fire department emergency access to all floors. The elevator car shall be of such a size and arrangement to accommodate an ambulance stretcher 24 inches by 84 inches (610 mm by 2134 mm) with not less than 5-inch (127 mm) radius corners, in the horizontal, open position 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 hoistway door frame. Such elevators shall open into a lobby providing sufficient area to accommodate transport of a 24-inch by 84-inch (610mm by 1930 mm) ambulance stretcher.

Table 3002.4
Ambulance Stretcher Sized Elevator Cars

Highest floor level served above lowest level of fire department access in feet (meters)	Number of elevator cars sized to accommodate an ambulance stretcher
Less than 120 (36.6m)	1
120-599 (36.6m-182.6m)	2 ^a .
600-899 (182.9m-274.0m)	3 ^a .
900 and greater (≥274.3m)	4 ^a .

^a. An elevator installed in accordance with Section 403.6.1 shall be permitted to substitute for one of these elevators.

Section 3003.1.3 Two or more elevators.

Revise Section 3003.1.3, as follows:

3003.1.3 Two or more elevators. Where two or more elevators are controlled by a common operating system, all elevators shall automatically transfer to standby power within 60 seconds after failure of normal power where the standby power source is of sufficient capacity to operate all elevators at the same time. Where the standby power source is not of sufficient capacity to operate all elevators at the same time, all elevators shall transfer to standby power in sequence, return to the designated landing and disconnect from the standby power source. After all elevators have been returned to the designated level, at least one elevator, and all elevators installed in accordance with Section 3002.4, shall remain operable from standby power source.

Section 3006.4 Machine rooms and machinery spaces.

Revise Section 3006.4, as follows:

3006.4 Machine rooms and machinery spaces. Elevator machine rooms and machinery spaces shall be enclosed with *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 712, or both. The *fire-resistance rating* shall not be less than the required rating of the hoistway enclosure served by the machinery. Openings in the *fire barriers* shall be protected with assemblies having a *fire protection rating* not less than that required for the hoistway enclosure doors.

Exceptions:

1. *Unchanged.*
2. In buildings four *stories* or less above *grade plane* when machine room and machinery spaces have no openings to the hoistway enclosure they serve, the machine room and machinery spaces are not required to be fire-resistance rated.

Section 3111 CABANAS

Add a new Section 3111, as follows:

**SECTION 3111
CABANAS**

3111.1 General. This section shall apply to cabanas on, or in close proximity to, buildings where the predominant building construction type would not otherwise allow cabanas to be constructed as membrane structures in accordance with Section 3102.3. Cabanas that are erected for a period of less than 180 days shall comply with the *International Fire Code*.

3111.2 Definitions. The following words and terms shall, for the purposes of this section, have the meanings shown herein:

CABANA. A structure used for temporary shelter, comfort and privacy of occupants located on, or in close proximity to, a building. Cabanas shall not be used for retail sales, bar service, food preparation, storage, or overnight sleeping.

CABANA GROUP. A group of individual cabanas that are not separated from each other as required within this section. The total area of the cabana group shall be used to determine code requirements for all cabanas contained within the cabana group.

3111.3 Design and Construction. Cabanas shall be designed and constructed to withstand wind or other lateral loads and live loads as required by Chapter 16 with due allowance for shape, open construction and similar features that relieve the pressures or loads. Structural members shall be protected to prevent deterioration.

3111.3.1 Frame. Cabanas shall be constructed of a rigid, noncombustible frame that is permanently mounted to the roof or deck on which it is located.

3111.3.2 Membrane Covering. The membrane covering of the cabana shall either be noncombustible in accordance with Section 703.4 or be tested by an approved agency and pass Test 2 of NFPA 701.

3111.3.3 Openness. Each cabana shall be provided with a minimum of one opening to an exterior egress route. Such opening shall provide a minimum unobstructed opening of 5 feet (1524 mm) wide by 7 feet (2134 mm) high.

3111.3.4 Height. The highest point of a cabana shall not exceed 20 feet (4572 mm).

3111.3.5 Area. The area of any single cabana or cabana group shall not exceed 1,000 square feet (46.45 m²).

Exception: The area of cabanas that are constructed entirely of noncombustible materials shall not exceed 2,000 square feet (92.90 m²).

3111.3.5.1 Subdivision. Subdivision of a cabana is permitted where subdivision of the cabana is provided by any material that is tested by an approved agency and passes Test 2 of NFPA 701.

3111.4 Location. Cabanas shall be located to minimize the hazard to the building, other cabanas, and the means of egress.

3111.4.1 Separation between cabanas. Cabanas shall be separated from all other cabanas by a minimum distance of 10 feet (3048 mm), as measured at the nearest horizontal projection. Where cabanas do not meet this spacing, the cabanas shall be considered a cabana group, and the cabana group shall meet the requirements set forth herein.

3111.4.2 Separation between cabana groups. Cabana groups shall be separated from all other cabanas by a minimum distance of 10 feet (3048 mm), as measured at the nearest horizontal projection.

3111.4.3 Separation to building. Cabanas shall be a minimum of 10 feet (3048 mm) from any wall or building opening, and shall not be located beneath any horizontal projection of the main building.

3111.4.4 Obstruction to means of egress. Cabanas shall be located and spaced such that the required means of egress is not obstructed by the cabanas for the entire height of the cabanas.

3111.5 Automatic sprinkler system. Cabanas and cabana groups shall be protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

Exception: An automatic sprinkler system shall not be required in cabanas or cabana groups that do not exceed 120 square feet (11.148 m²) in area.

3111.6 Cooking facilities. Cooking shall not be permitted within 20 feet (6096 mm) of a cabana or inside a cabana.

3111.7 Fuel-fired equipment. Fuel-fired equipment shall not be permitted within 20 feet (6096 mm) of a cabana or inside a cabana.

3111.8 Lighting. All lighting within or attached to cabanas shall be electric. Open flames for any purpose are prohibited within 20 feet (6096 mm) of a cabana or inside a cabana.

3111.9 Fire protection report. A fire protection report shall be submitted and shall address the type of construction of the main structure and the cabana(s), the size of the cabana(s), fire protection systems for the cabana(s), and the impact of the cabana(s) on the means of egress.

Section 3306.2 Walkways.

Revise Section 3306.2, as follows:

3306.2 Walkways. A walkway shall be provided for pedestrian travel in front of every construction and demolition site unless the applicable governing authority authorizes the sidewalk to be fenced or closed. Walkways shall be of sufficient width to accommodate the pedestrian traffic, but in no case shall they be less than 4 feet (1219 mm) in width. Walkways shall be provided with a durable walking surface. Walkways shall be *accessible* in accordance with Chapter 11 and shall be designed to support all imposed loads and in no case shall the design live load be less than 150 pounds per square foot (psf) (7.2 kN/m²). Sidewalks or walkways that lead from the public sidewalk to a building entrance where the general public may be at risk due to falling construction debris shall be similarly protected.

Section 3310.3 Stairway floor number markings.

Add new Section 3310.3, as follows:

3310.3 Stairway floor number markings. Temporary stairway floor number markings shall be provided in accordance with the following requirements. The markings shall be provided at each floor landing in interior stair enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the stair enclosure and identification of the stair. The markings shall also state the story of, and the direction to the exit discharge and the availability of roof access from the stairway for the fire department. The markings shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions.

Section 3401.5 Alternative compliance.

Revise Section 3401.5, as follows:

3401.5 Alternative compliance. When approved by the *building official*, work performed in accordance with the *International Existing Building Code* shall be deemed to comply with the provisions of this chapter.

Section 3403.1 General.

Revise Section 3403.1, as follows:

3403.1 General. Additions to any building or structure shall comply with the requirements of this code for new construction. Alterations to the existing building or structure shall be made to ensure that the existing building or structure together with the *addition* are no less conforming with the provisions of this code than the existing building or structure was prior to the *addition*. An existing building together with its additions shall comply with the height and area provisions of Chapter 5. The portions of the building or structure not altered and not affected by the alterations are not required to comply with the height provisions for a new structure.

Section 3404.1 General.

Revise Section 3404.1, as follows:

3404.1 General. Except as provided by Section 3401.4 or this section, alterations to any building or structure shall comply with the requirements of the code for new construction. Alterations shall be such that the existing building or structure is no less complying with the provisions of this code than the existing building or structure was prior to the *alteration*.

Exceptions:

1. (remains unchanged)
2. (remains unchanged)
3. The building or structure shall not be required to comply with the height and area provisions of Chapter 5 for a new structure.

Section 3411.8.15 Check-out aisles.

Add new Section 3411.8.15, as follows:

3411.8.15 Check-out aisles. Where check-out aisles are altered, at least one of each check-out aisle serving each function shall be made accessible until the number of accessible check-out aisles complies with Section 1109.11.2.

Delete Appendices A, B, D, F, G, and K, in their entirety.

Adopt Appendices C, E, H and I in their entirety.

Appendix E Supplementary Accessibility Requirements

Revise Section E104.3.1, as follows:

E104.3.1 Transient lodging. In *transient* lodging facilities, *sleeping units* with *accessible* communication features shall be provided in accordance with Table E104.3.1. Units required to comply with Table E104.3.1 shall be dispersed among the various classes of units. Not more than 10 percent of dwelling or sleeping units required to provide mobility features under ICC A117.1, Section 1003 shall be used to satisfy the minimum number of dwelling or sleeping units required to provide communication features under Table E104.3.1.

Appendix H - Outdoor Signs

Revise Title of Appendix H, as follows:

“Appendix H - Outdoor Signs”

Section H101.2 Signs exempt from permits.

Add item #6 to Section H101.2, as follows:

H101.2 Signs exempt from permits. The following signs are exempt from the requirements to obtain a permit before erection:

1. Painted nonilluminated signs.
2. Temporary signs announcing the sale or rent of property.
3. Signs erected by transportation authorities.
4. Projecting signs not exceeding 2.5 square feet (0.23 m²).
5. The changing of moveable parts of an approved sign that is designed for such changes, or the repainting or repositioning of display matter shall not be deemed an alteration.
6. Other signs listed by the applicable Administrative Code.

Appendix J Grading

Section J102.1 Definitions.

Revise the definition of GRADING in J102.1, as follows:

GRADING. An excavation, clearing and grubbing of vegetation, or fill or combination thereof.

Add new definitions in Section J102.1 for Building Pad, Certify, Fault, Holocene Active Fault, Quaternary Active Fault, Inactive Fault, Final Grading Report, Geotechnical Report (Soils Report), Pad Certification Report, Pad Recertification Report, Refusal, and Special Geotechnical Consideration Area, as follows:

BUILDING PAD. The soil, cut or fill site, outlined by the area of the footprint of the building plus a minimum of 5 additional feet (1529 mm) to the exterior. This includes any type of foundation system for the structure.

CERTIFY. Use of the word “certify” or “certification” constitutes an expression of professional opinion regarding those facts or findings which are the subject of the certification.

FAULT. A fracture or zone of fracturing in geologic materials (soil or rock) along which there has been displacement of the sides relative to one another parallel to the fracture.

FAULT, HOLOCENE ACTIVE. A fault with recognized activity within Holocene time (within the past 11,000 years).

FAULT, QUATERNARY ACTIVE. A fault with recognized activity within Quaternary time (within the past 1.6 million years).

FAULT INACTIVE. A fault without recognized activity within Quaternary time (within the past 1.6 million years).

FINAL GRADING REPORT. A grading report stamped and signed by a registered design professional certifying that the building pad was constructed in conformance with the recommendations set forth in the geotechnical report. This report contains explicit information and data that verifies compliance with the geotechnical report of record including any approved supplements or addendums.

GEOTECHNICAL REPORT (SOILS REPORT). Data and engineering recommendations resulting from site exploration which evaluates the soil conditions and general site characteristics and suitability of the site for the proposed construction. A registered design professional shall prepare and seal the report.

PAD CERTIFICATION REPORT. An interim grading report stamped and signed by a registered design professional certifying that the building pad currently is in conformance with the recommendations set forth in the geotechnical report of record.

PAD RECERTIFICATION REPORT. A report stamped and signed by a registered design professional certifying that the building pad currently is in conformance with the recommendations set forth in the geotechnical report of record. This report contains explicit information and data that verifies compliance to the geotechnical report of record including any approved supplements or addendums.

REFUSAL. Refusal while advancing an exploration is recognized as defined by ASTM D 1586-08a.

SPECIAL GEOTECHNICAL CONSIDERATION AREA. A portion of Clark County where additional geotechnical investigation requirements may apply. These areas are identified on the most recent edition of the “Clark County Soil Guidelines Reference Map(s)” as published by Clark County.

Section J103.2 Exemptions.

Revise Exemption #1 in Section J103.2, as follows:

J103.2 Exemptions. A grading permit shall not be required for the following:

1. Grading in an area deemed by the Building Official as isolated, self-contained, presenting no danger to the public, and not adversely affects adjoining properties; and the drainage study for the proposed site has been waived, or determined to be unnecessary, by the planning and/or civil review process.
2. Excavation for construction of a structure permitted under this code.
3. Cemetery graves.
4. Refuse disposal sites controlled by other regulations.
5. Excavations for wells or trenches for utilities.
6. Mining, quarrying, excavating, processing or stockpiling rock, sand, gravel, aggregate or clay controlled by other regulations, provided such operations do not affect the lateral support of, or significantly increase stresses in, soil on adjoining properties.
7. Exploratory excavations performed under the direction of a registered design professional.

Exemption from the permit requirements of this appendix shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

Section J103.3 Hazards.

Add a new Section J103.3 Hazards, as follows:

J103.3 Hazards. Whenever the building official determines that any existing excavation or embankment or fill on private property has become a hazard to life and limb, or endangers property, or adversely affects the safety, use or stability of a public way, easement, storm sewer system, or drainage channel, the owner of the property upon which the excavation or fill is located, or other person or agent in control of said property, upon receipt of notice in writing from the building official, shall within the period specified therein repair or eliminate such excavation or embankment to eliminate the hazard and to be in conformance with the requirements of this code.

Section J104.1 Submittal requirements.

Revise Section J104.1, as follows:

J104.1 Submittal requirements. In addition to the provisions of Section 105.3, the applicant shall state the estimated quantities of excavation and fill. All projects that require grading shall have a grading plan prepared, stamped, and signed by a registered design professional.

Exception: At the option of the building official, if the structure is located outside of a flood hazard area the following projects may be exempted from having a grading plan. Projects exempted from a grading plan must still comply with the grading and drainage requirements in the IBC.

1. Single story structures or additions with a footprint less than 600 square feet.
2. Patio covers, decks, and canopies associated with a single family residence.
3. Mobile homes, trailers, modular buildings that do not have concrete or masonry foundations.
4. Pre-engineered carports.
5. Signs, light poles, and communication towers.

Section J104.2 Grading plan requirements.

Revise Section J104.2 in its entirety, as follows:

J104.2 Grading plan requirements. All grading plans shall be prepared, stamped, and signed by a registered design professional. The following items must be included on all grading plan submittals.

1. General vicinity of the proposed site.
2. Property limits and accurate contours of existing ground and details of terrain and area drainage.
3. Limiting dimensions, elevations or finish contours to be achieved by the grading, proposed drainage channels and related construction.
4. Location of any buildings or structures on the property where the work is to be performed and the location of any buildings or structures on land of adjacent owners that are within 100 feet of the property or that may be affected by the proposed grading operations.
5. Recommendations included in the geotechnical report shall be incorporated in the grading plans or specifications as follows:
 - a. Locations and dimensions of all cut and fill slopes,
 - b. Locations of all cross sections presented in the geotechnical report,
 - c. Locations and sizes of all recommended remedial measures such as buttress fills, stability fills, deep foundation systems, reinforced earth, retaining walls, etc.,
 - d. Location and layout of proposed subdrainage system.
6. A statement that the site shall be graded in accordance with the approved geotechnical report. This statement shall include the firm name that prepared the geotechnical report, the report number, and the date of the geotechnical report.
7. Locations of other existing topographic features either natural or man-made such as streets, drainage structures, pavements, walls, mining pits, etc.
8. The cut to fill transition line.
9. Positive drainage away from the foundation per Section 1804.3.
10. Details and cross sections at property lines, fence walls, retaining walls, berms, etc.
11. Elevation datum and benchmarks (NAVD 88).
12. Existing contours at least 100 feet beyond the property lines.

13. Proposed finish contours or spot elevations at the property corners, building pad, and at swale flow lines.
14. Elevations of curbs or centerlines of roads or streets.
15. Earthwork quantities in cubic yards.
16. Finish floor elevations.
17. Details and cross sections of typical fill slopes and cut slopes.
18. Typical details of fill-over-natural slopes and fill-over-cut slopes where fill is to be placed on natural or cut slopes steeper than 5H:1V in accordance with Section J107.
19. Setback dimensions of cut and fill slopes from site boundaries per Section J108.
20. The placement of buildings and structures on and or adjacent to slopes steeper than 3H:1V (33.3% slope) shall be in accordance with Section 1808.7.
21. Provide terracing in accordance with Section J109 for slopes steeper than 3H:1V (33.3% slope).
22. Provide the locations and dimensions of all terrace drains for all slopes steeper than 3H:1V in accordance with Section J109.
23. The standard notes specified in the Las Vegas Valley Construction Site Best Management Practice Guidance Manual (most current edition).
24. Registered design professional original seal (wet seal), signature and date or a Records stamp and signature stating, *"This is a true and exact copy of the original document on file in this office."*

Section J104.3 Geotechnical Report.

Revise Section J104.3, as follows:

J104.3 Geotechnical Report. A geotechnical report prepared by a registered design professional shall be provided. The report shall comply with Section 1803.6.

Section J105.1 General.

Revise Section J105 in its entirety, as follows:

J105.1 General. Inspection of grading operations shall comply with the provisions of this section. The permittee shall be responsible for the work to be performed in accordance with the approved plans and specifications and in conformance with the provisions of this code. The permittee shall engage an approved agency, if required by the Building Official.

J105.1.1 Completion of work and final reports. Report submittal shall be in compliance with Section 1704.1.2.

J105.1.2 Final Grading report. Upon completion of pad grading (or foundation excavation) and prior to a footing or foundation inspection, a Final Grading report shall be provided by an approved agency. Grading (or foundation excavation) shall be observed and tested by an approved agency. The approved agency shall prepare the report, signed by a registered design professional certifying that the grading and earthwork are complete and substantially comply with the requirements of the geotechnical report of record including any approved supplements or addenda. At the option of the Building Official, a Pad Certification report submitted in accordance with Section J105.1.3 may be accepted as an interim report prior to a footing or foundation inspection. A Final Grading report will then be required prior to receiving a Final Inspection.

The Final Grading report itself will contain all applicable test data and analysis of the data. Specific project information is also required if there were any changes to the geotechnical report of record or unusual circumstances encountered during grading. The report shall also include the following information:

1. Compaction test results, requirements, locations, depth of backfill at test locations and names of technicians conducting the tests.
2. Moisture Density values and curves that include classifications for all soils used in the grading operation.
3. Description of structure or pad including the proposed use.
4. Grading plan showing approximate locations of tests, dates and depths of over-excavation observations, original contours and finish pad elevations.
5. Swell and solubility test requirements and results. This information shall be provided if required by the geotechnical report of record, elsewhere in the code, or if imported soils were utilized.
6. Type of foundation system applicable to work being certified (i.e. spread footings, strip footings, combination footings, drilled shafts etc.).
7. Import material used, source of import, and tests indicating compliance with the geotechnical report of record recommendations, and classification in relation to ACI 318-08 Section 4.3.
8. A statement describing the process of pad grading. Where applicable, this shall include, but not be limited to the minimum depth of over-excavation, blending operations, the use of import soils, nested aggregate, organics encountered, and removal of unsuitable soils.
9. The preceding requirements shall be presented for each pad or structure being certified.

The Final Grading report remains valid for a maximum of six months after the completion of grading. The six month period begins at the first test date of the final test of the final lift of the structural pad. Once expired, a Pad Recertification report is required.

J105.1.3 Pad Certification report. This letter/report is used as an interim document until a Final Grading report is completed (i.e., a Final Grading report for the entire project or a particular phase(s) of a project). The approved agency shall prepare this report signed by a registered design professional and certifying that the grading and earthwork are complete and substantially comply with the requirements of the geotechnical report of record including any approved supplements or addenda. Specific project information is also required if there were any changes to the geotechnical report of record or unusual circumstances encountered during grading.

This report shall include the following information for each pad or structure:

1. The first test date of the final test of the final lift.
2. Permit number and pad or structure description.
3. Classification of foundation soils in relation to ACI 318-08 Section 4.3.
4. Classification of foundation soil for expansive properties (i.e. non-expansive or results from standard 60 pounds per square foot swell test).
5. The name(s) of the approved special inspector(s) and any technicians that observed grading or foundation improvements.

This report remains valid for no longer than six months after the completion of grading. The six month period begins at the first test date of the final test of the final lift of the structural pad. Upon expiration, a Final Grading report and Pad Recertification report will be required.

J105.1.4 Pad Re-certification report. This report is required when a Final Grading report or Pad Certification report has expired or if required by the Building Official. The approved agency shall prepare this report signed by a registered design professional certifying the current suitability of the pad(s). The condition of the pad(s) is discussed, tests performed and their results are presented and discussed, and any additional grading or reworking is discussed. The conclusions are stated and based upon the current condition of the pad(s) compared to completion at original grading and a statement that the current condition of the pad(s) substantially complies with the requirements of the geotechnical report of record including any approved supplements or addenda.

As a minimum, pad moisture data and standard sixty pounds per square foot swell test results, if applicable, are included in this report. The tests shall be conducted on a representative number of pads.

The report remains valid for no longer than six months after the latest test date. Once expired, the pad(s) recertification will require an evaluation by a registered design professional to confirm the applicability of current site conditions.

J105.1.5 Finished Floor Elevation Certificate. A registered design professional shall certify the lowest habitable finished floor elevation to the elevation on the approved plans upon completion of the slab inspection and placement or the placement of the final construction form for the finished floor. All certifications required by this section shall be provided to and accepted by the Building Official prior to performance of any additional inspections. The minimum finished floor elevation shall comply with the approved plans and the allowable tolerance shall be minus (-) 0.0 feet to plus (+) 0.3 feet of the finished floor elevation detailed on the approved plans.

J105.1.6 Drainage Compliance Report. Upon completion of final grading, and prior to the final building inspection, a statement of compliance for drainage shall be provided by the registered design professional of record or the developer when approved by the building official.

This report shall state that site conditions at the time of final construction provide positive drainage in compliance with the approved drainage plan or the plot and grading plan.

When engineered drainage features, facilities, or structures are required by the approved plans, the registered design professional of record shall verify that installed and constructed elements are in compliance with the approved plans. This includes site detention, lot to lot drainage, and drainage conveyance devices.

J105.1.7 Notification of Noncompliance. If in the course of fulfilling their respective duties under this appendix, the registered design professional or the approved agency finds that the work is not being done in conformance with this appendix or the approved plans the discrepancies shall be immediately reported in writing to the contractor, the permittee, and to the Building Official.

J105.2 Special Inspections. The special inspection requirements of Section 1704 shall apply to work performed under a grading permit where required by the Building Official.

Appendix L Fences

Add a new Appendix L Fences, walls and retaining walls, as follows:

APPENDIX L

FENCES, WALLS AND RETAINING WALLS

L101 General

L101.1 General. It shall be unlawful for any person, contractor, firm or corporation to erect, install, construct or replace any fence, wall or retaining wall contrary to the provisions of this code.

L101.2 Applicable regulations. All regulations and requirements of the Building Code and any amendments, deletions and additions thereto shall apply to the erection, installation or construction of any fence, wall and/or retaining wall except that which may be inconsistent with this chapter.

L102.0 DEFINITIONS

L102.1 Definitions. For the purpose of this chapter, certain terms are defined as follows:

CUT. See Excavation.

EXCAVATION. The removal of earth material by artificial means, also referred to as a cut.

FENCE. A structure of temporary or semi-permanent material such as wrought iron, wire, wood, screen, vinyl, plastic, etc... erected for purposes of enclosure, division of property or decoration.

FILL. The placement of earth materials by artificial means.

RETAINING WALL. Any wall that is used to resist the lateral displacement of earth or any other material with a difference in elevation of the material from one side to the other exceeding 24 inches (610 mm) in height.

ROCKERY WALL. A system of stacked rocks constructed to retain soil. See the Southern Nevada Building Officials Rockery Wall Construction Standards.

WALL. A structure of stone, brick, masonry, concrete or other similar permanent material, raised to some height and erected for purposes of enclosure, division of property or decoration.

L103.0 PERMITS

L103.1 Permits required. No fence, wall or retaining wall regulated by this code shall be erected, constructed, enlarged, altered, repaired, moved, improved, removed, converted or demolished unless a permit for each fence, wall or retaining wall is obtained from the Building Official.

L103.2 Separate permits required. A separate permit is required for each parcel of land upon which a fence, wall or retaining wall is to be located.

EXCEPTION: Only one permit is required for multiple fence(s), wall(s) and/or retaining wall(s) constructed along property lines in connection with the development of a subdivision, provided that a legal description of the property is submitted together with a dimensioned plot plan showing the exact location of the fence, wall and/or retaining wall and all other recorded lot and easement lines.

L103.3 Application for a fence, wall or retaining wall permit. To obtain a permit, the applicant shall first file an application on a form furnished by the jurisdiction for that purpose. The application shall include the following:

1. The name and address of the owner of the real property upon which the fence, wall and/or retaining wall is to be located.

2. The type of material to be used for construction of the fence, wall, and/or retaining wall.
3. The total length, height and square footage of each fence, wall and/or retaining wall.
4. The authorized agent to perform construction.
5. A dimensioned drawing that identifies the location of each fence, wall and/or retaining wall with respect to the property or lot lines, easements, streets, other rights-of-way. Existing construction and drainage features shall be clearly identified on the drawings.
6. The location of all light standards, gas and water meters, and fire hydrants.
7. Other information deemed pertinent by the Building Official.

L103.4 Drawings and specifications. Drawings and specifications required for retaining walls shall be prepared by a registered design professional. The design shall be in accordance with the applicable chapters of the IBC. Rockery walls shall be designed in accordance with the IBC and the Southern Nevada Building Officials Rockery Wall Construction Standards.

Drawings or specifications for fences and walls need not be submitted unless required by the Building Official. Drawings and specifications shall be submitted for retaining walls showing that the retaining wall is designed in accordance with this code.

L104.0 GENERAL REQUIREMENTS AND LIMITATIONS

L104.1 General. General requirements and limitations shall be as follows:

1. No fence, wall and/or retaining wall shall be placed within a right-of-way unless granted permission by the authority having jurisdiction.
2. The height and location of a fence, wall and/or retaining wall shall comply with all zoning ordinances and regulations of the authority having jurisdiction.
3. Fences, walls and/or retaining walls shall be constructed in accordance with published standards of the department or agency having authority of utility easements, when located within a utility easement for any light standard, gas meter, water meter, or fire hydrant.
4. Special inspection, if required, shall be in accordance with the IBC. Rockery walls shall require special inspection in accordance with the IBC and the Southern Nevada Building Officials Rockery Wall Construction Guidelines.

L104.2 Required inspections

1. All footings shall be inspected to verify location to property line, structures, and compliance to the approved plans and permit. Footings shall be excavated and cast against the earth.
2. Concrete foundations shall not be placed until footings have been inspected and approved by the Building Official.
3. No wall and/or retaining wall shall be grouted until the reinforcing required has been inspected and approved by the Building Official.
4. No retaining wall shall be backfilled until verification of the dampproofing, when required, and drainage has been inspected and approved by the Building Official.

L104.3 Natural drainage. No permits shall be issued for fences, walls and/or retaining walls, which would block any natural flow path.

L104.4 Prohibited materials. Walls, fences and retaining walls shall not be constructed of materials which impose a direct safety hazard, such as pointed posts, stakes or pickets, components intended for electrocution, embedded glass, nails, barbed or razor type wire, or other sharp, cutting objects.

EXCEPTION: Manufactured barbed or razor wire may be used when its detailed use, location, and construction requirements are approved by the authority having jurisdiction.

L105.0 IMPLEMENTATION

L105.1 Implementation. The Building Official is empowered to formulate procedural guidelines to be used in implementing this chapter.

BUSINESS IMPACT STATEMENT
BILL NO. 2011-10
(Adopts the 2009 Edition of the International Building Code,
together with amendments thereto)

This business impact statement was prepared pursuant to NRS 237.090 to address the impact of a proposed ordinance, Bill No. 2011-10, that will adopt the 2009 Edition of the International Building Code, together with amendments thereto.

1. The following constitutes a description of the manner in which comment was solicited from affected businesses, a summary of their responses and an explanation of the manner in which other interested persons may obtain a copy of the summary.

Notice of the proposed ordinance was published in the Las Vegas Review-Journal. In addition, a copy of the notice was provided to development-related and construction groups that are representative of affected industries. No written responses were received.

2. The estimated economic effect of the proposed rule on businesses, including, without limitation, both adverse and beneficial effects, and both direct and indirect effects:

Adverse effects:

Those proposing construction will need to plan for and adjust to any new or differing Code requirements

Beneficial effects:

Code provisions that are updated and that are consistent with other area jurisdictions

Direct effects:

See adverse and beneficial effects above

Indirect effects:

None identified

3. The following constitutes a description of the methods the local government considered to reduce the impact of the proposed rule on businesses and a statement regarding whether any, and if so which, of these methods were used:

None identified

4. The governing body estimates the annual cost to the local government for enforcement of the proposed rule is:

No additional cost

5. If the proposed rule provides for a new fee or increases an existing fee, the total annual amount expected to be collected is:

Not applicable

6. If the proposed rule provides for a new fee or increases an existing fee, the money generated by the new fee or increase in existing fee will be used by the local government to:

Not applicable

7. If the proposed rule includes provisions that duplicate or are more stringent than federal, state or local standards regulating the same activity, the following explains when such duplicative or more stringent provisions are necessary:

Not applicable

Date: February 16, 2011

AGENDA SUMMARY PAGE
RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY ATTORNEY

DIRECTOR: BRADFORD R. JERBIC

☐ Consent ☒ Discussion

SUBJECT:

Bill No. 2011-11 – Updates the City’s Administrative Code, relating to the administration of the various building and technical codes. Sponsored by: Councilman Steven D. Ross

Fiscal Impact

☒

No Impact

☐

Augmentation Required

☐

Budget Funds Available

Amount:

Funding Source:

Dept./Division:

PURPOSE/BACKGROUND:

This bill will update the City’s Administrative Code, relating to the administration of the various building and technical codes. The update is designed to adapt the 1997 Uniform Administrative Code for use in implementing and enforcing the various building and technical codes.

RECOMMENDATION:

This bill should be submitted to a Recommending Committee for review, hearing and recommendation to the City Council for final action.

BACKUP DOCUMENTATION:

1. Bill No. 2011-11
2. Supplemental Document Amending the Uniform Administrative Code, 1997 Edition
3. Business Impact Statement

1 **BILL NO. 2011-11**

2 **ORDINANCE NO. _____**

3 AN ORDINANCE TO UPDATE THE DOCUMENT ENTITLED "A SUPPLEMENTAL
4 DOCUMENT AMENDING THE UNIFORM ADMINISTRATIVE CODE, 1997 EDITION," AS
ADOPTED IN LVMC 16.02.010(B), AND TO PROVIDE FOR OTHER RELATED MATTERS.

5 Sponsored by: Councilman Steven D. Ross

Summary: Updates the City's Administrative
Code, relating to the administration of the
various building and technical codes.

7 THE CITY COUNCIL OF THE CITY OF LAS VEGAS DOES HEREBY ORDAIN
8 AS FOLLOWS:

9 SECTION 1: Except as otherwise provided in Section 3 of this Ordinance, the
10 document entitled "A Supplemental Document Amending the Uniform Administrative Code, 1997
11 Edition," adopted in LVMC 16.02.010(B), is hereby repealed in its entirety.

12 SECTION 2: Subject to the provisions of Sections 3 and 4 of this Ordinance, the
13 document entitled "A Supplemental Document Amending the Uniform Administrative Code, 1997
14 Edition," which is attached hereto and incorporated by this reference, is hereby adopted and
15 incorporated in LVMC 16.02.010(B).

16 SECTION 3: The fee tables adopted by Ordinance No. 6110 as part of the document
17 entitled "A Supplemental Document Amending the Uniform Administrative Code, 1997 Edition":

18 (A) Shall remain in full force and effect; and

19 (B) Subject to the provisions of Section 4 of this Ordinance, shall serve as the fee
20 tables that are included as part of the document referred to in Section 2 of this Ordinance.

21 SECTION 4: The fee tables referred to in Section 3 of this Ordinance are amended
22 by adding to Table No. 3-E thereof, in the appropriate location and in the format used in that table,
23 a research and processing fee for large-scale projects in the amount of \$500.

24 SECTION 5: The Department of Building and Safety is authorized and directed to
25 incorporate into the fee tables referred to in Section 3 of this Ordinance, at the appropriate location,
26 the new fee adopted by Section 4 of this Ordinance.

27 SECTION 6: If any section, subsection, subdivision, paragraph, sentence, clause or
28 phrase in this ordinance or any part thereof is for any reason held to be unconstitutional or invalid or

ineffective by any court of competent jurisdiction, such decision shall not affect the validity or effectiveness of the remaining portions of this ordinance or any part thereof. The City Council of the City of Las Vegas hereby declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause or phrase thereof irrespective of the fact that any one or more sections, subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional, invalid or ineffective.

SECTION 7: Whenever in this ordinance any act is prohibited or is made or declared to be unlawful or an offense or a misdemeanor, or whenever in this ordinance the doing of any act is required or the failure to do any act is made or declared to be unlawful or an offense or a misdemeanor, the doing of such prohibited act or the failure to do any such required act shall constitute a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than \$1,000.00 or by imprisonment for a term of not more than six months, or by any combination of such fine and imprisonment. Any day of any violation of this ordinance shall constitute a separate offense.

SECTION 8: All ordinances or parts of ordinances or sections, subsections, phrases, sentences, clauses or paragraphs contained in the Municipal Code of the City of Las Vegas, Nevada, 1983 Edition, in conflict herewith are hereby repealed.

PASSED, ADOPTED and APPROVED this _____ day of _____, 2011.

APPROVED:

By OSCAR B. GOODMAN, Mayor

ATTEST:

BEVERLY K. BRIDGES, MMC
City Clerk

APPROVED AS TO FORM:

Valtied 2-16-11
Date

1 The above and foregoing ordinance was first proposed and read by title to the City Council on the
2 ____ day of _____, 2011, and referred to the following committee composed of
3 _____ and _____ for recommendation;
4 thereafter the said committee reported favorably on said ordinance on the ____ day of
5 _____, 2011, which was a _____ meeting of said Council; that at said
6 _____ meeting, the proposed ordinance was read by title to the City Council
7 as first introduced and adopted by the following vote:

8 VOTING "AYE": _____
9 VOTING "NAY": _____
10 ABSENT: _____

12 APPROVED:

14 By _____
OSCAR B. GOODMAN, Mayor

15 ATTEST:
16 _____
17 BEVERLY K. BRIDGES, MMC
City Clerk

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**A SUPPLEMENTAL DOCUMENT AMENDING
THE UNIFORM ADMINISTRATIVE CODE, 1997 EDITION**

SECTION 1: Except as otherwise indicated, all section and chapter references contained in this Supplemental Document are to the Uniform Administrative Code, 1997 Edition.

