

**CITY OF EL PASO, TEXAS**  
**AGENDA ITEM DEPARTMENT HEAD'S SUMMARY FORM**

**DEPARTMENT:** Engineering and Construction Management Department

**AGENDA DATE:** Introduction on September 14, 2010; Public hearing on September 21, 2010

**CONTACT PERSON/PHONE:** R. Alan Shubert, P.E. - ext. 4423

**DISTRICT(S) AFFECTED:** Citywide

**SUBJECT:**

Discussion and action on the following code changes to Titles, 9 (Health & Safety), and 18 (Building & Construction) of the City Code, as follows:

- a) An Ordinance amending Title 18 (Building & Construction), Chapter 18.02 (Building and Construction administrative Code, Sections 18/02.103.1.1.6 (Prerequisite to Issuance of Permits), and 18/02.103.9.1.2.1 (Prerequisite to Issuance of Certificate of Occupancy) of the El Paso City Code to Amend the Requirements for Issuance of Conditional Building Permits and Certificates of Occupancy for Lots with Conditional Building Permits.
- b) An Ordinance amending Title 18 (Building & Construction), Chapter 18.02 (Building and Construction Administrative Code) of the El Paso City Code, by repealing Chapter 18.02 in its entirety and adopting a new Chapter 18.02 in its place.
- c) An Ordinance adopting the 2009 Edition of the International Building Code and amending Title 18 (Building & Construction), Chapter 18.08 (Building Code) of the El Paso City Code to provide for local amendments.
- d) An Ordinance adopting the 2009 Edition of the International Residential Code and amending Title 18 (Building & Construction), Chapter 18.10 (Residential Code) of the El Paso City Code to provide for local amendments.
- e) An Ordinance adopting the 2009 Edition of the International Mechanical Code and amending Title 18 (Building & Construction), Chapter 18.12 (Mechanical Code) of the El Paso City Code to provide for local amendments.
- f) An Ordinance adopting the 2008 Edition of the National Electrical Code and amending Title 18 (Building & Construction), Chapter 18.16 (Electrical Code) of the El Paso City Code to provide for local amendments.
- g) An Ordinance adopting the 2009 Edition of the International Plumbing Code and amending Title 18 (Building & Construction), Chapter 18.20 (Plumbing Code) of the El Paso City Code to provide for local amendments.
- h) An Ordinance adopting the 2009 Edition of the International Fuel Gas Code and amending Title 18 (Building & Construction), Chapter 18.24 (Gas Code) of the El Paso City Code to provide for local amendments.
- i) An Ordinance adopting the 2009 Edition of the International Existing Building Code and amending Title 18 (Building & Construction), Chapter 18.28 (Existing Building Code) of the El Paso City Code to provide for local amendments.
- j) An Ordinance amending Title 18 (Building and Construction), Chapter 18.46 (Landscape), of the El Paso City Code, to provide additional definitions, clarify the landscape requirements for parking lots, lower the percentage of plants required from the plant list, and add an exemption to the landscape requirements.
- k) An Ordinance adopting the 2009 Edition of the International Energy Conservation Code and amending Title 18 (Building & Construction), to add Chapter 18.70 (Energy Conservation Code) to the El Paso City Code and providing for local amendments.
- l) An Ordinance adopting the 2009 Edition of the International Fire Code and amending Title 9 (Health & Safety), Chapter 9.52 (Fire Prevention Code) of the El Paso City Code to provide for local amendments.

**BACKGROUND / DISCUSSION:**

The International Code Council has published the 2009 version of the International Code Family and local public input and industry input has been taken to assure that the current version of the codes are amended and adopted as appropriate for the City Of El Paso. These codes are normally revised on a three year cycle, and adoption is key to stay abreast of modern developments in building safety and to be consistent with adoption by the State of Texas of certain codes.

An additional amendment was made after introduction of the ordinance to item b, adding language in 18.02.103.2.3 (Design Professional) defining the sections in the Texas Occupations Code, sections 1001 (Engineers) and 1051 (Architects) that are applicable and govern these professions and adding language in 18.02.109.2.5 (Plan Review Options Available to the Applicant) regarding the fee reductions in place for the Tax Increment Financing Zone No. 5 and any neighborhood empowerment zone, which may be designated by resolution of the City Council.

**PRIOR COUNCIL ACTION:**

The City Council on July 20, 2010 heard the findings of the Planning and Development Legislative Review Committee, and directed staff to go forward with the 2009 International Building Codes, perform additional industry outreach and to bring the codes back for Council consideration in 90 days.

**AMOUNT AND SOURCE OF FUNDING:**

No funding required for execution of this item.

**BOARD / COMMISSION ACTION:**

N/A

**\*\*\*\*\*REQUIRED AUTHORIZATION\*\*\*\*\***

**LEGAL:** (if required) \_\_\_\_\_ **FINANCE:** (if required) \_\_\_\_\_

**DEPARTMENT HEAD:** \_\_\_\_\_  
(Example:  if RCA is initiated by Purchasing, client department should sign also)  
*Information copy to appropriate Deputy City Manager*

**APPROVED FOR AGENDA:**

**CITY MANAGER:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

ORDINANCE NO. \_\_\_\_\_

**AN ORDINANCE ADOPTING THE 2008 EDITION OF THE NATIONAL ELECTRICAL CODE AND AMENDING TITLE 18 (BUILDING AND CONSTRUCTION), CHAPTER 18.16 (ELECTRICAL CODE), OF THE EL PASO CITY CODE, TO PROVIDE FOR LOCAL AMENDMENTS TO THE 2008 NATIONAL ELECTRICAL CODE, THE PENALTY BEING AS PROVIDED IN SECTION 18.02.107 (VIOLATIONS AND PENALTIES) OF THE EL PASO CITY CODE.**

**WHEREAS**, the 2008 edition of the National Electrical Code has been published and adoption of the 2008 edition of the National Electrical Code is now proposed; and

**WHEREAS**, the Building Official for the City of El Paso has reviewed and favorably recommends the adoption of the 2008 National Electrical Code together with the local amendments appropriate for the City of El Paso; and

**WHEREAS**, the City Council has deemed the proposed local amendments appropriate for the City of El Paso.

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF EL PASO:**

**A.** That the book entitled “NFPA 70 National Electrical Code,” 2008 Edition, a copy of which authenticated by the City Clerk is on file in the City Clerk’s Office, is hereby adopted by the City Council for the City of El Paso.

**B.** That Title 18 (Building and Construction), Chapter 18.16 (Electrical Code), of the El Paso City Code, containing the local amendments to the 2008 National Electrical Code, shall be and is hereby amended in its entirety to read as follows:

**18.16.010 Short title.**

This chapter may be cited as the “Electrical Code”.

