

## ARTICLE 12-III ELECTRICITY

Sec 12-31	Annex H	Electrical Code	Administrative Provisions	Adopted
Sec	12-32	Electrical Code	Ordinance	Adopted
Secs	12-33	-	12-100	(Reserved)

**Editor's note**— Ord. No. 018-014, § 1(Exh. A), adopted January 23, 2018, repealed the former Art. III, §§ 12-31–12-100, and enacted a new Art. III as set out herein. The former Art. III pertained to similar subject matter and derived from Ord. No. 092-37, § 1, 6-2-92; Ord. No. 093-05, § 4, 1-5-93; Ord. No. 099-41, §§ 1–4, 6–12, 6-8-99; Ord. No. 001-17, § 1, 2-27-01.

### ~~Sec 12-31 Annex H Electrical Code Administrative Provisions Adopted~~ ~~Sec 12-31 Aurora Annex H Electrical Code Administrative Provisions Adopted~~

~~Annex H of the adopted Electrical Code shall be replaced in its entirety with the following. Further this adoption shall delete the 2010 adoption of International Building Code Appendix K as these provisions amend and replace them.~~

#### SECTION 101 - GENERAL

101.1 Purpose. A purpose of this code is to establish minimum requirements to safeguard public health, safety and general welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance or use of electrical systems and equipment.

101.2 Scope. This code applies to the design, construction, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of electrical systems and equipment.

~~101.2.1 (A) Installation and Use of Equipment. Utilization Equipment shall be installed and used per the Manufacturer's written recommendations/instructions and if Listed or Labeled shall be installed and used in accordance with the listing or labeling.~~

~~101.2.1 (B) Examination and Inspection of Non-Labeled Manufacturing Equipment:~~

~~(1) Conditions deemed as posing an imminent danger shall be required to be removed from service until repaired; OR until labeled from an IAS or OSHA Nationally Recognized Testing Laboratory or field tested from a third party third party testing company as accepted by the Authority Having Jurisdiction.~~

~~(2) For Non-Labeled Manufacturing Equipment, equipment owner and equipment supplier shall verify that OSHA regulations are being met without assessment or inspection by City of Aurora personnel. Aurora's inspection responsibilities will end at the connection to the permanently installed power feed for the equipment. The suitability of the power to the equipment shall be the responsibility of the owner of the equipment or the manufacturer, and shall be verified by the equipment's owner prior to installation.~~

~~a. Non-Labeled Manufacturing Equipment may NOT be installed:~~

~~1. In hazardous locations;~~

~~2.— If equipment uses propane, gas or burns fossil fuels.~~

101.3 Appeals: Appeals shall be conducted by the Electrical Commission as defined in Article I of the Aurora Building Code and per the adopted rules of the Commission.

## SECTION 102 - APPLICABILITY

102.1 General. The provisions of this code apply to all matters affecting or relating to structures and premises, as set forth in Sec.101.

102.2 Existing installations. Except as otherwise provided for in this chapter, a provision in this code shall not require the removal, alteration or abandonment of, nor prevent the continued utilization and maintenance of, existing electrical systems and equipment lawfully in existence at the time of the adoption of this code.

102.2.1 Practical Safeguarding for Existing Installations. Existing electrical installations that do not comply with the provisions of this code shall be permitted to continue in use unless the authority having jurisdiction determines that the lack of conformity with this code presents 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.

1. Non-Compliant Existing Conditions and Installations at existing structures undergoing repairs, renovations, alteration, extensive alterations or reconstruction may remain unless indicated to be remedied in proportion to the extent of the project per the adopted existing structures code:

a. ~~One and Two Family~~One- and Two-Family structures; refer to the adopted International Residential Code -Appendix BOJ.

b. ~~Non-One and Two Family~~One- and Two-Family structures; refer to the adopted International Existing Building Code.

2. In addition by further determination of the authority having jurisdiction, the following are hereby determined to constitute an imminent danger to occupants.

a. Inadequate Service Capacity

b. Inadequate Service Grounding

i. Grounding location more than 5 feet from water service entry and per Art 250.68 (C).

ii. Grounding or bonding locations where non-conductive materials interrupt the required conductive path per Art 250.68 (B).

c. Improper fusing

d. Improper wiring or installation that was not installed per the applicable code at the date of the installation.

