CITY OF AURORA, ILLINOIS
DIVISION OF BUILDING & PERMITS
ELECTRICAL COMMISSION MEETING MINUTES
Meeting held
Feb 23RD 2017, at 2:30 PM, at the
Building and Permits Division, 65 Water Street, Aurora, Illinois.
Committee Members Present: Martin, Marshall, Kluber, Chief Krienitz, Thomas
Additional Attendees: Ex-Officio: Beneke, Curley
Additional Staff Present: Jason Elsenbroek, Ron Bergstrom
2:32 PM called to order.

Future Agenda Development Discussed
a. Call to Order
b. Roll Call
c. Public Speaking opportunity – 7 minutes
d. Meeting minutes
e. Desire to have an Inspectors Report to the
   commission will be added to the agenda
f. Licensing Issues
g. Code Adoption and amendments
h. Old Business
i. New Business
j. Action Items
k. Open Discussion
l. Adjournment

Frequency of meeting as a commission - Quarterly

The purpose of this Electrical Commission Meeting is to consider the following:
1. **Deliberation of Proposed 2014 National Electrical Code (NEC) Adoption**
   a. Annex H- NEC Administration and Enforcement (formerly IBC appendix K)
   b. Local NEC Amendments - Article III Electricity (non-one & two family structures)
   c. Amendments to affected portions of the adopted Aurora Building Code
   d. Amendments to affected portions of the 2009 International Existing Building Code (IEBC).
   e. Amendments to affected portions of the 2009 International Residential Code (IRC)
   f. Amendments to affected portions of the 2009 International Residential Code (IRC) Appendix J (existing buildings
      and structures)

2. **Staff handed out most recent draft and clean copy (Feb 23, 2017) of the 6 documents to deliberate.** Note that all
   proposals are based upon the 2014 recommendation to adopt the 2011 NEC as a starting point. Staff has adjusted to meet the
   2014 differences from 2011 and then added a few other suggestions.
   a. Annex H- NEC Administration and Enforcement (formerly IBC appendix K)
      i. 111.3 change proposed on page 4
      ii. Recommendation to forward to City Council for adoption
         1. Motion by Krienitz second by Thomas
         2. Vote - 5 ayes 0 nays
   b. Local NEC Amendments - Article III Electricity (non-one & two family structures)
      i. Staff proposals modified from 2014 are highlighted in red comments on the right.
      ii. Recommendation to forward to City Council for adoption
         1. Motion by Krienitz second by Marshall
         2. Vote - 5 ayes 0 nays
   c. Amendments to affected portions of the adopted Aurora Building Code
      i. Staff proposals modified from 2014 are highlighted in red comments on the right.
      ii. Recommendation to forward to City Council for adoption
         1. Motion by Thomas second Marshall
         2. Vote - 5 ayes 0 nays.

3. **Next Meetings**
   a. Continued meeting to 3:30 2nd March

4. **Adjourn to next meeting**
   a. Motion by Marshall all were in favor. 4:20PM

Director Division of Building & Permits
John P. Curley AIA, CBO

Date: 24 FEB '17
CHAPTER 12 BUILDINGS AND
BUILDING REGULATIONS*
ANNEX H. ADMINISTRATIVE PROVISIONS

*Cross reference(s)--Airport zoning, § 5-36 et seq.; erosion and sedimentation control, Ch. 15; fire prevention codes and standards, § 17-101 et seq.; floodplain management, Ch. 18; open housing, § 22-41 et seq.; planning and development, Ch. 34; preservation, Ch. 37; awnings, § 42-176 et seq.; subdivisions, Ch. 43; zoning, App. A.--State law reference(s)--Powers of home rule units, III, Const. art. VII, § 6.

ARTICLE III. ELECTRICITY*
ANNEX H. ADMINISTRATIVE PROVISIONS

Section 12-31: shall be deleted in its entirety and replaced with 12-31 ELECTRICAL CODE ADMINISTRATIVE PROVISIONS below.

Sec. 12-31. 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 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 &Two Family structures; refer to the adopted International Residential Code - Appendix J.
   b. Non-One &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).
The text on the page appears to be a continuation of the previous content, discussing maintenance and safety regulations for electrical systems, equipment, and related materials. The text mentions the importance of proper installation, maintenance, and safety precautions, including the requirement of building officials to ensure compliance with the code.