**18.16.020 Adoption.**

The book entitled “NFPA 70 National Electrical Code,” 2008 Edition, a copy of which authenticated by the City Clerk is on file in the City Clerk’s Office is adopted as the Electrical Code of the City, as fully as if copied at length in this chapter, but with the changes set forth in this chapter and Chapter 18.02, the Building and Administrative Code of the City of El Paso.

**18.16.030 Article 80 Evaporative Coolers, added.**

NFPA 70 National Electrical Code, 2008 Edition, Article 80 Evaporative Coolers, is hereby added to read as follows:

**80.1 Evaporative Coolers.**

Evaporative cooler shall have their controls mounted in a metal box. Feeders for such equipment shall run in conduit to a metal box mounted on the equipment, and shall terminate in a switchable disconnect device.

**80.2 Controls and Operating Mechanisms.**

In areas required by the Building Code to be accessible to persons with disabilities, the highest operable part of controls, receptacles and other operable equipment shall be placed within at least of one of the reach ranges specified in this section. Electrical and communications receptacles on walls shall be mounted no less than 15 in (380 mm) above the floor to the bottom of the box.

**80.3 Forward Reach.**

If the clear floor space allows only forward approach to an object, the highest operable part of controls, receptacles and other operable equipment shall be placed not more than 48 in (1220 mm) above finished floor to the top of the box.

**80.4 Side Reach.**

If the clear floor space allows only parallel approach to an object, the highest operable part of controls, receptacles and other operable equipment shall be placed not more than 54 in (1370 mm) above finished floor to the top of the box.

**18.16.040 Section 210.70 Lighting Outlets Required (A)(2)(b), amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 210.70 Lighting Outlets Required, (A) Dwelling Units, (2) Additional Locations, (b) is hereby amended to read as follows:

**210.70 Lighting Outlets Required, (A) Dwelling Units, (2) Additional Locations (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 in a garage shall be considered as an outdoor entrance or exit.

**18.16.050 Section 210.70 Lighting Outlets Required (A)(3), added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 210.70 Lighting Outlets Required, (A) Dwelling Units, (3) Storage or Equipment Spaces, is hereby amended by adding the following sentence at the end of the paragraph:

**210.70 Lighting Outlets Required (A) Dwelling Units (3) Storage or Equipment Spaces.**

Add: An attic shall be considered storage area if it has either a decked area or permanent access ladder.

**18.16.060 Section 210.71 Additional Outlets, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 210.71, Additional Outlets, is hereby added to read as follows:

**210.71 Additional Outlets.**

The following receptacle outlets shall be installed, in addition to those required by National Electrical Code, 2009 Edition, Sections 210-50 through 210-70:

- (1) On wall areas over work benches, behind bars, serving counters, or other wall spaces where electrical signs or appliances may be used or installed, not less than one (1) receptacle outlet shall be installed for every six (6) feet or major fraction thereof (i.e. the second outlet shall be located a maximum of 9 feet from the beginning of the work bench, serving counter or wall space) from the edge measured horizontally along such wall parallel to the floor or ceiling.
- (2) In lounges, taverns, bars or other establishments where electrical signs, appliances or similar devices may be placed on or attached to the ceiling, sufficient receptacle outlets shall be installed on the ceilings so that no point on such ceiling is more than twenty (20) feet from a receptacle outlet.
- (3) In "mini-warehouse" units or similar storage occupancies designed to be leased or rented individually the following minimum requirements for lights and receptacles shall be provided:
  - (a) One light controlled by a switch, within each unit, or
  - (b) Exterior lighting providing a minimum 1.0 foot-candle illumination at the ground level at the center of the entry door of each unit.
- (4) Flexible cords more than six (6) feet in length shall not be used to connect plug-in appliances, electrical signs, or similar devices to the receptacle outlets required under paragraphs (a) and (b) of this subsection.

**18.16.070 Section 215.13 Wiring Methods for Feeders 600 Volts or Less, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 215.13 Wiring Methods for Feeders 600 Volts or Less, is hereby added to read as follows:

**215.13 Wiring Methods for Feeders 600 Volts or Less.**

(a) All occupancies:

Feeder conductors shall be installed in accordance with the applicable requirements of this Code covering the type of wiring method used and shall be limited to the following methods:

- (1) Rigid metal conduit
- (2) Intermediate metal conduit
- (3) Electrical metallic tubing
- (4) Busways
- (5) Metal wireways
- (6) Rigid non-metallic conduit
- (7) Mineral insulated, metal sheathed cable
- (8) Surface metal raceways
- (9) Cellular metal raceways
- (10) Cable bus
- (11) Flexible metal conduit only where one of the other methods cannot be reasonably installed and only if equipped with the appropriate size ground wire
- (12) Electrical non-metallic tubing.
- (13) Metal clad cable
- (14) Armored cable

(b) All one-family, two-family or multi-family occupancies:

- (1) All of the wiring methods listed in subparagraph (a) above

- (2) Underground feeder and branch circuit cable
- (3) Service entrance cable
- (4) Non-metallic sheathed cable

**18.16.080 Section 215.14 Split Bolt Connections, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 215.14 Split Bold Connections, is hereby added to read as follows:

**215.14. Split Bolt Connections.**

“Split Bolt” (Kerney) type connections will not be allowed for services or any type of feeders.

**18.16.090 Section 230.28 Service Masts as Supports, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 230.28, Service Masts as Supports, is hereby amended to read as follows:

**230.28. Service Masts as Supports.**

- (a) Where a service mast is used for the support of service-drop conductors, it shall be of rigid metal conduit or intermediate metal conduit supported and anchored to safely withstand the strain imposed by the service drop. All mast fittings shall be identified for use with service masts. Only power service-drop conductors shall be permitted to be attached to a service mast.
- (b) All other service masts shall be of rigid metal conduit, intermediate metal conduit, or electrical metallic tubing.
- (c) Service masts shall not extend above the roof more than three (3) feet for dwelling occupancies, nor more than five (5) feet for other occupancies without the prior approval of the building official.

**18.16.100 Section 230.43 Wiring Methods for 600 Volts, Nominal, or Less, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 230.43 Wiring Methods for 600 Volts, Nominal, or Less, is hereby amended to read as follows:

**230.43 Wiring Methods for 600 Volts, Nominal, or Less.**

Service entrance conductors shall be installed in accordance with the applicable requirements of this Code covering the wiring method used and shall be limited to the following wiring methods:

- (a) Rigid metal conduit
- (b) Intermediate metal conduit
- (c) Electrical metallic tubing
- (d) Busways
- (e) Metal wireways
- (f) Metal auxiliary gutters
- (g) Non-metallic rigid conduit for laterals only
- (h) Flexible metal conduit not over 6 ft (1.83 m) long or liquidtight flexible metal conduit not over 6 ft (1.83 m) long between raceways, or between raceway and service equipment, with equipment bonding jumper routed with the flexible metal conduit or the liquidtight flexible metal conduit according to the provisions of Section 250-102(a), (b), (c) and (e)

- (i) Liquidtight flexible nonmetallic conduit.
- (j) Mineral-insulated, metal-sheathed cable.