- e. Deterioration or Damage
- f. Corroded, Rusted Switchgear, Bussing, Branch Circuit Panelboards
- g. Electrical wiring, of all types, not supported in an approved manner.
- h. Splices unenclosed in approved boxes other than knob and tube wiring in areas where Knob and Tube are permitted to remain.
- i. Absence of or use of unapproved connectors for splices and termination into boxes or cabinets.
- j. Wiring with insulation deterioration or other damaged conditions.
- k. Flexible cords used as a substitute for fixed wiring.
- l. Flexible cords where running through or concealed within walls, ceilings, dropped-ceilings, baseboard and floors.
- m. Boxes or conduit with excessive numbers of conductors based upon permitted installation date.
- n. Knob and Tube wiring in areas other than concealed within framing cavities or within limited access or lockable attics.
- o. Exposed fuse blocks or exposed terminal-cleat type light fixtures in areas where Knob and Tube would not be permitted to remain.
- p. Other items determined imminently dangerous by the Authority Having Jurisdiction.

102.3 Maintenance. Electrical systems, equipment, materials and appurtenances, both existing and new, and parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe, hazard-free condition. Devices or safeguards that are required by this code shall be maintained in compliance with the code edition under which installed. The owner or the owner's ~~designated authorized~~ agent shall be responsible for the maintenance of the electrical systems and equipment. To determine compliance with this provision, the building official shall have the authority to require that the electrical systems and equipment be re-inspected.

102.4 Additions, alterations and repairs. Additions, alterations, renovations and repairs to electrical systems and equipment shall conform to that required for new electrical systems and equipment without requiring that the existing electrical systems or equipment comply with all of the requirements of this code. Additions, alterations and repairs shall not cause existing electrical systems or equipment to become unsafe, hazardous or overloaded.

-Minor additions, alterations, renovations and repairs to existing electrical systems and equipment shall meet the provisions for new construction, except where such work is performed in the same manner and arrangement as was in the existing system, is not hazardous and is approved.

102.5 Subjects not regulated by this code. Where no applicable standards or requirements are set forth in this code, or are contained within other laws, codes, regulations, ordinances or bylaws adopted by the jurisdiction, compliance with applicable standards of nationally recognized standards as are approved shall be deemed as prima facie evidence of compliance with the intent of this code. Nothing herein shall derogate from the authority of the building official to determine compliance with codes or standards for those activities or installations within the building official's jurisdiction or responsibility.

#### SECTION 103 - PERMITS

103.1 Types of permits. An owner, authorized agent or contractor who desires to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace electrical systems or equipment, the installation of which is regulated by this code, or to cause such work to be done, shall first make application to the building official and obtain the required permit for the work.

Exception: Where repair or replacement of electrical systems or equipment must be performed in an emergency situation, the permit application shall be submitted within the next working business day of the department of electrical inspection.

103.2 Work exempt from electrical permit(s). The following work shall be exempt from the requirement for a permit:

~~\_\_\_\_\_ [Exemption from the permit requirements of this code shall not be deemed to grant authorization for work to be done in violation of the provisions of this code or other laws or ordinances of this jurisdiction.]~~

1. Listed cord- and plug-connected temporary decorative lighting.

\_\_\_\_\_ 2. Reinstallation of attachment plug receptacles, but not the outlets therefor.

\_\_\_\_\_ 3. Replacement of branch circuit overcurrent devices of the required capacity in \_\_\_\_\_ the same location.

\_\_\_\_\_ 4. Temporary wiring for experimental purposes in suitable experimental \_\_\_\_\_ laboratories or temporary system for testing or servicing of electrical equipment or \_\_\_\_\_ apparatus [IBC exemption].

\_\_\_\_\_ 5. Telecommunication wiring, devices, appliances, apparatus or equipment \_\_\_\_\_ operating at; less than 50 volts, ~~and~~**AND** not associated with fire alarm ~~,or~~ other life safety systems ~~and low-voltage suspended ceiling systems.~~

\_\_\_\_\_ 6. Minor maintenance such as changing a switch, receptacle, light fixture, ceiling \_\_\_\_\_ fans less than 35 lbs., ballasts and bulbs; providing wiring and junction boxes are \_\_\_\_\_ not altered.

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7. Repair or replacement of branch circuit overcurrent devices w/devices appropriately sized for the conductors.

8. Wiring replacement for mechanical equipment from existing switch or existing disconnect where the circuit conductors are of adequate size.

79. Wiring replacement for industrial machinery from existing switch or existing disconnect where the circuit conductors are of adequate size.

910. Wiring replacement for electrified signage from existing switch or existing disconnect where the circuit conductors are of adequate size.

~~11. Items indicated in NEC 90.2(B).~~

1012. Single family owner occupied home projects not requiring special knowledge (see IBC section 117); where the equipment and material costs are less than \$500.250.

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

#### SECTION 104 - CONSTRUCTION DOCUMENTS

104.1 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Electronic media documents are permitted to be submitted where approved by the building official. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that such work will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official.