SECTION 2: Certain provisions of this code may be parallel or similar to provisions of the International Building Code; International Residential Code; Uniform Plumbing Code; Uniform Mechanical Code; National Electrical Code; or other similar code adopted by the City. The provisions of this Code and the provisions of the other referenced codes shall be applied to the extent possible. The Building Official shall have the discretion, in the interest of convenience for the City or the public, to apply the provisions herein or corresponding administrative provisions in any of the above-referenced codes, in the versions adopted by the City. In the event of any conflict in administrative provisions, the provisions of Section 104 of this Code shall govern, unless otherwise deemed appropriate by the Building Official. Unless otherwise specified, the term "Department" refers to the department of the City charged with the enforcement of the codes referred to in this Section, and the term "Director" refers to the director of that department.

SECTION 3: Section 102 is hereby amended by adding a new Subsection 102.9, reading as follows:

102.9 Professional Office Conversions. Except as otherwise provided in this Subsection, any conversion from a residential occupancy to a professional office shall conform to the new construction requirements for a B Occupancy, including without limitation the requirements of the International Building Code, the National Electrical Code, the Uniform Mechanical Code, and the Uniform Plumbing Code. However, a conversion from a residential occupancy to a professional office that meets all the following criteria is exempt from the requirements of the International Building Code for commercial buildings (other than those contained in Chapter 11 and Chapter 34):

1. The building must have a building area of 1500 square feet or less, calculated using the definition of "building area" contained in Section 502 of the International Building Code, but not inclusive of parking garage or carport areas;
2. The conversion must be pursuant to a valid zoning approval; and
3. The conversion must not include expansion of the existing building and must be limited to minor exterior or interior remodeling, or both, that is allowed by the Building Official to be done in order to accommodate the disabled or to comply with zoning requirements.

SECTION 4: Section 103 is hereby amended by deleting the introductory paragraph thereof and replacing it with the following:

For the purpose of this code, certain terms, phrases, words and their derivatives shall be construed as specified in this section. Where terms are not defined, they shall have their ordinarily accepted meanings within the context with which they are used. The American Heritage Dictionary of the English Language, Fourth Edition, copyright 2006, shall be considered as providing ordinarily accepted meanings. Words used in the singular include the plural and the plural the singular. Words used in the masculine gender include the feminine and the feminine the masculine.

SECTION 5: Section 103 is hereby amended by deleting the definitions of the terms "Building Code," "Mechanical Code," "Plumbing Code" and "UBC Standards."

SECTION 6: Section 103 is hereby amended by adding thereto, at the appropriate locations, the following terms and corresponding definitions:

BUILDING CODE refers to the International Building Code and the International Residential Code promulgated by the International Code Council, as adopted by the City.

MECHANICAL CODE is the Uniform Mechanical Code promulgated by the International Association of Plumbing and Mechanical Officials, as adopted by the City.

PLUMBING CODE is the Uniform Plumbing Code promulgated by the International Association of Plumbing and Mechanical Officials, as adopted by the City.

SECTION 7: Section 202 is hereby amended by deleting Subsections 202.1 and 202.6 and substituting therefor new Subsections 202.1 and 202.6 reading as follows:

202.1 General. The Building Official is hereby authorized and directed to enforce all the provisions of this code and the referenced technical codes. For such purposes, the Building Official shall have the powers of a law enforcement officer. The Building Official shall have the sole power and discretionary authority to render interpretations, to modify or to suspend portions of this code and the referenced technical codes and to adopt and enforce additional rules and regulations supplemental to this code and the referenced technical codes as may be deemed necessary to clarify and apply the provisions of this code and the referenced technical codes.

202.6 Authority to Disconnect Utilities. The Building Official or his authorized representative shall have the authority to disconnect any utility service or energy supplied to the building, structure or building service equipment therein regulated by this Code or by the technical codes, in case of emergency, where such building, structure or equipment is hazardous to life or property. The Building Official shall whenever possible notify the serving utility, the owner and the occupant of the building, structure or building service equipment of the decision to disconnect prior to taking such action, and shall notify in writing such utility, owner and occupant of such disconnection immediately thereafter. Such disconnection is also authorized in cases where a building or structure has been constructed, remodeled, repaired, energized or occupied in violation of this Code or any of the technical codes; provided, however, that notice and an opportunity for informal hearing shall first be afforded the owner and occupant.

SECTION 8: Section 204 is hereby amended by deleting Section 204.1 and 204.2 and substituting therefor a new Section 204.1 and Subsections 204.1.1 through 204.1.5, reading as follows:

204.1 Board of Appeals. The Board of Appeals is created to hear and decide

appeals of determinations made by the Building Official or Fire Marshal relative to the application and interpretation of the technical codes. The Board of Appeals is authorized to hear appeals relating to this Chapter and the technical codes, and to review proposed alternate materials and methods of construction. Members of the Board of Appeals shall be appointed by the Las Vegas City Council and shall serve a term of four years, or until their successors are appointed. Members may be removed from office at any time by a majority vote of the City Council.

204.1.1 Members. The members of the Board of Appeals shall be qualified by training and experience to decide matters pertaining to building construction and building service equipment. The members shall not be employees of the City of Las Vegas. The members of the Board of Appeals shall consist of the following:

1. Two general contractors.
2. One electrical contractor or electrical engineer.
3. Two mechanical/plumbing contractors.
4. One fire protection engineer.
5. One lay member.
6. One architect registered by the State of Nevada.
7. One structural engineer registered by the State of Nevada.

201.1.2 Procedures. The Board of Appeals may adopt rules and procedures for conducting its hearings and investigations. A person (the appellant) who wishes to appeal a determination of the Building Official or Fire Marshal to the Board of Appeals shall submit a written request for appeal to the Building Official or Fire Marshal, as applicable. The Building Official or Fire Marshal, as applicable, shall provide the appellant a copy of the guidelines for preparing an appeal and a copy of any Board-adopted rules and procedures. The appellant is responsible to prepare the written appeal in compliance with the guidelines. In order to provide for timely hearing and resolution of appeals, the Building Official or Fire Marshal shall schedule a hearing before the Board upon a determination of the Building Official or Fire Marshal that a written appeal is in substantial compliance with the Board guidelines for preparing an appeal. In addition to information and evidence submitted by the appellant, information and evidence may be submitted in support of the determination by the Building Official or Fire Marshal. The Board shall issue a written decision based on the evidence presented at the hearing. The decision shall be signed by the chairman of the Board and shall be filed with the Building Official or Fire Marshal, as applicable. A copy of the Board decision shall be delivered to the appellant in person or by U.S. Certified Mail.

201.1.3 Limitation and Scope of Authority. The Board of Appeals shall not have authority relative to the interpretation of the administrative provisions of this Chapter or the adopted administrative provisions of the technical codes, nor shall the Board be empowered to waive any requirements of this Chapter or the technical codes.

201.1.4 Tests. The appellant shall, at the appellant's expense, cause to be performed and produced any tests or research necessary to support appellant's claims before the Board of Appeals and any tests or research as may be required by the Board in its consideration of the claims

of the appellant.

201.1.5 Liability. No member of the Board of Appeals shall be personally liable for any damage that may accrue to persons or property as a result of any good faith act or any good faith act omission in the discharge of the duties specified herein. Any suit brought against the Board or any member thereof resulting from such act or omission performed, or not performed, by a member of the Board acting in an official capacity in the performance of Board duties as specified in this Chapter shall be considered an act of the City of Las Vegas and shall be subject to all applicable immunities and rights conferred by law upon the City of Las Vegas, as well as subject to applicable City of Las Vegas liability self-insurance or insurance coverage.

SECTION 9: Section 301 is hereby amended by deleting Subsection 301.1 and substituting therefor a new Subsection 301.1 and new Subsections 301.1.1 and 301.1.2, reading as follows:

301.1 Permits Required. Except as specified in this Section 301 or in Section 28 of this Supplemental Document, no building, structure, building service equipment or onsite improvement regulated by this Code or any of the technical codes shall be erected, constructed, enlarged, altered, repaired, moved, improved, removed, converted, or demolished unless a separate, appropriate permit for each building, structure, building service equipment or onsite improvement has first been obtained from the Building Official. If work is commenced before a necessary and appropriate permit for the work has been obtained, the Building Official is authorized to charge:

1. An additional fee in the amount of the building permit fees chargeable under Section 304 (i.e., double fees); and
2. An investigation inspection fee pursuant to Table No. 3-E, if an inspector or inspections supervisor is sent to inspect the work.

NOTE: Requirements concerning swimming pools and spas are contained in Sections 39 to 44, inclusive, of this Supplemental Document.

301.1.1 Licensing and Contractor Requirements. No building permits shall be issued for building work which is required to be performed by a licensed contractor under NRS Chapter 624 unless the applicant is appropriately licensed by the State of Nevada and is licensed to do business within the City. Where State law requires that a general contractor be retained for a particular project, the general contractor shall be responsible for acquiring the permits for all the trades to be involved in the work, and shall be responsible for paying all fees associated with the work in accordance with Table Nos. 3-A, 3-B and 3-C. A general contractor to whom a permit is issued shall be responsible for all work authorized for the project and shall post at the job site a list of all subcontractors doing work on the job with their names, their State subcontractor's license numbers and classifications and their City business license numbers. Mechanical, electrical and plumbing subcontractors shall register with the Department when all permits have been taken out by the general contractor. The general contractor and subcontractors must meet all applicable qualifications and requirements described in the technical codes. All building permit applications must include the license number and applicable monetary limits of the general contractor and each

subcontractor.

NOTE: Additional licensing requirements concerning plumbing work are contained in Sections 26 to 33, inclusive, of this Supplemental Document. Additional licensing requirements concerning mechanical work are contained in Sections 34 to 38, inclusive, of this Supplemental Document.

301.1.2 Maintenance. All buildings, structures, pools, spas, signs, and building service equipment, existing and new, and all parts thereof shall be maintained in a safe condition. All devices or safeguards which are required by the technical codes shall be maintained in conformance with the technical code under which installed. The owner or his designated agent shall be responsible for the maintenance of buildings, structures, pools, spas, signs and their building service equipment. To determine compliance with this subsection, the Building Official may cause any structure to be reinspected.

SECTION 10: Section 301 is hereby amended by deleting Subsection 301.2.1, including its constituent subdivisions and substituting therefor a new Subsection 301.2.1, reading as follows:

301.2.1 Work Exempt from Permit. A building permit shall not be required for the following:

1. Construction work on property owned by the United States or on property owned by any other governmental entity, to the extent exempted by State law.
2. Amusement devices and structures, including merry-go-rounds, ferris wheels, rotating conveyances, slides and similar devices, and any other accessory structure consisting of a cover or roof whose use is necessary for the operation of any such device or structure when such device or structure is used for less than 30 days. A storage building or detached structure that is not an integral part of an amusement device or structure does not qualify as an exempt accessory structure for purposes of this paragraph. The exemption contained in this paragraph likewise does not apply to any electrical, mechanical or plumbing work that is to be done in connection with amusement devices or structures that are to be used on a site.
3. Oil derricks.
4. Movable cases, counters and partitions that do not exceed 5 feet 9 inches in height and not containing electrical branch circuits.
5. Privately owned water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons and the ratio of height to diameter or width does not exceed two to one.
6. Platforms, walks and driveways not more than 30 inches above grade and not over any basement or story below, when built in conjunction with a building that is classified as a Group R, Division 3 one-family or two-family dwelling or a U Occupancy.
7. Painting, papering and similar finish work, except for trim and decorative work exceeding 0.5 pounds per square foot or 0.35 pounds per lineal foot in weight.
8. Temporary motion picture, television and theater stage sets and scenery.
9. Window awnings supported by an exterior wall of a Group R, Division 3

one-family or two-family dwelling, or a U Occupancy, when projecting not more than 54 inches.

10. Residential television or radio antennas whose height design does not exceed 10 feet above the height of the tallest structure on the property, and so located that the distance to the nearest property line is equal to or greater than the total height of the antenna mast.

11. Construction directly relating to the delivery of a utility service, built by a public utility company operating under the control of the Public Service Commission. This exemption applies only to buildings, structures, or service equipment that is directly used in utility generation or distribution and is installed on properly registered easements belonging to water, gas, power, telephone, or other utility companies governed under the State of Nevada Public Service Commission, another State agency, or a public franchise. This exemption does not apply to office buildings, grading, occupied support buildings and general site development.

12. Portable motors or other portable appliances energized by means of a cord or cable having an attachment plug end to be connected to an approved 120-volt receptacle, when that cord or cable is permitted by the Electrical Code.

13. The repair or replacement of fixed motors or fixed approved appliances of the same type and rating in the same location.

14. The installation, alteration or repair of electrical wiring, apparatus or equipment for the generation, transmission, distribution or metering of electrical energy or in the operation of signals or the transmission of intelligence by a public utility in the exercise of its function as a serving utility.

15. Any portable unit refrigerating system (cooling only) as defined in the Mechanical Code.

16. Any wall, including a retaining wall, that is not over two feet in height, measured from the low finished grade to the grade on the opposite side. This exemption does not apply to:

- a. Any wall that supports a surcharge;
- b. Any wall (including a patio wall) that retains flammable liquids;

or

- c. Any wall of combined materials that exceeds 2 feet in height.

17. One-story detached accessory buildings used as tool and storage sheds, playhouses, and similar uses, provided the floor area does not exceed 200 square feet.

NOTE: Exemption from the permit requirements of this Code shall not be deemed to authorize any work to be done in violation of the provisions of the technical codes or any other City ordinances or regulations.

SECTION 11: Section 301 is hereby amended by adding thereto a new subsection, designated as Subsection 301.3, reading as follows:

301.3 Manufactured Housing, Travel Trailer and Recreational Vehicle Permits.

301.3.1 Manufactured Housing Installations (R-MH or R-MHP District).

Manufactured housing installations are under the jurisdiction of the Nevada State Department of

Business and Industry. The units shall bear a seal from a recognized approval agency.

301.3.2 Travel Trailers or Recreational Vehicles (R-MH or R-MHP District).

Travel trailers or recreational vehicles are under the jurisdiction of the Nevada State Department of Business and Industry.

301.3.3 Temporary Residential Use Pending Construction. Nothing in this Code or the technical codes shall be deemed to prohibit any owner of a lot or parcel of land from parking his own manufactured home or recreational vehicle thereon and living therein. Before placing or parking the manufactured home or recreational vehicle, the owner must:

1. Obtain a building permit for a permanent residence to be located on the same lot and for the owner's use;
2. Execute in the City's favor a surety bond or equivalent, in accordance with the provisions of Section 301.3.4 below;
3. Obtain a permit for the temporary placement of the manufactured home or recreational vehicle; and
4. Provide the proper sanitary facilities in the manner required by the Clark County Health District.

The period of occupancy may not exceed one year after the permit for temporary placement is issued. Upon written request, the Building Official may grant a single extension of time of up to six months.

301.3.4. Surety for Removal. The surety bond required by Section 301.3.3 shall be in the amount of one thousand dollars (\$1,000.00), shall secure the removal of the manufactured home or recreational vehicle, and shall be conditioned upon the owner's maintaining in force a valid building permit during the entire time the manufactured home or recreational vehicle is in place. As an alternative to the surety bond, the owner may deposit the sum of one thousand dollars (\$1,000.00):

1. With the City Treasurer, to be refunded upon full compliance with this Subsection; or
2. With a financial institution, provided that the owner, the City and the financial institution have entered into a security agreement that is acceptable to the City Attorney. The arrangement described in the preceding sentence is referred to below as cash-in-lieu-of-bond.

301.3.5 Temporary Placement for Contractor/Security Purposes. Nothing in this Code or the technical codes shall be deemed to prohibit the temporary placement of a manufactured home or travel trailer for the use of a contractor engaged in construction work on the same parcel of land. In addition, a manufactured home or travel trailer may be temporarily placed upon any commercially zoned lot or parcel of land to be used for security purposes when approved by the Building Official. Any placement of a temporary manufactured home or travel trailer for the purpose of living there shall be subject to the requirements concerning installation, permitting, bonding, and time limits as set forth in Sections 301.3.4 and 301.3.5 above. Any such manufactured home or travel trailer shall be properly installed and maintained in accordance with this Section 301.3.

301.3.6 Temporary Placement of Manufactured Building for Commercial Operation. Nothing in this Code or the technical codes shall be deemed to prohibit a commercial operation from temporarily operating within a manufactured building when the use has been approved by the City Council, the duration of the temporary use shall be in accordance with this Section 301.3 or as determined by the City Council. The period of occupancy may not exceed one year from the date of approval. The Building Official may, upon written request, grant a single six-month extension, provided that a valid building permit is in force at the time the extension is requested and the City Council has approved the extension. Any such manufactured home or travel trailer shall be properly installed and maintained in accordance with this Section 301.3.

301.3.7 Enforcement. Enforcement of the provisions of this Section 301.3 shall be in accordance with this Section 301.3.7. Each reference in this Section 301.3.7 to the term "manufactured home" includes a travel trailer or recreational vehicle.

1. Whenever the Building Official or his designee finds that a manufactured home has remained on the permit holder's property for a period in excess of the limits specified above, he may issue a written notice and order to comply to the principal and to any surety on the bond. Notice to the principal is sufficient if sent by certified mail, return receipt requested, to the address provided by the principal on the application for the permit. The notice and order shall state the estimated cost of removal, and provide that if the manufactured home is not removed within 30 days from the date of notice, the bond shall be forfeited.

2. Any permit holder or surety who believes that no violation described in Paragraph (1) above has occurred may, within 15 days after the date of the notice and order, apply in writing to the Department for a hearing. The Department shall forthwith set a date for said hearing, with at least five days written notice to the requesting party. The hearing shall be conducted by the Building Official or his designee.

3. The compliance order shall be stayed from the date a timely hearing request is received by the Department until a decision is rendered by the Department, and by the City Council in the event of a timely appeal of the Department's decision.

4. After the requested hearing, the Building Official may rescind, modify or affirm the order of compliance.

5. Within ten days after the date the Department's decision is rendered, the permit holder or surety may, if dissatisfied, appeal to the City Council by filing a written notice of appeal with the Department.

6. Upon receipt of an application from the person required to remove the manufactured home and an agreement by such person to comply with the order if allowed additional time, the Building Official or his designee may, at his discretion, grant an extension of time, not to exceed an additional 180 days, within which to remove the manufactured home. The Building Official or his designee's authority to extend time is limited to the removal of the manufactured home and shall not in any way affect the time to appeal the notice and order.

7. After receipt of a notice and order to comply, the surety must, within the time limits specified above, either cause the manufactured home to be removed or pay over to the Department the cost of removal after said manufactured home is removed by the Department. The Building Official or his designee may proceed by such mode as is deemed convenient to cause the

manufactured home to be removed. The Building Official or his designee may, in accordance with City contracting procedures, hire a private contractor to remove manufactured home.

8. If a cash bond has been posted, notice of default as provided shall be given to the principal, and if the compliance is not obtained within the time limits specified, the Building Official or his designee may proceed without further notice to use the cash deposit or any portion of such deposit to cause the manufactured home to be removed, by contract or otherwise. The balance, if any, of such cash deposit shall, upon the completion of the work, be returned to the depositor or to his successors or assignee after deducting the cost of the work.

9. If cash-in-lieu of bond has been deposited, the notice of default shall be given to the principal, and if the compliance is not obtained within the 30) days specified, the Building Official or his designee may withdraw the deposited funds and use them to cause the manufactured home to be removed by contract or otherwise. The balance, if any, shall upon the completion of the work, be returned to the depositor or to his successors or assignee after deducting the cost of the work.

10. In any instance where the Building Official or his designee has caused a manufactured home to be removed, such manufactured home may be placed in storage at any location within Clark County, Nevada, and all costs of that storage shall be borne by the owner of such mobile home upon reclaiming the manufactured home. Upon the owner's failure to pay storage costs, such manufactured home may be sold in accordance with NRS Chapter 108.

11. Any costs in excess of the forfeited bond amounts shall be charged to the principal. Where the full amount due to the City is not paid by the principal within 60 days after the City has removed the manufactured home, the Building Official or his designee may request the City Attorney to commence appropriate legal proceedings to obtain payment.

301.3.8 Adoption of Guidelines. The Department may adopt procedural guidelines to be used in implementing this Section 301.3.

SECTION 12: Section 301 is hereby amended by adding thereto three new subsections, designated as Sections 301.4, 301.5 and 301.6, respectively, reading as follows:

301.4 Grading Permit-Acreage Limitations. In order to minimize the environmental impacts of large-scale grading, a grading permit shall authorize the grading of no more than 120 acres at a time. The Building Official may increase the acreage authorized for grading in the case of:

1. Golf course development; or
2. Other large-scale development, if the applicant or permittee demonstrates to the satisfaction of the Building Official that enhanced dust control mitigation measures are in place to ensure that the increase in grading activity will not adversely impact neighboring properties.

301.5 Moving of Buildings.

1. In order to move any building or structure to or from a location within the City, a moving permit must be obtained in advance. The application for a permit must describe the

proposed new location for the building or structure. After a permit is issued, but before the building or structure is moved, the applicant must contact a Supervisor of Building Inspections to schedule field inspections of the building that is to be moved and the site from which it is being moved. Field inspections may include, without limitation, the following items:

- a. Visible structural integrity of the structure.
- b. Required or proposed means of egress.
- c. Electrical wiring and grounding.
- d. Plumbing and gas line location, and compliance with applicable codes.
- e. Site safety, including the capping of lines, disconnection of electrical power, filling of holes, and removal of other potential hazards.

The moving of buildings shall be subject to the requirements (and the prior approval, if applicable) of the Traffic Engineering Division of the Department of Public Works, the Nevada Department of Transportation, and any other agency having jurisdiction.

2. With regard to any structure proposed to be moved to a location within the City, whether it is proposed to be moved from another location within the City or from a location outside the City, the application for a moving permit shall be accompanied by an application for a building permit, including the submittal of plans of the type and extent that would be required for the initial erection of that structure and comply with current codes. The Department is authorized to require letters from design professions verifying structural integrity and compliance with the International Energy Code. The review and approval of those plans shall also include and be subject to review and verification by the Department of Planning and Development, and the Land Development Division that the proposed location of the building, whether permanent or temporary, is permissible and appropriate under applicable zoning and development regulations.

301.6 Demolition Permits. Except as otherwise provided in this Section 301.6, a separate demolition permit is required for each building, address or suite at which demolition is to occur. Any sewer investigation permit which is required must be obtained prior to the issuance of a demolition permit. A demolition permit is not required under this Section for partial demolition work if:

1. The work is to be performed in conjunction with remodeling, alteration, or repair of a structure;
2. Plans for the work have been reviewed, approved, and a permit has been issued by the Building Department for the proposed work; and
3. The demolition work is within the area of the scope of the new work.

SECTION 13: Section 302 is hereby amended by deleting Subsections 302.3 and 302.5, substituting therefor new Subsections 302.3 and 302.5, reading as follows:

302.3 Information on Plans and Specifications. Plans and specifications shall be drawn to scale upon substantial paper whose sheets will be of a uniform size not to exceed 42 x 30 inches in size. The plans and specifications shall be of sufficient clarity to indicate the location,

nature and extent of the work proposed and to show in detail that the work will conform to the provisions of the technical codes and all relevant laws, ordinances, rules and regulations. Electronic submittals will be accepted in accordance with 1) State of Nevada approved guidelines and 2) technological capabilities.

302.5 Inspection and Observation Program. When special inspection is required by Chapter 17 of the International Building Code, the architect or engineer of record shall prepare an inspection program which shall be submitted to the Building Official for approval prior to issuance of the building permit. The inspection program shall designate the portions of the work to have special inspection, the name or names of the individuals or firms who are to perform the special inspections and indicate the duties of the special inspectors.

The special inspector shall be employed by the owner, the engineer or architect of record, or agent of the owner, but not the contractor or any other person responsible for the work.

When structural observation is required by Chapter 17 of the International Building Code, the inspection program shall name the individuals or firms who are to perform structural observation and describe the stages of construction at which structural observation is to occur.

The inspection program shall include samples of inspection reports and provide time limits for submission of reports.

SECTION 14: Section 303 is hereby amended by deleting Subsection 303.4 and substituting therefor a new subsection 303.4, reading as follows:

303.4 Expiration. Every permit issued by the Building Official with respect to work governed by the technical codes shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within 180 days from the date of such permit, as documented by an approved inspection, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days, as documented by an approved inspection. For purposes of this Section, an "approved inspection" is a complete inspection that is passed for all aspects of the subject of the inspection, and does not include "partial passed" inspections.

Any permittee holding an unexpired permit may apply for an extension of the time within which to commence work under that permit when the permittee is unable to commence work within the time required by this Section for good and satisfactory reasons. The Building Official may extend the time for action by the permittee for a period not exceeding 180 days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. For each permit extension, an administrative fee in the amount set forth in Table No. 3-D for "Permit Issuance and Administration" shall be charged. The Building Official may extend a permit more than once, at his or her sole discretion. However, no such extension shall exceed a period of 2 years in the aggregate. After 2 years, new permits shall be required with full

fees at each renewal.

Permits shall also expire when corrections which have been required by means of a notice to correct have not yet been completed within 30 days after such inspection. Before such work can be recommenced, a new permit therefor shall first be obtained, and the fee therefor shall be one half the amount required for a new permit for such work, provided that no changes have been made or will be made in the original plans and specifications for such work, and provided further that such suspension or abandonment has not exceeded one year. In order to renew action on a permit after expiration, the permittee shall request the renewal in writing and pay a new full permit fee.

SECTION 15: Section 304 is hereby amended by deleting Subsection 304.1, 304.2, and 304.3, and substituting therefor new Subsections 304.1, 304.2, and 304.3, including their constituent parts, reading as follows:

304.1 General Provisions.

304.1.1 Fees—Generally. Fees shall be assessed in accordance with the provisions of this Section and the fee tables adopted in connection with this Supplemental Document, as amended by the City Council from time to time. Political subdivisions which by law are exempt from the payment of building permit fees are not exempt from:

1. The plan check fees described in this Section 304;
2. Sewer connection fees; or
3. Any other development-related fee, except to the extent provided by law.

304.1.2 Fee-Related Definitions. For purposes of this Section 304:

1. "New construction" refers to new construction, remodels and additions relating to the occupancies that are listed in Table No. 3-A, as adopted in connection with this Supplemental Document.

2. "Included examination time," with respect to a project and the fees chargeable in relation thereto, means the amount of time (measured in hours) that the Building Official has estimated as necessary to complete the required review of plans by Building and Safety staff for compliance with applicable codes relating to the issuance of a building permit (plan check). The plan check fees that have been set with respect to any particular type of project are deemed to entitle the developer/contractor/owner of that particular project to a level of effort and service from the Building and Safety Department which reflects the "included examination time." The estimated hours of plan check time are represented in the base plan check fee (calculated as the product of that number of hours and the applicable hourly rate).

3. "Extraordinary examination time," with respect to a project and the fees chargeable in relation thereto, means the time necessary to conduct plan check that is in excess of the "included examination time" for that project.

4. "Included inspection time," with respect to a project and the fees chargeable in relation thereto, means the amount of time (measured in hours) that the Building

Official has estimated as necessary to complete the required inspections of the on-site construction work for completion of the project to a final certificate of occupancy or completion. The fees that have been set with respect to any particular type of permit are deemed to entitle the developer/contractor/owner of that particular project to a level of effort and service from the Building and Safety Department which reflects the "included inspection time." The estimated hours of building inspection time are represented in the base fee (calculated as the product of that number of hours and the applicable hourly rate).

5. "Extraordinary inspection time," with respect to a project and the fees chargeable in relation thereto, means the time necessary to inspect a project that is in excess of the "included inspection time" for that project.

304.2 Plan Check Fees.

304.2.1 New Construction. For new construction, as defined in Subsection 304.1, the base plan check fee for each type of permit shall be the applicable base plan check fee as set forth in Table No. 3-A under the heading "Effective July 1, 2010," determined with reference to the occupancy and the size basis thresholds listed therein. Such base fees, which are subject to adjustment in accordance with Sections 304.2.2 and 304.9, include plans examination to the extent represented in the "included examination time" that has been established by the Building and Safety Department for that project. Additional examination time (referred to as "extraordinary examination time") will be charged in accordance with Table No. 3-E.

304.2.2 Size-Based Adjustment to Base Plan Check Fee. For new construction, as defined in Subsection 304.1, the applicable base plan check fee, determined with reference to the occupancy and the size basis thresholds listed therein, shall be increased, in accordance with Table No. 3-B, by the amount that corresponds to the number of square feet by which the construction exceeds the amount of the applicable threshold base plan check fee, taking into account the applicable construction type listed in the various table columns.

304.2.3 Other Construction. For construction other than new construction, as defined in Subsection 304.1, the plan check fee for each type of permit shall be as set forth in Table No. 3-E under the heading "Effective July 1, 2010". Those fees, which are subject to adjustment in accordance with Section 304.9, include plans examination to the extent represented in the "included examination time" that has been established by the Building and Safety Department for that project. Additional examination time (referred to as "extraordinary examination time") will be charged in accordance with Table No. 3-E.

304.3 Permit and Inspection Fees

304.3.1 New Construction. For new construction, as defined in Subsection 304.1, the base fee for each type of permit and the associated inspections shall be the applicable base fee as set forth in Table No. 3-A under the heading "Effective July 1, 2010," determined with reference to the occupancy and the size basis thresholds listed therein. Such base fees, which are subject to

adjustment in accordance with Sections 304.3.2 and 304.9, include:

1. The fees for the associated mechanical, plumbing and electrical work;
2. Associated structural reviews; and
3. Inspections to the extent represented in the "included inspection time" that

has been established by the Building and Safety Department for that project.

Additional inspection time (referred to as "extraordinary inspection time") will be charged in accordance with Table No. 3-E.

304.3.2 Size-Based Adjustment to Base Fee. For new construction, as defined in Subsection 304.1, the applicable base fee, determined with reference to the occupancy and the size basis thresholds listed therein, shall be increased, in accordance with Table No. 3-C, by the amount that corresponds to the number of square feet by which the construction exceeds the amount of the applicable threshold base fee, taking into account the applicable construction type listed in the various table columns.

304.3.3 Other Construction. For construction other than new construction, as defined in Subsection 304.1, the fee for each type of permit and the associated inspections shall be as set forth in Table No. 3-E. Those fees, which are subject to adjustment in accordance with Section 304.9, do not include necessary structural reviews, which shall be chargeable under Section 304.7, but do include:

1. The fees for the associated mechanical, plumbing and electrical work; and
2. Inspections to the extent represented in the "included inspection time" that

has been established by the Building and Safety Department for that project.

Additional inspection time (referred to as "extraordinary inspection time") will be charged in accordance with Table No. 3-E.

304.3.4 Mechanical/Plumbing/Electrical Work Only. For work that is limited to mechanical, plumbing, or electrical, the fee for each type of permit and the associated inspections shall be as set forth in Table No. 3-D. Those fees, which are subject to adjustment in accordance with Section 304.9, do not include necessary structural reviews, which shall be chargeable under Section 304.7, but do include inspections to the extent represented in the "included inspection time" that has been established by the Building and Safety Department for that project. Additional inspection time (referred to as "extraordinary inspection time") will be charged in accordance with Table No. 3-E.

SECTION 16: Section 304 is hereby amended by adding a new Subsection 304.6.1, reading as follows:

304.6.1 Nonrefundable Fees. Except with respect to fees erroneously collected, the following fees will not be refunded:

1. Administrative issuance fees.
2. Zoning requirement review fees collected on behalf of the Planning and Development Department.

SECTION 17: Section 304 is hereby amended by adding thereto four new subsections, designated as Subsections 304.7, 304.8, 304.9 and 304.10, reading respectively as follows:

304.7 Miscellaneous and Other Fees. The following fees are chargeable to the extent not included elsewhere under applicable fee tables:

1. Administrative issuance fees, which are chargeable under Table Nos. 3-D and 3-E and apply to every permit, in addition to any other charge.
2. Hourly fees for extraordinary examination time and extraordinary inspection time as described in this Section 304 and as set forth in Table No. 3-E.
3. A research and processing fee, as set forth in Table No. 3-E, for certain large-scale projects concerning which permit renewal has been requested. The determination of which projects are subject to this fee shall be made by the Building Official, taking into account the size and complexity of the project.
4. All other fees set forth in Table Nos. 3-E and 3-F.

304.8 Interpretation of Fee Tables. In connection with certain items of work or construction (or combinations of such items), it may be necessary to consult more than one fee table in order to determine the amounts of all applicable fees. The determination of which fee table or fee tables apply in any particular case shall be within the discretion of the Building Official or his designee.

304.9 Fee Increases. Unless otherwise determined by future action of the City Council pursuant to Section 304.10:

1. All fees set forth in Table Nos. 3-A, 3-D and 3-E under the columns "Effective July 1, 2010" shall be increased on July 1, 2012, and on July 1, 2013, respectively, as set forth under the corresponding columns in those Tables; and
2. On those dates, there shall be corresponding percentage-based increases in the amounts set forth in Tables 3-B, 3-C and 3-F.

304.10 Fee Review. Before July 1, 2012, the Building Official shall review the current fiscal performance of the City of Las Vegas Building and Safety Enterprise Fund to determine the need for the fee increases described in Section 304.9. Following the completion of the review, the Building Official will present the results of the review to the City of Las Vegas Building and Safety Enterprise Fund Committee for consideration in accordance with NRS 354.59893. If the Building Official determines that the fee increases are not needed, an appropriate agenda item to remove the increases shall be presented to the City Council for action to do so.

SECTION 18: Section 305 is hereby amended by deleting the first paragraph of the subsection remaining the same:

305.1 General. Construction or work for which a permit is required shall be subject to inspection by the Building Official, and the construction or work shall remain accessible and exposed for inspection purposes until approved by the Building Official. In addition, certain types

of construction shall have continuous inspection as specified by Chapter 17 of the International Building Code.

SECTION 19: Section 305 is hereby amended by deleting Subsection 305.5 and substituting therefor a new Subsection 305.5, reading as follows:

305.5 Required Building Inspections. All work regulated by this Code and the technical codes must be inspected and approved before being covered or concealed, and finished work must be inspected and approved before occupancy. The sequence and types of required inspections will be indicated on the inspection report card. The absence of such indication shall not be deemed to waive any inspection requirement. The Building Official, upon notification, shall make inspections that may include, but are not limited to, the following, and shall either approve that portion of the construction as completed or shall notify the permit holder or his agent of construction that fails to comply with this Code or the technical codes:

1. Foundation Inspection. To be made after excavations for footing are complete and required reinforcing steel is in place. For concrete foundations, required forms shall be in place prior to inspection. All materials for the foundation shall be on the job, except when concrete is ready-mixed in accordance with approved nationally recognized standards, the concrete need not be on the job. When the foundation is to be constructed of approved treated wood, additional inspections may be required by the Building Official.

2. Concrete slab or under-floor inspection. To be made after in-slab or under-floor building service equipment, conduit, piping accessories and other ancillary equipment items are in place but before any concrete is placed or floor sheathing installed, including the subfloor.

3. Frame inspection. To be made after the floor, framing, fire blocking and bracing are in place and all pipes, chimneys and vents are complete and the rough electrical, plumbing, and heating wires, pipes, and ducts are approved.

4. Lath and/or wallboard inspection. To be made after lathing and wallboard, interior and exterior, is in place but before plaster is applied or before wallboard joists and fasteners are taped and finished.

5. Final inspection. To be made after finish grading and the building is completed and ready for occupancy.

SECTION 20: Sections 306 and 307 are deleted in their entirety with no substitution.

SECTION 21: Section 308 is hereby amended by adding thereto two new subsections, designated as Subsections 308.3 and 308.4, respectively, reading as follows:

308.3 Construction Power. The Building Official may authorize temporary construction power, which is a privilege granted solely for convenience.

308.4 Revocation of Temporary Connection or Construction Power. Temporary connections of construction power may be revoked, upon written notice, for the use of temporary construction power for permanent occupancy, and may be revoked with or without notice for tampering with the electrical service panel in violation of the National Electrical Code and utility company requirements, or in the event work is suspended or abandoned as described in Subsection 303.4.