**18.16.110 Section 230.70 General, (A)(1), amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 230.70 General, (A) Location, (1) Readily Accessible Location, is hereby amended to read as follows:

**230.70 General. (A) Location. (1) Readily Accessible Location.**

(1) Readily Accessible Location.

- (a) Services rated 800 amps or less. A load-break rated meter disconnect shall be installed on the exterior of the building or structure adjacent to and not more than five (5) feet from the meter. The service disconnecting means is allowed to meet this requirement if installed in compliance with this proximity requirement and the requirements of the NEC. If the service disconnecting means is located more than five feet from the meter, a separate and additional load-break rated meter disconnect that meets this proximity requirement is required on the supply (line) side of the service disconnecting means.
- (b) Services rated over 800 amps. The service disconnecting means shall be located not more than five (5) feet, measured vertically and horizontally, from the point where the service conductors enter the building or structure.

**18.16.120 Section 230.70.1 “Six Hand Movement”, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 230.70.1, “Six Hand Movement”, is hereby added to read as follows:

**230.70.1 “Six Hand Movement”.**

“Six Hand Movement” rule will apply to switches or circuit breakers used to disconnect feeders only. A “main” switch or circuit breaker will be required ahead of any branch circuit overcurrent protection.

**18.16.130 Section 250.8 Connection of Grounding and Bonding Equipment (A) (6), deleted.**

NFPA 70 National Electrical Code, 2008 Edition, Section 250.8 Connection of Grounding and Bonding Equipment, paragraph (A)(6) is hereby deleted in its entirety.

**18.16.140 Section 250.8 Connection of Grounding and Bonding Equipment (B) Methods Not Permitted, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 250.8 Connection of Grounding and Bonding Equipment, (B) Methods Not Permitted, is hereby amended to read as follows:

**250.8 Connection of Grounding and Bonding Equipment, (B) Methods Not Permitted. (1)**

Connection devices or fittings that depend solely on solder shall not be used. (2) Sheet metal screws shall not be used to connect grounding conductors or connection devices to enclosures.

**18.16.150 Section 310.2 Conductors (B) Conductor Material, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 310.2 Conductors, (B) Conductor Material, is hereby amended to read as follows:

**310.2 Conductors, (B) Conductor Material.** Conductors in this article shall be of aluminum, copper clad aluminum or copper unless otherwise specified. Aluminum or copper-clad aluminum conductors shall not be smaller than No. 2 AWG, except a ground conductor which is part of an approved cable assembly shall be not smaller than No. 6 AWG.

**18.16.160 Section 334.10 Uses Permitted (1), (2), (3), (4), amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 334.10 Uses Permitted, items (1), (2), (3) and (4) are amended to read as follows:

**334.10 Uses Permitted.**

Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following:

- (1) One- and two-family dwellings.
- (2) Multifamily dwellings not exceeding three floors above grade.

**18.16.170 Section 358.10 Uses Permitted (B) Corrosion Protection, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 358.10 Uses Permitted, (B) Corrosion Protection, is hereby amended to read as follows:

**358.10 Uses Permitted, (B) Corrosion Protection.** Ferrous or nonferrous EMT, elbows, couplings, and fittings shall be permitted to be installed in concrete. EMT shall not be used in direct contact with the earth or in areas subject to severe corrosive influence.

**18.16.180 Article 382 Nonmetallic Extensions, deleted.**

NFPA 70 National Electrical Code, 2008 Edition, Article 382 Nonmetallic Extensions is hereby deleted in its entirety.

**18.16.190 Article 394 Concealed Knob-and-Tube Wiring, deleted.**

NFPA 70 National Electrical Code, 2008 Edition, Article 394, concealed Knob-and-Tube Wiring, is hereby deleted in its entirety.

**18.16.200 Article 398 Open Wiring on Insulators, deleted.**

NFPA 70 National Electrical Code, 2008 Edition, Article 398, Open Wiring on Insulators is hereby deleted in its entirety.

**18.16.210 Section 404.10 Mounting of Snap Switches, (A) Surface-Type, deleted.** NFPA 70 National Electrical Code, 2008 Edition, Section 404.10 Mounting of Snap Switches, (A) Surface-Type, is hereby deleted in its entirety.

**18.16.220 Section 406.8 Receptacles in Damp or Wet Locations (F) Plastic Bubble Type, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 406.8 Receptacles in Damp or Wet Locations, is hereby amended to add paragraph (F) Plastic Bubble Type, to read as follows:

**406.8 Receptacles in Damp or Wet Locations.**

(F) "Plastic Bubble Type" in-use covers are not permitted.

**18.16.230 Section 406.8 Receptacles in Damp or Wet Locations (G) Air Condition Equipment, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 406.8 Receptacles in Damp or Wet Locations, is hereby amended to add paragraph (G) Air Condition Equipment, to read as follows:

**406.8 Receptacles in Damp or Wet Locations.**

(G) Air Condition Equipment.

Receptacles used solely for the maintenance of air condition equipment will not be required to have "In Use" type covers.

**18.16.240 Section 410.36 Means of Support (B) Suspended Ceilings, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 410.36 Means of Support, (B) Suspended Ceilings, is hereby amended to delete the last sentence as follows:

**410.36 Means of Support, (B) Suspended Ceilings**, delete "Listed clips identified for use with the type of ceiling member and luminaire(s) shall also be permitted."

**18.16.250 Section 422.12 Central Heating Equipment, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 422.12 Central Heating Equipment, is hereby amended to read as follows:

**422.12 Central Heating Equipment.**

Central heating equipment other than fixed electric space-heating equipment shall be supplied by an individual branch circuit.

Exception 1: Auxilliary equipment, such as pump, valve, humidifier, or electrostatic air cleaner directly associated with the heating equipment, shall be permitted to be connected to the same branch circuit.

Exception 2: Evaporative coolers may be supplied by the same individual branch circuit supplying the central heating equipment in residential occupancies only, provided the loads are non-coincidental.

**18.16.260 Section 590.4 General (K) Temporary Service Poles, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 590.4 General, is hereby amended to add paragraph (K) Temporary Service Poles, to read as follows:

**590.4 General**

**(K) Temporary Service Poles.**

Temporary service poles shall be a minimum of four (4) inch by four (4) inch treated wood posts, or four (4) inch diameter round treated poles securely imbedded in the earth.

**18.16.270 Section 600.10 Portable or Mobile Signs, deleted.**

NFPA 70 National Electrical Code, 2008 Edition, Section 600.10 Portable or Mobile Signs, is hereby deleted in its entirety.

**18.16.280 Section 600.43 Miscellaneous Provisions, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 600.43 Miscellaneous Provisions, is hereby added to read as follows:

**600.43 Miscellaneous Provisions.**

(A) Sign circuits shall contain a copper grounding conductor deriving from the circuit's supply source; exterior locations shall terminate in a weatherproof box and cover. Taps in metallic raceways shall not be allowed as the grounding means.