104.2 Penetrations. Construction documents shall indicate where penetrations will be made for electrical systems and shall indicate the materials and methods for maintaining required structural safety, fire-resistance rating and fireblocking.

104.3 Load calculations. Where an addition or alteration is made to an existing electrical system, an electrical load calculation shall be prepared to determine if the existing electrical service has the capacity to serve the added load.

#### SECTION 105 - ALTERNATIVE ENGINEERED DESIGN

105.1 General. The design, documentation, inspection, testing and approval of an alternative engineered design electrical system shall comply with this section.

105.2 Design criteria. An alternative engineered design shall conform to the intent of the provisions of this code and shall provide an equivalent level of quality, strength, effectiveness, fire-resistance, durability and safety. Materials, equipment or components shall be designed and installed in accordance with the manufacturer's installation instructions.

105.3 Submittal. The registered design professional shall indicate on the permit application that the electrical system is an alternative engineered design. The permit and permanent permit records shall indicate that an alternative engineered design was part of the approved installation.

105.4 Technical data. The registered design professional shall submit sufficient technical data to substantiate the proposed alternative engineered design and to prove that the performance meets the intent of this code.

105.5 Construction documents. The registered design professional shall submit to the building official two complete sets of signed and sealed construction documents for the alternative engineered design. The construction documents shall include floor plans and a diagram of the work.

105.6 Design approval. Where the building official determines that the alternative engineered design conforms to the intent of this code, the electrical system shall be approved. If the alternative engineered design is not approved, the building official shall notify the registered design professional in writing, stating the reasons therefor.

105.7 Inspection and testing. The alternative engineered design shall be tested and inspected in accordance with the requirements of this code.

#### SECTION 106 - REQUIRED INSPECTIONS

106.1 General. The building official, upon notification, shall make the inspections set forth in this section.

106.2 Underground. Underground inspection shall be made after trenches or ditches are excavated and bedded, piping and conductors installed, and before backfill is put in place. Where excavated soil contains rocks, broken concrete, frozen chunks and other rubble that would damage or break the raceway, cable or conductors, or where corrosive action will occur, protection shall be provided in the form of granular or selected material, approved running boards, sleeves or other means.

106.3 Rough-in. Rough-in inspection shall be made after the roof, framing, fireblocking and bracing are in place and all wiring and other components to be concealed are complete, and prior to the installation of wall or ceiling membranes.

106.4 Contractors' responsibilities. It shall be the responsibility of every contractor who enters into contracts for the installation or repair of electrical systems for which a permit is required to comply with adopted state and local rules and regulations concerning licensing.

#### SECTION 107 - PREFABRICATED CONSTRUCTION

107.1 Prefabricated construction. Prefabricated construction shall meet the Aurora Electrical code(s) and is subject to Sections 107.2 through 107.5.

107.2 Evaluation and follow-up inspection services. Prior to the approval of a prefabricated construction assembly having concealed electrical work and the issuance of an electrical

permit, the building official shall require the submittal of an evaluation report on each prefabricated construction assembly, indicating the complete details of the electrical system, including a description of the system and its components, the basis upon which the system is being evaluated, test results and similar information, and other data as necessary for the building official to determine conformance to this code.

107.3 Evaluation service. The building official shall designate the evaluation service of an approved agency as the evaluation agency; and review such agency's evaluation report for adequacy and conformance to this code.

107.4 Follow-up inspection. Except where ready access is provided to electrical systems, service equipment and accessories for complete inspection at the site without disassembly or dismantling, the building official shall conduct the in-plant inspections as frequently as necessary to ensure conformance to the approved evaluation report or shall designate an independent, approved inspection agency to conduct such inspections. The inspection agency shall furnish the building official with the follow-up inspection manual and a report of inspections upon request, and the electrical system shall have an identifying label permanently affixed to the system indicating that factory inspections have been performed.

107.5 Test and inspection records. Required test and inspection records shall be available to the building official at all times during the fabrication of the electrical system and the erection of the building; or such records as the building official designates shall be filed.

#### SECTION 108 - TESTING

108.1 Testing. Electrical work shall be tested as required in this code. Tests shall be performed by the permit holder and observed by the building official.

108.1.1 Apparatus, material and labor for tests. Apparatus, material and labor required for testing an electrical system or part thereof shall be furnished by the permit holder.

108.1.2 Re-inspection and testing. Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made so as to achieve compliance with this code. The work or installation shall then be resubmitted to the building official for inspection and testing.