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 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 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 not associated with fire alarm or other life safety 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.
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.
9. Wiring replacement for industrial machinery from existing switch or existing disconnect where the circuit conductors are of adequate size.
10. Wiring replacement for electrified signage from existing switch or existing disconnect where the circuit conductors are of adequate size.
11. Replacement of meter sockets or masts on services where no new conduit or conductors are changed enlarged or replaced.
11. Items indicated in NEC 90.2(B).
12. Single family owner occupied home projects not requiring special knowledge (see IBC section 117): where the equipment and material costs are less than $250.

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

111.5 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.

111.6 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.

111.7 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.
CHAPTER 12 BUILDINGS AND
BUILDING REGULATIONS* ELECTRICITY

*Cross reference(s)—Airport zoning, § 5-36 et seq.; erosion and sedimentation control, Ch. 15; fire prevention codes and standards, § 17-101 et seq.; floodplain management, Ch. 16; open housing, § 22-41 et seq.; planning and development, Ch. 34; preservation, Ch. 37: awnings, § 42-176 et seq.; subdivisions, Ch. 43; zoning, App. A.—State law reference(s)—Powers of home rule units, Ill. Const. art. VII, § 6.

ARTICLE III. ELECTRICITY*

Sec. 12-32. City of Aurora Electrical Ordinance shall be deleted and replaced with the following.
1) The provisions herein shall govern installations in Non-One & Two Family structures.
   a) Electrical provisions for existing Non-One & 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 & Two Family structures additionally shall refer to the current International Residential Code Part VIII—Electrical as amended
   a) Electrical provisions for existing One & 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, three (3) 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.
   • 2014 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 210 Branch Circuits shall be added to as follows:
II. Branch-Circuit Ratings
   Subsection to 210.23 shall be added as follows:
   210.23(E) 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.

Article 230 Services shall be added to/amended as follows:
II. Overhead Service Conductors
   Section 230.23(B) Minimum Size. The conductors shall not be smaller than 6 AWG copper or 1/0 AWG aluminum.
III. Underground Service Conductors
   Section 230.31(B) Minimum Size: 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 Volts, Nominal, or Less shall be amended as follows:
   230.43(1) Open Wiring on Insulators: Deleted.
   230.43(2) Type IGS Cable: Deleted.
   230.43(3) Electrical Metallic Tubing (EMT): Deleted.
   230.43(7) Service-entrance Cables: Deleted.
   230.43(8) Wireways: Deleted.
   230.43(12) Cablebus: Deleted.
   230.43(13) Type MC 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(1) All service entrance conduit for overhead service drops shall be supported by galvanized 2 piece backstraps 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: Main Service Disconnecting means shall be located at the meter location.

Article 250 Grounding & 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) Methods not Permitted: Sheet-metal strap type ground clamps shall not be used for connecting a grounding electrode conductor to a grounding electrode.

XI. Grounding Conductors shall be added to as follows:
Chapter 3 Wiring Methods and Materials

Article 310 Conductors for General Wiring

Table 310.15 (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 104, when engineering calculations are provided in conformance with fill and amperage derating per Chapter 9 of the NEC.

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

Plastic device and junction boxes 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.

Section 320.10 Uses Permitted shall be deleted and replaced with the following:

320.10 Uses Permitted: Type AC cable shall not be permitted

Exception (1) Except where included as a factory assembled subcomponent of a manufactured system.

Article 322 Flat Cable Assemblies: Type FC shall be deleted in its entirety.

Article 324 Flat Conductor Cable: Type FCC shall be deleted in its entirety.

Article 326 Integrated Gas Spacer Cable: Type IGS shall be deleted in its entirety.

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

330.10 Uses Permitted: Type MC cable shall only be permitted when fished into existing walls with not more than (6) six feet exposed.

Exception (1) Except where included as a factory assembled subcomponent of a manufactured system.

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

Article 334 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.

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:

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

Article 348 Flexible Metal Conduit: Type FMC.

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

Article 350 Liquid-tight Flexible Metal Conduit: Type LFMC.

Section 350.10 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:

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) Conduits encased in concrete at Light Pole Bases.