(B) All sign installations shall maintain a clearance from adjacent power lines as follows:

Voltage--Line To Ground	H (ft.) Minimum Horizontal Clearance	V (ft.) Minimum Clearance Measured Either Diagonally or Vertically	V (ft.) Over or Under Catwalks Minimum Clearance Measured Either Diagonally or Vertically
Guy Wires and Neutrals	3	3	10.5
0-750 V Supply Cables Meeting Rule 230C2 and 230C3 NESC, 1997	3.5	3.5	11
0-750 V Open Conductors N.E.S.E. Rule 230C2 and 230C3	5.5	6	11.5
750V--22KV	7.5	8	13.5

Notes to table:

1. Signs should never hang over any adjacent power circuits.
2. Voltages are line to ground on a Y-Circuit with multi-ground neutral or between phases on an underground circuit.

**18.16.290 Section 725.41 Class 1 Circuit Classifications and Power Source Requirements**

**(C) Transformers for Class 2 and Class 3 low voltage Circuits, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 725.41 Class 1 Circuit Classifications and Power Source Requirements, is hereby amended to add paragraph (C) Transformers for Class 2 and Class 3 low voltage Circuits, to read as follows:

**725.41 Class 1 Circuit Classifications and Power Source Requirements.**

**(C) Transformers for Class 2 and Class 3 low voltage Circuits.**

- (1) Transformers for Class 2 and Class 3 low voltage circuits shall be accessible.
- (2) Transformers for Class 2 and Class 3 low voltage circuits shall be installed in accordance with their listing.

**18.16.300 Errata, adopted.**

Errata to the 2008 NEC Code issued by the National Fire Protection Association is hereby adopted and shall become part of this code.

**18.16.310 Conflicting ordinances.**

All ordinances and parts of ordinances in conflict with the provisions of this chapter are hereby repealed as follows: Ordinance No. 014308, 12-14-1999 and Ordinance No. 15900, 09-28-2004.

C. The effective date of this ordinance shall be June 1, 2011. This ordinance shall be applicable to all permit applications received on or after that date.

D. Except as herein provided, Title 18 (Building and Construction) shall remain in full force and effect.

**PASSED AND APPROVED** this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

THE CITY OF EL PASO

\_\_\_\_\_  
John F. Cook  
Mayor

ATTEST:

\_\_\_\_\_  
Richarda Duffy Momsen  
City Clerk

APPROVED AS TO FORM:

  
\_\_\_\_\_  
Cynthia Osborn  
Assistant City Attorney

APPROVED AS TO CONTENT:

  
\_\_\_\_\_  
R. Alan Shubert, P.E.  
City Engineer

## Title 18 BUILDING AND CONSTRUCTION

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### Chapter 18.16 ELECTRICAL CODE\*

18.16.010 Short title.

18.16.020 Adoption.

18.16.030 ~~Chapter 18.02 Building and Construction Administrative Code—Adopted.~~

Article 80 Evaporative coolers, added

18.16.040 ~~Article 80 Administration and Enforcement—Amended.~~ Section 210.70

Lighting outlets required, (A)(2)(b), amended

18.16.050 Section 210.70—~~Amended.~~ Lighting outlets required, (A)(3), amended

18.16.060 Section 210.71 Additional Outlets, Added.

18.16.070 Section 215.42 13 Wiring Methods for Feeders--600 Volts or Less, Added.

18.16.080 Section ~~230.28—Amended.~~ Section 215.14 Split Bolt Connections, Added

18.16.090 Section ~~230.43—Amended.~~ 230.28 Service masts as supports, amended

18.16.100 Section ~~230.50—Deleted.~~ 230.43 Wiring methods for 600 volts or less amended

18.16.110 Section ~~230.51—Deleted.~~ 230.70 General, (A)(1) amended

18.16.120 Section ~~230.52—Deleted.~~ 230.7.1 “Six Hand Movement”, added

18.16.130 ~~Section 230.70(A)(1)—Amended.~~ 250.8 Connection of Grounding and Bonding Equipment, (A)(6), deleted.

18.16.140 Section ~~310.2(B)—Amended.~~ 250.8 Connection of Grounding and Bonding Equipment, (B), amended

18.16.150 Section ~~334.10—Amended.~~ 310.2 Conductors (B), amended

18.16.160 Section ~~358.10(B)—Amended.~~ 334.10 Uses Permitted, amended

18.16.170 ~~Article 382 Nonmetallic Extensions—Deleted.~~ Section 358.10 Uses Permitted, (B), amended

18.16.180 ~~Article 394—Deleted.~~ Article 382 Nonmetallic Extensions, deleted

18.16.190 ~~Article 398—Deleted.~~ Article 394 Concealed Knob-and-Tube Wiring, deleted

18.16.200 ~~Subsection 404.10(A)—Deleted.~~ Article 398 Open Wiring on Insulators, deleted

18.16.210 Section ~~422.12 Central Heating Equipment—Amended.~~ 404.10 Mounting of Snap Switches, (A), deleted.

18.16.220 Section ~~527.4(K) Temporary Service Poles—Added.~~ 406.8 Receptacles in Damp or Wet Locations, (F), added

18.16.230 Section ~~550.10(J)—Added.~~ 406.8 Receptacles in Damp or Wet Locations, (G), added

18.16.240 Section ~~600.10—Deleted.~~ 410.36 Means of Support, (B), amended

18.16.250 Section ~~600.43 Miscellaneous Provisions—Added.~~ 422.12 Central Heating Equipment, amended

18.16.260 Section ~~725.41(C)—Added.~~ 590.4 General, (K), added

18.16.270 ~~Errata.~~ Section 600.10 Portable or Mobile Signs, deleted

18.16.280 ~~Conflicting ordinances.~~ Section 600.43 Miscellaneous Provisions, added

18.16.290 Section 725.41 Class 1 Circuit Classifications and power Source Requirements, (C), added.

18.16.300 Errata, adopted.

### 18.16.310 Conflicting ordinances

\* Prior history: prior code §§ 6-48--6-50.3, 6-50.9--6-50.13, 6-50.23--6-50.25, 6-50.29--6-50.37, 6-50.40, 6-50.41, 6-50.46--6-50.64 and Ords. 8346, 8772, 9065, 9075, 9431, 9614, 9656, 9657, 9658, 9659, 9757, 9758, 9846, 9847, 11833, 13152, 13315, 14308.