#### SECTION 109 - RECONNECTION

109.1 Connection after order to disconnect. A person shall not make utility service or energy source connections to systems regulated by this code, which have been disconnected or ordered to be disconnected by the building official, or the use of which has been ordered to be discontinued by the building official until the building official authorizes the reconnection and use of such systems.

#### SECTION 110 - CONDEMNING ELECTRICAL SYSTEMS

110.1 Authority to condemn electrical systems. Wherever the building official determines that any electrical system, or portion thereof, regulated by this code has become hazardous

to life, health or property, the building official shall order in writing that such electrical systems either be removed or restored to a safe condition. A time limit for compliance with such order shall be specified in the written notice. A person shall not use or maintain a defective electrical system or equipment after receiving such notice.

Where such electrical system is to be disconnected, written notice as prescribed in this code shall be given. In cases of immediate danger to life or property, such disconnection shall be made immediately without such notice.

#### SECTION 111 - ELECTRICAL PROVISIONS

111.1 Adoption. Electrical systems and equipment shall be designed, constructed and installed in accordance with ~~the International Residential Code or~~ NFPA 70 as applicable, except as otherwise provided in this code.

111.2 Abatement of electrical hazards. All identified electrical hazards shall be abated. All identified hazardous electrical conditions in permanent wiring shall be brought to the attention of the building official responsible for enforcement of this code. Electrical wiring, devices, appliances and other equipment which is modified or damaged and constitutes an electrical shock or fire hazard shall not be used.

111.3 Appliance and fixture listing. Electrical appliances and fixtures shall be tested and listed in published reports of inspected electrical equipment by an approved agency or OSHA Nationally Recognized Testing Laboratory -or- International Accreditation Service (IAS) Recognized Testing Laboratory and installed in accordance with all instructions included as part of such listing.

#### ~~111.4 Nonmetallic-sheathed cable. Deleted~~

#### 111.45 Cutting, notching and boring.

The cutting, notching and boring of wood and steel framing members, structural members and engineered wood products shall be in accordance with this code.

111.56 Smoke alarm circuits. Single- and multiple-station smoke alarms required by this code and installed within new dwelling units shall not be connected as the only load on a branch circuit. Such alarms shall be supplied by branch circuits having lighting loads consisting of lighting outlets in habitable spaces.

111.67 Equipment and door labeling. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating ELECTRICAL ROOM or similar approved wording. The disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident.

#### SECTION 112 - LIABILITY FOR DAMAGES

112.1 Liability for Damages. This code shall not be construed to affect the responsibility or liability of any party owning, designing, operating, controlling, testing per NEC or OSHA requirements, or installing any electrical equipment for damages to persons or property



caused by a defect therein, nor shall the Electrical Commission members or the City of Aurora or any of its employees be held as assuming any such liability by reason of inspection, re-inspection, other examination authorized or any lack of inspection thereof. `

(Ord. No. 018-014, § 1(Exh. A), 1-23-18)

#### **Sec 12-32 Electrical Code Ordinance Adopted**

~~(1) The provisions herein shall govern installations in Non-One and Two Family structures.~~

~~(a) Electrical provisions for existing Non-One and Two family structures shall additionally refer to the International Existing Building Code adoption, the more specific of which shall govern.~~

~~(2) Electrical provisions within One and Two Family structures additionally shall refer to the current International Residential Code Part VIII – Electrical as amended~~

~~(a) Electrical provisions for existing One and Two family structures shall additionally refer to the International Residential Code Appendix J adoption, the more specific of which shall govern.~~

~~(3) That certain document, two three (23) copies of which are on file in the office of the Building Code Official, being marked and designated as the City of Aurora Electrical Ordinance.~~

202314 NFPA -70 National Electrical Code; As published by the National Fire Protection Association and adopted as the Electrical Ordinance of the City of Aurora, Illinois in the State of Illinois: for the control and regulation of installation and/or alteration of electrical systems and electrical equipment; for the utilization of electricity for light, heat or power. Each and all of the regulations, penalties, conditions and terms of said edition of NFPA-70 are hereby referred to and amended in part hereof as if fully set out in this article, with the additions, insertions, deletions, and changes prescribed in ARTICLE III. Sec. 12-31 through 12-100.Ord. No. 092-37, § 1, 6-2-92; Ord. No. 099-41, §§ 1, 11, 6-8-99).