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

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

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

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

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

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

Section 356.10 uses permitted shall be amended as follows:

Section 356.10 (5) shall be deleted in its entirety.

Section 356.12 uses not-permitted shall be amended as follows:

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

Article 358 Electrical Metallic Tubing: Type EMT

Section 358.12 shall be added.

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

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

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

Article 362 Electrical Non-Metallic Tubing: Type ENT shall be deleted in its entirety.

Article 378 Non-Metallic Wireways: shall be deleted in its entirety.

Article 382 Non-Metallic Extensions: shall be deleted in its entirety.

Article 386 Surface Metal Raceway
Article 388 Surface Non-Metallic Raceways: shall be deleted in its entirety.
Article 393 Low-Voltage Suspended Ceiling Power Distribution Systems: shall be deleted in its entirety.
Article 394 Concealed Knob and Tube Wiring shall be amended as follows:
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.

Chapter 4 Equipment for General Use:
Article 408 Switch Boards Switch Gear and Panel Boards: shall be added to as follows:
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 695 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,d Maximum Locked Rotor Currents.

City of Aurora Code of ordinances Chapter 12 - Sections 33-100. Shall be deleted and marked as ‘Reserved’.
CHAPTER 12 BUILDINGS AND BUILDING REGULATIONS*
ARTICLE I BUILDING CODES
PLUMBING, PERMITTING & LICENSING PROVISIONS

*Cross reference(s)—Airport zoning, § 5-36 et seq.; erosion and sedimentation control, Ch. 15; fire prevention codes and standards, § 17-101 et seq.; floodplain management, Ch. 18; open housing, § 22-41 et seq.; planning and development, Ch. 34; preservation, Ch. 37; drainage, § 42-176 et seq.; subdivisions, Ch. 43; zoning, App. A. —State law reference(s)—Powers of home rule units, Ill. Const. art. VII, § 6.

ARTICLE I. BUILDING CODES*

Sec. 12-16 through 12-17. Additions, insertions, deletions and changes.
ARTICLE I. AURORA BUILDING CODES

A certain document, three (3) copies of which are on file in the office of the Building Code Official of the City of Aurora, Illinois, being marked and designated as,

- "2009 International Building Code - including Appendix Chapters (A, B, E, F, K);
- 2009 International Mechanical Code - including Appendix Chapter (A);
- 2009 International Fuel and Gas Code - including Appendix Chapters (A, B, C, D);
- 2009 International Residential Code - including Appendix Chapters (E, F, G, J, K, M, O, P);
- 2009 International Existing Building Code - including Appendix Chapters (A, B);
- 2009 International Fire Code - including Appendix Chapters (A, B, C, D, F, H, I, J)."

as published by the International Code Council, Inc. and adopted as the building code of the City of Aurora, Illinois in the State of Illinois; for the control of buildings and structures as herein provided; and each and all of the regulations, penalties, conditions, and terms of said 2009 International Codes 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 section 12-17.1 through 12-17.8 of this article. Nothing in this ordinance or in the Aurora Building Code hereby adopted shall be construed to affect any suit or proceeding impeding in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in section 12-17.1 through 12-17.8 of this ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

Furthermore the following code standards are adopted as modified
- Current State of Illinois Plumbing Code
- Current State of Illinois Energy Conservation Code
- Current Illinois State Safety Code for Elevators and Escalators consisting of the following American Society of Mechanical Engineers (ASME), American National Standards (ANSI), and American Society of Civil Engineers (ASCE) standards, and any additional references required by the State of Illinois.
  - Safety Code for Elevators and Escalators (ASME A17.1-), A 17.1 (a), and A17.1(s).
  - Guide for Inspection of Elevators, Escalators, and Moving Walks (ASME 17.2)
  - Safety Code for Existing Elevators and Escalators (ASME A17.3)
  - Safety Standard for Platform Lifts and Stairway Chairlifts (ASME A 18.1): and
  - Standard for the Qualification of Elevator Inspectors (ASME QEI-1)
  - Safety Requirements for Personal Hoists and Employee Elevators (ANSI A10.4)
  - Automated People Mover Standards (ASCE 21).
- Current State of Illinois Life Safety Code for existing buildings (Portions of NFPA#101 plus Annex A & B) as adopted and required by the State Fire Marshal’s Office
- 2014 National Electrical Code (NFPA 70) and Annex H as amended by Article III. Electricity Sec. 12-31 and 12-32 of the Aurora Code of Ordinances.
  (Code 1969, § 12-1; Ord. No. 089-19, § 1, 3-7-89; Ord. No. 095-47, § 1, 7-5-95, Ord. No. 001-47, 05 June 2001; Ord. No. O10-017, 11 May 2010)
ARTICLE II. BUILDING CODE