SECTION 22: Subsection 309.1 is hereby amended by deleting both the first paragraph thereof and the exception that follows and substituting for that paragraph and exception the following paragraph:

309.1 Use or Occupancy. No building or structure shall be used or occupied and no change in the existing occupancy classification of a building or structure or portion thereof shall be made until the Building Official approved the building or structure for occupancy, either by means of a Certificate of Occupancy or by the approval of a final inspection.

SECTION 23: Subsection 309.3 is hereby amended by adding and the end thereof the following provisions:

Whenever it is determined that an existing building has never been issued a Certificate of Occupancy, the Building Official may require that the following steps be taken in order to determine a minimal level of compliance with the appropriate technical codes:

1. The performance of a site investigation by an appropriate inspector to review the building's compliance with applicable codes in effect at the time the building was constructed.

2. Written notice to the owner, representative, or tenant identifying deficiencies in code compliance and requiring that actions be taken within a specified time to address such deficiencies.

In connection with these steps, the Building Official may also require that the use or occupancy of the building be ceased pending the correction of deficiencies, but only where the Building Official determines that immediate danger to public safety so requires.

Upon correction of the deficiencies, a Certificate of Occupancy will be issued.

SECTION 24: Section 309 is hereby amended by adding thereto a new subsection, designated as Subsection 309.7, reading as follows:

309.7 Utilities. Upon revocation of a Certificate of Occupancy, the Building Official may order the disconnection or discontinuance of utility services upon at least 3 days written notice to the owner and occupant.

SECTION 25: Table Nos. 3-A to 3-H, inclusive, are hereby deleted in their entirety, and new Table Nos. 3-A, 3-B, 3-C, 3-D, 3-E and 3-F, which were adopted by Ordinance No. 6110, are incorporated by this reference and are adopted in lieu of the tables hereby deleted.

PROVISIONS RELATING TO THE PLUMBING CODE

SECTION 26: In connection with the administration and enforcement of the Uniform Plumbing Code, as adopted by the City, the provisions which are set forth as Sections 27 to 33, inclusive, of this Supplemental Document are hereby adopted.

SECTION 27: GENERAL PROHIBITIONS AND PROVISIONS

A. It is unlawful for any person to conduct, carry or engage in the business of plumbing or act in the capacity of a plumbing contractor without first having obtained a license from the State of Nevada Contractor's Board to carry on the trade of plumbing.

B. It is unlawful for any person to conduct, carry on or engage in the business of installing, altering or repairing sewers or private sewage disposal systems without first having obtained a license from the State of Nevada Contractors Board to carry on the trade of plumbing.

C. The minimum job site requirement for an individual leading or directing the installation of plumbing shall be a Southern Nevada licensed journeyman plumber.

D. Contractors and their employees engaged in the construction of underground utility lines are exempt from provisions of this Chapter requiring a Certificate of Qualification, but such contractors must possess both valid State contractor's license and a City business license to carry on the business of contracting, as distinct from engaging in the business of plumbing.

SECTION 28: DEFINITIONS AND QUALIFICATIONS OF CONTRACTORS AND PLUMBERS

A. A Plumbing Contractor is a person who holds a license from the State of Nevada Contractors Board and a business license from the City to carry on the trade of plumbing.

B. A licensed Journeyman Plumber is a person who has successfully passed an examination issued by an approved agency in Clark County.

C. A Qualified Individual or QI is a person who has passed an appropriate examination(s) of the State of Nevada Contractors Board subsequent to July 1, 1985, and otherwise meets the qualifications of, and has been accepted by, the State of Nevada Contractors Board as a Qualified Individual in one or more of the subcategories of plumbing contracting (or as appropriate to the work to be permitted) after July 1, 1985.

D. Notwithstanding anything to the contrary in Sections 301 through 309 of this Code, as adopted by the City, the Building Official may authorize approved contractors to install, inspect and verify the proper installation of water heaters and water softeners, without the need to obtain a permit prior to the installation or to obtain an inspection of the work by the City following the installation. In such cases, the Building Official may issue permits for the installation of water heaters and water softeners after the work has been completed and charge an appropriate fee in connection therewith. Each installation must be properly verified, tagged and documented in accordance with procedures set forth by the Building Official. For the purposes of this Subsection, an "approved contractor" is one who:

1. Is properly licensed for the type of work to be performed;
2. Has successfully completed a course on the installation of water heaters and water softeners provided by the City; and
3. Has been approved by the City to participate in the program described in this Subsection.

SECTION 29: PERMITS; WORKSITE REQUIREMENTS

A. Permits may be issued to plumbing contractors having a State of Nevada Contractor's license and City business license for any plumbing or drainage work regulated by the Uniform Plumbing Code.

B. Permits may be issued to any properly licensed person to install, alter or enlarge irrigate systems, providing that required backflow prevention devices are installed to existing water lines.

C. Permits may be issued to licensed fire sprinkling contractors or licensed plumbing contractors for the installation of automatic fire extinguishing systems, provided that all work conforms to the requirements of the most recent edition of the National Board of Fire Underwriters Standard #13.

D. Permits may be issued to any person to do plumbing or drainage work regulated by the Uniform Plumbing Code in a single family dwelling used exclusively for living purposes, including the usual accessory buildings or quarters in connection with such buildings, provided that such person is the bona fide owner of such dwelling and accessory buildings or quarters, and the same are occupied or designated to be occupied by said owner.

E. A permit may be issued for the original installation of permanent and rental water softening equipment, provided the work done involves only minor changes in the existing water lines. Every application for a permit shall be accompanied by a sketch or drawing of the proposed installation. The person making the installation, at a minimum, must have successfully passed an examination given by an approved agency for a limited certificate of competency, permitting the holder to make minor changes in the present water system to install only permanent and rental water softening equipment. If the installation involves connecting to the drainage system, this work must

be done by a certified plumber unless the building is provided with a drain connection suitable for the purpose of connecting a water softener. For purposes of this paragraph, "minor changes" in the water system shall be construed to mean that no more than one cut into the existing water lines will be required.

F. A permit may be issued to any general engineering contractor, or to any sewer, sewage disposal, drain and pipelaying contractor, pipeline contractor or industrial piping contractor licensed by the State of Nevada, for work within that contractor's respective specialty or specialties, for the construction and installation of sewer, water, or other underground utility lines on private or public property up to a point not less than 5 feet from the building and, with respect to a manufactured home or recreational vehicle park, for installation of pipeline systems in accordance with approved plans.

G. A permit may be issued to any refrigeration or air conditioning contractor who holds both a valid State of Nevada contractor's license, Classification C-21 (a) or (b), and a valid business license issued by the City, to install gas piping which is directly related and necessary to the repair or replacement of a refrigeration, heating or air conditioning system, not exceeding 500,000 BTUH per permit (based on natural gas input). The permittee shall only use qualified workers who have met City requirements for installation of gas lines. The permittee shall not modify or alter any gas piping except for that gas piping allowed by this Subsection.

H. At least one licensed Journeyman Plumber must be on any job site while work is being performed.

I. Notwithstanding anything to the contrary in Sections 301 through 309 of this Code, as adopted by the City, the Building Official may authorize approved contractors to install, inspect and verify the proper installation of water heaters and water softeners, without the need to obtain a permit prior to the installation or to obtain an inspection of the work by the City following the installation. In such cases, the Building Official may issue permits for the installation of water heaters and water softeners after the work has been completed and charge an appropriate fee in connection therewith. Each installation must be properly verified, tagged and documented in accordance with procedures set forth by the Building Official. For the purposes of this Subsection, an "approved contractor" is one who:

1. Is properly licensed for the type of work to be performed;
2. Has successfully completed a course on the installation of water heaters and water softeners provided by the City; and
3. Has been approved by the City to participate in the program described in this Subsection.

SECTION 30: PLAN/CALCULATION PREPARATION

When plans and calculations are not stamped with the seal of an architect or engineer who is responsible for the work, the plumbing contractor shall be responsible for design and

conformance with this Code. The plumbing contractor shall provide on any plans a title block which includes the plumbing contractor's company and individual names, and the State contractor's license number.

EXCEPTION: An owner-builder may prepare plans for the owner-builder's own home. An owner-builder shall provide a title block and sign the building plans.

SECTION 31: OCCUPANCY FEES FOR SEWER CONNECTION (See Chapter 14.04 of the Las Vegas Municipal Code for Schedule of Fees)

Occupancy fees for sewer connection shall be due at the time of issuance of building permit or occupancy change. An application for occupancy change shall include the deposit for any additional fees that required to be paid. Credit for existing sewer shall be applied to the new sewer fees based on previous type of occupancy and only when the new occupancy requires an additional fee. The Building Official may authorize the refunding of sewer connection fees which are erroneously paid or collected and in instances where construction is not performed. All applications for refunds must be filed in writing by the original permittee not later than 180 days after the date of payment. All refunds are subject to an administrative fee to cover the processing of permits and refund applications. The administrative fee shall be in the amount of the Permit Issuance and Administration Fee set forth in Table No. 3-D, or 20% of the total connection fee, whichever is less.

SECTION 32: SEWER TRUNK EXTENSION AND OVERSIZING REFUNDING AGREEMENTS

A. Sewer trunk extensions and oversizing necessary to serve real property within the City which is incapable of being served by existing sewer trunks may be installed pursuant to refunding agreements, at the discretion of the Director of Public Works, in accordance with the following procedures:

1. An applicant for a "sewer extension" refunding agreement will file an application with the Department of Public Works, accompanied by an approved design of the proposed installation.

2. When a "sewer oversizing" refunding agreement is required, the Department of Public Works shall designate the sizing for the proposed trunk extension; the depth at which it shall be installed; the number, location and type of appurtenances to be included therein; and the location of the area from which the refund therefor will be derived. Two designs shall be prepared for the project, an oversizing design and a base design meeting the capacity needs of the development. Both designs shall have matching pipe crown elevations.

3. Upon receipt of approved design plans, the applicant shall submit to the Department of Public Works at least 3 written bids (sealed) from licensed sewer contractors for the construction of the proposed sewer extension in accordance with the approved plans therefor; provided, however, that the Director of Public Works, at his discretion and upon good cause shown, may waive the requirement of those written bids.

4. Sewer refunding agreements are based on the lowest responsible bid.

Oversizing costs are based on the lowest cost differential between the oversizing design bid and the base design bid. Reimbursable extension costs are based on the lowest bid minus the oversizing costs. Costs involving rock or hard material excavation shall not be included in the original refunding agreements. If the developer encounters rock or hard material excavation, the developer shall notify Off-site Inspection and Testing who will document the amount of hard material excavation encountered. The developer may request an amendment to the agreement based on the amount of hard material excavation encountered. As a prerequisite for City consideration for payment for rock or hard material excavation, notification will be provided to the City prior to commencement of work.

5. Any sewer trunk extension and appurtenant installation under a refunding agreement shall conform to Design and Construction Standards for Wastewater Collection Systems then in force in the City, and shall be subject to the acceptance by the City prior to the use thereof.

6. Upon the completion of construction of any such sewer trunk extension, as-built plans of said installation shall be filed with the Department of Public Works.

B. Recovery of extension costs shall apply only to that portion of the extended sewer trunk in excess of 200 feet from its connection to the existing sewer trunk (the "trunk extension subject to refunding") and terminating at the nearest point of the development. The amount recoverable thereunder shall be as specified in the agreement but not to exceed 95% of the amount, based on the lowest acceptable bid, actually expended by the applicant, after any appropriate adjustment in cost, in the construction of the trunk extension subject to refunding; provided, however, that the cost resulting from any oversizing of such extended sewer trunk at the request of the City shall be pursuant to separate agreement and shall be paid after the acceptance by the City of such extended sewer trunks, or as specified in the agreement.

C. Unless otherwise provided by agreement, refunds pursuant to each refunding agreement shall be made by the City on or before the anniversary date of the refunding agreement in each year on the basis of and shall be limited to \$125.00 for each sewer connection fee received during the preceding 12 months from properties adjacent to the limits of the extension agreement. The right to any refund thereunder shall expire on the tenth anniversary of the execution of such agreement. In no event shall the aggregate refund to be made under any such refunding agreement ever exceed ninety-five percent (95%) of the costs expended by the applicant in connection with the installation of the trunk extension subject to refunding.

D. Unless otherwise specified by agreement, refunds associated with sewer extensions and reimbursements associated with oversizing shall be made to the applicant.

SECTION 33: FEES.

Fees related to plumbing permits and plumbing work shall be as set forth in Table Nos. 3-A through 3-F.

PROVISIONS RELATING TO THE MECHANICAL CODE

SECTION 34: In connection with the administration and enforcement of the Uniform Mechanical Code, as adopted by the City, the provisions which are set forth as Sections 35 to 37, inclusive, of this Supplemental Document are hereby adopted.

SECTION 35: LICENSING

Any person, firm or corporation engaged in the business of installing, repairing, servicing, maintaining or improving heating and air conditioning equipment or ductwork in the City shall first secure a State of Nevada contractor's license and a City business license. Those licenses must be kept valid as long as the licensee is engaged in any business described in this section.

SECTION 36: QUALIFIED PERSONS

A. It is unlawful for any person to install, alter, reconstruct, repair or maintain any heating, ventilating, air conditioning or refrigeration equipment or evaporative cooler or cooling tower as described in this Code, unless such person is a qualified person or a regular salaried employee of a qualified person, in which latter case the qualified person shall be responsible for all work done by such employee.

B. The term "qualified person" shall be deemed to mean a person, firm or corporation holding both a valid contractor's license issued by the State of Nevada and a valid City business license, or a person who qualifies under Subsection (C) of this Section.

C. Any permit required by this Code may be issued to any person doing any construction or work regulated by this Code in a single family dwelling used exclusively for living purposes, including usual accessory buildings and quarters in connection with such single family dwelling, provided that:

1. Such person is a bona fide owner of such dwelling, accessory building and quarters;
2. The same are occupied by or intended to be occupied by such owner;
3. For the installation of any equipment, such owner applies for and obtains a permit for such construction work; provided, however, that no permit will be required for the repair, service or maintenance of existing equipment.

SECTION 38: FEES.

Fees related to mechanical permits and mechanical work shall be as set forth in Table Nos. 3-A through 3-F.

PROVISIONS RELATING TO THE POOL CODE

SECTION 39: In connection with the administration and enforcement of the Southern Nevada Pool Code, as adopted by the City, the provisions which are set forth as Sections 40 to 44,

inclusive, of this Supplemental Document are hereby adopted.

SECTION 40: EXISTING INSTALLATIONS

A. Any swimming pool/spa or water feature lawfully installed prior to the effective date of this Code may have its existing use, maintenance or repair continued if the use, maintenance or repair is in accordance with the original design and location and no hazard to the public health, safety or welfare has been created by such system.

B. The owner or his designated agent shall be responsible for the maintenance of the swimming pool/spa or water feature in a safe and sanitary condition.

SECTION 41: AUTHORITY TO ABATE

A. Any portion of a swimming pool/spa or water feature found to be unsafe and/or insanitary as defined herein is hereby declared to be a nuisance.

B. Where a nuisance exists or a system is maintained in violation of this Code, the Building Official shall have authority to provide notice of, and require the abatement of, the nuisance in any manner provided by law.

SECTION 42: PERMIT REQUIRED

A. It shall be unlawful for any person to install, remove, repair or replace or cause to be installed, removed, repaired or replaced, any swimming pool/spa or water feature within a building or upon any premises without first obtaining a permit to do such work from the Building Official.

B. A separate permit shall be obtained for each building structure or swimming pool/spa or water feature.

EXCEPTION: A permit is not required for repairs and remodeling which involve only the replacement of component parts of existing work with similar materials and do not affect any structural, electrical, mechanical, or plumbing installations.

SECTION 43: APPLICATION FOR PERMIT

A. A permit application may be made by a person entitled to apply for and receive a permit, on forms provided for that purpose. The application shall include a description of the character of the work proposed to be done and the location, ownership, occupancy and use of the premises in connection therewith. The Building Official may require plans, specifications or drawings and such other information as may be deemed necessary before issuance of a permit per Section 101.6 of this Code.

B. An application for a permit for new construction shall be accompanied by plans as required by the Building Official, and in sufficient detail, to include the following:

1. Plot plans dimensioned and drawn to a reasonable scale and showing at least the following:

a. Property lines, easement, right-of-way of record, and overhead utilities over the property adjacent to the pool/spa or water feature.

b. Existing structures, fences, retaining walls, irregular grades, and other relevant characteristics adjacent to the pool/spa or water feature.

c. The proposed pool/spa or water feature shape and type, dimensioned and located to show setbacks, side yards and clearance from existing structures adjacent to the pool/spa or water feature.

d. The proposed mechanical equipment pad location in relation to setbacks and side yards.

e. All diving and deck equipment items if included.

f. The proposed deck work configuration showing its anticipated drainage.

2. A structural plan showing at least the following:

a. The type of construction.

b. The pool/spa or water feature dimensions, including the depth, surface area, and adequate cross-sections drawn to scale.

c. Computations, stress diagrams, and other data sufficient to show the correctness of the plans, including the reinforcing steel schedule and detail, if applicable.

d. Contractor's structural calculations (stamped and signed by a registered engineer) for pools, spas, spa dam walls, raised bond beams, surcharges, waterscape and all other unusual conditions.

e. Detailed drawings of the items listed in (e), which shall be stamped and signed by the engineer of record and show:

i. Plan views.

ii. Cross sections.

iii. Reinforcing steel size.

iv. Reinforcing steel spacing.

v. Thickness of walls.

3. A mechanical plan showing at least the following:

a. The volume, system flow rate in gallons per minute (GPM's), and turnover in hours.

b. The type and size of filtration system and means of waste disposal.

c. The type and size of the pool heater, including the method of venting and provisions for combustion air, if applicable.

d. The pool piping layout and types of material to be used, and showing the location of the main outlet, surface skimmers and inlets.

e. The rated capacity of the pool pump in GPM's at the design head with the size and type of motor indicated and identified as to type of pump.

f. The means of adding make-up water.

g. The size and length from source to heater and routing of gas line, if applicable.

h. The size and location of existing electrical service.

C. If the Building Official determines that the plans, specifications, drawings, descriptions, or information furnished by the applicant are in compliance with this Code, the permit applied for shall be issued upon payment of the required fees.

D. The Building Official shall further require that permits be obtained by the persons responsible for all of the electrical, plumbing, related utility connections and heating work in conjunction with issuance of the building permit for the swimming pool/spa or water feature.

E. All plans and documents submitted shall be on substantial paper and shall show the name and address of the person under whose supervision the documents were prepared.

F. Nothing in this Section or in its implementation shall void or diminish the applicability of any other requirement of any other department or agency having jurisdiction.

SECTION 44: FEES.

Fees related to permits and work under the Pool Code shall be as set forth in Table Nos. 3-B, 3-C, 3-D and 3-E.

BUSINESS IMPACT STATEMENT

BILL NO. 2011-11

(Updates the City's Administrative Code, relating to the administration of the various building and technical codes)

This business impact statement was prepared pursuant to NRS 237.090 to address the impact of a proposed ordinance, Bill No. 2011-11, that will update the City's Administrative Code, relating to the administration of the various building and technical codes.

1. The following constitutes a description of the manner in which comment was solicited from affected businesses, a summary of their responses and an explanation of the manner in which other interested persons may obtain a copy of the summary.

Notice of the proposed ordinance was published in the Las Vegas Review-Journal. In addition, a copy of the notice was provided to development-related and construction groups that are representative of affected industries. No written responses were received.

2. The estimated economic effect of the proposed rule on businesses, including, without limitation, both adverse and beneficial effects, and both direct and indirect effects:

Adverse effects:

Those proposing construction will need to plan for and adjust to any new or differing Code requirements

Beneficial effects:

Code provisions that are updated and that are consistent with other area jurisdictions

Direct effects:

See adverse and beneficial effects above

Indirect effects:

None identified

3. The following constitutes a description of the methods the local government considered to reduce the impact of the proposed rule on businesses and a statement regarding whether any, and if so which, of these methods were used:

Not applicable

4. The governing body estimates the annual cost to the local government for enforcement of the proposed rule is:

Unknown; dependent on how many applicants for large-scale projects need research services

5. If the proposed rule provides for a new fee or increases an existing fee, the total annual amount expected to be collected is:

Unknown; dependent on how many applicants for large-scale projects need research services.
Likely not to exceed \$2500 per year

6. If the proposed rule provides for a new fee or increases an existing fee, the money generated by the new fee or increase in existing fee will be used by the local government to:

Offset research-related costs

7. If the proposed rule includes provisions that duplicate or are more stringent than federal, state or local standards regulating the same activity, the following explains when such duplicative or more stringent provisions are necessary:

Not applicable

Date: February 16, 2011

AGENDA SUMMARY PAGE
RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY ATTORNEY

DIRECTOR: BRADFORD R. JERBIC

☐ Consent ☒ Discussion

SUBJECT:

Bill No. 2011-12 – Adopts the 2009 Edition of the Uniform Plumbing Code, together with amendments thereto, as the City’s Plumbing Code. Sponsored by: Councilman Steven D. Ross

Fiscal Impact

☒

No Impact

☐

Augmentation Required

☐

Budget Funds Available

Amount:

Funding Source:

Dept./Division:

PURPOSE/BACKGROUND:

This bill will adopt the 2009 Edition of the Uniform Plumbing Code, together with amendments thereto, as the City’s Plumbing Code. The amendments primarily represent adaptations agreed upon by local area jurisdictions.

RECOMMENDATION:

This bill should be submitted to a Recommending Committee for review, hearing and recommendation to the City Council for final action.

BACKUP DOCUMENTATION:

1. Bill No. 2011-12
2. Southern Nevada Amendments to the 2009 Uniform Plumbing Code
3. Business Impact Statement

1 **BILL NO. 2011-12**

2 **ORDINANCE NO. _____**

3 AN ORDINANCE TO ADOPT THE 2009 EDITION OF THE UNIFORM PLUMBING CODE,
4 TOGETHER WITH AMENDMENTS THERETO, AND TO PROVIDE FOR OTHER RELATED
MATTERS.

5 Sponsored by: Councilman Steven D. Ross

Summary: Adopts the 2009 Edition of the
Uniform Plumbing Code, together with
amendments thereto, as the City's Plumbing
Code.

8 THE CITY COUNCIL OF THE CITY OF LAS VEGAS DOES HEREBY ORDAIN
9 AS FOLLOWS:

10 SECTION 1: Title 16, Chapter 28, Section 10, of the Municipal Code of the City of
11 Las Vegas, Nevada, 1983 Edition, is hereby amended to read as follows:

12 **16.28.010:** Those certain documents, [three] copies of each being on file in the Office of the City
13 Clerk, and designated as follows, are adopted by reference and made a part of this Code, to the same
14 effect as if set out herein in full:

15 (A) Uniform Plumbing Code, [2006] 2009 Edition, including its Standards and
16 Appendices, except as otherwise indicated, designated as Part 1 of this Chapter; and

17 (B) A document entitled ["Southern Nevada Amendments to the 2006 Uniform
18 Plumbing Code,"] "Southern Nevada Amendments to the 2009 Uniform Plumbing Code," adding to,
19 deleting from and amending the Uniform Plumbing Code, [2006] 2009 Edition, designated as Part 2
20 of this Chapter.

21 SECTION 2: The document entitled Southern Nevada Amendments to the 2009
22 Uniform Plumbing Code is attached hereto.

23 SECTION 3: The document entitled "Southern Nevada Amendments to the Uniform
24 Plumbing Code, 2009 Edition," is amended by adding thereto the following language:

25 Section 313.4 of the Uniform Plumbing Code, 2009 Edition, is amended by adding thereto a
26 new sentence, reading as follows:

27 All copper piping under the slab must be sleeved.

28 SECTION 4: The Uniform Plumbing Code, 2006 Edition, and the 2006 Southern

1 Nevada Plumbing Code Amendments, as amended, are hereby repealed in their entirety.

2 SECTION 5: This Ordinance shall become effective on July 5, 2011.

3 SECTION 6: If any section, subsection, subdivision, paragraph, sentence, clause or
4 phrase in this ordinance or any part thereof is for any reason held to be unconstitutional or invalid or
5 ineffective by any court of competent jurisdiction, such decision shall not affect the validity or
6 effectiveness of the remaining portions of this ordinance or any part thereof. The City Council of the
7 City of Las Vegas hereby declares that it would have passed each section, subsection, subdivision,
8 paragraph, sentence, clause or phrase thereof irrespective of the fact that any one or more sections,
9 subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional,
10 invalid or ineffective.

11 SECTION 7: Whenever in this ordinance any act is prohibited or is made or declared
12 to be unlawful or an offense or a misdemeanor, or whenever in this ordinance the doing of any act is
13 required or the failure to do any act is made or declared to be unlawful or an offense or a
14 misdemeanor, the doing of such prohibited act or the failure to do any such required act shall
15 constitute a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than
16 \$1,000.00 or by imprisonment for a term of not more than six months, or by any combination of such
17 fine and imprisonment. Any day of any violation of this ordinance shall constitute a separate offense.

18 SECTION 8: All ordinances or parts of ordinances or sections, subsections, phrases,
19 sentences, clauses or paragraphs contained in the Municipal Code of the City of Las Vegas, Nevada,
20 1983 Edition, in conflict herewith are hereby repealed.

21 PASSED, ADOPTED and APPROVED this _____ day of _____, 2011.

22 APPROVED:

23 By _____
24 OSCAR B. GOODMAN, Mayor

25 ATTEST:

26 BEVERLY K. BRIDGES, MMC
City Clerk

27 APPROVED AS TO FORM:

28 Val Steep 2-16-11
Date

1 The above and foregoing ordinance was first proposed and read by title to the City Council on the
2 ____ day of _____, 2011, and referred to the following committee composed of
3 _____ and _____ for recommendation;
4 thereafter the said committee reported favorably on said ordinance on the ____ day of
5 _____, 2011, which was a _____ meeting of said Council; that at said
6 _____ meeting, the proposed ordinance was read by title to the City Council
7 as first introduced and adopted by the following vote:

8 VOTING "AYE": _____

9 VOTING "NAY": _____

10 ABSENT: _____

11

12 APPROVED:

13

14 By _____
OSCAR B. GOODMAN, Mayor

15 ATTEST:

16

17 BEVERLY K. BRIDGES, MMC
City Clerk

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Southern Nevada Building
Officials

c/o City of Las Vegas
Building & Safety Dept
713 S. 4th Street
Las Vegas, NV 89101

Phone: 702-229-6257

Fax: 702-382-1731

Email:

chknight@lasvegasnevada.gov

MEMBERS

Chris Knight, Chair
City of Las Vegas

Greg Blackburn
City of North Las Vegas

Ron Nybo
City of Boulder City

Ron Lynn
Clark County

Kurt Sawyer
City of Mesquite

Brent Steed
Pahrump Regional
Planning District
(Nye County)

Michael Bouse
City of Henderson

Lisa Conner
Clark County School District

SOUTHERN NEVADA AMENDMENTS TO THE 2009 UNIFORM PLUMBING CODE

**Approved by SNBO
July 23, 2010**

Chapter 1 Administration.

Delete Chapter 1, with the exception of Sections 101.1, 101.2 and 103.1.3 and revise Section 103.1.3, as follows:

103.1.3 Plumbing Licensing Provision. Provision for licensing shall be determined by the Administration Provision of Authority Having Jurisdiction.

Section 205 Definitions.

Add a new definition to Section 205 to be placed in alphabetical order, as follows:

Combustible Construction - Combustible construction shall mean work within any building or structure classified as Type III, Type IV or Type V as defined in the Building Code. Plastic piping is not permitted in Type I and Type II buildings.

Section 311.4 Prohibited Fittings and Practices.

Revise Section 311.4 by deleting the second sentence and adding a new exception, as follows:

311.4 Except as hereinafter provided in Sections 908.0, 909.0 and 910.0, no vent pipe shall be used as a soil or waste pipe, nor shall any soil or waste pipe be used as a vent.

Exception: Single stack DWV systems may be used provided they are designed by a Nevada registered Mechanical Engineer and approved by the authority having jurisdiction.

Section 402.2 Water Closets.

Revise Section 402.2 in its entirety, as follows:

402.2 Water Closets. Water closets, either flush tank, flushometer tank, or flushometer valve operated, shall have an average consumption of 1.6 gallons (6.1 liters) of water per flush. A timing device or other mechanism which will automatically flush a water closet periodically or continually is prohibited.

Section 402.3 Urinals.

Revise Section 402.3 in its entirety, as follows:

402.3 Urinals. Urinals shall have an average water consumption of 1 gallon (3.8 liters) of water per flush. A timing device or other mechanism which will automatically flush a urinal periodically or continually is prohibited.

Section 411.2 Location of Floor Drains.

Add a new Section, 411.2.4, as follows:

411.2.4 All Fire Pump rooms shall be provided with a (3) inch (76 mm) minimum floor drain which must be connected to an approved trap primer.

Section 412.1 Minimum Number of required Fixtures.

Delete Sections 412.2 through 412.6 and Table 4-1 in their entirety and revise Section 412.1, as follows:

412.1 Minimum Number of Required Fixtures. Plumbing fixtures shall be provided for the type of occupancy and in the minimum number as required by the currently adopted Building Code.

Section 413.1 Limitation of Hot Water Temperature for Public Lavatories.

Add a new Exception to Section 413.1, as follows:

413.1 Limitation of Hot Water Temperature for Public Lavatories. Hot water delivered from public use lavatories shall be limited to a maximum temperature of 120°F (49°C) by a device that conforms to ASSE 1070 or CSA B125.3. The water heater thermostat shall not be considered a control for meeting this provision.

Exception: An ASSE 1017 listed device may be acceptable when the maximum temperature setting for the device is 120°F.

Section 414.5 The Limitation of Hot Water in Bathtubs and Whirlpool Bathtubs.

Add a new Exception to Section 414.5, as follows:

414.5 The Limitation of Hot Water in Bathtubs and Whirlpool Bathtubs. The maximum hot water temperature discharging from the bathtub and whirlpool bathtub filler shall be limited to 120°F (49°C) by a device that conforms to ASSE 1070 or CSA B125.3. The water heater thermostat shall not be considered a control for meeting this provision.

Exception: An ASSE 1017 listed device may be acceptable when the maximum temperature setting for the device is 120°F.

Section 416.3 Limitation of Water Temperature in Bidets.

Add a new Exception to Section 416.3, as follows:

416.3 Limitation of Water Temperature in Bidets. The maximum hot water temperature discharging from a bidet shall be limited to 110°F (43°C) by a device that conforms to ASSE 1070 or CSA B125.3. The water heater thermostat shall not be considered a control for meeting this provision.

Exception: An ASSE 1017 listed device may be acceptable when the maximum temperature setting for the device is 120°F. In no case shall the setting for the bidet exceed 110°F.

Section 509.3.1 Access to Appliances on Roofs.

Revise Section 509.3.1, as follows:

509.3.1 Gas utilization appliances located on roofs or other elevated locations shall be accessible by permanent roof access ladders, as follows:

- (1) Each ladder shall have side railings which extend at least thirty (30) inches (762 mm) above the roof or parapet wall.
- (2) Each ladder shall be a minimum of fourteen (14) inches (356 mm) in width.
- (3) Each ladder rung shall be spaced at a maximum of fourteen (14) inches (356 mm) on center.
- (4) Each ladder shall have a minimum of a six (6) inch (152 mm) toe space.
- (5) Each ladder shall have intermediate horizontal landings whenever the ladder height exceeds eighteen feet (5486 mm) above finished grade. Landings shall be placed at eighteen foot (5486 mm) intervals, maximum.

Exceptions:

1. Permanent exterior ladders providing roof access need not extend closer than eight (8) feet (2438 mm) to the finish grade.
2. A portable ladder may be used for access for Group R Division 3 and 4 and U occupancies.

3. Permanent ladders for equipment access need not be provided at parapets or walls less than thirty (30) inches (762mm) in height.

Section 510.6 Gas vents.

Add a new Exception to Section 510.6.2, item #1, as follows:

510.6.2 A gas vent shall terminate in accordance with one of the following:

- (1) Above the roof surface with a listed cap or listed roof assembly. Gas vents twelve (12) inches (300 mm) in size or smaller with listed caps shall be permitted to be terminated in accordance with Figure 5-2, provided they are at least eight (8) feet (2.4 m) from a vertical wall or similar obstruction. Other gas vents shall terminate not less than two (2) feet (0.6 m) above the highest point where they pass through the roof and at least two (2) feet (0.6 m) exceeding any portion of a building within ten (10) feet (3.1 m).

Exception: A single-family residence having gas vents twelve (12) inches (300 mm) in size or smaller with listed caps shall be permitted to be terminated in accordance with Figure 5-2, provided they are at least four (4) feet (1.2 m) from a vertical wall or similar obstruction.

Items (2) through (6) remain unchanged.

Section 603.3 General Requirements.

Revise Section 603.3.3, as follows:

603.3.3 The premise owner or responsible person shall have the backflow prevention assembly tested by a certified backflow assembly tester at the time of installation, repair, or relocation and not less than on an annual schedule thereafter, or more often when required by the Authority Having Jurisdiction. The certified tester shall leave a copy of their backflow certification on site along with a copy of the certification of each device tested. These documents shall be recorded into the permanent record at the time of installation. The periodic testing shall be performed in accordance with the procedures referenced in Table 14-1 by a tester qualified in accordance with those standards.

Section 603.4.12 Potable Water Supply to Carbonators.

Revise Section 603.4.12, as follows:

603.4.12 Potable Water Supply to Carbonators. Potable water supply to carbonators shall be protected by a listed reduced pressure principle backflow preventer as approved by the authority having jurisdiction.

Section 604.0 Materials.

Add a new Section 604.1.1, as follows:

604.1.1 Plastic piping shall be limited to buildings defined as combustible construction by this code.

Section 608.5 Relief Valves.

Revise Section 608.5 Relief Valves, as follows:

608.5 Relief Valves. Relief valves located inside a building shall be provided with a drain, not smaller than the relief valve outlet, of galvanized steel, hard- drawn copper piping and fittings, CPVC, flexible corrugated connectors complying with 604.12, or listed relief valve drain tube with fittings that will not reduce the internal bore of the pipe or tubing (straight lengths as opposed to coils) and shall extend from the valve to the outside of the building with the end of the pipe not more than two (2) feet (610 mm) nor

less than six (6) inches (152 mm) above the ground or the flood level of the area receiving the discharge and pointing downward. Temperature and Pressure Relief (T & P) drains shall discharge to the exterior of the building unless structural conditions or the manufacturers listing prevent this termination. T & P drains may discharge through an air gap into a secondary clothes washer port, or through an air gap in a floor sink or a floor drain provided they are located in normally unoccupied areas. No part of such drain pipe shall be trapped or subject to freezing. The terminal end of the drain pipe shall not be threaded.

Section 701.0 Materials.

Revise Section 701.0 by adding a new Section 701.1.2.1 Materials, as follows:

701.1.2.1 Materials. Plastic piping used for drainage waste and vent systems shall be limited to buildings defined as combustible construction by this code.

Section 704.3 Fixture Connections (Drainage)

Revise Section 704.3, as follows:

704.3 Pot sinks, scullery sinks, dishwashing sinks, silverware sinks, commercial dishwashing machines and other similar fixtures shall be indirectly connected to the drainage systems by means of an air gap.

Section 707.10 Cleanouts

Add a new Exception to Section 707.10, as follows:

707.10 Cleanout fittings shall be not less in size than those given in Table 7-6.

Exception: Where a 2-1/2" (inch) cleanout is required, a 2" (inch) cleanout may be used for horizontal branch waste lines.