~~Section 110.26 (C)(2)(a) Unobstructed Egress. Where the location permits a continuous and unobstructed way of egress travel perpendicular and away from the equipment, which does not traverse through the working clearance of other equipment, a single entrance to the working space shall be permitted. Refer to NEC Handbook Exhibits for clarification.~~

#### **CHAPTER 2 WIRING AND PROTECTION**

~~Article 100 Definitions added; Article 210 Branch Circuits shall be added to as follows:~~

~~\_\_\_\_\_ Nearest the Point of Entrance- Within 5 feet.~~

~~110.3(D) is added to read:~~

~~Examination and Inspection of Non-Labeled Manufacturing Equipment.~~

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1. Conditions deemed as posing an imminent danger shall be required to be removed from service until repaired; OR until labeled from an IAS or OSHA Nationally Recognized Testing Laboratory or field tested from a third-party testing company as accepted by the Authority Having Jurisdiction.

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2. For Non-Labeled Manufacturing Equipment, equipment owner and equipment supplier shall verify that OSHA regulations are being met without assessment or inspection by City of Aurora personnel. Aurora's inspection responsibilities will end at the connection to the permanently installed power feed for the equipment. The suitability of the power to the equipment shall be the responsibility of the owner of the equipment or the manufacturer and shall be verified by the equipment's owner prior to installation.

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a. Non-Labeled Manufacturing Equipment may NOT be installed:

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i. In hazardous locations,

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ii. If equipment uses propane, gas or burns fossil fuels.

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## II. Branch-Circuit Ratings

Subsection to 210.23 shall be added as follows:

210.8(D)(6) is amended to read:

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Sump pumps- GFCI protection shall be provided at the panel and a single receptacle.

210.23 (FE) Existing 12 AWG branch circuits is added to read:

Existing 12 AWG branch circuits. Existing branch circuits with 12 AWG conductors that cannot be completely traced throughout the circuit shall be served by no more than 15 ampere breakers.

225.6(A) is amended to read:

(1) For 1000 volts, nominal, or less, 10 AWG copper or 1/0 AWG aluminum for spans up to 15 m (50 ft) in length, and 8 AWG copper or 1/0 AWG aluminum for a longer span unless supported by a messenger wire.

(2) For over 1000 volts, nominal, 6 AWG copper or 1/0 AWG aluminum where open individual conductors, and 8 AWG copper or 1/0 AWG aluminum where in cable.

Article 230 Services shall be added to/amended as follows:

225.10 is amended to read:

The installation of outside wiring on surfaces of buildings (or other structures) shall be permitted for circuits not exceeding 1000 volts, nominal, as the following:

(1) Auxiliary gutters

(2) Busways

(3) Cable trays

(4) Cablebus

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- ~~—Electrical metallic tubing (EMT)~~  
~~(5) Intermediate metal conduit (IMC)~~  
~~(6) Liquidtight flexible metal conduit (LFMC)~~  
~~(7) Liquidtight flexible nonmetallic conduit (LFNC)~~  
~~(8) Messenger-supported wiring~~  
~~(9) Reinforced thermosetting resin conduit (RTRC)~~  
~~(10) Rigid metal conduit (RMC)~~  
~~(11) Rigid polyvinyl chloride conduit (PVC)~~  
~~(12) TC-ER cable- limited to a manufactured HVAC system~~  
~~(13) Wireways~~

230.2(F) is added to read:

~~Buildings with multiple electrical services shall be provided with a shunt trip that simultaneously opens all electrical services including any emergency and standby power systems. Shunt trip shall be of a mushroom style push button provided with a protective cover. Button shall be identified with a sign that reads "EMERGENCY POWER SHUTDOWN SWITCH FOR FIRE DEPT USE ONLY".~~ ~~—H. Overhead Service Conductors~~

~~Section 230.23 (B) Minimum Size~~ is amended to read:

~~—~~ The conductors shall not be smaller than ~~36~~ AWG copper or 1/0 AWG aluminum.

### ~~III. Underground Service Conductors~~

~~Section 230.31(B) Minimum Size~~ is amended to read:

~~—~~ The conductors shall not be smaller than 3 AWG copper or 1/0 AWG aluminum.

### ~~IV. Service-Entrance Conductors~~

~~Section 230.43 Wiring Methods for~~ ~~600/1000~~ Volts, Nominal, or Less ~~shall be amended as follows~~ is amended to read:

~~Service-entrance 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 (RMC)~~
- ~~2. Intermediate metal conduit (IMC)~~
- ~~3. Busways~~
- ~~4. Auxiliary gutters~~
- ~~5. Rigid polyvinyl chloride conduit (PVC)- Shall be schedule 80~~
- ~~6. Mineral-insulated, metal-sheathed cable, Type MI~~
- ~~7. High density polyethylene conduit (HDPE)- Shall be schedule 80~~
- ~~8. Reinforced thermosetting resin conduit (RTRC)~~
- ~~9. Flexible bus systems~~

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~~230.43(1) Open Wiring on Insulators: Deleted~~