CHAPTER 1

105.2 Work exempt from permit. Exemptions from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Note that exterior changes in a historic district, Fox Walk district or if a historic structure you will be required to obtain a certificate of appropriateness. Building Permits shall not be required for the following:

Building:

1. Oil derricks.
2. Retaining walls which are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or III-A liquids.
3. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons (18,927 L) and the ratio of height to diameter or width does not exceed 2 to 1.
4. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
5. Temporary motion picture, television and theater stage sets and scenery.
6. Prefabricated swimming pools accessory to a Group R-3 occupancy, as applicable in Section 101.2, which are less than 24 inches (510 mm) deep, do not exceed 5,000 gallons (19,000 L) and are installed entirely above ground.
7. Shade cloth structures constructed for nursery or agricultural purposes and not including service systems.
8. Swings and other playground equipment accessory to one- and two-family dwellings.
9. Window awnings supported by an exterior wall of Group R-3, as applicable in Section 101.2, and Group U occupancies.
10. Movable cases, counters and partitions not over 5 feet 9 inches (1753 mm) in height.
11. Electrical Installations per Article III. ELECTRICITY - section 103.2 and NEC 90.2 are exempt from permit.
12. Storable or prefabricated swimming pools that are disassembled in their entirety and put into storage between the dates of September 15 and May 15 of each year.
13. Windows/Doors that are being replaced that do not alter the framing ogress requirements are exempt from a building permit. Note that if in a historic district, Fox Walk district or if a historic structure you will be required to obtain a certificate of appropriateness. Additionally the State Adopted Energy Conservation Code shall be adhered to.
15. Drain tile and ground water sump projects with a dedicated simplex pump receptacle and discharge further than 15 feet from property lines. Note that any associated structural work will require a permit.
16. Siding replacement. Note that if in a historic district, Fox Walk district or if a historic structure you will be required to obtain a certificate of appropriateness.

The following Section shall be added:

SECTION 117 REGISTRATION OF CONTRACTORS

117.1 No construction work, as set forth in Section 117.2 through 117.8 in which; the material cost exceeds one hundred dollars ($100.00), or the material plus the labor costs exceed two hundred and fifty dollars ($250.00) per discipline; may be installed, or replaced within the City of Aurora except by persons, firms, or corporations duly registered to perform such work, except as hereinafter provided, and then only, after a permit has been obtained to cover such work. Registrations shall be issued by the Division of Building and Permits to those persons, firms, or corporations qualified to perform such work, as set forth in this Section and as determined by the code compliance officers. Companies and corporations, upon transfer of ownership, shall be required to meet the testing requirements and apply for new licensure. Copies of Photo ID's, State trade contractor licenses, and State business registrations will be required as applicable.

117.1.1 Registration fee: The fee for contractor's registration shall be one hundred dollars ($100.00) per year and per trade. Said registration(s) shall be renewed annually unless stated otherwise in the specific trade regulations below.

117.1.2 Single Family Dwelling Property owner exemption: The provisions herein contained shall not require an owner of record having occupied the subject single-family dwelling from personally doing his own work on said owner-occupied single-family dwelling to obtain a registration; provided that said owner of record will continue to live in the residence for a period of not less than six (6) months after the completion of the construction and submits the required identification(s) and recordings demonstrating current occupancy of the structure and an owners' affidavit attesting to current and continuing occupancy.

117.1.2.1 Projects requiring special knowledge: projects requiring special knowledge and training indicated below shall be performed by a licensed contractor.

a) Electrical Work
1) New Service and service replacements
Proposed 2017 -- Aurora Electrical Code - CHAPTER 12 - licensing and permitting provisions.docx

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2) Alternative power generation equipment (Photovoltaic, Wind turbines, Generators, etc.) shall be installed by licensed contractors with training specialized in their installation.