Section 710.1 Drainage of Fixtures Located Below the Next Upstream Manhole or Below the Main Sewer level.

Delete Section 710.1, in its entirety and replace, as follows:

710.1 Drainage Piping servicing fixtures which have flood level rims located below the elevation of the next upstream manhole cover of the public or private sewer serving such drainage piping shall be protected from backflow of sewage by installing an approved type backwater valve; Other than a single dwelling unit served by an individual sewer, fixtures above such elevation shall not discharge through the backwater valve.

Section 801.2.2 Food and Beverage Handling Establishments.

Revise Section 801.2.2, as follows:

801.2.2 For walk-in coolers, floor drains shall be permitted to be connected to a separate drainage line discharging into an outside receptor. The flood level rim of the receptor shall be not less than six (6) inches (152 mm) lower than the lowest floor drain. Such floor drains shall be trapped and individually vented. Cleanouts shall be provided at every ninety (90) degree (1.6 rad) turn and shall be accessibly located. Such waste shall discharge through an airgap into a trapped and vented receptor, except that full-size airgap is required where the indirect waste pipe may be under vacuum.

Section 801.2.4 Floor Sinks.

Revise Section 801.2 by adding a new Section 801.2.4 Floor Sinks, as follows:

801.2.4 Floor Sinks. Floor sinks shall be installed flush with the finished floor and shall be accessible for cleaning.

Section 804.1 Indirect Waste Receptors.

Revise Section 804.1 by adding a new second paragraph, as follows:

When any indirect waste piping other than the discharge from the clothes washer is terminated into a washer box, a double port clothes washer box shall be used. The second port shall be permanently connected to the vertical receptor standpipe via a wye branch fitting or a listed multipoint clothes washer box may be used. The clothes washer shall discharge through an air break into the primary receptor standpipe. All other indirect waste piping shall discharge into the secondary port through an air gap.

Section 903.0 Materials.

Revise Section 903.1 by adding a new section 903.1.2.1, as follows:

903.1.2.1 Plastic piping used for drainage waste and vent systems shall be limited to buildings defined as combustible construction by this code.

1009.0 Gravity Grease Interceptors.

Delete Sections 1009.0 through 1017.2, retain Table 10-3 and add new Sections 1009.0, 1010.0, 1011.0, 1012.0 and 1013.0, as follows:

1009.0 - Gravity Grease interceptors

1009.1 General. A grease interceptor shall be provided for proper handling of liquid wastes containing grease. A grease interceptor as described in these standards shall be installed in any business establishment with kitchen facilities including restaurants, cafes, lunch counters, cafeterias, supermarkets, convenience stores, bakeries, bars and clubs, hotels, hospitals, sanitariums, factory or school kitchens, or any other commercial establishment where grease may be introduced into the sewer system.

Special consideration shall be given to every fish, fowl and animal slaughterhouse or establishment; every fish, fowl and meat packing or curing establishment; every soap factory, tallow rendering, fat rendering and hide curing establishment; or any other establishment from which considerable amounts of grease are likely to be discharged into the sewer system. Written application describing exact operation and anticipated volumes of grease shall be made to the Sanitation Authority Having Jurisdiction to determine the standards for such systems.

1009.2 Fixtures. The waste discharge from fixtures and equipment which may contain grease from the businesses set out previously shall be drained through a grease interceptor or grease interceptors. Fixtures such as, but not limited to, the following are included: scullery sinks, pot and pan sinks, dishwashing machines, soup kettles and similar cooking equipment, trash compactors, floor drains in grease generating areas, and trash can wash areas.

1009.3 Prohibited fixtures. The waste lines from toilets, urinals, and other similar fixtures shall not drain through a grease interceptor.

1009.4 Location.

- (1) Grease interceptors shall be so installed and connected that they shall be at all times easily accessible for inspection, cleaning and removal of the intercepted grease.
- (2) Grease interceptors shall be placed as close as practical to the fixtures served.

- (3) Grease interceptors shall be located on the exterior of buildings unless specifically approved otherwise in writing by the health district.
- (4) Grease interceptors shall be so located as to be accessible for service without the use of ladders or the removal of bulky equipment.
- (5) Location of all grease interceptors shall be shown on the approved plans.
- (6) Each grease interceptor shall serve only one business establishment. Multiple business connections to a single interceptor are not permitted. Unless approved by the sanitation authority in writing.
- (7) An accessible hose bib shall be located within 25 feet (7620 mm) of every grease interceptor.

1009.5 Size.

- (1) Grease interceptors shall be sized in accordance with Table 10-3. Interceptors shall not be more than one size larger than required in Table 10-3.

NOTE: For situations not covered by Table 10-3, a submittal showing the interceptor size and calculations shall be approved by the sanitation authority prior to building official plan approval. For business establishments other than commercial restaurants, a specific submittal shall be approved by the sanitation authority prior to building official plan approval. Such designs shall be prepared by a Nevada Registered Engineer.

- (2) All grease interceptors shall have a minimum of two compartments with a minimum of 3 inch (76.2 mm) diameter fittings designed for grease retention. The fittings shall be installed in the following manner: A sanitary tee shall be installed at the inlet, a sanitary tee on the inlet side of the interceptor baffle, and a sanitary tee installed at the outlet.
- (3) There shall be adequate access for cleaning all areas of the separator. A minimum of one access point into each compartment within the separator shall be provided. In addition, no access points shall be further apart than 10 feet (3048 mm) regardless of the number of compartments. Separator covers shall be of gas-tight construction. Interceptor covers shall have a minimum opening dimension of twenty (20) inches (508 mm) in diameter.
- (4) All waste shall enter the grease interceptor through the inlet pipe.
- (5) Grease interceptors shall be so designed that they will not become air bound. Each interceptor shall be properly vented with a relief vent located on the outlet side of the interceptor.
- (6) Cleanouts shall be installed in the drainage piping inlet and outlet side of each grease interceptor and the outlet side of each sample box.
- (7) Each fixture discharging into a grease interceptor shall be individually trapped and vented in an approved manner.
- (8) Each grease interceptor shall have an approved water seal of not less than two (2) inches (50.8 mm) in depth or the diameter of its outlet whichever is greater.
- (9) When grease interceptors are located in areas of pedestrian or vehicle travel, the design of the interceptor shall be adequate to support the imposed load. Structural calculations to verify its adequacy may be required.
- (10) A sample box shall be provided on the outlet side of each grease interceptor down stream of the required cleanout and vent.

1009.6 Water Test. A water test shall be applied to the level of the top of the interceptor inlet opening through the outlet opening or discharge side of the sample box. Interceptors shall show no leakage from section seams, pinholes or other imperfections. Any leakage below this level is cause for rejection.

- (1) **Backfill.** Interceptors shall not be backfilled until the inspection has been made to verify there are no leaks.

1010.0 Sand/Oil Interceptors.

1010.1 Where Required. An interceptor shall be provided for the proper handling of liquid wastes containing oil (of petroleum origin), sand, inert solids or any other similar substances.

NOTE: A sand/oil interceptor is not intended for the disposal of hazardous waste or as a backup system for accidental spills.

Interceptors as described in these standards shall be installed in, but not limited to, the following locations: car washes, motor vehicle, boat or airplane storage yards, gasoline and diesel service stations, repair garages or any other similar facility which may introduce sand and oil into the sewer system.

Submittal of a written application describing the exact facility operation and the types and anticipated volumes of waste to be generated may be required by the building official.

1010.2 Fixtures. The waste discharge from fixtures and equipment which may contain sand, oil-based wastes and inert solids shall drain only through an interceptor. This requirement includes, but is not limited to, the following: floor drains, floor sinks, special processing equipment, trench drains, and area drains.

1010.3 Prohibited Fixtures. The waste line from toilets, urinals, lavatories and other similar fixtures, which discharge domestic wastes only, shall not drain through the interceptor.

1010.4 Location.

- (1) Sand/ oil interceptors shall be so installed and connected that they shall be at all times accessible for inspection, cleaning and removal of the intercepted waste.
- (2) Sand / oil interceptors shall be placed as close as practical to the fixtures served.
- (3) Sand/ oil interceptors shall be located on the exterior of buildings unless specifically approved otherwise in writing by the sanitation authority.
- (4) Sand/ oil interceptors shall be located as to be accessible for service without the use of ladders or the removal of bulky equipment.
- (5) Location of all sand/oil interceptors shall be shown on the approved plans.
- (6) Each sand/ oil interceptor shall serve only one business establishment. Multiple business connections to a single sand/ oil interceptor are not permitted unless approved by the sanitation authority in writing.

1010.5 Size and Design.

- (1) All sand/oil interceptors shall be a minimum of three hundred (300) gallons (40 cubic feet) (1136 l) of total liquid capacity with a minimum floating liquid capacity of 55 gallons (208 l).
- (2) All sand/oil interceptors shall have a minimum of two compartments with a minimum of 3 inch (76.2 mm) diameter fittings designed for retention. The fittings shall be installed in the following manner: a 90° long sweep shall be installed at the interceptor inlet, a sanitary tee shall be installed on the inlet side of the interceptor baffle, and a sanitary tee installed at the outlet.
- (3) There shall be adequate access for cleaning all areas of the separator. A minimum of one (1) access point into each compartment within the separator shall be provided. In addition, no access points shall be further apart than ten (10) feet (3048 mm) regardless of number of compartments. Access covers shall have a minimum opening dimension of twenty (20) inches (508 mm) in diameter. Separator covers shall be of gas-tight construction.
- (4) The sand/oil interceptor shall be properly vented and designed to prevent it from becoming air bound in accordance with this code.

- (5) Each business establishment for which a sand/oil interceptor is required shall be provided with an interceptor which shall serve that establishment only and no others. Separate owners or lessees within a large business or establishment shall require separate interceptors.
- (6) Each sand/oil interceptor shall have a water seal of not less than six (6) inches (152 mm).
- (7) When separators are located in areas of foot or vehicle traffic, the design of the separator shall be adequate for the imposed load. Structural calculations performed by a Nevada Registered Engineer to verify adequacy may be required.
- (8) Any private or public wash rack or slab used for cleaning machinery or machine parts, shall drain to a sand/oil separator, and shall be adequately protected against storm or surface water intrusion.
- (9) Design standards other than those listed above may be acceptable. Redwood baffles shall not be used for new or existing interceptors. Any alternate design shall be prepared by a Nevada Registered Engineer and submitted for review and approval by the sanitation authority and the building official.
- (10) Cleanouts shall be installed in the drainage piping inlet and outlet side of each sand/oil interceptor and the outlet side of each sample box.
- (11) A sample box shall be provided on the outlet side of the interceptor down stream of the required cleanout and vent.

1010.6 Water Test. A water test shall be applied to the level of the top of the interceptor inlet opening through the outlet opening or discharge side of the sample box. Interceptors shall show no leakage from section seams, pinholes or other imperfections. Any leakage below this level is cause for rejection.

- (1) **Backfill.** Interceptors shall not be backfilled until the inspection has been made to verify there are no leaks.

1011.0 Maintenance of interceptors.

1011.1 Grease and sand/oil interceptors shall be maintained in efficient operating condition by periodic removal of the accumulated grease or sand/oil. No such collected grease, sand/oil, or any material collected from the interceptor shall be introduced into any drainage piping, public or private sewers. The materials removed from interceptors shall be handled and disposed of in a proper manner in accordance with published health district and sanitation authority requirements. Illegal dumping of waste into the sewer shall not be allowed.

1011.2 Maintenance records for each installed interceptor shall be maintained on the premises at all times and presented to a duly authorized agent of the sanitation authority upon request.

1011.3 The Authority Having Jurisdiction shall have the authority to mandate the installation of additional equipment or devices and enforce a maintenance program.

1012.0 Abandoned interceptors. Abandoned interceptors shall be cleaned and filled as required by Section 722.0 of the Plumbing Code for abandoned sewers and sewage disposal facilities.

1013.0 Existing Buildings. Whenever an existing building has a change in use which requires an interceptor or whenever there is an increase in the total number of drainage fixture units served by an existing interceptor, one or more interceptors shall be installed in the drainage system serving the building meeting the requirements of Section 1009 and 1010.

Section 1101.3 Material Uses.

Revise Section 1101.3 by adding a new Section 1101.3.1, as follows:

1101.3.1 Plastic piping used for rainwater systems shall be limited to buildings defined as combustible construction by this code.

Section 1101.5.1 Subsoil Drains.

Revise Section 1101.5.1, as follows:

1101.5.1 Where required by the geotechnical engineer or the authority having jurisdiction, subsoil drains shall be provided around the perimeter of buildings having basements, cellars, or crawl spaces or floors below grade. Such subsoil drains may be positioned inside or outside of the footing, shall be of perforated, or open-jointed approved drain tile or pipe not less than three (3) inches (80 mm) in diameter, and shall be laid in gravel, slag, crushed rock, approved three-quarter (3/4) inch (19.1 mm) crushed recycled glass aggregate, or other approved porous material with a minimum of four (4) inches (102 mm) surrounding the pipe on all sides. Filter media shall be provided for exterior subsoil piping.

Delete Section 1101.9, Filling Stations and Motor Vehicle Washing Establishments, in its entirety.

Delete Section 1101.10, Paved Areas, in its entirety.

Delete Section 1103.0, Traps on Storm drains and Leaders, in its entirety.

Delete Section 1104.3, Combining Storm with Sanitary Drainage, in its entirety.

Section 1203.3 Fuel gas.

Revise Section 1203.3 by adding a new Section 1203.3.1, as follows:

1203.3.1 Dry Gas – A gas having a moisture and hydrocarbon dew point below any normal temperature to which the gas piping is exposed. Southern Nevada shall be considered a dry gas condition area unless specified by the local gas purveyor.

Section 1211.1.6 Piping Underground Beneath Buildings.

Delete Section 1211.1.6 in its entirety and replace, as follows:

1211.1.6 Piping Underground Beneath Buildings. No gas piping shall be installed in or on the ground under any building or structure unless installed in gastight conduit, and all exposed gas piping shall be kept at least six (6) inches (152 mm) above grade or structure. The term “building or structure” shall include structures such as porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways, and similar structures or appurtenances. All gas piping under a slab shall be capable of being removed and replaced.

The conduit shall be of material approved for installation underground beneath buildings and not less than Schedule 40 pipe. The interior diameter of the conduit shall be not less than one-half (1/2) inch (15 mm) larger than the outside diameter of the gas piping.

The conduit shall extend to a point at least (12) inches (305 mm) beyond any area where it is required to be installed or to the outside wall of a building, and the outer ends shall not be sealed. Where the conduit terminates within a building, it shall be readily accessible and the space between the conduit and the gas piping shall be sealed to prevent leakage of gas into the building.

Exception: Products listed for such use.

Section 1211.3.2 Connections.

Revise item (4) in Section 1211.3.2, as follows:

1211.3.2 Connections. Where gas piping is to be concealed, unions, tubing fittings, bushings, and compression couplings made by combinations of fittings shall not be used. Connections shall be of the following types:

- (1) Pipe fittings such as elbows, tees, and couplings.
- (2) Joining tubing by brazing (see Section 1209.5.8.2).
- (3) Fittings listed for use in concealed spaces that have been demonstrated to sustain, without leakage, any forces due to temperature expansion or contraction, vibration, or fatigue based on their geographic location, application or operation.
- (4) Where necessary to insert fittings in gas pipe that has been installed in a concealed location, the pipe shall be reconnected by welding, flanges, or with right and left couplings.

Section 1214.3 Test Pressure.

Delete Section 1214.3.1 in its entirety and replace, as follows:

1214.3.1 This inspection shall be made after all piping authorized by the permit has been installed and after all portions thereof which are to be covered or concealed are so concealed and before any fixtures, appliance, or shutoff valve has been attached thereto. This inspection shall include an air, CO₂ or nitrogen pressure test, at which time the gas piping shall stand a pressure of not less than ten (10) pounds per square inch (68.9 kPa) gauge pressure, or at the discretion of the Administrative Authority, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge. Test pressures shall be held for a length of time satisfactory to the Administrative Authority, but in no case for less than fifteen (15) minutes, with no perceptible drop in pressure. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches (356 mm) water column pressure, the test pressure shall not be less than sixty (60) pounds per square inch (413.4 kPa) and shall be continued for a length of time satisfactory to the Administrative Authority, but in no case for less than thirty (30) minutes. These tests shall be made using air, CO₂, or nitrogen pressure only and shall be made in the presence of the Administrative Authority. All necessary apparatus for conducting tests shall be furnished by the permit holder. Test gauges used in conducting tests shall comply with Section 319.0, Test Gauges.

Delete Chapter 13, Health Care Facilities and Medical Gas and Vacuum Systems, in its entirety.

Delete Chapter 15, Firestop Protection, in its entirety.

Delete Chapter 16, Part 1 - Gray Water Systems, Sections 1601 through 1612 in their entirety.

Section 1613.0 Reclaimed Water Systems - General.

Revise Section 1613.0 (A), as follows:

1613.0 Reclaimed Water Systems - General.

(A) The provisions of Part II of this chapter shall not be allowed in residential buildings and shall apply to the installation, construction, alteration, and repair of reclaimed water systems intended to supply uses such as water closets urinals, trap primers for floor drains, floor sinks, irrigation, industrial processes, water features and other uses approved by the Authority Having Jurisdiction. Potable water supplied as makeup water in these systems shall be protected against back-pressure and back-syphonage in accordance with Sections 602.0 and 603.0.

Delete Appendix F, Firefighter Breathing Air Replenishment Systems, in its entirety.

Delete Appendix K, Private Sewage Disposal Systems, in its entirety.

BUSINESS IMPACT STATEMENT
BILL NO. 2011-12
(Adopts the 2009 Edition of the Uniform Plumbing Code, together with amendments thereto, as the City's Plumbing Code)

This business impact statement was prepared pursuant to NRS 237.090 to address the impact of a proposed ordinance, Bill No. 2011-12, that will adopt the 2009 Edition of the Uniform Plumbing Code, together with amendments thereto, as the City's Plumbing Code.

1. The following constitutes a description of the manner in which comment was solicited from affected businesses, a summary of their responses and an explanation of the manner in which other interested persons may obtain a copy of the summary.

Notice of the proposed ordinance was published in the Las Vegas Review-Journal. In addition, a copy of the notice was provided to development-related and construction groups that are representative of affected industries. No written responses were received.

2. The estimated economic effect of the proposed rule on businesses, including, without limitation, both adverse and beneficial effects, and both direct and indirect effects:

Adverse effects:

Those proposing construction will need to plan for and adjust to any new or differing Code requirements

Beneficial effects:

Code provisions that are updated and that are consistent with other area jurisdictions

Direct effects:

See adverse and beneficial effects above

Indirect effects:

None identified

3. The following constitutes a description of the methods the local government considered to reduce the impact of the proposed rule on businesses and a statement regarding whether any, and if so which, of these methods were used:

Not applicable

4. The governing body estimates the annual cost to the local government for enforcement of the proposed rule is:

No additional cost

5. If the proposed rule provides for a new fee or increases an existing fee, the total annual amount expected to be collected is:

Not applicable

6. If the proposed rule provides for a new fee or increases an existing fee, the money generated by the new fee or increase in existing fee will be used by the local government to:

Not applicable

7. If the proposed rule includes provisions that duplicate or are more stringent than federal, state or local standards regulating the same activity, the following explains when such duplicative or more stringent provisions are necessary:

Not applicable

Date: February 16, 2011

AGENDA SUMMARY PAGE

RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY ATTORNEY

DIRECTOR: BRADFORD R. JERBIC

☐ Consent ☒ Discussion

SUBJECT:

Bill No. 2011-13 – Adopts the 2009 Edition of the Uniform Mechanical Code, together with amendments thereto, as the City's Mechanical Code. Sponsored by: Councilman Steven D. Ross

Fiscal Impact

☒

No Impact

☐

Augmentation Required

☐

Budget Funds Available

Amount:

Funding Source:

Dept./Division:

PURPOSE/BACKGROUND:

This bill will adopt the 2009 Edition of the Uniform Mechanical Code, together with amendments thereto, as the City's Mechanical Code. The amendments primarily represent adaptations agreed upon by local area jurisdictions.

RECOMMENDATION:

This bill should be submitted to a Recommending Committee for review, hearing and recommendation to the City Council for final action.

BACKUP DOCUMENTATION:

1. Bill No. 2011-13
2. Southern Nevada Amendments to the 2009 Uniform Mechanical Code
3. Business Impact Statement

1 **BILL NO. 2011-13**

2 **ORDINANCE NO. _____**

3 AN ORDINANCE TO ADOPT THE 2009 EDITION OF THE UNIFORM MECHANICAL CODE,
4 TOGETHER WITH AMENDMENTS THERETO, AS THE CITY'S MECHANICAL CODE, AND
TO PROVIDE FOR OTHER RELATED MATTERS.

5 Sponsored by: Councilman Steven D. Ross

Summary: Adopts the 2009 Edition of the
Uniform Mechanical Code, together with
amendments thereto, as the City's Mechanical
Code.

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7
8 THE CITY COUNCIL OF THE CITY OF LAS VEGAS DOES HEREBY ORDAIN
9 AS FOLLOWS:

10 SECTION 1: Title 16, Chapter 24, Section 10, of the Municipal Code of the City of
11 Las Vegas, Nevada, 1983 Edition, is hereby amended to read as follows:

12 **16.24.010:** Those certain documents, [three] copies of each being on file in the office of the City
13 Clerk, and designated as follows, are adopted by reference and made a part of this Code, to the same
14 effect as if set out herein in full:

15 (A) Uniform Mechanical Code, [2006] 2009 Edition, designated as Part 1 of this
16 Chapter; and

17 (B) A document entitled the ["Southern Nevada Amendments to the 2006 Uniform
18 Mechanical Code,"] "Southern Nevada Amendments to the 2009 Uniform Mechanical Code," adding
19 to, deleting from and amending the Uniform Mechanical Code, [2006] 2009 Edition, designated as
20 Part 2 of this Chapter.

21 SECTION 2: The document entitled the "Southern Nevada Amendments to the 2009
22 Uniform Mechanical Code," which is attached hereto, is hereby modified as set forth in Section 3 of
23 this Ordinance.

24 SECTION 3: The amendment concerning Chapter 1 Administration is modified so
25 that it reads:

26 Chapter 1 is deleted in its entirety except Sections 101.0 Title, 102.0 Purpose and 103.0 Scope.

27 SECTION 4: The Uniform Mechanical Code, 2006 Edition, and the Southern Nevada
28 2006 Mechanical Code Amendments are hereby repealed in their entirety.

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1 The above and foregoing ordinance was first proposed and read by title to the City Council on the
2 ____ day of _____, 2011, and referred to the following committee composed of
3 _____ and _____ for recommendation;
4 thereafter the said committee reported favorably on said ordinance on the ____ day of
5 _____, 2011, which was a _____ meeting of said Council; that at said
6 _____ meeting, the proposed ordinance was read by title to the City Council
7 as first introduced and adopted by the following vote:

8 VOTING "AYE": _____

9 VOTING "NAY": _____

10 ABSENT: _____

11

12 APPROVED:

13

14 By _____
OSCAR B. GOODMAN, Mayor

15 ATTEST:

16

17 BEVERLY K. BRIDGES, MMC
City Clerk

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Southern Nevada Building
Officials

c/o City of Las Vegas
Building & Safety Dept
713 S. 4th Street
Las Vegas, NV 89101

Phone: 702-229-6257

Fax: 702-382-1731

Email:

chknight@lasvegasnevada.gov

MEMBERS

Chris Knight, Chair
City of Las Vegas

Greg Blackburn
City of North Las Vegas

Ron Nybo
City of Boulder City

Ron Lynn
Clark County

Kurt Sawyer
City of Mesquite

Brent Steed
Pahrump Regional
Planning District
(Nye County)

Michael Bouse
City of Henderson

Lisa Conner
Clark County School District

SOUTHERN NEVADA AMENDMENTS TO THE 2009 UNIFORM MECHANICAL CODE

**Approved by SNBO
July 23, 2010**

Chapter 1 Administration.

Delete Chapter 1 in its entirety, except for Section 101.0 Title and Section 101.2 Purpose.

Section 205.0 Definitions.

Add a new definition to Section 205.0, as follows:

Combustible Construction - Combustible construction shall mean work within any building or structure classified as Type III, Type IV, or Type V as defined in the Building Code. Plastic piping is not permitted in Type I and Type II buildings.

Section 303.1.1 Plastic Pipe Use.

Add a new Section 303.1.1, Plastic Pipe Use, as follows:

303.1.1 Plastic Pipe Use. Plastic materials listed for use in mechanical equipment are acceptable as an alternate to other approved materials for use in installations in combustible construction only.

Exceptions:

- (1) Approved plastic control tubing of mechanical equipment may be used in buildings or structures of all construction classifications when installed in accordance with their listings.
- (2) When restricted by other sections of this code.

Section 309.2 Condensate Control.

Revise Section 309.2, as follows:

309.2 Condensate Control. When a cooling coil or cooling unit is located in an attic or furred space where damage may result from condensate overflow an additional watertight pan of corrosion-resistant metal shall be installed beneath the cooling coil or unit top to catch the overflow condensate due to a clogged primary condensate drain or one of the following methods may be used:

- (1) One pan with a standing overflow and a separate secondary drain may be provided in lieu of the secondary drain pan.
- (2) One pan with a standing overflow and a water level detection device in lieu of the secondary drain pan. The water level detection device shall conform to UL 508 and shall shut off the equipment served in the event that the primary drain is blocked. The device shall be installed in the overflow drain line or in the equipment-supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of the drain pan.

Exception: Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

The additional pan or the standing overflow shall be provided with a drain pipe, minimum 3/4 inch (19.1 mm) nominal pipe size, discharging at a point that can be readily observed.

This requirement is in addition to the requirements in Sections 309.3 and 309.4.

Section 504.3 Moisture Exhaust Ducts.

Revise Section 504.3.1 by adding a new exception, as follows:

504.3.1 Moisture Exhaust Ducts. Moisture exhaust ducts shall terminate on the outside of the building and shall be equipped with a back-draft damper. Screens shall not be installed at the duct termination.

Ducts for exhausting clothes dryers shall not be connected or installed with sheet metal screws or other fasteners which will obstruct the flow. Clothes dryer moisture exhaust ducts shall not be connected to a gas vent connector, gas vent or chimney and shall only serve clothes dryers. Clothes dryer moisture exhaust ducts under positive pressure shall not extend into or through ducts or plenums.

Exception: When moisture exhaust ducts terminate vertically through a roof, backdraft dampers are not required.

Section 504.3.2.2 Length Limitation.

Revise Section 504.3.2.2 by adding a new exception, as follows:

504.3.2.2 Length Limitation. Unless otherwise permitted or required by the dryer manufacturer's installation instructions and approved by the Authority Having Jurisdiction, domestic dryer moisture exhaust ducts shall not exceed a total combined horizontal and vertical length of fourteen (14) feet (4,263 mm), including two (2) 90 degree (1.57 rad) elbows. Two (2) feet (610 mm) shall be deducted for each 90 degree (1.57 rad) elbow in excess of two.

Exception: Lengths may be increased when justified by calculations prepared by a Nevada Licensed Mechanical Engineer.

Section 510.7.2 Interior Installations.

Add a new Section 510.7.2.4, as follows:

510.7.2.4 Unless specifically listed, the structural supports for a duct enclosure shall be outside the enclosure.

Section 511.2.5 Performance Test.

Add a new Section 511.2.5, as follows:

511.2.5 Performance Test. Upon completion and before final approval of the installation of a ventilation system serving commercial food heat-processing equipment, a performance test shall be performed to verify the rate of airflow and proper operation as specified in this chapter or manufacturer's listing. The permittee shall furnish the necessary test equipment and devices required to perform the tests and shall provide the jurisdiction with an accurate, completed, and signed test report. The report shall be on a form supplied by the jurisdiction or on a form containing equivalent information. At the discretion of the building official, the performance test may be required to be witnessed by the Authority Having Jurisdiction, performed by an approved third party testing agency.

Section 609.0 Automatic Shutoffs.

Revise Section 609.0 by adding a new paragraph following the exceptions, as follows:

Upon completion and before final approval of the air-moving system provided with the required smoke detectors, a performance test shall be performed to verify compliance of detector installation to manufacturer's instructions and system compatibility as specified in this chapter. The permittee shall furnish the necessary test equipment and devices required to perform the tests and shall provide the jurisdiction with an accurate, completed, and signed test report. The report shall be on a form supplied by the jurisdiction or on a form containing equivalent information. At the discretion of the building official, the performance test may be required to be witnessed by the Authority Having Jurisdiction, performed by an approved third party testing agency.

Section 802.6.2 Gas Vents.

Add a new Exception to Section 802.6.2, item (1), as follows:

802.6.2 A gas vent shall terminate in accordance with one of the following:

- (1) Above the roof surface with a listed cap or listed roof assembly. Gas vents twelve (12) inches (300 mm) in size or smaller with listed caps shall be permitted to be terminated in accordance with Figure 5-2, provided they are at least eight (8) feet (2.4 m) from a vertical wall or similar obstruction. Other gas vents shall terminate not less than two (2) feet (0.6 m) above the highest point where they pass through the roof and at least two (2) feet (0.6 m) exceeding any portion of a building within ten (10) feet (3.1 m).

Exception: A single-family residence having gas vents twelve (12) inches (300 mm) in size or smaller with listed caps shall be permitted to be terminated in accordance with Figure 5-2, provided they are at least four (4) feet (1.2 m) from a vertical wall or similar obstruction.

The remainder of the section remains unchanged.

Section 904.10 Access to Appliances and Air Moving Systems on Roofs.

Revise Section 904.10, as follows:

904.10 Access to Appliances and Air Moving Systems on Roofs.

904.10.1 Appliances and air moving systems located on roofs or other elevated locations shall be accessible by permanent roof access ladders, as follows:

- (1) Each ladder shall have side railings which extend at least thirty (30) inches (762 mm) above the roof or parapet wall.
- (2) Each ladder shall be a minimum of fourteen (14) inches (356 mm) in width.
- (3) Each ladder rung shall be spaced at a maximum of fourteen (14) inches (356 mm) on center.
- (4) Each ladder shall have a minimum of a six (6) inch (152 mm) toe space.
- (5) Each ladder shall have intermediate horizontal landings whenever the ladder height exceeds eighteen feet (5486 mm) above finished grade. Landings shall be placed at eighteen foot (5486 mm) intervals, maximum.

Exceptions:

- (1) Permanent exterior ladders providing roof access need not extend closer than eight (8) feet (2438 mm) to the finish grade.
- (2) A portable ladder may be used for access for a Group R Division 3 and 4 and U occupancies.
- (3) Permanent ladders for equipment access need not be provided at parapets or walls less than thirty (30) inches (762mm) in height.

Chapter 10 Steam and Hot Water Boilers

Delete Chapter 10 in its entirety except Section 1001.0 and revise Section 1001.0, as follows:

1001.0 Applicability. For boilers and water heaters less than 120 gallon capacity, or a BTU input rating less than 200,000, or less than 160 pounds per square inch of pressure, see Chapter 5 of the Uniform Plumbing Code. For all other units, contact the Mechanical Section of the Nevada Division of Occupational Safety and Health, part of the Office of Business and Industrial Relations.

Table 11-1 Refrigerant Groups, Properties and Allowable Quantities.

Revise Table 11-1, by adding a new footnote #16, as follows:

¹⁶ For occupancy Group I, Division 1 and Division 2, the quantity of refrigerant in each system is limited to 50 percent of the respective amount listed in this table. Exceptions: Kitchens, laboratories and mortuaries.

Table 11-2 Permissible Refrigeration Systems.

Revise Table 11-2 and add new footnotes #3 and #4, as follows:

Table 11-2
Permissible Refrigeration Systems¹

Occupancy Group⁴ and Division	High - Probability System	Low Probability System	Machinery Room
A-1	Group A1 only	Any	Any
A-2	Group A1 only	Any	Any
A-3	Group A1 only	Any	Any
A-4	Group A1 only	Any	Any
A-5	Group A1 only	Any	Any
B	Group A1 only ²	Any	Any
E	Group A1 only	Any	Any
F-1	Group A1 only	Any	Any
F-2	Any ²	Any	Any
H-1	Any	Any	Any
H-2	Any	Any	Any
H-3	Any	Any	Any
H-4	Any	Any	Any
H-5	Group A1 only	Any	Any
I-1	Group A1 only ³	Any	Any
I-2	Group A1 only ³	Any	Any
I-3	Group A1 only ³	Any	Any
I-4	Group A1 only ³	Any	Any
M	Group A1 only ²	Any	Any
R-1	Group A1 only	Any	Any
R-2	Group A1 only	Any	Any
R-3	Group A1 only	Any	Any
R-4	Group A1 only	Any	Any
S-1	Group A1 only ²	Any	Any
S-2	Any ²	Any	Any
U	Any	Any	Any

Notes:

¹ See Section 1105.0.

² Any refrigerant may be used within a high-probability system when the room of space complies with Section 1105.3.

³ The allowable quantities shown in Table 11-1 shall be reduced by 50 percent for all institutional occupancies except kitchens, laboratories, and mortuaries. (ASHRAE Safety Standard for Refrigeration Systems 15-2007 Section 7.2.1.)

⁴ Occupancy classifications are defined in the Building Code

Section 1302 Fuel Gas.

Revise Section 1302.2 by adding a new Section 1303.2.1, as follows:

1303.2 Fuel Gas – Natural, manufactured, liquefied petroleum, or a mixture of these.

1303.2.1 Dry Gas – A gas having a moisture and hydrocarbon dew point below any normal temperature to which the gas piping is exposed. Southern Nevada shall be considered a dry gas condition area unless specified by the local gas purveyor.

Section 1312.1.6 Piping Underground Beneath Buildings.

Revise Section 1312.1.6 in its entirety, as follows:

1312.1.6 Piping Underground Beneath Buildings. No gas piping shall be installed in or on the ground under any building or structure unless installed in gastight conduit, and all exposed gas piping shall be kept at least six (6) inches (152 mm) above grade or structure. The term “building or structure” shall include structures such as porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways, and similar structures or appurtenances. All gas piping under a slab shall be capable of being removed and replaced.

The conduit shall be of material approved for installation underground beneath buildings and not less than Schedule 40 pipe. The interior diameter of the conduit shall be not less than one-half (1/2) inch (15 mm) larger than the outside diameter of the gas piping.

The conduit shall extend to a point at least (12) inches (305 mm) beyond any area where it is required to be installed or to the outside wall of a building, and the outer ends shall not be sealed. Where the conduit terminates within a building, it shall be readily accessible and the space between the conduit and the gas piping shall be sealed to prevent leakage of gas into the building.

Exception: Products listed for such use.

Section 1312.3.2 Connections.

Revise Section 1312.3.2, item 4, as follows:

1312.3.2 Connections. Where gas piping is to be concealed, unions, tubing fittings, bushings, and compression couplings made by combinations of fittings shall not be used. Connections shall be of the following types:

- (1) Pipe fittings such as elbows, tees, and couplings.
- (2) Joining tubing by brazing (see Section 1209.5.8.2).
- (3) Fittings listed for use in concealed spaces that have been demonstrated to sustain, without leakage, any forces due to temperature expansion or contraction, vibration, or fatigue based on their geographic location, application or operation.

- (4) Where necessary to insert fittings in gas pipe that has been installed in a concealed location, the pipe shall be reconnected by welding, flanges, or right and left couplings.