~~230.43(2) Type IGS Cable: Deleted.~~

~~230.43(5) Electrical Metallic Tubing (EMT): Deleted.~~

~~230.43(6) Electrical Nonmetallic Tubing (ENT): Deleted.~~

~~230.43(7) Service-entrance Cables: Deleted.~~

~~230.43(8) Wireways: Deleted.~~

~~230.43(11) Rigid Polyvinyl Chloride Conduit (PVC): Shall be schedule 80.~~

~~230.43(12) Cablebus: Deleted.~~

~~230.43(13) Type MC Cable: Deleted.~~

~~230.43(14) Mineral-insulated, metal-sheathed cable: Deleted.~~

~~230.43(15) Flexible metal conduit: Deleted.~~

~~230.43(16) Liquid-tight flexible nonmetallic conduit: Deleted.~~

~~230.43(17) High Density Polyethylene Conduit (HDPE/Poly Pipe): Shall be schedule 80.~~

~~230.43.151(D) is added to read:~~

~~- \_\_\_\_\_ All service entrance conduit for overhead service drops shall be supported by  
\_\_\_\_\_ galvanized 2 piece back-straps or an approved equal.~~

#### ~~VI. Service Equipment – Disconnecting Means~~

~~Section 230.70 General shall be amended as follows:~~

~~230.70 (A) (1) Readily Accessible Location is amended to read:~~

~~\_\_\_\_\_ Main Service Disconnecting means shall be readily accessible, located at the service meter location.~~

~~Article 250 Grounding and Bonding shall be added to/amended as follows:~~

#### ~~I. General~~

~~Section 250.8 Connection of Grounding and Bonding Equipment shall be added to as follows:~~

~~250.8(B)(1) is added to read Methods not Permitted:~~

~~\_\_\_\_\_ Steel - sSheet-metal strap type ground clamps shall not be used for connecting a  
\_\_\_\_\_ grounding electrode conductor to a grounding electrode.~~

~~250.50(A) is added to read:~~

Unless otherwise accepted by the building official, a concrete encased electrode shall be installed in new structures with an electrical service.

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250.64(A) is amended to read:

Aluminum and copper-clad aluminum is not permitted to be used as a grounding electrode conductor.

~~XI. Grounding Conductors shall be added to as follows:~~

~~Section 250.192 Underground/Under-slab/Concrete Encased Raceway~~ is added to read:

~~250.192 Equipment Grounding Conductor:~~ A conductor to serve as a 100% redundant Equipment Grounding conductor shall be \_\_\_\_\_ installed in all underground raceways and raceways in concrete.

#### CHAPTER 3 WIRING METHODS AND MATERIALS

310.106(B) (13(A) is amended to read

)The minimum size of conductors for voltage ratings up to and including 2000 volts shall be 142 AWG copper or 1/0 AWG aluminum or copper-clad aluminum, except as permitted elsewhere in this Code. Aluminum Conductors: Aluminum or copper-clad aluminum wires shall be 1/0 AWG or larger.

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~~Section 310.106 (A) Minimum Size of Conductors shall be added to as follows: 310.3(A)(1) is added to read:~~

~~For individually metered units of R-2, R-3 or R-4 uses (as defined in the IBC), the 310.106(A) (1) Min Conductor Size: mMinimum size conductors shall be 1432 AWG copper or 1/0 aluminum or copper-clad aluminum. except for individually metered units of R-2, R-3 or R-4 uses (as defined in the IBC).~~

~~Article 310 Conductors for General Wiring~~

~~310.12 is deleted.~~

~~Table 310.15(C)(1) add the following after second paragraph:~~

~~15 (B) (3) (a) Adjustment Factors For More than Three Current-Carrying Conductors: Table rows exceeding 9 conductors shall be eliminated. Fill exceeding 9 conductors may occur only as an engineered design alternative per IBC 104Aurora electrical administrative provisions 105, when engineering calculations are provided in conformance with fill and amperage derating per Chapter 9 of the NEC.~~

~~Table 310.15(C)(1) is revised to read:~~

<b>Number of Conductors</b>	<b>Percent of Values in Table 310.16 Through Table 310.19 as Adjusted for Ambient Temperature if Necessary</b>
<b>4-6</b>	<b>80</b>
<b>7-9</b>	<b>70</b>
<b>10-above</b>	<b>Only permitted through engineered design</b>

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Section 310.15 (B) (7) 120-240 single phase dwelling service and feeders shall be deleted in its entirety.

Section 310.106 (A) Minimum Size of Conductors shall be added to as follows:

310.106(A) (1) Min Conductor Size: Minimum size conductor shall be 12 AWG except for individually metered units of R-2, R-3 or R-4 uses (as defined in the IBC).