#### 18.16.010 Short title.

This chapter may be cited as the electrical code. (Ord. 15900 (part), 2004)

#### 8.16.020 Adoption.

The book entitled “**NFPA 70 National Electrical Code,**” 2002 **8** Edition, (~~NFPA~~) No. 70-2002, (a copy of which, authenticated by the signatures of the mayor and city clerk **is on file in the City Clerk’s Office and made a public record by resolution of the city council, is on file in the city clerk’s office**) is adopted as a part of this code as fully as if copied at length in this chapter, but with the changes set forth in this chapter. (Ord. 15900 (part), 2004)

#### ~~18.16.030 Chapter 18.02 Building and Construction Administrative Code Adopted.~~ **Evaporative Coolers, added**

~~Chapter 18.02, building and construction administrative code of the Municipal Code, shall serve as the administrative chapter for the electrical code. (Ord. 15900 (part), 2004)~~  
**NFPA 70 National Electrical Code, 2008 Edition, Article 80 Evaporative Coolers, is hereby added to read as follows:**

#### **80.1 Evaporative Coolers.**

Evaporative cooler shall have their controls mounted in a metal box. Feeders for such equipment shall run in conduit to a metal box mounted on the equipment, and shall terminate in a switchable disconnect device.

#### **80.2 Controls and Operating Mechanisms.**

In areas required by the Building Code to be accessible to persons with disabilities, the highest operable part of controls, receptacles and other operable equipment shall be placed within at least of one of the reach ranges specified in this section. Electrical and communications receptacles on walls shall be mounted no less than 15 in (380 mm) above the floor to the bottom of the box.

#### **80.3 Forward Reach.**

If the clear floor space allows only forward approach to an object, the highest operable part of controls, receptacles and other operable equipment shall be placed not more than 48 in (1220 mm) above finished floor to the top of the box.

#### **80.4 Side Reach.**

If the clear floor space allows only parallel approach to an object, the highest operable part of controls, receptacles and other operable equipment shall be placed not more than

54 in (1370 mm) above finished floor to the top of the box.  
(Ord. 15900 (part), 2004)

**18.16.040** ~~Article 80 Administration and Enforcement Amended.~~ **Section 210.70 Lighting Outlets Required, (A)(2)(b), amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 210.70 Lighting Outlets Required, (A) Dwelling Units, (2) Additional Locations, (b) is hereby amended to read as follows:

**210.70 Lighting Outlets Required, (A) Dwelling Units, (2) Additional Locations (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 in a garage shall be considered as an outdoor entrance or exit.

~~Article 80 Administration and Enforcement shall be and is hereby deleted in its entirety and amended to read as follows:~~

~~Article 80~~

~~Additional Requirements~~

~~80.1 Applications.~~

~~(A) New Installations.~~

~~— This Code applies to new installations. Buildings with construction permits dated after the adoption of this Code shall comply with its requirements.~~

~~(B) Existing Installations.~~

~~Existing electrical installations that do not comply with the provisions of this Code shall be permitted to continued in use unless the Deputy Director of Building Permits and Inspections determines that the lack of conformity with this Code present an imminent danger to occupants. Where changes are required for correction of hazards, a reasonable amount of time shall be given for compliance, depending on the degree of the hazard.~~

~~(C) Additions, Alterations, or Repairs.~~

~~Additions, alterations, or repairs to any building, structure, or premises shall conform to that required of new building without requiring the existing building to comply with all the requirements of this Code. Additions, alterations, installations, or repairs shall not cause an existing building to become unsafe or adversely affect the performance of the building, from the point of view of the health, safety and welfare the occupants and the public, as determined by the Deputy Director of Building Permits and Inspections. Electrical wiring added to an existing service, feeder, or branch circuit shall not result in an installation that violates the provisions of the Municipal Code at the time the additions are made.~~

### 80.2 Evaporative Coolers.

Evaporative cooler shall have their controls mounted in a metal box. Feeders for such equipment shall run in conduit to a metal box mounted on the equipment, and shall terminate in a switchable disconnect device.

### 80.3 Controls and Operating Mechanisms.

In areas required by the Building Code to be accessible to persons with disabilities, the highest operable part of controls, receptacles and other operable equipment shall be placed within at least of one of the reach ranges specified in this section. Electrical and communications receptacles on walls shall be mounted no less than 15 in (380 mm) above the floor to the bottom of the box.

#### 80.33.1 Forward Reach.

If the clear floor space allows only forward approach to an object, the highest operable part of controls, receptacles and other operable equipment shall be placed not more than 48 in (1220 mm) above finished floor to the top of the box.

#### 80.33.2 Side Reach.

If the clear floor space allows only parallel approach to an object, the highest operable part of controls, receptacles and other operable equipment shall be placed not more than 54 in (1370 mm) above finished floor to the top of the box.

(Ord. 15900 (part), 2004)

**18.16.050 Section 210.70--Amended. Lighting Outlets Required, (A)(3), added NFPA 70 National Electrical Code, 2008 Edition, Section 210.70 Lighting Outlets Required, (A) Dwelling Units, (3) Storage or Equipment Spaces, is hereby amended by adding the following sentence at the end of the paragraph:**

**210.70 Lighting Outlets Required (A) Dwelling Units (3) Storage or Equipment Spaces. Add: An attic shall be considered storage area if it has either a decked area or permanent access ladder.**

National Electrical Code Section 210.70 is amended as follows:

1. Paragraph (A)(2)(b) Dwelling Units shall be amended by amending the last sentence to read as follows:

----- A vehicle door in an attached garage is considered an outdoor entrance.

2. Paragraph (A)(3) Storage and Equipment Spaces shall be amended by adding the following at the end of the paragraph:

----- An attic shall be considered storage area if it has either a decked area or  
----- permanent access ladder.

(Ord. 15900 (part), 2004)

### 18.16.060 Section 210.71 Additional Outlets--Added.

National Electrical Code is amended by adding a new Section 210.71 to read as follows:  
**NFPA 70 National Electrical Code, 2008 Edition, Section 210.71, Additional Outlets, is hereby added to read as follows:**

### **210.71 Additional Outlets.**

The following receptacle outlets shall be installed, in addition to those required by Sections 210-50 through 210-70:

- (1) On wall areas over work benches, behind bars, serving counters, or other wall spaces where electrical signs or appliances may be used or installed, not less than one (1) receptacle outlet shall be installed for every six (6) feet or major fraction thereof (i.e. the second outlet shall be located a maximum of 9 feet from the beginning of the work bench, serving counter or wall space) from the edge measured horizontally along such wall parallel to the floor or ceiling.
- (2) In lounges, taverns, bars or other establishments where electrical signs, appliances or similar devices may be placed on or attached to the ceiling, sufficient receptacle outlets shall be installed on the ceilings so that no point on such ceiling is more than twenty (20) feet from a receptacle outlet.
- (3) In “mini-warehouse” units or similar storage occupancies designed to be leased or rented individually the following minimum requirements for lights and receptacles shall be provided:
  - (a) One light controlled by a switch, within each unit, or
  - (b) Exterior lighting providing a minimum 1.0 foot-candle illumination at the ground level at the center of the entry door of each unit.
- (4) Flexible cords more than six (6) feet in length shall not be used to connect plug-in appliances, electrical signs, or similar devices to the receptacle outlets required under paragraphs (a) and (b) of this subsection.  
(Ord. 15900 (part), 2004)