1316.3 Test Pressure.

Delete Sections 1316.3.2 and 1316.3.3 and revise Sections 1316.3 and 1316.3.1 in their entirety, as follows:

1316.3 Final Piping Inspection

1316.3.1 This inspection shall be made after all piping authorized by the permit has been installed and after all portions thereof which are to be covered or concealed are so concealed and before any fixtures, appliance, or shutoff valve has been attached thereto. Gas valves may be installed when permitted by the manufacturer to withstand test pressures. This inspection shall include an air, CO₂ or nitrogen pressure test, at which time the gas piping shall stand a pressure of not less than ten (10) pounds per square inch (68.9 kPa) gauge pressure, or at the discretion of the Authority Having Jurisdiction, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge. Test pressures shall be held for a length of time satisfactory to the Authority Having Jurisdiction, but in no case for less than fifteen (15) minutes, with no perceptible drop in pressure. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches (356 mm) water column pressure, the test pressure shall not be less than sixty (60) pounds per square inch (413.4 kPa) and shall be continued for a length of time satisfactory to the Authority Having Jurisdiction, but in no case for less than thirty (30) minutes. These tests shall be made using air, CO₂, or nitrogen pressure only and shall be made in the presence of the Administrative Authority. All necessary apparatus for conducting tests shall be furnished by the permit holder. Test gauges used in conducting tests shall comply with Section 1304.3.2.

BUSINESS IMPACT STATEMENT

BILL NO. 2011-13

(Adopts the 2009 Edition of the Uniform Mechanical Code, together with amendments thereto, as the City's Mechanical Code)

This business impact statement was prepared pursuant to NRS 237.090 to address the impact of a proposed ordinance, Bill No. 2011-13, that will adopt the 2009 Edition of the Uniform Mechanical Code, together with amendments thereto, as the City's Mechanical Code.

1. The following constitutes a description of the manner in which comment was solicited from affected businesses, a summary of their responses and an explanation of the manner in which other interested persons may obtain a copy of the summary.

Notice of the proposed ordinance was published in the Las Vegas Review-Journal. In addition, a copy of the notice was provided to development-related and construction groups that are representative of affected industries. No written responses were received.

2. The estimated economic effect of the proposed rule on businesses, including, without limitation, both adverse and beneficial effects, and both direct and indirect effects:

Adverse effects:

Those proposing construction will need to plan for and adjust to any new or differing Code requirements

Beneficial effects:

Code provisions that are updated and that are consistent with other area jurisdictions

Direct effects:

See adverse and beneficial effects above

Indirect effects:

None identified

3. The following constitutes a description of the methods the local government considered to reduce the impact of the proposed rule on businesses and a statement regarding whether any, and if so which, of these methods were used:

Not applicable

4. The governing body estimates the annual cost to the local government for enforcement of the proposed rule is:

No additional cost

5. If the proposed rule provides for a new fee or increases an existing fee, the total annual amount expected to be collected is:

Not applicable

6. If the proposed rule provides for a new fee or increases an existing fee, the money generated by the new fee or increase in existing fee will be used by the local government to:

Not applicable

7. If the proposed rule includes provisions that duplicate or are more stringent than federal, state or local standards regulating the same activity, the following explains when such duplicative or more stringent provisions are necessary:

Not applicable

Date: February 16, 2011

AGENDA SUMMARY PAGE
RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY ATTORNEY

DIRECTOR: BRADFORD R. JERBIC

☐ Consent ☒ Discussion

SUBJECT:

Bill No. 2011-14 – Adopts the 2008 Edition of the National Electrical Code, together with local amendments thereto. Sponsored by: Councilman Steven D. Ross

Fiscal Impact

☒

No Impact

☐

Augmentation Required

☐

Budget Funds Available

Amount:

Funding Source:

Dept./Division:

PURPOSE/BACKGROUND:

This bill will adopt the 2008 Edition of the National Electrical Code, together with local amendments thereto. The amendments primarily represent adaptations agreed upon by local area jurisdictions.

RECOMMENDATION:

This bill should be submitted to a Recommending Committee for review, hearing and recommendation to the City Council for final action.

BACKUP DOCUMENTATION:

1. Bill No. 2011-14
2. Southern Nevada Amendments to the 2008 National Electrical Code
3. Business Impact Statement

1 **BILL NO. 2011-14**

2 **ORDINANCE NO. _____**

3 AN ORDINANCE TO ADOPT THE 2008 EDITION OF THE NATIONAL ELECTRICAL CODE,
4 TOGETHER WITH LOCAL AMENDMENTS THERETO, AND TO PROVIDE FOR OTHER
RELATED MATTERS.

5 Sponsored by: Councilman Steven D. Ross

Summary: Adopts the 2008 Edition of the
National Electrical Code, together with local
amendments thereto.

7 THE CITY COUNCIL OF THE CITY OF LAS VEGAS DOES HEREBY ORDAIN
8 AS FOLLOWS:

9 SECTION 1: Title 16, Chapter 12, Section 10, of the Municipal Code of the City of
10 Las Vegas, Nevada, 1983 Edition, is hereby amended to read as follows:

11 **16.12.010:** Those certain documents, [three] copies of which are on file in the Office of the City
12 Clerk, and being marked and designated as follows, are adopted by reference as and for the City's
13 Electrical Code:

14 (A) National Electrical Code, [2005] 2008 Edition, hereby designated as Part 1 of
15 this Chapter; and

16 (B) [A document entitled "A Supplemental Document Amending the National
17 Electrical Code, 2005 Edition," deleting from and adding to the National Electrical Code, 2005
18 Edition, hereby designated as Part 2 of this Chapter; and

19 (C)] The Southern Nevada Amendments to the [2005] 2008 National Electrical
20 Code, hereby designated as Part [3] 2 of this Chapter.

21 SECTION 2: The document entitled the "Southern Nevada Amendments to the 2008
22 National Electrical Code," which is attached hereto, is modified as set forth in Section 3 of this
23 Ordinance.

24 SECTION 3: Where necessary for the sake of consistency, references in the Southern
25 Nevada Amendments to the 2008 National Electrical Code to "Article" numbers shall be deemed to
26 refer to "Section" numbers as contemplated in the National Electrical Code.

27 SECTION 4: The National Electrical Code, 2005 Edition, the supplemental document
28 amending that edition, and the Southern Nevada Amendments to the 2005 National Electrical Code,

1 are hereby repealed in their entirety.

2 SECTION 5: This Ordinance shall become effective on July 5, 2011.

3 SECTION 6: If any section, subsection, subdivision, paragraph, sentence, clause or
4 phrase in this ordinance or any part thereof is for any reason held to be unconstitutional or invalid or
5 ineffective by any court of competent jurisdiction, such decision shall not affect the validity or
6 effectiveness of the remaining portions of this ordinance or any part thereof. The City Council of the
7 City of Las Vegas hereby declares that it would have passed each section, subsection, subdivision,
8 paragraph, sentence, clause or phrase thereof irrespective of the fact that any one or more sections,
9 subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional,
10 invalid or ineffective.

11 SECTION 7: Whenever in this ordinance any act is prohibited or is made or declared
12 to be unlawful or an offense or a misdemeanor, or whenever in this ordinance the doing of any act is
13 required or the failure to do any act is made or declared to be unlawful or an offense or a
14 misdemeanor, the doing of such prohibited act or the failure to do any such required act shall
15 constitute a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than
16 \$1,000.00 or by imprisonment for a term of not more than six months, or by any combination of such
17 fine and imprisonment. Any day of any violation of this ordinance shall constitute a separate offense.

18 SECTION 8: All ordinances or parts of ordinances or sections, subsections, phrases,
19 sentences, clauses or paragraphs contained in the Municipal Code of the City of Las Vegas, Nevada,
20 1983 Edition, in conflict herewith are hereby repealed.

21 PASSED, ADOPTED and APPROVED this ____ day of _____, 2011.

22 APPROVED:

23

24 ATTEST:

By _____
OSCAR B. GOODMAN, Mayor

25

26 BEVERLY K. BRIDGES, MMC
City Clerk

27 APPROVED AS TO FORM:

28 Val Steed 2-16-11
Date

1 The above and foregoing ordinance was first proposed and read by title to the City Council on the
2 ____ day of _____, 2011, and referred to the following committee composed of
3 _____ and _____ for recommendation;
4 thereafter the said committee reported favorably on said ordinance on the ____ day of
5 _____, 2011, which was a _____ meeting of said Council; that at said
6 _____ meeting, the proposed ordinance was read by title to the City Council
7 as first introduced and adopted by the following vote:

8 VOTING "AYE": _____

9 VOTING "NAY": _____

10 ABSENT: _____

11

12 APPROVED:

13

14 By _____
OSCAR B. GOODMAN, Mayor

15 ATTEST:

16

17 BEVERLY K. BRIDGES, MMC
City Clerk

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Southern Nevada Building
Officials

c/o City of Las Vegas
Building & Safety Dept
713 S. 4th Street
Las Vegas, NV 89101

Phone: 702-229-6257

Fax: 702-382-1731

Email:

chknight@lasvegasnevada.gov

MEMBERS

Chris Knight, Chair
City of Las Vegas

Greg Blackburn
City of North Las Vegas

Ron Nybo
City of Boulder City

Ron Lynn
Clark County

Kurt Sawyer
City of Mesquite

Brent Steed
Pahrump Regional
Planning District
(Nye County)

Michael Bouse
City of Henderson

Lisa Conner
Clark County School District

SOUTHERN NEVADA AMENDMENTS TO THE 2008 NATIONAL ELECTRICAL CODE

**Approved by SNBO
July 23, 2010**

Article 110.12 Mechanical Execution of Work.

Add new Subsections (C) and (D) to Article 110.12, as follows:

(C) Abandoned Conductors and Cables. For those structures regulated by the Building or Swimming Pool Code, no electrical conductors or cables shall be abandoned in place. Such conductors or cables shall be removed from the building or structure back to the panelboard unless otherwise approved by the Building Official or designated representative based upon consideration of safety and combustibility.

(D) Used Materials and Equipment. The use of used materials which meet the requirements of this code for new materials is permitted. Used equipment and devices shall not be reused unless approved by the building official.

Article 110.26 Spaces About Electrical Equipment.

Revise Article 110.26 (C) (2), as follows:

(2) Large Equipment. For equipment rated 1200 amperes or more and over 1.8 m (6ft) wide that contains overcurrent devices, switching devices, or control devices, there shall be one entrance to and from the required working space not less than 610 mm (24 in.) wide and 2.0 m (6 ½ ft) high at each end of the working space. When more than one entrance is required by this ARTICLE both entrances shall open to the exterior of the building or into an approved means of egress that is not under the control of an individual tenant.

A single entrance to and egress from the required working space shall be permitted where either of the conditions in 110.26(C)(2)(a) or (C)(2)(b) is met.

The remainder of this Article remains unchanged.

Article 110.33 Entrance and Access to Work Space.

Revise Article 110.33 (A) (1), Large Equipment, as follows:

(1) Large Equipment. On switchboard and control panels exceeding 1.8 m (6 ft) in width, there shall be one entrance at the end of the equipment. When more than one entrance is required by this article both entrances shall open to the exterior of the building or into an approved means of egress that is not under the control of an individual tenant. A single entrance to the required working space shall be permitted where either of the conditions in 110.33 (A)(1)(a) or (A)(1)(b) is met.

The remainder of this Article remains unchanged.

Article 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

Add a new Subsection (6) to Article 210.8 (B), as follows:

(6) Food and/or beverage serving areas.

Article 210.23 Permissible Loads.

Add a new Subsection (E) to Article 210.23, as follows:

(E) Dwelling Branch Circuits.

(1) Maximum Number (15-ampere). The maximum number of outlets on a 15-ampere, 125 volt (nominal) luminaire lighting fixture circuit shall be twelve (12) and shall not contain general purpose outlets.

Exception No 1: Dedicated branch circuits feeding only IC rated recessed luminaires (recessed lighting fixtures) and/or low wattage energy efficient luminaires (lighting fixtures) may use Article 220.14(D) for maximum number of lighting outlets.

Exception No 2: In branch circuits serving smoke detectors the smoke detectors outlets need not be counted with the other lighting outlets.

(2) Maximum Number (20-ampere). The maximum number of outlets on a 20-ampere, 125-volt (nominal) circuit used either exclusively for receptacles, for lighting outlets or for any combination of receptacles and lighting outlets shall be twelve (12).

Exception No 1: Dedicated branch circuits feeding only IC rated recessed luminaires (recessed lighting fixtures) and/or low wattage energy efficient luminaires (lighting fixtures) may use Article 220.14(D) for maximum number of lighting outlets.

Exception No 2: In branch circuits serving smoke detectors the smoke detectors outlets need not be counted with the other lighting outlets.

(3) Individual Branch Circuits. The following fastened-in-place appliances are required to have a separate minimum 20-ampere circuit: dishwasher, trash compactor and microwave oven. The required laundry circuit may serve one (1) additional outlet in the laundry area.

Article 210.52 Dwelling Unit Receptacle Outlets.

Revise Article 210.52 (A) (2), as follows:

(2) The space occupied by fixed panels in exterior walls, excluding sliding panels. Where panels consist of multiple sliding panels only the first panel in each direction may be excluded.

Revise Article 210.52 (A)(2)(3), as follows:

(3) The space afforded by fixed room dividers such as free standing bar-type counters or railings. Where room dividers consist of multiple moving panels only the first moving panel in each direction may be excluded as a wall space.

Revise Article 210.52 (B)(3), as follows:

(3) Kitchen Receptacle Requirements. Receptacles installed in a kitchen to serve countertop surfaces shall be limited to five (5) duplex receptacles on a circuit. They shall be supplied by not fewer than two small-appliance branch circuits, either or both of which shall also be permitted to supply receptacle outlets in the same kitchen or in other rooms as specified in 210.52(B)(1). Additional small-appliance branch circuits shall be permitted to supply receptacle outlets in the kitchen and other rooms specified in 210.52(B)(1). No small-appliance branch circuit shall serve more than one kitchen.

Add a new exception to Article 210.52 (B)(3), as follows:

Exception: Receptacles installed to provide power for electric ignition systems or clock timers for gas-fired ranges, ovens or counter-mounted cooking units.

Add a new exception No. 3 to Article 210.52 (F), as follows:

Exception No. 3: In structures more than four (4) stories in height where the configuration of a laundry area is such that only an electrically heated stackable type washer/dryer unit utilizing 208 volt or 240 volt power can be accommodated, the receptacle may be considered as meeting the laundry circuit requirement.

Article 210.70 Lighting Outlets Required.

Revise Item (1) in Article 210.70 (A), as follows:

(1) Habitable Rooms. At least one wall switch-controlled lighting outlet shall be installed in every habitable room and bathroom. Unless prohibited by structural design, a wall switch shall be located within 1.8 m (6 ft) of the point of entry, and shall not be located behind an active door in the fully open position.

The remainder of this Article remains unchanged

Revise Item (a) in Article 210.70 (A)(2), as follows:

(a) At least one wall switch-controlled lighting outlet shall be installed in hallways, stairways, attached garages, and detached garages with electric power. Hallways of 3.0 m (10 ft) or more in length shall have wall switches at every end. There shall be a wall switch within 1.8 m (6 ft) of each bedroom door unless prohibited by structural design.

Revise Item (b) in Article 210.70 (A)(2), as follows:

(b) For dwelling units, attached garages, and detached garages with electric power, at least one wall-switch controlled lighting outlet shall be installed to provide illumination on the exterior side of outdoor entrances or exits with grade level access. A vehicle door shall not be considered as an outdoor entrance or exit. At least one wall switch that controls an interior lighting outlet shall be located at each keyed exterior entry. This switch shall be located within 1.8 m (6 ft) of the latching jamb side, unless prohibited by structural design, and not behind an active door in the fully open position.

Add a new Subsection (4) to Article 210.70 (A), as follows:

(4) Closets. All walk-in closets or storage areas of 1.86 sq. m (20 square feet) or more in floor area shall contain a light fixture controlled by a wall switch.

Add a new Subsection (D) to Article 210.70, as follows:

(D) Self-Service Storage Facilities. All Self-Service Storage Facilities shall have egress illumination as required by the Building Code.

Article 220.5 Branch-Circuit, Feeder, and Service Calculations.

Add a new Subsection (C) to Article 220.5 to read as follows:

(C) Calculated Loads. The calculated load of a new single family dwelling service shall allow a minimum of 4800 volt-amperes for future expansion. These 4800 volt-amperes shall be added to the total net computed load.

Article 220.84 Multifamily Dwelling.

Delete item (5) in Article 220.84(C), in its entirety.

Add a new Subsection (D) to Article 220.84, as follows:

(D) Heating and Air Conditioning Load. The largest of the following six selections (load in kVA) shall be included:

- (1) 100 percent of the nameplate rating(s) of the air conditioning and cooling.
- (2) 100 percent of the nameplate rating(s) of the heat pump when the heat pump is used without any supplemental electric heating.
- (3) 100 percent of the nameplate ratings of electric thermal storage and other heating systems where the usual load is expected to be continuous at the full nameplate value. Systems qualifying under this selection shall not be calculated under any other selection in 220.84(D).
- (4) 100 percent of the nameplate rating(s) of the heat pump compressor and 65 percent of the supplemental electric heating for central electric space heating systems. If the heat pump compressor is prevented from operating at the same time as the supplementary heat, it does not need to be added to the supplementary heat for the total central space heating load.
- (5) 65 percent of the nameplate rating(s) of electric space heating if less than four separately controlled units.
- (6) 40 percent of the nameplate rating(s) of electric space heating if four or more separately controlled units.

Article 225.32 Location.

Revise Article 225.32, in its entirety, as follows:

225.32 Location. The disconnecting means shall be installed as described in 230.70 of these amendments. For the purposes of this Article the requirements in 230.6 shall be utilized.

Exception No. 1: *For installations under single management, where documented safe switching procedures are established and maintained for disconnection, and where the installation is monitored by qualified individuals, the disconnecting means shall be permitted to be located elsewhere on the premises.*

Exception No. 2: *For buildings or other structures qualifying under the provisions of Article 685, the disconnecting means shall be permitted to be located elsewhere on the premises.*

Exception No. 3: *For towers or poles used as lighting standards, the disconnecting means shall be permitted to be located elsewhere on the premises.*

Exception No. 4: *For accessory buildings to one and two-family dwellings the disconnecting means may be installed either inside or on the exterior of the accessory structure.*

Article 230 Services.

Add a new Article 230.11 Location of Customer Owned Service Lateral or Drop, as follows:

230.11 Location of Customer Owned Service Lateral or Drop. All conductors shall traverse only the property to be served except through recorded power easements.

Article 230.70 General.

Revise Article 230.70, in its entirety, as follows:

230.70 General. Means shall be provided to disconnect all ungrounded service entrance conductors to a building or structure.

(A) Location. The service disconnecting means shall be installed in accordance with 230.70(A)(1), (2), (3), (4) and (5).

(1) Exterior of the Building. The service disconnecting means shall be installed in a readily accessible exterior location and within 3.7 m (12 ft.) of the building or structure. Where the distance is greater than 3.7 m (12 ft.) from the building or structure the service disconnecting means shall be considered as a separate structure.

Exception No1: A fire pump and its associated electrical equipment.

(2) Electrical Equipment Room. The service disconnecting means may be installed within a dedicated electrical equipment room with a readily accessible direct access on the exterior of a building or structure. Such rooms shall be separated from all other rooms or spaces within the building by a minimum of one (1) hour fire resistive construction and shall have approved Fire Department access.

FPN: A recessed 3200 series Knox Box may serve as the approved Fire Department access in some jurisdictions.

(3) Bathrooms. Service disconnecting means shall not be installed in bathrooms.

(4) Remote Control. Where a remote control device(s), required by another code such as in a fire command center, is used to actuate the service disconnecting means, the service disconnecting means shall be located in accordance with 230.70(A)(1) or (2). The remote control device shall be supervised by a local signaling service that causes an audible signal and illumination of an amber visual signal at the Fire Command Center and at each auxiliary location required for the Life Safety System.

(5) Emergency Systems, Information Technology Equipment and Uninterruptible Power Supplies (UPS). Emergency Systems driven by prime movers and UPS Systems shall have separate disconnecting means with separate identification. Information Technology Equipment rooms complying with Article 645.2 shall be permitted to have their disconnecting means installed per article 645.10 and 645.11 if identified at the same location as the "Service Disconnect."

(B) Marking. Each service disconnecting means shall be marked with a sign(s). When located in a dedicated electrical room the exterior door(s) providing access to the disconnecting means located in a dedicated electrical room shall be permanently marked with a sign(s). Each sign shall be a minimum 0.093sq.m (1 sq. foot), colored yellow with 25.4mm (1 inch) high, 6.35 mm (¼ inch) stroke raised or engraved letters and/or numbers indicating the address or unit it serves and be identified as the "Electrical Service Disconnect(s)" and/or "Electrical Service Disconnect(s) Inside." Emergency Systems disconnects shall be permanently marked with sign(s), identified as "Emergency Electrical Disconnect(s)" and/or "Main Emergency Electrical Disconnect(s) Inside." When the service disconnecting means is located inside a dedicated electrical room and it is not the first service disconnect encountered or there are multiple service disconnects there shall be a directional 75mm (3inch) wide painted yellow stripe on the floor from the entry door(s) to each service disconnect. Other durable means of identification may be used with prior approval by The Authority Having Jurisdiction.

Exception: One and two family dwelling units and their associated accessory structures.

(C) Suitable for Use. Each service disconnecting means shall be suitable for the prevailing conditions. Service equipment installed in hazardous (classified) locations shall comply with the requirements of Articles 500 through 517.

Article 230.202 Service-Entrance Conductors.

Add a new Subsection (C) to Article 230.202, as follows:

(C) Conductors Considered Outside the Building. Service-entrance conductors shall be installed in accordance with Article 230.6.

Article 230.205 Disconnecting Means.

Revise Article 230.205(A), in its entirety, as follows:

(A) Location. The service disconnecting means shall be installed in accordance with 230.70. Facilities on private property, under single management with a Life Safety System, Fire Command Center and 24 hour on-site qualified maintenance personnel shall be permitted to utilize a remote control device for their power disconnecting means. The main electrical room is not required to be located on the exterior of the building or other structure.

Revise Article 230.205(C), as follows:

(C) Remote Control. For multi-building, industrial installations under single management, the service disconnecting means shall be permitted to be located at a separate building or structure. In such cases, the service disconnecting means shall be permitted to be electrically operated by a readily accessible, remote-control device. The remote control device shall be supervised by a local signaling service that causes an audible signal and the illumination of an amber visual signal at the Fire Command Center and at each auxiliary location required for the Life Safety System.

Article 240.6 Standard Ampere Ratings.

Revise Article 240.6 (B), as follows:

(B) Adjustable-Trip Circuit Breakers. The rating of adjustable-trip circuit breakers having external means for adjusting the current setting (long-time pickup setting), shall be the maximum setting possible.

Delete Subsection (C) of Article 240.6, in its entirety.

Article 240.86 Series Ratings.

Revise Article 240.86, as follows:

240.86 Series Ratings. Where a circuit breaker is used on a circuit having an available fault current higher than the marked interrupting rating by being connected on the load side of an acceptable overcurrent device having a higher rating, the circuit breaker shall meet the requirements specified in (A) or (B), and (C). All of the information including manufacturers and part numbers of each component making up the series combination rating shall be provided on the submittal drawings for plans examination and permit. Only those manufacturers and part numbers shall be permitted for the installation.

Article 250.32 Buildings or Structures Supplied by Feeder(s) or Branch Circuit(s).

Revise Article 250.32 (A), as follows:

(A) Grounding Electrode. For the purposes of this Article all buildings or structures not joined by a continuous concrete foundation or footing and roof shall be considered as separate buildings or structures. Building(s) or structure(s) supplied by feeder(s) or branch circuit(s) shall have a grounding electrode system installed in accordance with Part III of Article 250. The grounding electrode conductor(s) shall be connected in accordance with 250.32 (B) or (C). Where there is no existing grounding electrode, the grounding electrode(s) required in 250.50 shall be installed.

Article 250.50 Grounding Electrode System.

Revise Article 250.50, as follows:

250.50 Grounding Electrode System. All grounding electrodes as described in 250.52(A)(1) through (A)(7) that are present at each building or structure served shall be bonded together to form the grounding electrode system. Where none of these grounding electrodes exist, one or more of the grounding electrodes specified in 250.52(A)(4) through (A)(8) shall be installed and used. The concrete-encased electrode described in Article 250.52(A)(3) shall be required for new buildings and structures that are supplied with electrical power and have concrete foundations or footings.

***Exception:** Concrete-encased electrodes of existing buildings or structures shall not be required to be part of the grounding electrode system where the steel reinforcing bars or rods are not accessible for use without disturbing the concrete.*

Article 250.52 Grounding Electrodes.

Revise Item (5) of Article 250.52(A), as follows:

(5) Rod Electrodes. Rod electrodes shall not be less than 2.44 m (8 ft) in length and shall consist of the following materials and shall be installed according to Article 250.53 (G). Electrodes shall be copper clad or their equivalent and shall not be less than 15.875 mm (5/8 in.) in diameter, or listed non-ferrous rods or their equivalent and not less than 12.7 mm (1/2 in.) in diameter.

Delete Item (7) of Article 250.52(A), in its entirety and renumber the subsequent items sequentially, as follows:

(7) Other Local Metal Underground Systems or Structures.

The remainder of this Article remains unchanged

Article 250.53 Grounding Electrode System Installation.

Revise Article 250.53(A), as Rod Electrodes, as follows:

(A) Rod Electrodes. Where practicable, rod electrodes shall be embedded below permanent moisture level. Rod electrodes shall be free from nonconductive coatings such as paint or enamel.

Revise Article 250.53(B), as follows:

(B) Electrode Spacing. Where more than one of the electrodes of the type specified in 250.52(A)(5) are used, each electrode of one grounding system (including that used for air terminals) shall not be less than 1.83 m (6 ft) from any other electrode of another grounding system. Two or more grounding electrodes that are bonded together shall be considered a single grounding electrode system.

Revise Article 250.53(D) (2), as follows:

(2) Supplemental Electrode Required. A metal underground water pipe shall be supplemented by an additional electrode of a type specified in 250.52(A)(2) through (A)(7). Where the supplemental electrode is a rod type, it shall comply with 250.56. The supplemental electrode shall be permitted to be bonded to the grounding electrode conductor, the grounded service-entrance conductor, the nonflexible grounded service raceway, or any grounded service enclosure.

***Exception:** The supplemental electrode shall be permitted to be bonded to the interior metal water piping at any convenient point as covered in 250.52(A)(1), Exception.*

Revise Article 250.53(E), as follows:

(E) Supplemental Electrode Bonding Connection Size. Where the supplemental electrode is a rod electrode, that portion of the bonding jumper that is the sole connection to the supplemental grounding electrode shall not be required to be larger than 6 AWG copper wire or 4 AWG aluminum wire.

Revise Article 250.53(G), as follows:

(G) Rod Electrodes. The electrode shall be installed such that at least 2.44 m (8 ft) of length is in contact with the soil. It shall be driven to a depth of not less than 2.44 m (8 ft) except that, where rock bottom is encountered, the electrode shall be driven at an oblique angle not to exceed 45 degrees from the vertical or, where rock bottom is encountered at an angle up to 45 degrees, the electrode shall be permitted to be buried in a trench that is at least 750 mm (30 in.) deep. The upper end of the electrode shall be flush with or below ground level unless the aboveground end and the grounding electrode conductor attachment are protected against physical damage as specified in 250.10.

Delete Subsection (H) of Article 250.53, in its entirety.

Article 250.56 Resistance of Rod, Pipe and Plate Electrodes.

Revise Article 250.56, as follows:

250.56 Resistance of Rod Electrodes. A single electrode consisting of a rod that does not have a resistance to ground of 25 ohms or less shall be augmented by one additional electrode of any of the types specified by 250.52(A)(4) through (A)(8). Where multiple rod electrodes are installed to meet the requirements of this article, they shall not be less than 1.8 m (6 ft) apart.

FPN: The paralleling efficiency of rods longer than 2.5 m (8 ft) is improved by spacing greater than 1.8 m (6 ft).

Article 250.94 Bonding for Other Systems.

Add new items (4) and (5) to Article 250.94, as follows:

(4) A set of listed terminals connected to the concrete-encased electrode as defined in Article 250.52(A)(3).

(5) A set of listed terminals connected to the concrete-encased electrode conductor as defined in Article 250.24(D), 250.30(A)(3), 250.30(A)(4), 250.30(B)(1) and 250.32(E).

Article 250.120 Equipment Grounding Conductor Installation.

Add a new Subsection (D) to Article 250.120, as follows:

(D) Equipment Grounding Conductor. All raceways installed on roofs shall contain an equipment grounding conductor sized per Table 250.122 installed with the circuit conductors.

Exception No. 1: Low voltage, communication and similar type systems unless required elsewhere in the Code.

Exception No. 2: As permitted by Article 250.86 for short Articles of metal enclosures or raceways.

Table 250.122 Equipment Grounding Conductors for Grounding Raceway and Equipment

Revise Table 250.122 Minimum Size Equipment Grounding Conductors for Grounding Raceway and Equipment, as follows:

Rating or Setting of Automatic Overcurrent Device in Circuit Ahead of Equipment, Conduit, etc., Not Exceeding (Amperes)	Size (AWG or kcmil) Copper	Size (AWG or kcmil) Aluminum or Copper-Clad Aluminum*
4000	500	750

Article 300.1 Scope.

Add a new paragraph (D) to Article 300.1, as follows:

(D) Article 760 System Wiring.

(1) Wiring for Article 760 systems installed in the construction of buildings and structures shall be contained in a raceway or cable tray system.

Exception No. 1: AC cable, MC cable and MI cable. Articles 320, 330, and 332 respectively.

Exception No.2: Wiring in residential occupancies two stories or less in height.

(2) Raceway systems for Article 760 systems in buildings and structures of Type I or Type II A construction as defined in the Building Code shall be of metallic non-combustible materials and cable trays shall be of the fully enclosed type.

Exception No. 1: Non-metallic raceways encased in concrete, or masonry, or underground or solid grouted building components that are in compliance with the Building Code.

Exception No. 2: Liquid-tight flexible conduit in lengths of 1.8 m (6 ft) or less which comply with NEC Articles 350 and 356.

Article 310.15 Ampacities for Conductors Rated 0-2000 Volts.

Revise Article 310.15(B)(2)(c), as follows:

(c) *Conduits Exposed to Sunlight on Rooftops.* Where conductors or cables are installed in conduits exposed to direct sunlight on or above rooftops, one of the following conditions shall be met:

- (1) All conductors shall have an insulation rating of 90°C and the conduits shall be installed at least 3 1/2" above the roof surface.
- (2) The adjustments shown in Table 310.15(B)(2)(c) shall be added to the outdoor temperature to determine the applicable ambient temperature for application of the correction factors in Table 310.16 and Table 310.18.

FPN: One source for the average ambient temperatures in various locations is the ASHRAE Handbook — *Fundamentals*.

Article 314.24 Depth of Outlet Boxes.

Revise Article 314.24, as follows:

314.24 Minimum Depth of Boxes for Outlets, Devices, and Utilization Equipment. Outlet and device boxes shall have sufficient depth to allow equipment installed within them to be mounted properly and with sufficient clearance to prevent damage to conductors within the box. All boxes for outlets, devices, utilization equipment or junction boxes less than 200 mm (8 inches) in any dimension, shall have no more than two extension boxes or one extension box and one plaster ring.

Exception: *Listed unit(s) or assembly(s).*

Article 352.10 Uses Permitted.

Add a new Subsection (I) to Article 352.10, as follows:

(I) Exposed to Direct Sunlight. Rigid non-metallic conduit shall be a minimum Schedule 80 and identified for such use.

Article 358.12 Uses Not Permitted.

Add new items (7), (8) and (9) to Article 358.12, as follows:

- (7) Embedded within concrete or masonry in contact with earth.
- (8) Underground installations.
- (9) Within earth fills.

Article 408.54 Maximum Number of Overcurrent Devices.

Add the following paragraph to the end of Article 408.54 to read as follows:

Each panelboard or load center installed in a new one or two-family dwelling shall have a capacity for a minimum of two (2) additional full-size single pole overcurrent devices on adjacent opposite poles for expansion. All available overcurrent device spaces shall comply with Article 404.8(A).

Article 514.11 Circuit Disconnects.

Revise Article 514.11(A), as follows:

(A) General. Each circuit leading to or through dispensing equipment, including equipment for remote pumping systems, shall be provided with a clearly identified and readily accessible switch or other acceptable means, located remote from the dispensing devices, to disconnect simultaneously from the source of supply, all conductors of the circuits, including the grounded conductor, if any. Single-pole breakers utilizing handle ties shall not be permitted. The switch shall be a momentary contact type. The disconnect station sign shall be 0.093 sq. m (1 ft square), colored yellow and have black, 25.4 mm (1 inch) high, 6.35 mm (¼ inch) stroke permanent lettering describing it as "Emergency Pump Shutoff".

Article 600.41 Neon Tubing.

Revise Article 600.41(D), as follows:

(D) Protection. Field-installed skeleton tubing shall not be subject to physical damage. Where the tubing is readily accessible to other than qualified persons, field-installed skeleton tubing shall be provided with suitable guards or protected by other approved means. Installations less than 2.44 m (8 ft.) above finished grade or floor level shall be considered as readily accessible.

Article 682 Natural and Artificially Made Bodies of Water.

Delete Article 682 in its entirety.

Article 690.14 Additional Provisions.

Delete the exception and revise Article 690.14(C) (1), as follows:

(1) Location. The photovoltaic disconnecting means and overcurrent device shall be installed at an accessible location on the outside of a building or structure before any system conductors enter the building or structure.

The photovoltaic system disconnecting means shall not be installed in bathrooms.

Article 700.1 Scope.

Revise Article 700.1, as follows:

700.1 Scope. For the purposes of this ARTICLE items considered as meeting the requirements for high rise applications (i.e. buildings with an occupied floor located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access to be placed on the emergency distribution system may include: Emergency illumination, exit signage, electric fire pumps, fire jockey or makeup pumps, fire alarm equipment, smoke control equipment, one elevator per bank of elevators, cooling and heating equipment for emergency electrical rooms and elevator machine rooms, FAA required obstruction lighting, battery chargers for emergency generating equipment, heating equipment for freeze protection of fire sprinkler systems, telecommunications equipment (i.e. for 911 applications) fire command center loads such as monitoring and display equipment and other equipment approved by the Authority Having Jurisdiction that will enhance the survivability of life safety systems.

The provisions of this article apply to the electrical safety of the installation, operation, and maintenance of emergency systems consisting of circuits and equipment intended to supply, distribute, and control electricity for illumination, power, or both, to required facilities when the normal electrical supply or system is interrupted.

Emergency systems are those systems legally required and classed as emergency by municipal, state, federal, or other codes, or by any governmental agency having jurisdiction. These systems are intended to automatically supply illumination, power, or both, to designated areas and equipment in the event of failure of the normal supply or in the event of accident to elements of a system intended to supply, distribute, and control power and illumination essential for safety to human life.

Article 700.9 Wiring, Emergency System.

Revise Article 700.9(D), as follows:

(D) Fire Protection. Emergency systems shall meet the additional requirements in 700.9(D)(1) and (D)(2) in any occupancy(s) of 300 or more persons or in buildings with an occupied floor located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access.

Add a new exception and amend Article 700.9 (D) (2), as follows:

(2) Feeder-Circuit Equipment. Equipment for feeder circuits (including transfer switches, transformers, and panelboards) shall be located either in spaces fully protected by approved automatic fire suppression systems (including sprinklers, carbon dioxide systems) or in spaces with a 1-hour fire resistance rating. This equipment shall be located in room(s) dedicated to this equipment.

Exception: *System components described in Article 701 may occupy the same dedicated room(s) as emergency systems.*

FPN: For the definition of *Occupancy Classification*, see Article 6.1 of NFPA 101-2006, *Life Safety Code*.

Article 700.12 General Requirements.