Section 310.106 (B) Conductors shall be added to as follows:

310.106(B) (1) Aluminum Conductors: Aluminum or copper-clad aluminum wires shall be 1/0 AWG or larger.

Article 314 Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings and Hand Hole Enclosure

Section 314.3 Non-Metallic Boxes: shall be amended as follows is amended to read:

\_\_\_\_ Plastic device and junction boxes Nonmetallic shall not be installed, except in corrosive environments, when \_\_\_\_ approved or in non-grounded circuits when they are permitted to remain.

Article 320 Armored Cable: Type AC.

320.10 Uses Permitted: is amended to read:

- \_\_\_\_ Type AC cable shall not be only be permitted

Exception (1) Except where included as a factory assembled sub-\_\_\_\_ component of a manufactured system.

Article 322 Flat Cable Assemblies: Type FC shall be deleted in its entirety is deleted and not permitted.

Article 324 Flat Conductor Cable: Type FCC shall be deleted in its entirety is deleted and not permitted.

Article 326 Integrated Gas Spacer Cable: Type IGS shall be deleted in its entirety is deleted and not permitted.

Article 330 Metal-Clad Cable: Type MC shall be amended as follows:

330.10 ~~Uses Permitted~~ is amended to read:

\_\_\_\_\_ Type MC cable shall ~~only~~ be permitted as follows:

1. ~~w~~When fished into existing walls with not \_\_\_\_\_ more than (6) six feet exposed.
2. ~~Exception (1) Except w~~Where included as a factory assembled sub-component of a manufactured system.
3. For branch circuits when remodeling existing owner-occupied one-and-two family dwellings.
4. Where approved by the building official.

~~Article 332 Mineral-Insulated, Metal-Sheathed Cable: Type MI shall be deleted in its entirety.~~

~~Article 334 is deleted.~~ 10 is amended to read:

~~\_\_\_\_\_ Type NM and Type NMC cables shall be permitted to be used when remodeling existing owner occupied one and two family dwellings and their attached or detached garages, and \_\_\_\_\_ their storage buildings.~~ Nonmetallic-Sheathed Cable: Types NM, NMC, and NMS shall be amended as follows:

334.10 Uses Permitted: Type NM, NMC, and Type NMS cables shall not be permitted.

338.1(A) is added to read:

~~\_\_\_\_\_ Only USE cable is permitted. SE cable not permitted~~ shall only be permitted for temporary power when protected by a raceway.

~~338.10(B) is deleted.~~ Article 338 Service-Entrance Cable: Types SE and USE shall be amended as follows:

338.10 Uses Permitted (A): SE and USE cable shall not be allowed.

338.10 Uses Permitted (B): SE cable shall not be allowed. USE cable shall be permitted.

Article 340 Underground Feeder and Branch Circuit Cable: Type UF.

Section 340.10 ~~shall be amended as follows~~ is amended to read:

~~\_\_\_\_\_ 340.10 Uses Permitted: Type UF cables shall be permitted when remodeling existing one and two family one - and two family dwellings, only in underground exterior applications, and in conformance with the cable listing.~~

Article 348 Flexible Metal Conduit: Type FMC 348.10 is amended to read:

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~~Section 348.10~~ Uses Permitted: FMC shall only be permitted when fished into existing walls, wall and ceiling spaces with not more than (6) six feet exposed. Please refer to NEC 348.12 uses not permitted and NEC 348.20 size.

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Article 350 Liquid-tight Flexible Metal Conduit: Type LFMC 350.10 is amended to add (5):

~~Section 3(5) 50.10 Uses Permitted:~~ LFMC shall only be permitted in lengths not to exceed (6) six feet.

Article 352 Rigid Polyvinyl Chloride Conduit: Type PVC

Section 352.10 shall be amended as follows is amended as follows:

~~352.10.1~~ When permitted the transition at grade shall be 90 degree galvanized rigid metal conduit or Schedule 80 PVC.

~~Exception (1)~~ Conduits and sleeves used exclusively for utility cables.

~~Exception (2)~~ Conductors encased in concrete at Light Pole Bases.

~~352.10(A) Concealed shall be deleted in its entirety. deleted~~

~~Exception (1) Conduits encased in min 2 inches of concrete.~~

~~352.10(DC) Cinders: shall be deleted in its entirety. deleted~~

~~352.10(E) Dry and Damp Locations: shall be deleted in its entirety. deleted~~

~~352.10(F) Exposed: shall be deleted in its entirety unless approved by the authority having jurisdiction. deleted~~

~~(G) Deleted unless approved by the code official~~

~~(I) Deleted~~

~~(J) deleted~~

Article 356 Liquid Tight Flexible Non-Metallic Conduit: Type LFNC

Section 356.10 uses permitted shall be amended as follows:

Section 356.10 (5) is amended to read: shall be deleted in its entirety.