### **18.16.070 Section 215.12 ~~13~~ Wiring Methods for Feeders--600 Volts or Less--Added.**

~~National Electrical Code is amended by adding a new Section 215.12 to read as follows:  
Section 215.12 Wiring Methods for Feeders—600 Volts or Less.~~

**NFPA 70 National Electrical Code, 2008 Edition, Section 215.13 Wiring Methods for Feeders 600 Volts or Less is hereby added to read as follows:**

### **215.13 Wiring Methods for Feeders 600 Volts or Less**

- (a) All occupancies:  
Feeder conductors shall be installed in accordance with the applicable requirements of this Code covering the type of wiring method used and shall be limited to the following methods:
  - (1) Rigid metal conduit
  - (2) Intermediate metal conduit
  - (3) Electrical metallic tubing
  - (4) Busways
  - (5) Metal wireways
  - (6) Rigid non-metallic conduit
  - (7) Mineral insulated, metal sheathed cable
  - (8) Surface metal raceways
  - (9) Cellular metal raceways
  - (10) Cable bus

- (11) Flexible metal conduit only where one of the other methods cannot be reasonably installed and only if equipped with the appropriate size ground wire
- (12) Electrical non-metallic tubing.
- (13) Metal clad cable
- (14) Armored cable
  - (b) All one-family, two-family or multi-family occupancies:
    - (1) All of the wiring methods listed in subparagraph (a) above
    - (2) Underground feeder and branch circuit cable
    - (3) Service entrance cable
    - (4) Non-metallic sheathed cable

(Ord. 15900 (part), 2004)

**18.16.080 Section ~~230.28~~ Amended. 215.14 Split Bolt Connections, added**  
 NFPA 70 National Electrical Code, 2008 Edition, Section 215.14 Split Bolt Connections, is hereby added to read as follows:

**215.14. Split Bolt Connections.**

“Split Bolt” (Kerney) type connections will not be allowed for services or any type of feeders.

**18.16.090 Section ~~230.43~~ Amended. 230.28 Service Masts as Supports, amended.**  
 NFPA 70 National Electrical Code, 2008 Edition, Section 230.28, Service Masts as Supports, is hereby amended to read as follows:

~~National Electrical Code Section 230.28 is amended to read as follows:  
 230.28. Service Masts.~~

**230.28. Service Masts as Supports.**

- (a) Where a service mast is used for the support of service-drop conductors, it shall be of rigid metal conduit or intermediate metal conduit supported and anchored to safely withstand the strain imposed by the service drop. All mast fittings shall be identified for use with service masts. Only power service-drop conductors shall be permitted to be attached to a service mast.
  - (b) All other service masts shall be of rigid metal conduit, intermediate metal conduit, or electrical metallic tubing.
  - (c) Service masts shall not extend above the roof more than three (3) feet for dwelling occupancies, nor more than five (5) feet for other occupancies without the prior approval of the Director for Building Permits and Inspections
- (Ord. 15900 (part), 2004)

**18.16.100 Section 230.43 Wiring Methods for 600 Volts, Nominal, or Less, amended.**  
 NFPA 70 National Electrical Code, 2008 Edition, Section 230.43 Wiring Methods for 600 Volts, Nominal, or Less, is hereby amended to read as follows:

~~National Electrical Code Section 230.43 is amended to read:~~

**230.43 Wiring methods for 600 volts, nominal, or less:**

Service entrance conductors shall be installed in accordance with the applicable requirements of this Code covering the wiring method used and shall be limited to the following wiring methods:

- (a) Rigid metal conduit
  - (b) Intermediate metal conduit
  - (c) Electrical metallic tubing
  - (d) Busways
  - (e) Metal wireways
  - (f) Metal auxiliary gutters
  - (g) Non-metallic rigid conduit for laterals only
  - (h) Flexible metal conduit not over 6 ft (1.83 m) long or liquidtight flexible metal conduit not over 6 ft (1.83 m) long between raceways, or between raceway and service equipment, with equipment bonding jumper routed with the flexible metal conduit or the liquidtight flexible metal conduit according to the provisions of Section 250-102(a), (b), (c) and (e)
  - (i) Liquidtight flexible nonmetallic conduit.
  - (j) Mineral-insulated, metal-sheathed cable.
- (Ord. 15900 (part), 2004)

~~18.16.100 Section 230.50 Deleted. Protection Against Physical Damage  
National Electrical Code Section 230.50 is deleted entirely. (Ord. 15900 (part), 2004)  
Rationale: This topic is addressed is in the 2008 NEC.~~

~~18.16.110 Section 230.51 Deleted. Mounting Supports~~ **230.70 General, (A)(1), amended.**

**NFPA 70 National Electrical Code, 2008 Edition, Section 230.70 General, (A) Location, (1) Readily Accessible Location, is hereby amended to read as follows:**

~~National Electrical Code Section 230.51 is deleted entirely. (Ord. 15900 (part), 2004)~~

~~18.16.120 Section 230.52 Deleted.  
National Electrical Code Section 230.52 is deleted entirely. (Ord. 15900 (part), 2004)~~

~~18.16.130 Section 230.70(A)(1) Amended.~~ **General. (A) Location. (1) Readily Accessible Location**

~~National Electrical Code Section 230.70(A)(1) Location is amended to read as follows:~~

- (1) Readily Accessible Location.
  - (a) Services rated ~~400~~ **800** amps or less. A load-break rated meter disconnect shall be installed on the exterior of the building or structure adjacent to and not more than five (5) feet from the meter. The service disconnecting means is allowed to meet this requirement if installed in compliance with this proximity requirement and the requirements of the NEC. If the service

disconnecting means is located more than five feet from the meter, a separate and additional load-break rated meter disconnect that meets this proximity requirement is required on the supply (line) side of the service disconnecting means.

- (b) Services rated over ~~400~~ 800 amps. The service disconnecting means shall be located not more than five (5) feet, measured vertically and horizontally, from the point where the service conductors enter the building or structure.  
(Ord. 15900 (part), 2004)

**18.16.120 Section 230.7.1 “Six Hand Movement”, added**

NFPA 70 National Electrical Code, 2008 Edition, Section 230.7, Other Conductors in Raceway or Cable, is hereby amended to read as follows:

**230.7.1 “Six Hand Movement”**

“Six Hand Movement” rule will apply to switches or circuit breakers used to disconnect feeders only. A “main” switch or circuit breaker will be required ahead of any branch circuit overcurrent protection.

**18.16.130 Section 250.8 Connection of Grounding and Bonding Equipment, (A) (6), deleted**

NFPA 70 National Electrical Code, 2008 Edition, Section 250.8 Connection of Grounding and Bonding Equipment, paragraph (A)(6) is hereby deleted in its entirety.