Revise Article 700.12, as follows:

700.12 General Requirements. Current supply shall be such that, in the event of failure of the normal supply to, or within the building or group of buildings concerned, emergency lighting, emergency power, or both shall be available within the time required for the application but not to exceed 10 seconds. The supply system for emergency purposes, in addition to the normal services to the building and meeting the general requirements of

this ARTICLE, shall be one or more of the types of systems described in 700.12(A) through (E). Unit equipment in accordance with 700.12(F) shall satisfy the applicable requirements of this article.

In selecting an emergency source of power, consideration shall be given to the occupancy and the type of service to be rendered, whether of minimum duration, as for evacuation of a theater, or longer duration, as for supplying emergency power and lighting due to an indefinite period of current failure from trouble either inside or outside the building.

Equipment shall be designed and located so as to minimize the hazards that might cause complete failure due to flooding, fires, icing, and vandalism.

Equipment for sources of power as described in 700.12(A) through 700.12(E) shall meet the following additional requirements in any occupancy(s) of 300 or more persons or in buildings with an occupied floor located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access. This equipment shall be installed in spaces fully protected by approved automatic fire suppression systems (sprinklers, carbon dioxide systems and so forth) or in spaces protected by a fire-rated assembly listed to achieve a minimum fire rating of one-hour.

FPN No. 1: For the definition of *Occupancy Classification*, see ARTICLE 6.1 of NFPA 101-2006, *Life Safety Code*.

FPN No. 2: Assignment of degree of reliability of the recognized emergency supply system depends on the careful evaluation of the variables at each particular installation.

Add a new Subsection (7) to Article 700.12 (B), as follows:

(7) The emergency generator shall not be located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access. When the generator set is located inside a building it shall be located in a room dedicated to the Emergency Power Supply System. This room shall be separate from the interior of the building by a minimum of two-hour resistive construction or shall be in room(s) fully protected by approved automatic fire suppression systems. Unless otherwise required by Building Codes openings for generator cooling and exhaust shall not be required to be fire-resistive construction.

When a generator set is located within 1.5 m (5 ft) of a building it shall be separated from the building with a rated separation wall equal to the highest fire rating within the building that has no openings. It shall be isolated within an enclosure and protected from physical damage.

When a generator set is located more than 1.5 m (5 ft) from a building it shall be isolated within an enclosure and protected from physical damage.

Article 760.3 Other Articles.

Add a new paragraph (A) to Article 760.3, and re-alphabetize the existing paragraphs (A) through (G) to (B) through (H) respectively:

(A) Wiring Methods. Article 760 Fire Alarm Systems wiring shall comply with Article 300.1(D).

Add a new paragraph to the end of this section, as follows:

All Fire alarm wiring installed in the construction of buildings and structures shall be contained in a raceway or cable tray system.

BUSINESS IMPACT STATEMENT
BILL NO. 2011-14
(Adopts the 2008 Edition of the National Electrical Code,
together with local amendments thereto)

This business impact statement was prepared pursuant to NRS 237.090 to address the impact of a proposed ordinance, Bill No. 2011-14, that will adopt the 2008 Edition of the National Electrical Code, together with local amendments thereto.

1. The following constitutes a description of the manner in which comment was solicited from affected businesses, a summary of their responses and an explanation of the manner in which other interested persons may obtain a copy of the summary.

Notice of the proposed ordinance was published in the Las Vegas Review-Journal. In addition, a copy of the notice was provided to development-related and construction groups that are representative of affected industries. No written responses were received.

2. The estimated economic effect of the proposed rule on businesses, including, without limitation, both adverse and beneficial effects, and both direct and indirect effects:

Adverse effects:

Those proposing construction will need to plan for and adjust to any new or differing Code requirements

Beneficial effects:

Code provisions that are updated and that are consistent with other area jurisdictions

Direct effects:

See adverse and beneficial effects above

Indirect effects:

None identified

3. The following constitutes a description of the methods the local government considered to reduce the impact of the proposed rule on businesses and a statement regarding whether any, and if so which, of these methods were used:

Not applicable

4. The governing body estimates the annual cost to the local government for enforcement of the proposed rule is:

No additional cost

5. If the proposed rule provides for a new fee or increases an existing fee, the total annual amount expected to be collected is:

Not applicable

6. If the proposed rule provides for a new fee or increases an existing fee, the money generated by the new fee or increase in existing fee will be used by the local government to:

Not applicable

7. If the proposed rule includes provisions that duplicate or are more stringent than federal, state or local standards regulating the same activity, the following explains when such duplicative or more stringent provisions are necessary:

Not applicable

Date: February 16, 2011

AGENDA SUMMARY PAGE
RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY ATTORNEY

DIRECTOR: BRADFORD R. JERBIC

☐ Consent ☒ Discussion

SUBJECT:

Bill No. 2011-15 – Adopts an updated version of the Southern Nevada Amendments to the 2009 International Energy Conservation Code. Sponsored by: Councilman Steven D. Ross

Fiscal Impact

☒

No Impact

☐

Augmentation Required

☐

Budget Funds Available

Amount:

Funding Source:

Dept./Division:

PURPOSE/BACKGROUND:

This bill will adopt the an updated version of the Southern Nevada Amendments to the 2009 International Energy Conservation Code. The update represents recent adaptations agreed upon by local area jurisdictions.

RECOMMENDATION:

This bill should be submitted to a Recommending Committee for review, hearing and recommendation to the City Council for final action.

BACKUP DOCUMENTATION:

1. Bill No. 2011-15
2. Southern Nevada Amendments to the 2009 International Energy Conservation Code
3. Business Impact Statement

1 **BILL NO. 2011-15**

2 **ORDINANCE NO. _____**

3 AN ORDINANCE TO ADOPT AN UPDATED VERSION OF THE SOUTHERN NEVADA
4 AMENDMENTS TO THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE, AND TO
PROVIDE FOR OTHER RELATED MATTERS.

5 Sponsored by: Councilman Steven D. Ross

Summary: Adopts an updated version of the
Southern Nevada Amendments to the 2009
International Energy Conservation Code.

7 THE CITY COUNCIL OF THE CITY OF LAS VEGAS DOES HEREBY ORDAIN
8 AS FOLLOWS:

9 SECTION 1: The document entitled "Southern Nevada Amendments to the 2009
10 International Energy Conservation Code," as adopted in LVMC 16.52.010(B), is hereby repealed in
11 its entirety.

12 SECTION 2: The document entitled "Southern Nevada Amendments to the 2009
13 International Energy Conservation Code," which is attached hereto and incorporated by this reference,
14 is hereby adopted and incorporated in LVMC 16.52.010(B).

15 SECTION 3: This Ordinance shall become effective on July 5, 2011.

16 SECTION 4: If any section, subsection, subdivision, paragraph, sentence, clause or
17 phrase in this ordinance or any part thereof is for any reason held to be unconstitutional or invalid or
18 ineffective by any court of competent jurisdiction, such decision shall not affect the validity or
19 effectiveness of the remaining portions of this ordinance or any part thereof. The City Council of the
20 City of Las Vegas hereby declares that it would have passed each section, subsection, subdivision,
21 paragraph, sentence, clause or phrase thereof irrespective of the fact that any one or more sections,
22 subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional,
23 invalid or ineffective.

24 SECTION 5: Whenever in this ordinance any act is prohibited or is made or declared
25 to be unlawful or an offense or a misdemeanor, or whenever in this ordinance the doing of any act is
26 required or the failure to do any act is made or declared to be unlawful or an offense or a
27 misdemeanor, the doing of such prohibited act or the failure to do any such required act shall
28 constitute a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than

1 \$1,000.00 or by imprisonment for a term of not more than six months, or by any combination of such
2 fine and imprisonment. Any day of any violation of this ordinance shall constitute a separate offense.

3 SECTION 6: All ordinances or parts of ordinances or sections, subsections, phrases,
4 sentences, clauses or paragraphs contained in the Municipal Code of the City of Las Vegas, Nevada,
5 1983 Edition, in conflict herewith are hereby repealed.

6 PASSED, ADOPTED and APPROVED this _____ day of _____, 2011.

7 APPROVED:

8
9 By _____
OSCAR B. GOODMAN, Mayor

10 ATTEST:

11 _____
12 BEVERLY K. BRIDGES, MMC
City Clerk

13 APPROVED AS TO FORM:

14 Val Steed 2-16-11
15 Date
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1 The above and foregoing ordinance was first proposed and read by title to the City Council on the
2 ____ day of _____, 2011, and referred to the following committee composed of
3 _____ and _____ for recommendation;
4 thereafter the said committee reported favorably on said ordinance on the ____ day of
5 _____, 2011, which was a _____ meeting of said Council; that at said
6 _____ meeting, the proposed ordinance was read by title to the City Council
7 as first introduced and adopted by the following vote:

8 VOTING "AYE": _____
9 VOTING "NAY": _____
10 ABSENT: _____

12 APPROVED:

14 By _____
OSCAR B. GOODMAN, Mayor

15 ATTEST:
16 _____
17 BEVERLY K. BRIDGES, MMC
City Clerk

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Southern Nevada Building
Officials

c/o City of Las Vegas
Building & Safety Dept
713 S. 4th Street
Las Vegas, NV 89101

Phone: 702-229-6257

Fax: 702-382-1731

Email:

chknight@lasvegasnevada.gov

MEMBERS

Chris Knight, Chair
City of Las Vegas

Greg Blackburn
City of North Las Vegas

Ron Nybo
City of Boulder City

Ron Lynn
Clark County

Kurt Sawyer
City of Mesquite

Brent Steed
Pahrump Regional
Planning District
(Nye County)

Michael Bouse
City of Henderson

Lisa Conner
Clark County School District

SOUTHERN NEVADA AMENDMENTS TO THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE

**Approved by SNBO
September 22, 2010**

Section 101.1 Title.

Revise Section 101.1 Title, as follows:

101.1 Title. This code shall be known as the *International Energy Conservation Code of Southern Nevada*, and shall be cited as such. It is referred to herein as “this code”.

Section 101.4.3 Additions, alterations, renovations or repairs.

Revise Exceptions 2, 3 and add a new exception 9 of Section 101.4.3, as follows:

101.4.3 Additions, alterations, renovations or repairs. Additions, alterations renovations or repairs to an existing building, building system or portion thereof shall conform to the provisions of this code as they relate to new construction without requiring the unaltered portions of the existing building or building system to comply with this code. Additions, alterations, renovations or repairs shall not create an unsafe or hazardous condition or overload existing building systems. The addition shall be deemed to comply with this code if the addition alone complies or if the existing building and addition comply with this code as a single building.

Exceptions: The following need not comply provided the energy use of the building is not increased:

1. Storm windows installed over existing fenestrations.
2. Glass only replacements in an existing sash and frame. Glass must meet or exceed the same U-value and SHGC of the glass being replaced. If U-value and SHGC of glass cannot be determined, the minimum prescriptive values of Tables 402.1.1 for residential buildings and 502.3 for commercial buildings shall be deemed compliant.
3. Existing ceiling, wall or floor cavities exposed during construction provided that these cavities are filled with insulation. The R-values need not exceed the prescriptive values in Tables 402.1.1 for residential buildings and 502.2(1) for commercial buildings.
4. Construction where the existing roof, wall or floor cavity is not exposed.
5. Reroofing for roofs where neither the sheathing nor the insulation is exposed. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below sheathing.
6. Replacement of existing doors that separate *conditioned space* from the exterior shall not require installation of the vestibule or revolving door, provided, however, that an existing vestibule that separates a *conditioned space* from the exterior shall not be removed.
7. Alterations that replace less than 50 percent of the luminaires in a space, provided that such alterations do not increase the installed interior lighting power.
8. Alterations that replace only the bulb and ballast within the existing luminaires in a space provided that the *alteration* does not increase the installed interior lighting power.
9. Relocations only of existing luminaires within an existing area enclosed by walls or floor to ceiling partitions.

Section 102.1.1 Above code programs.

Revise Section 102.1.1, as follows:

Section 102.1.1 Above code programs. The Southern Nevada Building Officials shall be permitted to deem a national, state or local energy efficiency program to exceed the efficiency required by this code. Programs seeking approval must submit all requested supporting documentation to the Southern Nevada Building Officials for review. Buildings certified in writing by such an energy efficiency program shall be considered in compliance with this code. The requirements identified as “mandatory” in chapters 4 and 5 of this code, as applicable, shall be met. A list of approved energy efficiency programs include the following:

- EPA: Energy Star (15% above Code Program)
- EPA: Home Performance with Energy Star for existing home improvements.
- Department of Energy: Builder Challenge (30% above Code Program)
- IRS: Federal Tax Credit (50% above Code Program)
- IRS: Federal Tax Credit for Homeowner Improvements
- Utility Incentive Programs for new homes (15% above Code Program)
- USGBC LEED Green Building Program (15% above Code Program)
- Build it Green (15% above Code Program)
- Build it Green for Existing Home improvements
- SNHBA Green Building Partnership (15% above Code Program)
- Environments for Living (EFL) (15% above Code Program or better)
- City of Las Vegas Green Building Program (15% above Code Program or better)

102.1.1.1 Compliance for residential tract developments. Residential tract developments, consisting of 10 homes or more, shall be deemed in compliance with this code when the following documentation is submitted to the jurisdiction by the developer:

1. Written HERS documentation, certifying compliance with an *approved* energy efficiency program using approved RESNET software
2. A copy of the contractual agreement between the developer and a certified HERS rater to perform all mandatory field testing, sampling protocols and program verifications.
3. Additional documentation as may be deemed necessary by the jurisdiction.

Section 106.1 General.

Revise Section 106.1, as follows:

Section 106.1 General. The codes and standards referenced in this code shall be those listed in Chapter 6. Where this code refers to other codes not adopted by the jurisdiction, the applicable code adopted by the jurisdiction shall govern. Such codes and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference.

Section 202 General Definitions.

Revise Section 202, General Definitions, as follows:

AIR BARRIER. An integral component of the *building thermal envelope* comprised of approved materials that are assembled and joined together to support in-contact insulating materials on one or more of its surfaces and to provide a barrier to air leakage through the building envelope. An air barrier may be comprised of, but not limited to, the exterior siding, exterior lath and stucco, rigid insulation board, exterior sheathing and sub-sheathing, water proof substrate with tiles, masonry walls, roof sheathing and drywall between conditioned and unconditioned spaces.

BUILDING THERMAL ENVELOPE. The basement walls, exterior walls, floor, roof and any other building air barrier element(s) that enclose *conditioned space*. This boundary also includes the air barrier between *conditioned space* and any exempt or unconditioned space.

Add new definitions to Section 202, General Definitions, as follows:

CASINO. A business with a Non-restricted Gaming License from the Nevada Gaming Commission and State Gaming Control Board. It includes the gaming area(s) as well as the adjacent areas within the building envelope.

CASINO GAMING AREA. The space within a *casino* wherein gaming is conducted. The gaming area shall also include accessory uses within the same room(s) as, or substantially open to the gaming floor(s). Such areas shall include, but not be limited to lobbies, balconies, public circulation areas, assembly areas, restaurants, bars, lounges, food courts, retail spaces, mezzanines, convention pre-function areas, cashiers' cages, players' clubs, customer support, conservatories and promenades that share the same atmosphere, spillover lighting and theme lighting with the adjacent gaming floor area.

For accessory areas situated on the perimeter of the gaming floor to be considered substantially open, the wall(s) or partition(s) separating an accessory space from the gaming area must be a minimum of 50% open, as measured from the interior side of the accessory space, with no doors, windows and other obstructions, other than roll up security grills, installed within the opening.

CONDITIONED SPACE. An area or room within the building thermal envelope being heated or cooled, containing un-insulated ducts, or with a fixed opening directly into an adjacent *conditioned space*. An attic shall be considered conditioned space if the roof sheathing is constructed as the air barrier, with all insulation installed in direct contact with it, all exterior ventilation is eliminated and the space, including all eave framing and pipe and flue penetrations through the air barrier are tightly sealed to prevent exterior air infiltration.

INSULATION (THERMAL). A component of the thermal energy envelope comprised of any approved material installed in substantially direct contact to either side of the air barrier that provides measurable thermal resistance (R-value) to heat flow to or from a conditioned space to which it bounds.

LIGHTING, THEATRICAL. Lighting used to directly or indirectly illuminate performance areas, dance floors, and visual features in themed or theatrical environments. Theatrical Lighting shall include, but not be limited to: strobe lights, automated luminaries (intelligent lighting), effects projectors, lasers, and ultraviolet (UV) fixtures. In order to qualify as Theatrical Lighting, the lighting must be controlled separately from general illumination.

LUMINAIRE. A complete lighting unit consisting of a light source, such as a lamp or lamps, together with the parts designed to position the light source and connect it to the power supply. It may also include parts to protect the light source, ballast, or distribute the light. A lamp holder itself is not a luminaire.

OCCUPANT SENSOR (LIGHTING). A device that detects the presence or absence of people within an area and causes lighting to be regulated accordingly. The term “occupant sensor” applies to a device that controls indoor lighting systems. When the device is used to control outdoor lighting systems, it is defined as a motion sensor. This definition also applies to “occupancy sensor” and “occupant-sensing device.” When used with a manual device for initial activation, an occupant sensor may be called a “vacancy sensor.”

SIGN (SIGNAGE). An interior or exterior lighted device used to impart way-finding, identifications or promotional information to the viewer. Signs include, but are not limited to, business identification, location maps and directories, gaming boards, sports scoreboards, and slot carousel identifiers.

Section 301.1 General.

Delete Section 301.1 in its entirety and replace, as follows:

301.1 General. The jurisdictions of the City of Boulder City, the County of Clark County, the Clark County School District, the City of Henderson, the City of Las Vegas, the City of Mesquite and the City of North Las Vegas shall meet the requirements of this code for Climate Zone 3B.

Exception: Areas within these jurisdictions above altitudes of 4000 ft and the Town of Pahrump shall be considered in Climate Zone 5B.

Section 303.1.3 Fenestration product rating.

Revise Section 301.1.3, as follows:

303.1.3 Fenestration product rating. *U*-factors of fenestration products (windows, doors and skylights) shall be determined in accordance with NFRC 100 by an accredited, independent laboratory, and labeled and certified by the manufacturer. Products lacking such a labeled *U*-factor shall be assigned a default *U*-factor from Table 303.1.3(1) or 303.1.3(2), or Table 4 of the 2009 ASHRAE Fundamentals Handbook (with the exclusion of the “glass only” columns).

The solar heat gain coefficient (SHGC) of glazed fenestration products (windows, doors, and skylights) shall be determined in accordance with NFRC 200 by an accredited, independent laboratory and labeled and certified by the manufacturer. Products lacking such a labeled SHGC shall be assigned a default SHGC from Table 303.1.3(3) or from Table 10 of the 2009 ASHRAE Fundamentals Handbook center-of-glazing properties--normal incidence angle 0.00 column only).

NOTE: When the 2009 ASHRAE Fundamentals Handbook simulation tables are used, all information must be provided as prescribed in amended subsections 303.1.3.1 and 303.1.3.2. This amended provision, allowing plans to be submitted to the building department for approval using the ASHRAE simulation tables, will expire after December 31, 2010.

Add two (2) new Subsections, 303.1.3.1 and 303.1.3.2, as follows:

303.1.3.1 Fenestration rating documentation. All fenestration products to be used in a project must be listed in a fenestration schedule on the approved plans. This schedule shall include all of the following:

1. A list of all fenestrations, including, but not limited to, fixed and operable windows, skylights, sliding, swinging and overhead doors and glass block.
2. The manufacturer and model numbers for all non-default fenestration products, including NFRC CDP numbers.

3. For site-built windows, simulation report reference numbers provided by an NFRC accredited simulation laboratory, for each type of product to be used in the project.
4. The fenestration type, size, quantity, NFRC 100 certified U-factor or default U-factor. (If default U-factor is used, the schedule must also include a description of the key energy-efficiency features that are necessary to achieve that default U-factor.)
5. The solar heat gain coefficient for each fenestration proposed, using either the NFRC 200 certified value or the default value.

303.1.3.2 Construction site rating documentation. In addition to the approved plans described above, the following documentation shall be provided at the construction site prior to inspection of the thermal energy envelope:

1. All NFRC certified factory-built fenestration products shall be labeled with the NFRC certification label. This label is to remain intact on the fenestration unit until inspected by the jurisdiction having authority.
2. For rated site-built fenestration products, there shall be a separate NFRC label certificate for each type of fenestration product used in the project, signed by an independent, NFRC certified inspection agency. The label will display the following information:
 - a) The NFRC certification logo.
 - b) The name, address and authorized NFRC license number of the approved inspection agency.
 - c) The product ratings (U-factor, solar heat gain coefficient and visible light transmittance).
 - d) The name, address, and permit number of the project.
 - e) The product line information.
 - f) The names, addresses and contractors/business license numbers for the suppliers of the frame, the glazing and the contractor.
 - g) The printed name and signature of the inspector for the certified inspection agency.
3. For site-built fenestration products where default values were listed on the approved plans, the glazing contractor of record will provide the jurisdiction, a letter on company stationary, containing the following information:
 - a) The name, address and permit number of the project.
 - b) An itemized list of documentation describing specific components used to construct each type of fenestration.
 - c) The signature of the principal owner of the glazing company, attesting to the fact that all products described and documentation submitted were used on that jobsite.
 - d) A statement taking full legal and financial responsibility for the correct installation of the fenestration products.
 - e) Attached copies of all packing slips for all fenestration components used on the project. This documentation shall bear the job site address or specifically referencing the project.

Section 401.3 Certificate.

Revise Section 401.3, as follows:

401.3 Certificate. A permanently installed certificate approved by the jurisdiction shall be posted on a wall adjacent to the water heater. The certificate shall be completed by the builder or registered design professional. The certificate shall have a heading stating “DO NOT REMOVE” in ½” minimum bold face letters and shall list the predominant R-values of the insulation installed in or on ceiling/roof, walls, foundation (slab, *basement wall*, crawlspace wall and/or floor) and ducts outside conditioned spaces; U-factors for fenestration and the solar heat gain coefficient (SHGC) of fenestration. Where there is more than one value for each component, the certificate shall list the value covering each area or component separately. The certificate shall list the types and efficiencies of heating, cooling and service water heating equipment.

Section 403.2.2 Sealing (Mandatory).

Revise Section 403.2.2, as follows:

403.2.2 Sealing (Mandatory). All ducts, air handler connections at the plenum, filter boxes and building cavities used as ducts shall be sealed. Joints and seams shall comply with the currently adopted mechanical code. Duct assemblies shall be verified for tightness by either of the following methods:

The remainder of this Section remains unchanged

Section 403.4 Service hot water systems (Mandatory).

Delete Section 403.4 in its entirety and replace, as follows:

403.4 Service hot water systems (Mandatory). All service hot water heating systems shall meet the requirements of Sec. 403.4.1 or 403.4.2.

403.4.1 Non-circulating hot water systems. All service hot water piping installed in unconditioned spaces, including under-slab piping, shall be insulated to at least R-2.

403.4.2 Circulating hot water systems. All circulating service hot water piping, including under-slab piping, shall be insulated to at least R-2. Circulating hot water systems shall include an automatic or readily accessible manual switch that can turn off the hot water circulating pump when the system is not used.

Section 403.5 Mechanical ventilation (Mandatory).

Add a new Exception to Section 403.5, as follows:

403.5 Mechanical ventilation (Mandatory). Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating.

Exception: Where clothes dryer exhaust vents terminate vertically at the roof, back draft dampers are not required.

Section 403.6 Equipment sizing (Mandatory).

Revise Section 403.6, as follows:

403.6 Equipment sizing (Mandatory). Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculations methodologies.

Section 405.6.1 Minimum capabilities.

Revise Section 405.6.1, Item 2, as follows:

2. Calculation of whole-building (as a single zone) sizing for the heating and cooling equipment in the standard reference design residence in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies.

Section 502.4.5 Outdoor air intakes and exhaust openings.

Add new Exceptions No.2 through No.6 to Section 502.4.5, as follows:

502.4.5 Outdoor air intakes and exhaust openings. Stair and elevator shaft vents and other outdoor air intakes and exhaust openings integral to the building envelope shall be equipped with not less than a Class I motorized, leakage-rated damper with a maximum leakage rate of 4 cfm per square foot (6.8 L/s · Cm²) at 1.0 inch water gauge (w.g.) (250 Pa) when tested in accordance with AMCA 500D.

Exceptions:

1. Gravity (non-motorized) dampers are permitted to be used in buildings less than three stories in height above grade.
2. Supply and exhaust ducts or shafts integral to the smoke management system as required by Sec. 909 of the International Building Code.
3. Type I and Type II fume hoods in commercial kitchens and the make-up air units that are required for the operation of these fume hoods.
4. All vents used for conveying products of combustion.
5. Clothes dryer vents that terminate vertically through a roof.
6. Explosion venting.

503.2.5.1 Demand controlled ventilation.

Revise Section 503.2.5.1, as follows:

503.2.5.1 Demand controlled ventilation. Demand control ventilation (DCV) is required for spaces larger than 500 ft² (50m²) and with an average occupant load of 40 people per 1000 ft² (93 m²) of floor area) as established in Table 4-1 of the *Uniform Mechanical Code* and served by systems with on or more of the following:

Revise the title of Section 505, as follows:

SECTION 505 ELECTRICAL POWER AND LIGHTING SYSTEMS

Section 505.2.1 Interior lighting controls.

Add a new Exception No. 3 to Section 505.2.1, as follows:

505.2.1 Interior lighting controls. (...)

Exceptions:

1. *No change*
2. *No change*
3. Normally unoccupied areas, such as restrooms, janitor closets, storage closets and similar spaces, controlled by local occupancy sensors.

Section 505.2.2 Additional controls.

Revise Section 505.2.2, as follows:

505.2.2 Additional controls. Each area that is required to have a manual control shall have additional controls that meet the requirements of Sections 505.2.2.1, 505.2.2.2 and 505.2.2.3.

Section 505.2.2.3 Daylight zone control.

Add two new Exceptions to Section 505.2.2.3, as follows:

505.2.2.3 Daylight zone control. Daylight zones, as defined by this code, shall be provided with controls that control the lights independent of general area lighting. Contiguous daylight zones adjacent to vertical fenestration are allowed to be controlled by a single controlling device provided that they do not include zones facing more than two adjacent cardinal orientations (i.e., north, east, south, and west). Daylight zones under skylights more than 15 feet (4572 mm) from the perimeter shall be controlled separately from daylight zones adjacent to vertical fenestration.

Exceptions:

1. Daylight spaces enclosed by walls or ceiling height partitions and containing two or fewer light fixtures are not required to have a separate switch for general area lighting.
2. Where automatic dimming controls are provided for the electric lighting within the daylight zones, no separate manual control for the daylight zone shall be required.
3. In areas where daylight zones overlap, only one control shall be required to control both zones, unless the areas include more than two adjacent cardinal orientations.

Section 505.5.1 Total connected interior lighting power.

Revise Section 505.5.1 by revising exception #7 and adding a new exception #15, as follows:

505.5.1 Total connected interior lighting power. (...)

Exceptions:

(...)

7. Advertising signage or directional signage, including signage for business identification or promotion, location maps and directories, sports or gaming scoreboards, and slot carousel identifiers.

(...)

15. Theme elements in theme/amusement parks and casino gaming areas.

Section 505.6.2 Exterior building lighting power.

Revise Section 505.6.2, by revising exceptions #2 and #8, as follows:

505.6.2 Exterior building lighting power. (...)

Exceptions:

2. Advertising signage or directional signage, including signage for business identification and promotion, location maps and directories, and sports scoreboards;
8. Theme elements in theme/amusement parks and casinos; and

Chapter 6 REFERENCED STANDARDS

Revise the reference standards in Chapter 6 to include the organization ACCA (Air Conditioning Contractors of America), as follows:

ACCA	Air Conditioning Contractors of America 2800 Shirlington Road, Suite 300 Arlington, VA 22206
-------------	--

Standard reference number	Title	Referenced in code section number
Manual D--95	Residential Duct Systems	
Manual J--02	Residential Load Calculations—Eight Edition	403.6 amend.
Manual S	Residential Equipment Selection	

BUSINESS IMPACT STATEMENT
BILL NO. 2011-15
(Adopts an updated version of the Southern Nevada Amendments to the
2009 International Energy Conservation Code)

This business impact statement was prepared pursuant to NRS 237.090 to address the impact of a proposed ordinance, Bill No. 2011-15, that will adopt an updated version of the Southern Nevada Amendments to the 2009 International Energy Conservation Code.

1. The following constitutes a description of the manner in which comment was solicited from affected businesses, a summary of their responses and an explanation of the manner in which other interested persons may obtain a copy of the summary.

Notice of the proposed ordinance was published in the Las Vegas Review-Journal. In addition, a copy of the notice was provided to development-related and construction groups that are representative of affected industries. No written responses were received.

2. The estimated economic effect of the proposed rule on businesses, including, without limitation, both adverse and beneficial effects, and both direct and indirect effects:

Adverse effects:

Those proposing construction will need to plan for and adjust to any new or differing Code requirements

Beneficial effects:

Code provisions that are updated and that are consistent with other area jurisdictions

Direct effects:

See adverse and beneficial effects above

Indirect effects:

None identified

3. The following constitutes a description of the methods the local government considered to reduce the impact of the proposed rule on businesses and a statement regarding whether any, and if so which, of these methods were used:

Not applicable

4. The governing body estimates the annual cost to the local government for enforcement of the proposed rule is:

No additional cost

5. If the proposed rule provides for a new fee or increases an existing fee, the total annual amount expected to be collected is:

Not applicable

6. If the proposed rule provides for a new fee or increases an existing fee, the money generated by the new fee or increase in existing fee will be used by the local government to:

Not applicable

7. If the proposed rule includes provisions that duplicate or are more stringent than federal, state or local standards regulating the same activity, the following explains when such duplicative or more stringent provisions are necessary:

Not applicable

Date: February 16, 2011

AGENDA SUMMARY PAGE
RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY ATTORNEY

DIRECTOR: BRADFORD R. JERBIC

☐ Consent ☒ Discussion

SUBJECT:

Bill No. 2011-16 – Adopts the 2009 Edition of the Southern Nevada Pool Code. Sponsored by:
Councilman Steven D. Ross

Fiscal Impact

☒

No Impact

☐

Augmentation Required

☐

Budget Funds Available

Amount:

Funding Source:

Dept./Division:

PURPOSE/BACKGROUND:

This bill will adopt the 2009 Edition of the Southern Nevada Pool Code. This version represents an updated version of pool and spa regulations agreed upon by local area jurisdictions.

RECOMMENDATION:

This bill should be submitted to a Recommending Committee for review, hearing and recommendation to the City Council for final action.

BACKUP DOCUMENTATION:

1. Bill No. 2011-16
2. 2009 Southern Nevada Pool Code
3. Business Impact Statement

1 **BILL NO. 2011-16**

2 **ORDINANCE NO. _____**

3 AN ORDINANCE TO ADOPT BY REFERENCE THE 2009 EDITION OF THE SOUTHERN
4 NEVADA POOL CODE, AND TO PROVIDE FOR OTHER RELATED MATTERS.

5 Sponsored by: Councilman Steven D. Ross

Summary: Adopts the 2009 Edition of the
Southern Nevada Pool Code.

7 THE CITY COUNCIL OF THE CITY OF LAS VEGAS DOES HEREBY ORDAIN
8 AS FOLLOWS:

9 SECTION 1: Title 16, Chapter 30, Section 10, of the Municipal Code of the City of
10 Las Vegas, Nevada, 1983 Edition, is hereby amended to read as follows:

11 **16.30.010:** That certain document entitled ["2006 Southern Nevada Pool Code,"] "2009 Southern
12 Nevada Pool Code," three copies of which are on file in the Office of the City Clerk, is adopted by
13 reference and made a part of this Code, to the same effect as if set out herein in full.

14 SECTION 2: The 2009 Southern Nevada Pool Code, a copy of which is attached to
15 this Ordinance, shall supersede and replace the 2006 Southern Nevada Pool Code, as well as the
16 provisions of that certain document entitled "City of Las Vegas Swimming Pool/Spa Code, 1992
17 Edition."

18 SECTION 3: The 2009 Southern Nevada Pool Code referred to in Sections 1 and 2
19 of this Ordinance is hereby amended as set forth in Sections 4 and 5 of this Ordinance.

20 SECTION 4: Section 101.3 is hereby amended by adding to the list of exceptions a
21 new Exception (D), reading as follows:

22 (D) Non-permanently installed pools, except to the extent that the Building Official
23 determines that one or more provisions of Chapter 8 shall apply to particular pools or types of pools.

24 SECTION 5: Section 804.0 is hereby amended by amending Exceptions 2 and 3
25 within that Section to read as follows, with new material indicated by underlining:

26 **Exception 2:** An alarm permanently installed on all openings in the dwelling unit that provide direct
27 access to the pool or spa. Openings to include doors; operable windows with a sill height of forty-eight
28 (48) inches or less; and pet doors allowing the passage of a sphere of four (4) inches (102 mm) in

1 diameter. The alarm shall be listed to meet UL Standard 2017 for Residential Water Hazard Entrance
2 Alarms. The alarm shall sound continuously for a minimum of thirty (30) seconds within seven (7)
3 seconds after the door is opened, and be a minimum of capable of providing 85 dB when measured
4 indoors at ten (10) feet (3.05 m) (10'). The alarm shall automatically reset under all conditions. The
5 alarm shall be equipped with a manual means, such as a touch pad or switch, to temporarily deactivate
6 the alarm for a single opening. The deactivation switch shall be located at least fifty-four (54) inches
7 (1372 mm) (54") above the threshold of the door.

8 **Exception 3:** A laser or light beam activation alarm, permanently installed, that either provides an
9 active beam barrier across the access to the pool from the dwelling unit or is installed around the entire
10 perimeter of the pool. The laser or light beam must have an adjustable height capability and sound an
11 alarm of at least eighty-five (85) dB both inside and outside of the home when the beam is crossed.
12 The alarm must automatically reset after alarming. The alarm shall meet ASTM's Provisional
13 Standard Specifications for Pool Alarms (PS 128-01) and be listed.

14 SECTION 6: The provisions of the City's Administrative Code shall govern
15 procedural and administrative matters related to the enforcement and application of the 2009 Southern
16 Nevada Pool Code.

17 SECTION 7: This Ordinance shall become effective on July 5, 2011.

18 SECTION 8: If any section, subsection, subdivision, paragraph, sentence, clause or
19 phrase in this ordinance or any part thereof is for any reason held to be unconstitutional or invalid or
20 ineffective by any court of competent jurisdiction, such decision shall not affect the validity or
21 effectiveness of the remaining portions of this ordinance or any part thereof. The City Council of the
22 City of Las Vegas hereby declares that it would have passed each section, subsection, subdivision,
23 paragraph, sentence, clause or phrase thereof irrespective of the fact that any one or more sections,
24 subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional,
25 invalid or ineffective.

26 SECTION 9: Whenever in this ordinance any act is prohibited or is made or declared
27 to be unlawful or an offense or a misdemeanor, or whenever in this ordinance the doing of any act is
28 required or the failure to do any act is made or declared to be unlawful or an offense or a

1 misdemeanor, the doing of such prohibited act or the failure to do any such required act shall
2 constitute a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than
3 \$1,000.00 or by imprisonment for a term of not more than six months, or by any combination of such
4 fine and imprisonment. Any day of any violation of this ordinance shall constitute a separate offense.

5 SECTION 10: All ordinances or parts of ordinances or sections, subsections, phrases,
6 sentences, clauses or paragraphs contained in the Municipal Code of the City of Las Vegas, Nevada,
7 1983 Edition, in conflict herewith are hereby repealed.