117.1.2.2 **Hired Assistance Prohibited:** Owner of record occupying a single-family dwelling wishing to do their own work without a licensed contractor per 117.1.2 shall be prohibited from hiring assistance in any way on the project without the hired assistant becoming a licensed contractor in the appropriate trade. Owner may be subject to fines up to two times the permit fees in penalties should permit applications fraudulently indicate the owner is doing the work when they have hired persons engaging in the work.

117.1.2.3 **CDBG or HOME funded volunteer based projects:** benefiting low-moderate income homeowners at their homestead are exempt from licensed contractor requirements and shall be permitted under the property owner exemption. Depending upon timeframe and work hours of the volunteer project, in relation to Building and Permits normal work hours, inspection requirements and permit closing requirements may additionally be modified as determined by the Building Code Official.

117.1.2.4 **Apprentice Programs or Board of Education volunteer based projects:** benefiting not-for-profits OR low-moderate income homeowners at their homestead are exempt from licensed contractor requirements and shall be permitted under the supervision of a journeyman or a certified instructor.

117.1.6 Contractor Testing:

117.1.6.1 Tests shall be taken by a Qualifying Party

117.1.6.1.1 **Qualifying party:** means the individual filing as a sole proprietor, partner of a partnership, officer of a corporation, who is legally qualified to act for the business organization in all matters connected with its contracting business and has the responsibility to supervise installation operations, and is actively engaged in day to day activities of the business organization.

117.1.7 **ICC testing:** In addition to the requirements below, written Examination from the International Code Council OR reciprocal testing from another acceptable municipality shall also be required as qualification for registration in the following registration categories.

117.1.7.1 HVAC contractors

117.1.7.1.1 ICC - Master Mechanical Certification

117.1.7.2 Electrical contractors

117.1.7.2.1 Commercial Electrical Contractor registration; ICC – Standard Master Electrician.

117.1.7.2.2 Residential Electrical Contractor registration; ICC – Standard Residential Electrician.

117.1.7.2.3 Signage Electrical Contractor registration; ICC – Standard Journeyman Sign Electrician OR an ICC – Standard Master Electrician certification.

117.6 **REGISTRATION OF ELECTRICAL CONTRACTORS**

117.6.2 Qualifications: To qualify for registration; Registration shall be issued to those individuals, partnerships, corporations, business trusts, limited liability companies, or other legal entities upon payment of fee and fulfillment of bond and insurance requirements. A Qualifying Party of the firm or corporation must first pass a written examination, as provided by section 117.1.6 or 117.1.7.

117.6.2.1 New Registration: The following procedures shall be followed in obtaining a new electrical contractor's Registration:

a. ICC Certification: Present to Aurora ICC electrical contractor certification

b. Reciprocal Registration: Contractors specifically licensed as electrical contractors in other municipalities may be issued registration by reciprocity, provided that the code compliance officer/electrical accepts the equality of the testing procedure under which the candidate obtained his original registration. Contractor's registration in another municipality to perform electrical work solely on residential property shall be registration in Aurora only for residential work (one-family or two-family residences). Contractors shall still make payment for a registration and conform to the bonding requirements set forth in this section.

117.6.3 Registration of Electrical maintenance persons;

Any person involved in maintenance work, who may be doing electrical repairs, alterations or installations and directly employed, for the preceding twelve (12) months, for any industrial uses, firm, corporation or industry located within the city limits must be registered with the director of Building & Permits. Upon registration, such maintenance person shall be authorized by the director of Building & Permits to engage in such electrical repairs, alterations or installations only as pertains to the firm, corporation or industry in which he is employed.

117.6.3.1 The correction of violations of this article may be performed by maintenance people only if the code compliance officer/electrical determines that the violations to be corrected do not endanger life, safety or property. Corrections of unsafe conditions endangering life, safety or property must only be made by a licensed electrical contractor.
R403 - FOOTINGS

The following subsection shall be added
R403.1.8 Concrete-encased electrode.

E3608.1.2 Concrete-encased electrode.

Unless otherwise accepted by the building official, a concrete encased electrode shall be installed in new structures with an electrical service per Section E3608.1.2 of this code.