**250.8 (B) Methods Not Permitted.** (1) Connection devices or fittings that depend solely on solder shall not be used. (2) Sheet metal screws shall not be used to connect grounding conductors or connection devices to enclosures.

~~18.16.140 Section 310-2(B)--Amended.~~ **250.8 Connection of Grounding and Bonding Equipment, (B) Methods Not Permitted, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 250.8 Connection of Grounding and Bonding Equipment, (B) Methods Not Permitted, is hereby amended to read as follows:

**250.8 Connection of Grounding and Bonding Equipment, (B) Methods Not Permitted.** (1) Connection devices or fittings that depend solely on solder shall not be used. (2) Sheet metal screws shall not be used to connect grounding conductors or connection devices to enclosures.

~~National Electrical Code Section 310-2(B) is amended to read as follows:~~

**18.16.150 Section 310.2 Conductors, (B) Conductor Material, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 310.2 Conductors, (B) Conductor Material, is hereby amended to read as follows:

**310.2 (b) Conductors, (B) Conductor Material.** Conductors in this article shall be of aluminum, copper clad aluminum or copper unless otherwise specified. Aluminum or copper-clad aluminum conductors shall not be smaller than No. 2 AWG, except a ground conductor which is part of an approved cable assembly shall be not smaller than No. 6 AWG.

(Ord. 15900 (part), 2004)

~~18.16.150 Section 334.10—Amended.~~ **160 Section 334.10 Uses Permitted, (1), (2), (3), (4), amended**

~~National Electrical Code Section 334.10, items 334.10(1), (2), (3) and (4) are amended to read as follows:~~

**NFPA 70 National Electrical Code, 2008 Edition, Section 334.10 Uses Permitted, items (1), (2), (3) and (4) are amended to read as follows:**

334.10 Uses Permitted.

Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following:

- (1) One- and two-family dwellings.
- (2) Multifamily dwellings not exceeding three floors above grade.

(Ord. 15900 (part), 2004)

~~18.16.160 Section 358.10(B)—Amended.~~

~~National Electrical Code Section 358.10(B) is amended to read as follows:~~

**18.16.170 Section 358.10 Uses Permitted, (B) Corrosion Protection, amended.**

**NFPA 70 National Electrical Code, 2008 Edition, Section 358.10 Uses Permitted, (B) Corrosion Protection, is hereby amended to read as follows:**

**358.10 Uses Permitted, (B) Corrosion Protection,** Ferrous or nonferrous EMT, elbows, couplings, and fittings shall be permitted to be installed in concrete. EMT shall not be used in direct contact with the earth or in areas subject to severe corrosive influence.

(Ord. 15900 (part), 2004)

~~18.16.170 Article 382 Nonmetallic Extensions—Deleted.~~

~~National Electrical Code Article 382 Nonmetallic Extensions is deleted entirely. (Ord. 15900 (part), 2004)~~

**18.16.180 Article 382 Nonmetallic Extensions, deleted.**

**NFPA 70 National Electrical Code, 2008 Edition, Article 382 Nonmetallic Extensions is hereby deleted in its entirety.**

~~18.16.180~~ **18.16.190 Article 394--Concealed Knob and Tube Wiring, deleted**

~~National Electrical Code Article 394 is deleted entirely. (Ord. 15900 (part), 2004)~~

**NFPA 70 National Electrical Code, 2008 Edition, Article 394, concealed Knob-and-Tube Wiring, is hereby deleted in its entirety.**

~~18.16.190~~ **18.16.200 Article 398--Open Wiring on Insulators, deleted**

~~National Electrical Code Article 398 is deleted entirely. (Ord. 15900 (part), 2004)~~  
~~NFPA 70 National Electrical Code, 2008 Edition, Article 398, Open Wiring on Insulators is hereby deleted in its entirety.~~

~~18.16.200~~ **18.16.210 Subsection 404.10(A)--Mounting of Snap Switches, (A) Surface-Type, deleted**

~~National Electrical Code subsection 404.10(A) is deleted entirely. (Ord. 15900 (part), 2004)~~  
~~NFPA 70 National Electrical Code, 2008 Edition, Section 404.10 Mounting of Snap Switches, (A) Surface-Type, is hereby deleted in its entirety.~~

~~18.16.210 Section 422.12 Central Heating Equipment—Amended.~~ **404.10 Mounting of Snap Switches, (A) Surface-Type, deleted.**

~~National Electrical Code Section 422.12 Central Heating Equipment is amended to read as follows:~~ ~~National Electrical Code, 2008 Edition, Section 404.10 Mounting of Snap Switches, (A) Surface-Type, is hereby deleted in its entirety.~~

~~422.12 Central Heating Equipment.~~

~~Central heating equipment other than fixed electric space heating equipment shall be supplied by an individual branch circuit.~~

~~Exception 1: Auxilliary equipment, such as pump, valve, humidifier, or electrostatic air cleaner directly associated with the heating equipment, shall be permitted to be connected to the same branch circuit.~~

~~Exception 2: Evaporative coolers may be supplied by the same individual branch circuit supplying the central heating equipment in residential occupancies only, provided the loads are non-coincidental.~~

~~18.16.220 Section 527.4(K) Temporary Service Poles—Added.~~ **406.8 Receptacles in wet or damp locations(F) Plastic Bubble Type, added.**

~~National Electrical Code Section 527.4(K) Temporary Service Poles is added to read as follows::~~

~~NFPA 70 National Electrical Code, 2008 Edition, Section 406.8 Receptacles in Damp or Wet Locations is hereby amended to add paragraph (F) Plastic Bubble Type, to read as follows:~~

**406.8 Receptacles in Damp or Wet Locations.**

~~(F) “Plastic Bubble Type” in-use covers are not permitted.~~

~~(K) Temporary Service Poles. Temporary service poles shall be a minimum of six (6) inch by six (6) inch treated wood posts, or six (6) inch diameter round treated poles~~

securely imbedded in the earth.  
(Ord. 15900 (part), 2004)

**18.16.230 Section 550.10(J) Deleted. 406.8 Receptacles in wet or damp locations (G) Air Condition Equipment, added.**

National Electrical Code Section 550.10 is amended by adding Section (J) to read as follows:

NFPA 70 National Electrical Code, 2008 Edition, Section 406.8 Receptacles in Damp or Wet Locations is hereby amended to add paragraph (G) Air Condition Equipment, to read as follows:

**406.8 Receptacles in Damp or Wet Locations.**

(G) Air Condition Equipment.

Receptacles used solely for the maintenance of air condition equipment will not be required to have "In Use" type covers.

~~(J) Service Drop Conductors. Service drop conductors shall not be routed above the roof of mobile homes. (Ord. 15900 (part), 2004)~~

**18.16.240 Section 600.10 Deleted. 410.36 Means of Support (B) Suspended Ceilings, amended**

National Electrical Code Section 600.10 is deleted entirely. (Ord. 15900 (part), 2004)

NFPA 70 National Electrical Code, 2008 Edition, Section 410.36, Means of Support, (B) Suspended Ceilings, is hereby amended to delete the last sentence as follows:

**410.36 Means of Support, (B) Suspended Ceilings**, delete "Listed clips identified for use with the type of ceiling member and luminaire(s) shall also be permitted."