8 PASSED, ADOPTED and APPROVED this _____ day of _____, 2011.

9 APPROVED:

10
11 By _____
OSCAR B. GOODMAN, Mayor

12 ATTEST:

13 _____
14 BEVERLY K. BRIDGES, MMC
City Clerk

15 APPROVED AS TO FORM:

16 Val Steel 2-16-11
Date

1 The above and foregoing ordinance was first proposed and read by title to the City Council on the
2 ____ day of ____, 2011, and referred to the following committee composed of
3 ____ and ____ for recommendation;
4 thereafter the said committee reported favorably on said ordinance on the ____ day of
5 ____, 2011, which was a ____ meeting of said Council; that at said
6 ____ meeting, the proposed ordinance was read by title to the City Council
7 as first introduced and adopted by the following vote:

8 VOTING "AYE": _____

9 VOTING "NAY": _____

10 ABSENT: _____

11

12 APPROVED:

13

14 By _____
OSCAR B. GOODMAN, Mayor

15 ATTEST:

16

17 BEVERLY K. BRIDGES, MMC
City Clerk

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Southern Nevada Building
Officials

c/o City of Las Vegas
Building & Safety Dept
713 S. 4th Street
Las Vegas, NV 89101

Phone: 702-229-6257

Fax: 702-382-1731

Email:

chknight@lasvegasnevada.gov

MEMBERS

Chris Knight, Chair
City of Las Vegas

Greg Blackburn
City of North Las Vegas

Ron Nybo
City of Boulder City

Ron Lynn
Clark County

Kurt Sawyer
City of Mesquite

Brent Steed
Pahrump Regional
Planning District
(Nye County)

Michael Bouse
City of Henderson

Lisa Conner
Clark County School District

2009

SOUTHERN NEVADA

POOL CODE

Approved by SNBO

July 23, 2010

2009
SOUTHERN NEVADA POOL CODE

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PREFACE

This document comprises the Southern Nevada Pool Code and was developed by the jurisdictions listed on the cover page as a document to be adopted by reference. These provisions are not code unless adopted and codified by governmental jurisdictions. These provisions are not intended to prevent the use of any material or method of construction not specifically prescribed herein, provided any alternate has been approved and its use authorized by the building official. This document is available to be adopted as code by any jurisdiction without permission or approval from the jurisdictions listed on the cover page.

In addition to the requirements set forth in this document, public swimming pools, wading pools, spas and water features, designed for full or partial human submersion and open to the public must be constructed in compliance with the Southern Nevada Health District rules and regulations. In the event that conflicts between this document and those regulations occur, the more restrictive condition will apply.

For further information on public pools, please contact the Southern Nevada Health District at (702) 759-0571.

Chapter 1: SCOPE AND ADMINISTRATION

101.0 Title. This document shall be known as the “Southern Nevada Pool Code”, may be cited as such, and will be referred to herein as “this code”.

101.2 Purpose. This code is an ordinance providing minimum requirements and standards for the protection of public health, safety and welfare.

101.3 Scope. The provisions of this code shall apply to the erection, installation, alteration, repair, relocation, replacement, addition, use, or maintenance of artificially constructed bodies of water.

Exceptions: The following bodies of water shall be exempt from these requirements:

- (A) Manmade lakes as defined in local ordinance or administrative code.
- (B) Water features utilized in a family entertainment theme park as regulated in local ordinance or administrative code.
- (C) Water feature not greater than eighteen (18) inches (457 mm) of maximum water level, used in conjunction with and on the same property as a single-family residence, and available only to the family of the householder or their private guests.

Chapter 2: DEFINITIONS

201.0 General. For the purpose of this code, certain terms, phrases, words and their derivatives shall be construed as specified in this chapter and elsewhere in this code where specific definitions are provided. Terms, phrases, and words used in the singular include the plural and the plural singular. Terms, phrases, and words used in the masculine include the feminine and the feminine masculine.

Where terms are not defined, they shall have their ordinarily accepted meanings within the context with which they are used. *Webster's Third New International Dictionary of the English Language, Unabridged*, copyright 1986, shall be considered as providing ordinarily accepted meanings.

202.0 Definition of Terms.

ACCESSIBLE: When applied to a fixture, connection, appliance or equipment shall mean having access thereto, but which may require the removal of an access panel, door or similar obstruction without damaging the structure or finish.

ACCESSIBLE, READILY: When applied to a fixture, connection, appliance or equipment shall mean having direct access without the necessity to remove an access panel, door or similar obstruction.

ACCESS BARRIER: A fence, wall, building wall or combination thereof that completely encloses a pool, spa or water feature and obstructs access.

APPROVED: Approval by the Building Official as the result of investigation and tests conducted by the Building Official, or by reason of accepted principles or tests by recognized authorities, technical or scientific organizations.

GATE OR DOOR: A single movable panel that swings or hinges, rotates or slides used for entrance into or closing off an opening in the required barrier.

HEALTH DISTRICT: Southern Nevada Health District.

LISTED and LISTING: Equipment or materials included in a list published by an approved testing laboratory, inspection agency or other organization concerned with product evaluation that maintains periodic inspection of current productions of listed equipment or materials. The published list shall state that the material or equipment complies with approved nationally recognized codes, standards or tests and has been tested or evaluated and found suitable for use in a specified manner.

MANMADE DECORATIVE WATER FEATURE: Any manmade stream, fountain, waterfall, or other water feature that does not meet the definition of a swimming pool and contains water that flows or that is sprayed into the air, constructed for decorative, scenic or landscape purposes. Any manmade decorative water feature exceeding eighteen (18) inches (457 mm) in depth shall meet the requirements of a swimming pool as specified in Chapters 3 through 8.

MANUFACTURED: A pool, spa or water feature that is manufactured or constructed at another location, transported to the property, and placed and/or assembled at the property.

MAXIMUM WATER LEVEL: The highest level that water can reach before it spills out.

NORMAL OPERATING WATER LEVEL: The overflow point on overflow gutters or the midpoint in the throat of skimmers.

POOL: See “SWIMMING POOL.”

POOL DEPTH: The distance between the lowest point of the pool floor and the maximum water level.

PRIVATE SWIMMING POOL OR SPA: All constructed swimming pools or spas which are used in conjunction with and on the same property as a single-family residence, and available only to the family of the residence or their private guests.

PUBLIC POOL OR SPA: Any swimming pool or spa, other than a private pool or spa.

SLIP RESISTANT: A surface that has been so treated or constructed as to significantly reduce the chance of slipping when wet.

SPA: An artificially constructed body of water, either portable or permanent with a maximum water level greater than eighteen (18) inches (457 mm) in depth, designed for recreation or therapeutic use that is not drained, cleaned or refilled for each individual user. It may include, but is not limited to: hydro-jet circulation, hot tubs, hot water, cold water, mineral baths, air induction bubbles, or any combination thereof.

STAIR, RECESSED TREAD, LADDER: A means of entry and exit to and from the pool or spa that may be used in conjunction with each other.

- (A) **Stair:** A riser/tread or series of risers/treads extending down from the deck into the pool/spa.
- (B) **Recessed Tread:** A series of vertically spaced cavities in the pool or spa wall creating tread areas for step holes.
- (C) **Ladder:** A series of vertically separated treads or rungs connected by vertical rail members or independently fastened to an adjacent vertical wall.

STORABLE SWIMMING OR WADING POOL: Those that are constructed on or above the ground and are capable of holding water to a maximum depth of forty-two (42) inches (1067 mm), or a pool with nonmetallic, molded polymeric walls or inflatable fabric walls regardless of dimension. Such items are not subject to this code.

SUCTION OUTLET: The aperture or fitting, other than a skimmer, on the bottom or side wall of a pool, spa or water feature through which the water under negative pressure (vacuum) is drawn from the pool, spa or water feature to the pump.

SWIMMING POOL: A permanently installed artificial body of water with a maximum water level greater than eighteen (18) inches (457 mm) in depth, which includes all equipment necessary for its use.

UNBLOCKABLE DRAIN: The term “unblockable drain” means a drain of any size and shape that a human body cannot sufficiently block to create a suction entrapment hazard.

WASTEWATER: Water from filter cleansing, draining of a pool or spa, or lowering of the water level in a pool or spa.

WATER FEATURE: See “MANMADE DECORATIVE WATER FEATURE”.

WIDTH or LENGTH: The actual dimension taken at the maximum location from inner wall to inner wall at the normal operating water level of a pool or spa.

Chapter 3: SITE WORK, SETBACKS AND CLEARANCE REQUIREMENTS

301.0 Site Work. Excavation areas shall be protected so that they do not endanger life or property. Temporary barricades shall be maintained in place and kept in good order until permanent barriers are installed. It shall be the responsibility of the contractor or owner to verify property line locations prior to excavation.

302.0 Pool Location. In-ground pools, spas, and water features shall not be placed closer than sixty (60) inches (1524 mm) to any building or structure and shall not encroach within public utility easements. An exception may be permitted when substantiation is provided by a Nevada Licensed Structural or Civil Engineer that no damage will occur to buildings, structures or adjacent properties and that no unsafe structural conditions will exist.

303.0 Drainage. Site drainage shall be provided to direct all drainage from site, perimeter decks, and roofs away from the pool, spa and adjacent buildings and structures.

304.0 Equipment. Any outdoor equipment pad shall not be in contact with any foundation. Equipment shall be installed with adequate drainage. Equipment in vaults or pits shall have an approved means to drain water. Equipment shall be installed in accordance with the currently adopted Codes, listing requirements and the manufacturer's installation instructions.

305.0 Equipment Clearances. All electrical equipment clearances shall comply with requirements specified per National Electrical Code and manufacturer's listing guidelines. A twenty-four (24) inch (610 mm) wide access path is required to all pool and mechanical equipment. Equipment shall be mounted on a permanent, secure wall, fence or other approved structure.

306.0 Overhead electrical conductor clearances. Existing service-drop conductors or other open, overhead wiring shall not be left in place or be installed above the following:

- (1) Pools and the area extending ten (10) feet (3.05 m) horizontally from the inside of the walls of the pool;
- (2) Diving structures;
- (3) Observation stands, towers or platforms.

Exceptions:

1. Where such installations meet the requirements of NEC Table 680.8, as follows:

Table 680.8 Overhead Conductor Clearances

Clearance Parameters	Insulated supply or service drop cables or wiring, 0-750 volts to ground, supported on and cabled together with an solidly grounded bare messenger or solidly grounded neutral conductor	All other Conductors Voltage to Ground	
		0-15 kV	15 to 50 kV
A. Clearance in any direction to the water level, edge of water surface, base of diving platform, or permanently anchored raft	22.5 ft. (6.9 m)	25ft. (7.5 m)	27 ft. (8.0 m)
B. Clearance in any direction to the diving platform or tower	14.5 ft. (4.4 m)	17 ft. (5.2 m)	18 ft. (5.5 m)
C. Horizontal limit of clearance measured from inside wall of the pool	This limit shall extend to the outer edge of the structures listed in (A) and (B) of this table but not to less than 10 ft. (3.05 m).		

2. Utility-owned, operated, and maintained communications conductors, community antenna system coaxial cables complying with Article 820, and the supporting messengers shall be permitted at a height of not less than ten (10) feet (3.05 m) above swimming and wading pools, diving structures, and observation stands, towers, or platforms. (See Sections NEC 225.18 and 225.19 for clearances for conductors not covered by this section.)

307.0 Additional Clearances. All clearances must comply with the currently adopted edition of the National Electrical Code.

Chapter 4: STRUCTURAL REQUIREMENTS

401.0 General Materials. Pools, spas, and water features shall be constructed of reinforced concrete conforming to the provisions of the currently adopted Building Code, Southern Nevada Code Amendments or alternate materials approved by the Building Official. Approved, listed manufactured pools, spas and water features shall be installed in accordance with manufacturer's installation instructions and their listing.

402.0 Design. Structural design for pools, spas and water features shall be engineered by a registered design professional or approved by the Building Official. Construction documents (material specifications, sections and details) shall be wet sealed and signed by the engineer-of-record.

403.0 Geotechnical Investigation Report. All areas of Southern Nevada shall have a geotechnical investigation report at completion of excavation or prior to permit application. Geotechnical investigation report must be prepared by a registered design professional. Geotechnical investigation report shall be accompanied by appropriate substantiation test including: sampling data, suitability for the intended project, and recommendations on treating the sub-grade soil and/or modifications to the swimming pool design.

When a geotechnical report is not used for structural design, the design shall comply with the provisions of the currently adopted Building Code and the Southern Nevada Code Amendments.

Exceptions:

1. The site is specifically identified as outside a special geologic consideration zone as identified on the Clark County Soils Guidelines Map
2. Areas of Clark County not covered by the Clark County Soils Guidelines Map
3. At the option of the Building Official
4. Any excavation less than twenty-four (24) inches (610mm) in depth.

404.0 Ground Water Protection. If groundwater is present, a hydrostatic valve or other approved means shall be installed at the lowest point.

405.0 Site Condition. Additional loads due to sloping backfill and surcharges shall be designed and detailed. Plans and sections shall include all permanent structures from the pool wall within a horizontal distance of seven (7) feet (2.1m) or maximum depth of the pool, whichever is greater. The setback for permanent structures and pool shall comply with the provisions of the currently adopted Building Code and the Southern Nevada Code Amendments.

406.0 Seismic Consideration. In-ground pools, spas and water features are not required to be designed for a seismic load.

407.0 Concrete Strength, f'c. Minimum specified compressive strength in the construction document shall be 4,500psi with a maximum water to cement ratio of 0.45.

408.0 Bond Beam. A continuous bond beam shall not be interrupted for the installation of skimmers and/or similar apparatus. An alternate method may be used when approved by the Building Official.

409.0 Special Inspection. Unless required by a registered design professional or by the Building Official, special inspections are not required for a private swimming pool, spa or water feature.

Chapter 5: ELECTRICAL REQUIREMENTS

501.0 Electrical Requirements. All electrical installations, modifications, repairs or alterations of pools, spas and water features shall conform to the provisions of the currently adopted National Electrical Code, Southern Nevada Code Amendments and the Southern Nevada Health District.

502.0 Pool and Spa Lighting. Pools and spas shall be equipped with lighting that illuminates the entire bottom and volume, and shall be an underwater or overhead type. Underwater lighting shall be a minimum of one-half (1/2) watt or equivalent lumens per square foot of water surface area. Overhead lights shall be a minimum of two (2) watts or equivalent lumens per square foot of water surface area. Any glass parts shall be protected from breakage. Fiber Optic lighting used for pool and spa lighting shall be installed in accordance with their listing and labeling.

503.0 Area Lighting of Public Pools and Spas. Area lighting shall be provided to illuminate the surface areas of the pool deck and spa deck. The lights shall be a minimum of six-tenths (6/10) watt or equivalent lumens per square foot of deck area.

504.0 Disconnecting Means. Time clocks are not permitted as a means of disconnect for motors unless listed for the purpose or approved by the Building Official.

505.0 Load Calculations. Electrical load calculations will be required for any pool, spa, or combination that utilizes more than one pump motor. This is required to verify that the existing electrical system is adequate for the additional loads being added.

506.0 Conductor Feeder, Overcurrent Protection and Grounding: All pool panels shall have a minimum #10 AWG copper wire feeder or equal and a thirty ampere (30A) breaker with an insulated ground wire to the existing panel.

507.0 Bonding. Swimming pools and decks shall be bonded in accordance with the National Electrical Code, Article 680.26 and the Southern Nevada Code Amendments.

Chapter 6: PLUMBING REQUIREMENTS

601.0 Plumbing Requirements. Plumbing installation, modification, repair or alteration of a pool, spa or water feature shall conform to the provisions of the currently adopted Plumbing Code, Southern Nevada Code Amendments, Southern Nevada Health District and the additional following requirements:

602.0 Water Quality. All water treatment, filtration and recirculation devices, and hydraulic lines and systems shall be approved by the Health District prior to permit issuance for a public pool or spa. Water features designed for full or partial human submersion open to the public shall be reviewed and approved by the Health District prior to permit issuance. Water quality in water features, which do not come in contact with the public, and private pools and spas, shall be maintained in such a manner that a nuisance is not created pursuant to NRS 40.140.

603.0 Heating Equipment. Heating equipment shall conform to the provisions of the currently adopted Mechanical, Plumbing and Electrical Codes. Installation of such equipment shall be according to the manufacturer's instructions and listing. Heating equipment shall be located on a minimum three (3) inch (76 mm) thick pad of concrete or other approved material. The top of the pad shall be a minimum of three (3) inches (76 mm) above adjacent grade and shall be appropriately sized to accommodate all equipment. Equipment installed in alternate locations, such as vaults or pits, must be listed for the location or be approved by the Building Official. When pool or spa water heating equipment is installed with a full-way type shutoff valve between the outlet of the heater and the pool or spa, an approved pressure relief valve shall be installed on the discharge side of the water heating equipment.

603.1 Vents shall terminate with clearances as follows: Vents shall terminate as per the currently adopted Uniform Mechanical Code and per the manufacturers listing.

604.0 Underground Installation. All underground installation of plumbing lines, including water supply lines, drains, vacuum and circulating lines and gas piping systems, shall be installed on a minimum three (3) inch (76 mm) base, a minimum one (1) inch (25.4 mm) side and four (4) inch (101.6 mm) cover of clean sand in place at time of inspection.

605.0 Water Piping. Swimming pools, spas, and water features shall use approved type "L" copper, approved PVC pipe of a minimum schedule 40 PVC meeting the NSF PW-14 Standard (or equal), or other approved materials. PVC pipe shall be bent using heat by thermostatically controlled equipment. All plastic pipe exposed to sunlight shall be protected with an approved tape wrapping or paint. Water piping shall be pressure tested at twenty (20) PSI for fifteen (15) minutes. For the purpose of this code the factory installed pressure gauge shall be adequate.

606.0 Gas Piping. Natural gas piping systems shall conform to the provisions of the currently adopted Plumbing Code. All other approved systems shall be tested at sixty (60) PSI for thirty (30) minutes. Liquefied petroleum gas piping systems shall conform to the provisions of the National Fuel Gas Code, NFPA 54. Threaded ferrous metal gas pipe systems shall be pressure tested at ten (10) PSI for fifteen (15) minutes.

607.0 Water supply. Pools, spas, and water features shall have water directly supplied through a water supply inlet. The water supply inlet for public pools shall comply with Southern Nevada Health District provisions. The water supply inlet on private pools shall be protected by a one (1) inch (25.4 mm) air gap or approved backflow protection device.

Exception: Private pools and spas may be provided with a water supply consisting of an approved back flow protection device (vacuum breaker) located on the discharge side of the last valve or a sill cock (hose bib) from which a water hose may be attached.

608.0 Wastewater. Wastewater from pools, spas, and water features shall be discharged to the public sewer through a permanently installed waste line. Wastewater shall not be discharged to a septic tank.

The permanently installed waste line shall discharge through an indirect waste connection of the following type: an approved interceptor; a sand trap which is vented and provided with a clean-out on the discharge side; or a "P" trap of a minimum size of three (3) inches (76 mm).

Exceptions:

1. If a public sewer service is not available, the Building Official may authorize the wastewater to be discharged above ground and used for irrigation purposes. The wastewater shall not be allowed to drain to adjacent properties or the public way. This authorization may be revoked if a hazardous, nuisance or unsanitary condition occurs.
2. For private pools, spas, and water features, a hose connection may be used as a waste line.

609.0 Entrapment Avoidance: Each swimming pool, spa or water feature shall be constructed with at least one of the following means for entrapment avoidance. Public pools and spas shall comply with the Southern Nevada Health Districts requirements.

609.1 Minimum of two (2) suction outlets:

- (a) Each suction outlet must be sized to the maximum pipe size used in that outlet system.
- (b) The tee feeding the common suction line between the suction outlets, to the pump(s) shall be located approximately midway between the outlets, and without valves, with the branch side of the tee providing flow to the pump.
- (c) Each suction outlet shall be separated a minimum of thirty-six (36) inches (914.4mm) on a horizontal plane, or located on two (2) different planes. (For example: one on the bottom & one on a vertical plane, one each on two (2) separate walls). (One skimmer and one drain cover on a single suction line shall not be permitted)
- (d) Each suction outlet pipe must have a cover installed per the manufacturers instructions, complying with ASME/ANSI A112.19.8a-2008 or any successor standard.
- (e) The flow rate of each cover shall be at least the system's maximum flow rate.

609.2 One (1) or more unblockable drains:

- (a) All unblockable drains must be installed as a complete drain & sump assembly or pre assembled by the manufacturer. No "field fabricated sumps" will be allowed.
- (b) Unblockable drains must be eighteen (18) inches (457 mm) x twenty-three (23) inches (737 mm) or have a diagonal measurement of twenty-nine (29) inches (737 mm) or greater.
- (c) Drains must be installed per manufactures instructions.
- (d) Anti- Entrapment devices or systems complying with ASME/ASNI A112.19.17-2007 or ASTM standard F-2387-04.
 1. The device or system must be installed & tested as per manufactures instructions.
 2. The instruction manual shall be left with property owner, management or owners representative.
- (e) Other means as approved by the Building Official.

610.0 Filtering and recirculation. Pools, spas, and water features shall be equipped with a filtering and recirculation system. Equipment shall be mounted on a minimum three (3) inch (76 mm) thick pad of concrete or other approved materials. The pad shall be a minimum of three (3) inches (76 mm) above adjacent grade and sized to accommodate all equipment. All equipment shall be listed by a nationally recognized testing agency for the appropriate use. The circulation system shall provide a complete turnover of water within the time frame specified below:

Type of Water Feature	Maximum Recirculation Time (Hours)
Public Pool	6.0
Private Pool	12.0
Public Spa	0.5
Private Spas	1.0
Water Feature	8.0

Filler, circulation systems, scum gutters and skimmers that are located in public pools, spas and water features shall conform to Health District regulations. Inlets for fresh or repurified water in all pools, spas, and water features shall be located to produce uniform circulation of water throughout the entire pool, spa or water feature.

611.0 Sewer Lines. Swimming pools, in-ground spas, or water features shall not be constructed over a sewer, unless the sewer line is of cast iron material and prior approval from the Building Official is obtained.

612.0 Septic Systems. All Swimming pool and spa water filler and circulation piping within twenty-five (25) feet (7.5m) of a septic system shall conform to Health District regulations.

Chapter 7: ARCHITECTURAL REQUIREMENTS

700.0 Public Pools and Spas. Public pools and spas shall also comply with the Southern Nevada Health District requirements.

701.0 Walls and floors. The materials used in pool, spa, and water feature wall and floor construction shall conform to the provisions of the currently adopted Building Code and the Southern Nevada Code Amendments. Walls and floors shall be designed and constructed of non-absorbent material in a manner to be leak-proof and structurally sound under all the conditions of the site. The inner surface of the pool or spa shall be coved, rounded, or bull-nose at all joints, corners, angles of bases, walls, floors, or curbs. No sharp corners or projections shall be permitted.

702.0 Entry/Egress.

702.1 Pools. Pools with a depth greater than twenty-four (24) inches (610 mm) at pool walls shall be provided with a means of Entry/Egress. Pools exceeding thirty (30) feet (9.14 m) in width or length shall have egress provided on opposite ends of those sides greater than thirty (30) feet (9.14 m). A seat meeting the requirements of Section 704.0 shall be considered as a second means of egress.

702.2 Spas. Spas with a depth greater than twenty-four (24) inches (610 mm) shall have an interior top step, which complies with Section 703.2 below. The distance from the top step to the bench shall comply with Section 703.2 on one side of the top step. Spas with a deck between twelve (12) inches (305 mm) and twenty-four (24) inches (610 mm) above grade that are entered by sitting on the rim deck and spinning into the spa shall not require exterior steps. Listed manufactured spas shall have entry and egress as per their listing.

702.3 Water features. Water features and vanishing edge catch basins greater than twenty-four (24) inches (610 mm) in depth with walls that are inclined greater than forty-five (45°) degrees shall have a means of entry/egress.

703.0 Ladder, stairs, or recessed treads. An entry/egress for a pool, spa or water feature shall be constructed to minimize hazards and consist of a ladder, stairs, or recessed treads or an alternate method approved by the Building Official. The ladder, stairs or recessed treads shall comply with the following requirements, respectively:

703.1 Ladder. Ladders shall be of a corrosion resistant material and be provided with two handholds or handrails. Ladder treads shall have a uniform vertical spacing of seven (7) inches (178 mm) minimum and twelve (12) inches (305 mm) maximum, with a minimum width of eighteen (18) inches (457 mm). Vertical spacing variation within each ladder shall not exceed one (1) inch (25.4 mm). Treads shall have a minimum horizontal depth of one and one-half (1 ½) inches (38 mm). The top tread of the ladder shall be a maximum of twelve (12) inches (305 mm) below the top of coping, deck or exterior edge of the pool or spa.

703.2 Stairs/Steps. Stairs/steps shall have a slip resistant surface and no sharp edges. Public pools shall have a maximum riser height of ten (10) inches (254 mm) with a minimum horizontal tread depth of twelve (12) inches (305 mm). Riser height variation within each stair shall not exceed one (1) inch (25.4 mm). The distance from the bottom of the pool to the bottom step shall not be considered a riser. Private pools, private and public spas and water features shall have a maximum riser height of twelve (12) inches (305 mm), with a minimum horizontal tread depth of twelve (12) inches (305 mm). Steps shall extend to a depth of forty-two (42) inches (1067 mm) of water depth or within twelve (12) inches (305 mm) of a portion of the pool floor. The distance from the bottom of the pool to the bottom step shall not be considered a riser.

703.3 Recessed treads. Recessed treads shall be provided with a set of handrails or handholds to serve all treads and risers. Recessed treads shall have a uniform vertical spacing of seven (7) inches (178 mm) minimum and twelve (12) inches (305 mm) maximum. Recessed treads shall have a minimum depth of five (5) inches (127 mm) and a minimum width of twelve (12) inches (305 mm). The uppermost tread shall be a maximum of twelve (12) inches (305 mm) below the coping, deck or exterior edge of the pool or spa.

704.0 Deck, Seat or Handholds. Pools and spas greater than thirty-six (36) inches (914.4 mm) in water depth shall be provided with a deck made of a slip resistant material or other alternate materials, as approved by the Building Official. Man-made decorative water features and design features may interrupt the deck. In these cases seats or handholds may be used for safety and emergency provisions, and shall be spaced a maximum of every forty-eight (48) inches (1219 mm) around the perimeter of the pool or spa where deck interruptions occur. Decks shall be mandatory at each required entry and egress point. This deck section shall meet the width requirements as stated below and shall be a minimum of forty-eight (48) inches (1219 mm) in length. This decking may be up to twenty-four (24) inches (610 mm) below the maximum water level. The deck, seat or handholds shall comply with the following requirements, respectively:

704.1 Deck. The deck shall be a minimum of thirty (30) inches (762 mm) wide and slope one quarter ($\frac{1}{4}$) inch per foot (6.4 mm per 305 mm) away from pool, property lines and house footings. The deck shall be placed a maximum of twelve (12) inches (305 mm) above the normal operating water level to qualify as a handhold. Public pools and spas shall have a minimum deck width of forty-eight (48) inches (1219 mm).

The finished surface of pool decks shall be a minimum of two (2) inches (51 mm) below the bottom of any adjacent exterior wall weep screed. A drain feature allowing a two (2) inch (50.8mm) vertical clearance along the weep screed shall be acceptable.

Decks shall be sloped to effectively drain to either deck drains or perimeter areas away from the pool or spa. Deck drains must terminate a minimum of twenty-four (24) inches (610 mm) from the foundation of any structure.

704.2 Seat. An underwater seat, bench or swim-out, utilized as a means of egress, shall be a minimum of twelve (12) inches (305 mm) long, a minimum of twelve (12) inches (305 mm) wide and a maximum of twenty-four (24) inches (610 mm) below the water surface.

Exception: Spa seats.

704.3 Handhold. A handhold shall consist of any of the following:

- (a) A continuous coping, ledge or handhold shall be placed a maximum of twelve (12) inches (305 mm) above the water surface or no greater than six (6) inches (152.4 mm) below water level. A ledge shall have a minimum projection of three (3) inches (76 mm). Individual handholds must be at least six (6) inches (152.4 mm) in length and one and one-half ($1\frac{1}{2}$) inches (38 mm) in depth. Attachment must be made by an approved listed waterproof epoxy. Vanishing edges sloping into the main body of water shall have a maximum wall thickness of fifteen (15) inches (381 mm) when used as a handhold.
- (b) A permanently secured railing of one and one-quarter ($1\frac{1}{4}$) inches (32 mm) to two (2) inches (51 mm) in diameter placed at a maximum of twelve (12) inches (305 mm) above the water surface and a maximum of six (6) inches (152.4 mm) below the water surface.
- (c) Ladders, steps or recessed treads complying with Section 703.0 as listed above.

705.0 Wind Sensors. Water features and fountains on commercial properties shall be equipped with an integral automatic wind sensor device calibrated to shut off airborne and moving water when wind velocity exceeds twenty miles per hour.

706.0 Diving Boards/Slides. Pools equipped with diving boards or slides shall be engineered and designed to comply with published ANSI standards. Slides and diving boards shall be installed per manufacturer's listing.

Chapter 8: ACCESS BARRIERS AND SAFETY REQUIREMENTS

800.0 Public Pools and Spas. Public pools and spas shall also comply with the Southern Nevada Health Districts requirements.

801.0 Access Barrier Requirements. Pools and spas shall be completely enclosed with access barriers.

Exceptions:

- 1 Prefabricated swimming pools accessory to a Group R, Division 3 Occupancy in which the pool walls are entirely above the adjacent grade and the capacity does not exceed 5,000 gallons.
- 2 Spa or hot tub with an approved lockable cover in the closed position meeting the most recent addition of ASTM Standard F1346-91, or equal.

802.0 Access Barrier Construction Requirements: Access barriers shall comply with the following:

802.1 Height. The top of the barrier shall not be less than sixty (60) inches (1524 mm) in height above adjacent grade measured from outside the enclosed area or eight (8) feet (2.4 m) vertical, non-climbable, measured on the inside. The vertical clearance between grade and the bottom of the barrier shall be four (4) inches (101.6 mm) maximum. When permanently installed pools or spas are in adjacent yards the common barrier may be reduced to forty-eight (48) inches (1219.2 mm) on either side.

802.2 Wrought Iron. Wrought iron fence with open guardrails shall have intermediate rails or an ornamental pattern such that a sphere four (4) inches (101.6 mm) in diameter cannot pass. Horizontal support members shall be spaced at least thirty-two (32) inches (813 mm) and shall comply with Section 802.1.

802.3 Wrought Iron with Masonry. Mixed use of masonry and wrought iron walls shall comply with all of the following:

- (1) Masonry or wrought iron portion of the wall shall be a minimum of thirty-two (32) inches (813 mm) in height.
- (2) The wrought iron portion of the wall shall comply with Sections 802.1 and 802.2 with a maximum of two horizontal members, one near the bottom, within four (4) inches (101.6 mm) of the masonry wall below, and one a minimum of sixty (60) inches (1524 mm) above grade.

802.4 Chain Link. Chain link fences shall not exceed one and one quarter (1¼) inch (32 mm) mesh size. The fence shall have top and bottom horizontal supports. The fence height must be a minimum of sixty (60) inches (1524 mm) and shall be constructed of not less than 11 gauge wire.

803.0 Gates or Doors. All gates or doors eight (8) feet (2.4 m) in width or less shall meet the following requirements:

- (1) Gates and doors shall be self-closing and self-latching.
- (2) Gates shall open outward from the enclosed pool area.

803.1 Latching Devices. The self-latching devices of gates or doors shall be one of the following:

- (1) A device that is an ASTM F-1908-08 approved latching device. It shall be installed per the manufacturer's installation instructions.
- (2) A device mounted inside the enclosed area and be designed to be inoperable from outside the enclosed area. Manual catch latch devices shall not be less than three (3) inches (76 mm) or more than six (6) inches (152.4 mm) below the top of the door or gate. It shall be inaccessible from outside the enclosed area for a distance of twenty (20) inches (508 mm) in all directions from the latch except that an opening not greater than one-quarter (1/4) inch (6 mm) diameter shall be permitted. This protection is not required to extend above the top of the gate.
- (3) Keyed lockset devices shall be mounted at a minimum of forty-two (42) inches (1067 mm) above grade.

803.2 No other device shall impede operation or obstruct closing of self-latching device.

803.3 Large Access Barrier Gates. Access barrier gates, greater than eight (8) feet (2.4 m) in width, shall be equipped with protected self-latching, lockable hardware and shall remain locked at all times when not in use.

Exception: Electronic remote latches without manual devices and panic hardware where required shall not be subject to height restrictions.

803.4 Single Access Gates. Single access gates or doors integral to perimeter fences shall comply with the requirements of Section 802.0 and shall have latching devices capable of keeping the door or gate securely closed and latched.

803.5 Double Gates. Double gates integral to perimeter fences shall comply with the requirements of Section 802.0 and shall be permanently locked. If double gates are used as a component of the access barrier, one gate shall be pinned and locked in the closed position and the adjoining gate must meet the requirements of Section 803.0.

803.6 Electric Operated Gates. Electric operated gates shall start to close within thirty seconds (30) of entry.

803.7 Key Operated Devices. Key-operated, self-latching locks that are integral to the gate or door may be used as latching devices, as long as they are permanently locked from the outside and comply with the above installation requirements.

804.0 Secondary Access Barrier Requirement. An additional barrier that isolates all openings in the dwelling unit from the pool or spa shall be erected. The barrier shall be a minimum of forty-eight (48) inches (1219 mm) in height and shall not allow the passage of a sphere four (4) inches (102 mm) in diameter. All gates shall be self-closing and latching at the top of the barrier. No other device shall impede operation or obstruct the closing of self-latching gate.

Exception 1: Self-closing and self-latching devices installed on all openings in dwelling unit that provide direct access to the pool or spa. Openings to include doors; operable windows with a sill height of forty-eight (48) inches (1219 mm) or less; and pet doors allowing the passage of a sphere of four (4) inches (102 mm) in diameter.

Exception 2: An alarm installed on all openings in dwelling unit that provide direct access to the pool or spa. Openings to include doors; operable windows with a sill height of forty-eight (48) inches or less; and pet doors allowing the passage of a sphere of four (4) inches (102 mm) in diameter. The alarm shall be listed to meet UL Standard 2017 for Residential Water Hazard Entrance Alarms. The alarm shall sound continuously for a minimum of thirty (30) seconds within seven (7) seconds after the door is opened, and be a minimum of capable of providing 85 dB when measured indoors at ten (10) feet (3.05 m) (10'). The alarm shall automatically reset under all conditions. The alarm shall be equipped with a manual means, such as a touch pad or switch, to temporarily deactivate the alarm for a single opening. The deactivation switch shall be located at least fifty-four (54) inches (1372 mm) (54") above the threshold of the door.

Exception 3: A laser or light beam activation alarm installed that provides an active beam barrier across the access to the pool from the dwelling unit or installed around the entire perimeter of the pool. The laser or light beam must have an adjustable height capability and sound an alarm of at least eighty-five (85) dB both inside and outside of the home when the beam is crossed. The alarm must automatically reset after alarming. The alarm shall meet ASTM's Provisional Standard Specifications for Pool Alarms (PS 128-01) and be listed.

Exception 4: Power safety covers installed that comply with ASTM F1346-91.

Exception 5: An alternate means or method approved by the Building Official provided the degree of protection afforded is equal to or greater than that afforded by a secondary barrier.

805.0 Safety Glazing. Glazing in walls and fences within sixty (60) inches (1524 mm) or less, measured horizontally from the water's edge and less than sixty (60) inches (1524 mm) measured vertically above grade shall be considered hazardous locations. In these locations, tempered glazing, laminated glass or Plexiglas shall be used.