~~Installed in lengths not longer than 1.8 m (6 ft) where secured in accordance with 356.30.~~

Section 356.12 uses not permitted shall be amended as follows: (3) is amended to read:

Section ~~356.12 (3) in~~ lengths longer than 6 feet.

Article 358 Electrical Metallic Tubing: Type EMT

Section 358.12 (7) shall be added:

(a) Electrical metallic tubing ("EMT") shall not be used underground or in concrete bases or slabs.

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~~(1) Exception: EMT may be used in poured concrete only when installed above grade.~~

358.42(A) is added to read:

~~\_\_\_\_\_ (b) EMT shall not be installed using indenter type couplings and connectors.~~

~~360~~

~~Article 362 Electrical Non-Metallic Tubing: Type ENT shall be deleted in its entirety. 362 is deleted and not permitted.~~

~~Article 378 Non-Metallic Wireways: shall be deleted in its entirety. 378 is deleted and not permitted.~~

~~Article 382 Non-Metallic Extensions: shall be deleted in its entirety. 382 is deleted and not permitted.~~

~~Article 386 Surface Metal Raceway~~

~~Section 386.60(A) is added to read: 1 Grounding-~~

~~\_\_\_\_\_ Grounding. All surface metal raceways shall contain an equipment grounding conductor sized per table 250.122~~

~~Article 388 Surface Non-Metallic Raceways: shall be deleted in its entirety. is deleted and not permitted.~~

~~Article 393 Low-Voltage Suspended Ceiling Power Distribution Systems: shall be deleted in its entirety. is deleted and not permitted.~~

~~Article 394-10 Deleted. 10 is amended to read: Concealed Knob and Tube Wiring shall be amended as follows:~~

~~is amended to read:~~

~~Uses Permitted. New installations of Knob-and-tube wiring shall not be installed. Existing knob-and-tube wiring shall not be extended or modified.~~

~~625.40(A) is added to read: Section 394.10 Uses Permitted. New installations of Knob-and-tube wiring shall not be installed. Existing knob-and-tube wiring shall not be extended.~~

~~The EVSE branch circuit shall be at minimum provided with a 3/4" raceway and a 2-1/8" x 4-11/16" deep minimum box.~~

~~CHAPTER 4 EQUIPMENT FOR GENERAL USE:~~

~~690.31(H) is added to read:~~

~~\_\_\_\_\_ EMT shall be permitted for one-and-two family dwellings.~~

~~Article 408 Switch Boards Switch Gear and Panel Boards: shall be added to as follows:~~

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~~Section 408.54 (A) Mini-circuit breakers prohibited. All breakers shall be full sized, breakers known as mini, tandem, dual, twin, etc. shall not be permitted to be used in new or existing service or panel installations.~~

~~CHAPTER 6 SPECIAL EQUIPMENT:~~

~~Article 600 Electrical Signs and Outline lighting. Shall be amended to add the following:~~

~~Section 600.31 (F) Metallic Enclosures, On all neon signs, the high voltage transformer and high voltage equipment shall be installed in approved metal boxes and all metallic parts shall be grounded to the conduit.~~

~~Article 604 Manufactured Wiring Systems: shall be delete Article in its entirety.~~

~~Article 646 Modular Data Centers: shall be deleted in its entirety.~~

~~Article 66~~95 Fire Pumps: shall be amended as follows.

Section 695.5 (B) (1) Fire pump meter or cabinet: shall be sized in accordance with table 430.251 (B) Conversion of Polyphase Design b, c, and d Maximum Locked Rotor Currents.

(Ord. No. 018-014, § 1(Exh. A), 1-23-18)

**Editor's note**—Ord. No. 018-014, § 1(Exh. A), adopted January 23, 2018, repealed the former § 12-31, and enacted a new § 12-31 as set out herein. The former § 12-31 pertained to definitions and derived from Ord. No. 092-37, § 1, 6-2-92.

**Secs 12-33 - 12-100 (Reserved)**

**Editor's note**—Ord. No. 018-014, § 1(Exh. A), adopted January 23, 2018, repealed §§ 12-33—12-100, which pertained to electricity and derived from Ord. No. 092-37, § 1, 6-2-92; Ord. No. 093-05, § 4, 1-5-93; Ord. No. 099-41, §§ 2-10, 12, 6-8-99; Ord. No. 001-17, § 1, 2-27-01.