**18.16.250 Section 600.43 Miscellaneous Provisions Deleted. 422.12 Central Heating Equipment, amended.**

NFPA 70 National Electrical Code, 2008 Edition, Section 422.12 Central Heating Equipment, is hereby amended to read as follows: NFPA 70 National Electrical Code, 2008 Edition, Section 422.12 Central Heating Equipment, is hereby amended to read as follows:

**422.12 Central Heating Equipment.**

Central heating equipment other than fixed electric space-heating equipment shall be supplied by an individual branch circuit.

Exception 1: Auxilliary equipment, such as pump, valve, humidifier, or electrostatic air cleaner directly associated with the heating equipment, shall be permitted to be connected to the same branch circuit.

Exception 2: Evaporative coolers may be supplied by the same individual branch circuit supplying the central heating equipment in residential occupancies only, provided the loads are non-coincidental.

National Electrical Code is amended by adding a new Section 600.43 Miscellaneous Provisions to read as follows:

**Section 600.43 Miscellaneous Provisions:**

- (A) ~~Sign circuits shall contain a copper grounding conductor deriving from the circuit's supply source; exterior locations shall terminate in a weatherproof box and cover. Taps in metallic raceways shall not be allowed as the grounding means.~~
- (B) ~~All sign installations shall maintain a clearance from adjacent power lines as follows:~~

<del>Voltage Line To Ground</del>	<del>H (ft.) Minimum Horizontal Clearance</del>	<del>V (ft.) Minimum Clearance Measured Either Diagonally or Vertically</del>	<del>V (ft.) Over or Under Catwalks Minimum Clearance Measured Either Diagonally or Vertically</del>
<del>Guy Wires and Neutrals</del>	<del>3</del>	<del>3</del>	<del>10.5</del>
<del>0-750 V Supply Cables Meeting Rule 230C2 and 230C3 NESC, 1997</del>	<del>3.5</del>	<del>3.5</del>	<del>11</del>
<del>0-750 V Open Conductors N.E.S.E. Rule 230C2 and 230C3</del>	<del>5.5</del>	<del>6</del>	<del>11.5</del>
<del>750V-22KV</del>	<del>7.5</del>	<del>8</del>	<del>13.5</del>

Notes to table:

- ~~1. Signs should never hang over any adjacent power circuits.~~
- ~~2. Voltages are line to ground on a Y Circuit with multi-ground neutral or between phases on an underground circuit.~~  
(Ord. 15900 (part), 2004)

**18.16.260 Section 725.41(C)–Added. 590.4 (K) Temporary Service Poles, added National Electrical Code Section 725.41(C) Transformers for Class 2 and Class 3 low voltage Circuits is added to read as follows: NFPA 70 National Electrical Code, 2008 Edition, Section 590.4 General, is hereby amended to add paragraph (K) Temporary Service Poles, to read as follows:**

**590.4 Genral  
(K) Temporary Service Poles.**

Temporary service poles shall be a minimum of four (4) inch by four (4) inch treated wood posts, or four (4) inch diameter round treated poles securely imbedded in the earth.

~~(C) Transformers for Class 2 and Class 3 low voltage Circuits.~~

~~(1) Transformers for Class 2 and Class 3 low voltage circuits shall be accessible.~~

~~(2) Transformers for Class 2 and Class 3 low voltage circuits shall be installed in accordance with their listing.~~

~~(3)~~

**18.16.270** ~~Errata.~~ **Section 600.10 Portable or Mobile Signs, deleted.**

**NFPA 70 National Electrical Code, 2008 Edition, Section 600.10, Portable or Mobile Signs, is hereby deleted in its entirety.**

~~Errata to the 2002 8 NEC Code issued by the National Fire Protection Association shall become part of this code. (Ord. 15900 (part), 2004)~~

**18.16.280** ~~Conflicting ordinances.~~ **Section 600.43 Miscellaneous Provisions, added.**

~~All ordinances and parts of ordinances in conflict with the provisions of this chapter are hereby repealed as follows: Ordinance No. 014308, 12-14-1999. (Ord. 15900 (part), 2004)~~ **NFPA 70 National Electrical Code, 2008 Edition, Section 600.43 Miscellaneous Provisions, is hereby added to read as follows:**

**600.43 Miscellaneous Provisions.**

(C) Sign circuits shall contain a copper grounding conductor deriving from the circuit's supply source; exterior locations shall terminate in a weatherproof box and cover. Taps in metallic raceways shall not be allowed as the grounding means.

(D) All sign installations shall maintain a clearance from adjacent power lines as follows:

Voltage--Line To Ground	H (ft.) Minimum Horizontal Clearance	V (ft.) Minimum Clearance Measured Either Diagonally or Vertically	V (ft.) Over or Under Catwalks Minimum Clearance Measured Either Diagonally or Vertically
Guy Wires and Neutrals	3	3	10.5
0-750 V Supply Cables Meeting Rule 230C2 and 230C3 NESC, 1997	3.5	3.5	11
0-750 V Open Conductors N.E.S.E. Rule 230C2 and	5.5	6	11.5

230C3			
750V--22KV	7.5	8	13.5

Notes to table:

3. Signs should never hang over any adjacent power circuits.
4. Voltages are line to ground on a Y-Circuit with multi-ground neutral or between phases on an underground circuit.  
(Ord. 15900 (part), 2004)

**18.16.290 Section 725.41 (C) Transformers for Class 2 and Class 3 low voltage Circuits, added.**

NFPA 70 National Electrical Code, 2008 Edition, Section 725.41 Class 1 Circuit Classifications and Power Source Requirements, is hereby amended to add paragraph (C) Transformers for Class 2 and Class 3 low voltage Circuits, to read as follows:

**725.41 Class 1 Circuit Classifications and Power Source Requirements.  
(C) Transformers for Class 2 and Class 3 low voltage Circuits.**

- (4) Transformers for Class 2 and Class 3 low voltage circuits shall be accessible.
- (5) Transformers for Class 2 and Class 3 low voltage circuits shall be installed in accordance with their listing.

**18.16.270 Errata, adopted**

Errata to the 2008 NEC Code issued by the National Fire Protection Association shall become part of this code.

**18.16.300 Conflicting ordinances.**

All ordinances and parts of ordinances in conflict with the provisions of this chapter are hereby repealed as follows: Ordinance No. 014308, 12-14-1999 and Ordinance No. 15900, 09-28-2004.

**C.** The effective date of this ordinance shall be \_\_\_\_\_. This ordinance shall be applicable to all permit applications received on or after that date.

**D.** Except as herein provided, Title 18 (Building and Construction) shall remain in full force and effect.