806.0 Barrier Timeliness. All required access barrier elements shall be installed prior to:

- (1) Installation of a pre-manufactured pool or spa.
- (2) The pre-plaster inspection of a conventionally constructed pool or spa.
- (3) The filling of any water feature.

807.0 Surveillance Substitute. In lieu of access barriers required by this code, resort hotel facilities and therapeutic facilities used by or under the direct control of licensed medical personnel may provide a dedicated guard so that observation is maintained at all times. An alternate method may be submitted in writing and approved by the Building Official. Such submittal shall become a permanent part of the job record.

808.0 Responsible Party. The owners of the property upon which pools, spas or artificial bodies of water are located are responsible to establish and maintain access barriers. The owner or developer of land adjacent to an access barrier required by this section shall not reduce, degrade, or infringe on the access barrier's compliance with this code.

809.0 Alternate Materials or Methods: An application for alternate materials or methods must be reviewed and approved by the Building Official for any proposed access barrier which does not meet the requirements of this code. If approved by the Building Official, the owner remains responsible for establishing and maintaining such approved alternate materials or methods.

BUSINESS IMPACT STATEMENT
BILL NO. 2011-16
(Adopts the 2009 Edition of the Southern Nevada Pool Code)

This business impact statement was prepared pursuant to NRS 237.090 to address the impact of a proposed ordinance, Bill No. 2011-16, that will adopt the 2009 Edition of the Southern Nevada Pool Code.

1. The following constitutes a description of the manner in which comment was solicited from affected businesses, a summary of their responses and an explanation of the manner in which other interested persons may obtain a copy of the summary.

Notice of the proposed ordinance was published in the Las Vegas Review-Journal. In addition, a copy of the notice was provided to development-related and construction groups that are representative of affected industries. No written responses were received.

2. The estimated economic effect of the proposed rule on businesses, including, without limitation, both adverse and beneficial effects, and both direct and indirect effects:

Adverse effects:

Those proposing construction will need to plan for and adjust to any new or differing Code requirements

Beneficial effects:

Code provisions that are updated and that are consistent with other area jurisdictions

Direct effects:

See adverse and beneficial effects above

Indirect effects:

None identified

3. The following constitutes a description of the methods the local government considered to reduce the impact of the proposed rule on businesses and a statement regarding whether any, and if so which, of these methods were used:

Not applicable

4. The governing body estimates the annual cost to the local government for enforcement of the proposed rule is:

No additional cost

5. If the proposed rule provides for a new fee or increases an existing fee, the total annual amount expected to be collected is:

Not applicable

6. If the proposed rule provides for a new fee or increases an existing fee, the money generated by the new fee or increase in existing fee will be used by the local government to:

Not applicable

7. If the proposed rule includes provisions that duplicate or are more stringent than federal, state or local standards regulating the same activity, the following explains when such duplicative or more stringent provisions are necessary:

Not applicable

Date: February 16, 2011

AGENDA SUMMARY PAGE

RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY ATTORNEY

DIRECTOR: BRADFORD R. JERBIC

☐ Consent ☒ Discussion

SUBJECT:

Bill No. 2011-17 – Adopts the 2010 Edition of the City of Las Vegas Amusement and Transportation Rides Code as a replacement for the 1993 Edition of that Code. Sponsored by: Councilman Steven D. Ross

Fiscal Impact

☒

No Impact

☐

Augmentation Required

☐

Budget Funds Available

Amount:

Funding Source:

Dept./Division:

PURPOSE/BACKGROUND:

This bill will adopt the 2010 Edition of the City of Las Vegas Amusement and Transportation Rides Code as a replacement for the 1993 Edition of that Code. This version represents an updated version of the City's regulations governing amusement and transportation rides.

RECOMMENDATION:

This bill should be submitted to a Recommending Committee for review, hearing and recommendation to the City Council for final action.

BACKUP DOCUMENTATION:

1. Bill No. 2011-17
2. City of Las Vegas Amusement and Transportation Rides Code, 2010 Edition
3. Business Impact Statement

1 **BILL NO. 2011-17**

2 **ORDINANCE NO. _____**

3 AN ORDINANCE TO ADOPT THE "CITY OF LAS VEGAS AMUSEMENT AND
4 TRANSPORTATION RIDES CODE, 2010 EDITION" AS A REPLACEMENT FOR THE 1993
EDITION OF THAT DOCUMENT, AND TO PROVIDE FOR OTHER RELATED MATTERS.

5 Sponsored by: Councilman Steven D. Ross

Summary: Adopts the 2010 Edition of the City
of Las Vegas Amusement and Transportation
Rides Code as a replacement for the 1993
Edition of that Code.

8 THE CITY COUNCIL OF THE CITY OF LAS VEGAS DOES HEREBY ORDAIN
9 AS FOLLOWS:

10 SECTION 1: Title 16, Chapter 48, Section 10, of the Municipal Code of the City of
11 Las Vegas, Nevada, 1983 Edition, is hereby amended to read as follows:

12 **16.48.010:** That certain document entitled ["City of Las Vegas Amusement and Transportation
13 Rides Code, 1993 Edition,"] "City of Las Vegas Amusement and Transportation Rides Code, 2010
14 Edition," three copies of which are on file in the Office of the City Clerk, is adopted by reference and
15 made a part of this Code, to the same effect as if set out herein in full.

16 SECTION 2: That certain document entitled "City of Las Vegas Amusement and
17 Transportation Rides Code, 1993 Edition" is hereby repealed in its entirety.

18 SECTION 3: That certain document referred to in Section 1 is attached to this
19 Ordinance.

20 SECTION 4: This Ordinance shall become effective on July 5, 2011.

21 SECTION 5: If any section, subsection, subdivision, paragraph, sentence, clause or
22 phrase in this ordinance or any part thereof is for any reason held to be unconstitutional or invalid or
23 ineffective by any court of competent jurisdiction, such decision shall not affect the validity or
24 effectiveness of the remaining portions of this ordinance or any part thereof. The City Council of the
25 City of Las Vegas hereby declares that it would have passed each section, subsection, subdivision,
26 paragraph, sentence, clause or phrase thereof irrespective of the fact that any one or more sections,
27 subsections, subdivisions, paragraphs, sentences, clauses or phrases be declared unconstitutional,
28 invalid or ineffective.

SECTION 6: Whenever in this ordinance any act is prohibited or is made or declared to be unlawful or an offense or a misdemeanor, or whenever in this ordinance the doing of any act is required or the failure to do any act is made or declared to be unlawful or an offense or a misdemeanor, the doing of such prohibited act or the failure to do any such required act shall constitute a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than \$1,000.00 or by imprisonment for a term of not more than six months, or by any combination of such fine and imprisonment. Any day of any violation of this ordinance shall constitute a separate offense.

SECTION 7: All ordinances or parts of ordinances or sections, subsections, phrases, sentences, clauses or paragraphs contained in the Municipal Code of the City of Las Vegas, Nevada, 1983 Edition, in conflict herewith are hereby repealed.

PASSED, ADOPTED and APPROVED this ____ day of _____, 2011.

APPROVED:

By OSCAR B. GOODMAN, Mayor

ATTEST:

BEVERLY K. BRIDGES, MMC
City Clerk

APPROVED AS TO FORM:

Valued 2-16-11
Date

1 The above and foregoing ordinance was first proposed and read by title to the City Council on the
2 ____ day of _____, 2011, and referred to the following committee composed of
3 _____ and _____ for recommendation;
4 thereafter the said committee reported favorably on said ordinance on the ____ day of
5 _____, 2011, which was a _____ meeting of said Council; that at said
6 _____ meeting, the proposed ordinance was read by title to the City Council
7 as first introduced and adopted by the following vote:

8 VOTING "AYE": _____

9 VOTING "NAY": _____

10 ABSENT: _____

11

12 APPROVED:

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14 By _____
OSCAR B. GOODMAN, Mayor

15 ATTEST:

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17 BEVERLY K. BRIDGES, MMC
City Clerk

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CITY OF LAS VEGAS AMUSEMENT AND TRANSPORTATION RIDES CODE, 2010 EDITION

SECTION 1: Purpose. The purpose of this Code is to establish minimum standards for the design, construction, alteration, maintenance, operation, inspection, and issuance of ride permits/certificates for, amusement and transportation rides for use by the public. The Code is intended to protect the public safety, health and general welfare by setting certain standards for structural strength, stability, health and general welfare by setting certain standards for structural strength, stability and safety relative to life and property hazards incident to the installation, construction, maintenance, alteration, repair, removal and use of amusement and transportation rides.

SECTION 2: Scope. Except as otherwise provided, the provision of this Code shall apply to all amusement rides and transportation rides that are erected or installed for a period of 30 days or longer.

This Code may be referred to as the “City of Las Vegas Amusement and Transportation Rides Code, 2010 Edition” or the “Amusement and Transportation Rides Code of the City of Las Vegas, 2010 Edition.”

Nothing in this Code shall be deemed to deprive any federal or state agency, or any applicable governing body having jurisdiction, or any power or authority which it had on the effective date of this Code or of any remedy for the enforcement of its orders, nor shall anything in this Code be deemed to deprive any individual or entity of its legal rights as provided by law. Nothing herein is intended to regulate means of public transportation that are already regulated by the Nevada Public Service Commission.

Nothing in this Code shall be deemed to create any additional duty on the part of the City of its officers, agents and employees toward any individual or group of individuals. The liability provisions set forth in Section 202 of the Uniform Administrative Code, as adopted by the City, shall apply to this Code and the administration and enforcement thereof.

This Code shall be considered a “technical code” whose administrative provisions are generally contained in the Uniform Administrative Code, as adopted by the City of Las Vegas, except as otherwise specifically provided herein.

SECTION 3: Definitions. The terms used in this Code have the meanings ascribed to them in this Section, or in the Uniform Administrative Code or other technical codes adopted by the City of Las Vegas. Terms that are not defined in accordance with the preceding sentence shall have their ordinarily accepted meanings within the context in which they are used. Webster’s “Third New International Dictionary of the English Language, Unabridged, 1981 Edition,” shall be deemed to provide ordinarily accepted meanings.

“Amusement Ride” means any ride, device, building or structure which is put to public use and is used primarily for human entertainment, enjoyment or transportation of people, whether moving or stationary, or a structure which causes a medium to be moved to transport passengers. The final determination concerning whether or not a ride, device, building or structure shall be classified as an “amusement ride” is within the discretion of the Director.

“Amusement Park” means a tract or area used principally as a permanent location for amusement ride, transportation rides and building and systems associated therewith.

“Attraction” means an interactive device that contains elements such as a moving stage, hydraulics, pneumatics, fire spectacles or other devices designed to entertain.

“Approved Agency” means an agency regularly engaged in providing verification reports; manufacturing inspections or testing; raw material inspection; certification or testing of completed products or components at the point of fabrication or manufacture; or inspection or testing of assembled items or components at a project location during construction or installation.

“Department” means the Department of Building and Safety of the City of Las Vegas.

“Director” means the Director of the Department or his designee.

“Major Modification” of a Ride means any change in either the structural or operation characteristics of the Ride which will alter its performance from that specified in the manufacturer’s design criteria.

“Minor Modification” of a Ride means any change that does not alter the structural or operation characteristics of the Ride no change its performance from that specified in the manufacturer’s design criteria.

“Operations and Maintenance Manual(s)” means one or more manuals, written in the English language and approved by the Director, which specify the procedures for the Owner/Operator to follow to ensure proper maintenance and safe operation of Rides regulated by this Code.

“Owner/Operator” means the owner, operator and/or lessee of a Ride, and includes a person who has custody or control of the Ride.

“Prohibited Use Notice” means a formal written notice issued by the Department indicating noncompliance with the requirements of certification, installation, inspection, operation or any other requirement of this Code and further indicating that the Ride may not be operated for other than inspection or testing.

“Qualified Individual” means a designated representative of the Owner/Operator of a Ride who is technically qualified and is accountable to the Owner/Operator for the maintenance of a Ride.

“Ride” means an Amusement Ride or Transportation Ride.

“Ride Operation Certificate” means a certificate issued by the Department on an annual basis certifying that a Ride has been inspected and found to be in compliance with the manufacturer’s requirements for operation and maintenance, the approved Operations and Maintenance Manual(S) and all other requirements of this Code.

“Ride Permit” means a permit issued by the Department authorizing construction and installation of a Ride. At the Director’s option, the permit may include in its scope any subsidiary permits for supporting, enclosing or affiliated buildings or structures; utility permits; or other building service equipment.

“Serious Injury” means an injury to a person that results in hospitalization for inpatient or outpatient treatment or both.

“Transportation Ride” means any moving apparatus which is primarily intended for transportation but may provide entertainment and enjoyment while moving along, around or over a fixed or restricted course. The final determination concerning whether or not an apparatus shall be classified as a “transportation ride” is within the discretion of the Director. The term does not include automobiles, trucks, buses, surface trains or other means of transportation to the extent that such inclusion would conflict with existing regulation by federal, state or local authorities.

“Verification Report” means certification by an Approved Agency or the Department that all inspection and testing required by the manufacturer and the approved Operations and Maintenance Manual(s) have been performed and that the ride is in compliance therewith and with the applicable provisions and all other requirements of this Code.

SECTION 4: Other Codes. Any installation associated with a Ride regulated by this Code shall conform to the requirements of all other technical codes enforced by the Department as they apply to that installation.

SECTION 5: Permit and Certification Requirements. No Ride may be constructed or installed without a valid Ride Permit, and no Ride may be operated without a valid Ride Operation Certificate. The principal and ultimate (but not exclusive) responsibility for obtaining permits and certificates belongs to the Owner/Operator.

SECTION 6: Owner/Operator and Qualified Individual.

(A) Owner/Operator Responsibilities. The responsibilities of an Owner/Operator include but are not limited to: ensuring that all new and existing Rides for which he is responsible, as well as the associated equipment and safeguards, are periodically inspected and properly maintained and operated in accordance with the approved Operations and Maintenance Manual(s); designating a Qualified Individual for each Ride; and determining when a Ride’s use should be discontinued.

(B) Qualified Individual Responsibilities. For each Ride, the Qualified Individual shall be the designated technical representative of the Owner/Operator with respect to that Ride and shall be responsible for having full operational knowledge of the Ride and responsibility for the maintenance of the Ride at all times it is in use. The Qualified Individual may be an employee of the Owner/Operator, the manufacturer or its representative, or a contracted maintenance company or its representative. This individual is responsible for providing all reports to the City of Las Vegas as described herein.

SECTION 7: Reporting Requirements.

(A) Fatalities. In the case of a fatality which appears to have resulted from mechanical or structural failure of a Ride or operator error related thereto, the Owner/Operator shall immediately cause the Ride to be closed down. He shall report the incident to the Department by telephone within four (4) hours after the incident and by written report to the Director within two (2) days.

(B) Serious Injuries. The reporting requirement for serious injuries shall be the same as those for fatalities.

(C) Structural Damage. Within five (5) days after the occurrence of structural damage to a Ride, the Owner/Operator shall file with the Director a written report concerning such damage.

(D) Action upon notification. Upon notification of a fatality, serious injury, or structural damage, the Director shall determine whether the Ride shall be sealed out-of-service by a "Prohibited Use Notice" until an investigation of the site and records can be performed. The Owner/Operator shall be responsible for fully inspecting the Ride, making corrective repairs, and testing components and operations as specified in this Code and the Operation and Maintenance Manual(s). The Owner/Operator has the burden to ensure that the Ride meets all requirements for return to service prior to requesting Department inspection. In the event that a Ride is sealed out-of-service in accordance with this Subsection (D), the Department shall perform an inspection within twenty-four (24) hours or as soon thereafter as possible.

(E) Content of Reports. Any written reports shall include all pertinent facts including:

- (1) Date, time, and location of incident;
- (2) Name, age, and address of victim(s);
- (3) Type of injury;
- (4) Hospital where treated;
- (5) A description of the incident;
- (6) Name, address and telephone number of the Owner/Operator and the Qualified Individual; and
- (7) Damage to equipment, and the Owners/Operator's expected actions to repair or take out of service.

SECTION 8: **Administrative Actions.**

(A) **Prohibited Use Notice.** Where the Director determines that a Ride is not in compliance with the requirements of this Code, the applicable technical codes, the Uniform Administrative Code, the approved Operations and Maintenance Manuals(s) or if an accident has occurred which has resulted in a fatality, injury, or Ride system damage, the Director may declare that the continued operation of the Ride is prohibited. The Prohibited Use Notice shall recite the reason(s) for the finding. Upon receipt of a Prohibited Ride Notice, the Owner/Operator and Qualified Individual immediately shall cause the operation of the Ride to discontinue.

(B) **Out of Service Seal.** Upon issuance of a Prohibited Use Notice, the Director shall cause to be affixed to the control panel, one or more Out-Of-Services Seals stating that the Rid shall not be used except for testing or inspection. In the event that the Owner/Operator does not adequately secure the Ride,, the Director may in his discretion cause one or more Out-Of-Service Seal(s) to be placed across the entrance(s) to the Ride. No Notice or Seal shall be removed except by order of the Director after the Ride has been repaired, reinspected and certified as operational.

(C) **Inspection and Certification.** Once the Owner/Operator has effected a repair of all deficiencies identified in the Prohibited Use Notice, the Owner/Operator shall notify the Department and request an inspection. The Department shall perform an inspection within twenty-four (24) hours or as soon thereafter as possible. When the deficiencies are found to be corrected and any required tests have been completed successfully, the Out-of-Service Seal(s) shall be removed.

SECTION 9: **Appeals.** The Owner/Operator may appeal orders, decisions or determinations made by the Director relative to the application or interpretation of this Code in accordance with the appeal provisions set forth in the Uniform Administrative Code as adopted by the City of Las Vegas. Unless otherwise determined by the Director, a Prohibited Use Notice and Out-Of-Service Seal which are the subject of an appeal shall remain in effect during the pendency of the appeal. Failure of the Owner/Operator to file an appeal within the deadlines prescribed by the Uniform Administrative Code shall be a waiver of subsequent administrative redress.

SECTION 10: **Adoption of Standard for Physical Information.** That certain document, , being marked and designated as the American Society for Testing and Materials (ASTM) Standard F698-94 (re-approved 2000),Standard Specification for Physical Information to be Provided for Amusement Rides and Devices, is hereby adopted by reference as part of this Code.

SECTION 11: **Adoption of Standard for Ownership and Operation.** That certain document, being marked and designated as the American Society for Testing and Materials (ASTM) Standard F770-06a, Standard Practice for Ownership and Operation Procedures for Amusement Rides and Devices, is hereby adopted by reference as part of this Code, but amended to include a new Section 11, reading as follows:

11.0 REQUIRED DOCUMENTS

11.1 Copies of all items identified in this standard shall be presented to the department for review and approval. All such documents shall be a part of the Ride Permit application package and are a required part of the total plan submittal package. The plans for construction may not be approved or any building permits issued until the information required herein is submitted, reviewed and approved.

11.2 Copies of the City of Las Vegas approved Operation and Maintenance Manual(s) identified in this standard shall be maintained at all times with the ride or at a location which is near the ride or device and which has been approved by the Director, his authorized agent or other concerned governmental agencies upon request during normal operating hours.

11.3 A copy of the emergency procedure shall be filed with the department to meet the intent of the standard included herein.

11.4 The owner/operator shall retain quality assurance documentation, such as material certification test reports, inspection records and reports for the life of the ride while under his/her control. Upon sale or other transfer of the ride, the Owner/Operator shall transfer these quality assurance documents to the new Owner/Operator.

SECTION 12: Adoption of the Standard for Testing Performance That certain document, being marked and designated as the American Society of Testing and Materials (ASTM) Standard F846-92 (re-approved 1998), Standard Guide for Testing Performance of Amusement Rides and Devices, is hereby adopted by reference as part of this Code, but amended to add to Section 7, Paragraph 7.1, reading as follows:

The manufacturer of the ride shall develop specific operational tests along with minimum intervals for these tests to be performed that will allow the owner/operator of the ride to determine whether a given ride is operating within prescribed operating limits. Testing as prescribed by the manufacturer shall be performed or observed by a third party testing agency approved by the department for initial installation and subsequent testing. When required by the approved Operations and Maintenance Manual(s), the owner/operator shall cause an approved third-party agency to perform or observe testing and/or inspection.

SECTION 13: Adoption of Standard for Maintenance. That certain document, being marked and designated as the American Society for Testing and Materials (ASTM) Standard F853-05, Standard Practice for Maintenance Procedures for Amusement Rides and Devices, is hereby adopted by reference as a part of this Code, but with the following amendments:

Section 4, Paragraph 4.1, Subparagraph 4.1.14 is amended by adding a new sentence to read as follows:

“The Owner/Operator shall provide the department, upon request, maintenance bulletins or similar documents, published by the manufacturer of the amusement ride after its initial installation.”

Section 4, Paragraph 4.1, Subparagraph 4.1.4 is amended to read as follows:

4.1.4 A formal written daily log form must be completed and signed by the person performing maintenance prior to each day’s operation, identifying each required maintenance and inspection item and attesting that the required maintenance procedures have been performed. A copy of the daily and other log forms required by the approved Operations and Maintenance Manual shall be maintained by the Owner/Operator as long as the ride is under the control of the Owner/Operator. All records shall be available for inspection upon request by the department and any of its assigned inspectors during working hours. All records and maintenance logs created subsequent to the date of the last annual department inspection shall be maintained on-site.

Section 4, Paragraph 4.1 is amended to add a new Subparagraph 4.1.15, reading as follows:

4.1.15 Any additional recommendation of the Owner/Operator, manufacturer or the Department of Building and Safety of the City of Las Vegas.

SECTION 14: **Adoption of Standard for Inspection.** That certain document, being marked and designated as the American Society for Testing and Materials (ASTM) Standard F893-05a, Standard Guide for Inspection of Amusement Rides and Devices, is hereby adopted by reference as a part of this Code, but with the following amendments:

Section 5, Paragraph 5.1, Subparagraph 5.1.1 is amended by the addition of two new sentences to read as follows:

A copy of the manufacturer’s written quality assurance program shall be submitted for review and approval at the time a Ride Permit application is submitted. The director may also require that the quality assurance program be amended and brought into conformance with the adopted and published technical guidelines or other requirements of the City of Las Vegas prior to the approval of any amusement ride.

Section 5, Paragraph 5.1, Subparagraph 5.1.3.1 is amended to read as follows:

5.1.3.1 When changes in the procedures prescribed in Paragraph 5.1.3 are deemed essential by the manufacturer because of information not available to the manufacturer at the time of delivery, those changes shall be communicated in writing to the Owner/Operator and to the department.

Section 5, Paragraph 5.1, Subparagraph 5.1.5 is amended by adding a new sentence to read as follows:

The Owner/Operator shall provide the findings to the department when requested.

SECTION 15: Adoption of Standard for Design and Manufacture. That certain document, being marked and designated as the American Society for Testing and Materials (ASTM) Standard F1159-02, Standard Practice for The Design and Manufacture of Amusement Rides and Devices is hereby adopted by reference as a part of this Code, but with the following amendments:

Section 1 is amended by adding a new Paragraph 1.3, reading as follows:

1.3 The application of this standard to systems or devices that involve hazardous materials, operations or equipment shall not affect or diminish the application or enforcement of the applicable requirements of the Fire Code or the International Building Code, including Chapter 9 thereof.

Section 4, Paragraph 4.1 is amended by adding a new Subparagraph 4.1.3, reading as follows:

4.1.3 Engineering analysis of primary structural, engineering and mechanical components.

Section 4 is amended by adding a new Paragraph 4.4 and a new Paragraph 4.5, reading as follows:

4.4 Engineering Review. When the ride is not designed by a Nevada-registered engineer or architect, the plans specifications, and calculations shall be reviewed by an engineer registered in Nevada to verify that the design is in conformance with this Code and other applicable standards.

4.5 Equivalency Review. Other demonstration of adequacy of design such as testing, product listing or any other appropriate documentation may be required or accepted by the director in lieu of engineering design or calculations.

SECTION 16: Adoption of Standard for Quality Manufacture and Construction of Amusement Rides and Devices and Quality Assurance Program. That certain document, being marked and designated as the American Society for Testing and Materials (ASTM) Standard F1193-06, Standard Practice for Quality, Manufacture and Construction of Amusement Ride and Devices, is hereby adopted by reference as a part of this Code. It is the intent of the director that ride manufacturers shall maintain a quality assurance program that is satisfactorily equivalent to the Uniform Administrative Code, Section 306.6, entitled "Approved Fabricators." Documentation that the manufacturer meets this standard shall be furnished to the department at the time application for a Ride Permit is made.

SECTION 17: Adoption of Standard for the Classification of Amusement Ride and Device Related Injuries and Illnesses. That certain document being marked and designated as the American Society for Testing and Materials (ASTM) Standard F1305-94 (Re-approved 2002), is hereby adopted with the following amendments:

Sections 2.1.1, 2.1.3, 3, 4.2 and 5 are not adopted.

Section 2.1.4 is modified to add the following sentences:

Simple Fractures – A simple fracture of any bone shall be reported as a serious injury. Toxic inhalation shall be considered a serious injury.

Section 4 is amended to add the following:

4.3.1.9 Damage to equipment, and the Owner/Operator's expected actions to repair or take out of service

4.4 It shall be the responsibility of the Owner/Operator to maintain all reports specified by this standard.

SECTION 18: Adoption of Standard for Used Rides. That certain document, ~~three copies of which are on file in the Office of the City Clerk, said copies~~ being marked and designated as the American Society for Testing and Materials (ASTM) Standard F1950-99, Standard Specification for Physical Information to be transferred With Used Amusement Ride and Devices, is hereby adopted by reference as a part of this Code.

SECTION 19: Adoption of Standard for Concession Go-Karts. That certain document being marked and designated as the American Society for Testing and Materials (ASTM) Standard, F2007-07. Standard Practice for the Classification, Design, Manufacture, and Operation of Concession Go-Karts and Facilities, is hereby adopted by reference as part of this Code

SECTION 20. Adoption of Standard for Measuring the Dynamic Characteristics of Amusement Rides and Devices. That certain document being marked and designated as the American Society for Testing and Materials (ASTM) Standard, F2137-01 Standard Practice for Measuring the Dynamic Characteristics of Amusement Rides and Devices, is hereby adopted by reference as a part of this Code

SECTION 21. Adoption of Standard for Design of Amusement Rides and Devices. That certain document being marked and designated as the American Society for Testing and Materials (ASTM) Standard, F2291-05, Standard Practice for Design of Amusement Ride and Devices is hereby adopted by reference as a part of this Code

Section 1 Scope is amended by the addition of new Section 1.6.

1.6 This standard may involve hazardous materials, operations and equipment. Where such substances or operations are involved, the requirements of International Building Code Section 307 and other appropriate sections of the International Building Code and Fire Code shall apply.

A new paragraph 5.1.1.4 is added to read as follows:

5.1.1.4 Passenger Evacuation – The ride analysis shall address passenger evacuation and shall provide an egress platform, stairway, walkway, elevator, scissors lift, ladder or other acceptable means to safely evacuate passengers from all positions during an unscheduled cessation.

A new paragraph 5.5.3 is added to read as follows:

5.5.3 Engineering Review – When the Ride is not designed by a Nevada Licensed engineer, a Nevada licensed engineer shall provide or ensure the necessary expertise to review subsystem design (i.e. civil, controls, mechanical, electrical, power, structural, etc.). The Nevada licensed engineer shall ensure subsystem integration compatibility and the overall system to verify that the design is in conformance with this chapter and other applicable standards. A report prepared by and stamped with the seal of the Nevada licensed engineer describing the review process shall be included with the submittal. Other proof of adequacy of design such as testing, product listing or any other appropriate documentation may be required or accepted by the Director in lieu of engineering design or calculations.

A new sentence is added to Paragraph 6.3.1 of ASTM 2291-05 to read as follows:

6.3.1 A rider restraint system, individually adjustable to the girth of the rider, may be required by the Director, based on a review of the unique operating characteristics of each particular Ride. The Director may require the use of two independent restraints.

Add a new section 11.3.1.6 to ASTM 2291-05 to read as follows:

11.3.1.6 Ride Control System Review

11.3.1.6.1 The Ride control system shall be reviewed by an engineer registered in the state of Nevada or an agency acceptable to the department.

11.3.1.6.2 The analysis and conclusions of the review shall be provided to the department.

11.3.1.6.3 A testing program consisting of normal operation and worst case scenarios shall be developed to verify the Ride control system operates as designed. If the scenario has been designed by others, the design professional shall review the testing program.

Section 18 Unlisted or Uncertified Components is hereby added and shall read as follows:

18. Unlisted or Uncertified Components. All unlisted or uncertified components shall be labeled using the appropriate standards by a Nationally recognized agency.

SECTION 22. Adoption of Standard for Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyors – Safety Requirements. That certain document being marked and designated as the American National Standards Institute (ANSI) Standard B77.1-2006, American National Standard for Passenger Ropeways – Aerial Tramways, Aerial Lifts, Surface Lifts, Tows and Conveyors – Safety Requirements, is hereby adopted.

SECTION 23. Adoption of Standards for Funiculars. That certain document being marked and designated as the American National Standards Institute (ANSI) Standard B77.2-2004, American National Standard for Funiculars – Safety Requirements, is hereby adopted.

SECTION 24. Adoption of Standard for Fixed Guideway Transit Systems. That certain document being marked and designated as the National Fire Protection Association, Inc., NFPA 130-2007, Standard for Fixed Guideway Transit and Passenger Rail systems is hereby adopted.

SECTION 25. Adoption of Standard for Automated People Movers. (Part 1) That certain document being marked and designated as the American Society of Civil Engineers, ASCE 21-05, Automated People Mover Standards – Part 1 (Operating Environment, Safety Requirements, System Dependability, Automatic Train Control (ATC), and Audio Visual Communications), is hereby adopted.

SECTION 26. Adoption of Standard for Automated People Movers. (Part 2) That certain document being marked and designated as the American Society of Civil Engineers, ASCE 21-98, **Automated People Mover Standards – Part 2** (Vehicles, Propulsion and Braking), is hereby adopted.

SECTION 27. Adoption of Standard for Automated People Movers. (Part 3) That certain document being marked and designated as the American Society of Civil Engineers, ASCE 21-00, Adopted People Mover Standards – Part 3 (Electrical, Stations, and Guideways), is hereby adopted.

SECTION 28. Adoption of Standard for Bungy Jumping. That certain document being marked and designated as the Australian/New Zealand Standard, AS/NZS 5848:2000, Code of Practice for Bungy Jumping, is hereby adopted with the following amendment:

Add a new section 114.7.2(h) to read as follows:

- (h) When the exposure to daylight exceeds 250 hours.

SECTION 29. Adoption of Standard for Flame Effects. That certain document being marked and designated as the National Fire Protection Agency (NFPA) 160, Standard for Flame Effects before an Audience, 2006 Edition is hereby adopted.

SECTION 30. Requirements for an attraction. Devices classified as an attraction must obtain all appropriate permits and inspections required for installation. In addition, an attraction must demonstrate the following:

1. In the event of a fire alarm or signal, the attraction must stop all confusing sounds and show elements and reset to its original load/unload position.
2. Exits must be illuminated and visible. Additional exit signs and directional markings may be required.
3. Lighting shall be restored to a level equivalent to the building requirements prior to the attraction being run.
4. Attractions must be built of materials and comply with material specifications appropriate to the building where the attraction is placed.
5. Attractions shall demonstrate compliance with codes and manufacturer's specifications and obtain all permits and inspections prior to public operation.

SECTION 31: Rides, Structures, or Transportation Devices with Insufficient Data or Built to Other Standards. When information on a Ride, structure or transportation devices is insufficient to meet the standards of this Code, or the Ride was built to other standards, the Owner/Operator or Qualified Individual shall provide such information as the director determines to be appropriate. Such information shall conform to the intent of this Code and shall include engineering analysis and calculations, testing programs, and inspections of the Ride, structure or transportation device, as appropriate. When the Owner/Operator possesses or can obtain one or more published standards under which the Ride was designed and built, the Owner/Operator shall submit the standard(s) along with the design, calculations, testing and inspection data for review in accordance with Sections 105, 106 and 107 of the Uniform Administrative Code. The Department shall determine whether and to what extent equivalency exists.

SECTION 32: Violations

A. It is unlawful for a person to construct or allow to be constructed, or to operate or allow to be operated any Ride:

1. Without a valid Ride Permit issued pursuant to this Code;
2. Without a valid Ride Operation Certificate issued pursuant to this Code;
3. In violation of an Out-of-Service Seal or Prohibited Use Notice;
4. In violation of the safety requirements of this Code.

B. It is unlawful for a person to fail to perform any act required by this Code or to perform any act which is prohibited by this Code.

SECTION 33: Fees. Fees applicable to this Code shall be set forth in the Uniform Administrative Code, as adopted by the City of Las Vegas.

BUSINESS IMPACT STATEMENT

BILL NO. 2011-17

(Adopts the 2010 Edition of the City of Las Vegas Amusement and Transportation Rides Code as a replacement for the 1993 Edition of that Code)

This business impact statement was prepared pursuant to NRS 237.090 to address the impact of a proposed ordinance, Bill No. 2011-17, that will adopt the 2010 Edition of the City of Las Vegas Amusement and Transportation Rides Code as a replacement for the 1993 Edition of that Code.

1. The following constitutes a description of the manner in which comment was solicited from affected businesses, a summary of their responses and an explanation of the manner in which other interested persons may obtain a copy of the summary.

Notice of the proposed ordinance was published in the Las Vegas Review-Journal. In addition, a copy of the notice was provided to development-related and construction groups that are representative of affected industries. No written responses were received.

2. The estimated economic effect of the proposed rule on businesses, including, without limitation, both adverse and beneficial effects, and both direct and indirect effects:

Adverse effects:

Those proposing construction will need to plan for and adjust to any new or differing Code requirements

Beneficial effects:

Code provisions that are updated and that are consistent with other area jurisdictions

Direct effects:

See adverse and beneficial effects above

Indirect effects:

None identified

3. The following constitutes a description of the methods the local government considered to reduce the impact of the proposed rule on businesses and a statement regarding whether any, and if so which, of these methods were used:

Not applicable

4. The governing body estimates the annual cost to the local government for enforcement of the proposed rule is:

No additional cost

5. If the proposed rule provides for a new fee or increases an existing fee, the total annual amount expected to be collected is:

Not applicable

6. If the proposed rule provides for a new fee or increases an existing fee, the money generated by the new fee or increase in existing fee will be used by the local government to:

Not applicable

7. If the proposed rule includes provisions that duplicate or are more stringent than federal, state or local standards regulating the same activity, the following explains when such duplicative or more stringent provisions are necessary:

Not applicable

Date: February 16, 2011

AGENDA SUMMARY PAGE

RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY CLERK

DIRECTOR: BEVERLY K. BRIDGES

SUBJECT:

CITIZENS PARTICIPATION: PUBLIC COMMENT DURING THIS PORTION OF THE AGENDA MUST BE LIMITED TO MATTERS WITHIN THE JURISDICTION OF THE COMMITTEE. NO SUBJECT MAY BE ACTED UPON BY THE COMMITTEE UNLESS THAT SUBJECT IS ON THE AGENDA AND IS SCHEDULED FOR ACTION. IF YOU WISH TO BE HEARD, COME TO THE PODIUM AND GIVE YOUR NAME FOR THE RECORD. THE AMOUNT OF DISCUSSION ON ANY SINGLE SUBJECT, AS WELL AS THE AMOUNT OF TIME ANY SINGLE SPEAKER IS ALLOWED, MAY BE LIMITED



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RECOMMENDING COMMITTEE MEETING OF: MARCH 15, 2011

DEPARTMENT: CITY CLERK

DIRECTOR: BEVERLY K. BRIDGES

☐ Consent ☒ Discussion

SUBJECT:

ADJOURNMENT

