

**RESOLUTION NO. 092-2024**

Date Adopted: May 1, 2024

Date Published: \_\_\_\_\_

Effective Date: January 1, 2025

**A RESOLUTION TO ADOPT THE NATIONAL ELECTRICAL CODE,  
2023 EDITION**

**WHEREAS**, pursuant to K.S.A. 12-1527, any city or county may adopt and enforce electrical codes, standards, and regulations as their governing bodies deem appropriate; and

**WHEREAS**, pursuant to K.S.A. 19-101d, the Kansas State Legislature granted the Board of County Commissioners of Sedgwick County the authority to enforce all resolutions passed pursuant to county home rule powers; and

**WHEREAS**, the Board of County Commissioners adopted the Wichita-Sedgwick County Unified Building and Trade Code ("UBTC") within Sedgwick County Resolution 175-2012; and

**WHEREAS**, Article 4 of the UBTC contains the Electrical Code; and

**WHEREAS**, this Resolution adopts and incorporates the National Electrical Code, 2023 Edition, with local amendments, into Article 4 of the UBTC.

**NOW, THEREFORE, BE IT RESOLVED THAT THE BOARD OF COUNTY COMMISSIONERS OF SEDGWICK COUNTY, KANSAS, AMENDS THE WICHITA-SEDGWICK COUNTY UNIFIED BUILDING AND TRADE CODE AS FOLLOWS:**

***SECTION 1.***

***SECTION 4.A.050 – Definitions is hereby amended to read as follows:***

In addition to the definitions given in this Section, words and terms used in this Code shall be as defined in the National Electrical Code as referred to and adopted in Article 4.1 of this Code.

*"Apprentice"* means an individual who works as an employee in training under the direct supervision of a Journeyman or Master (while performing electrical work). An Apprentice is not a certified individual.

*"Approved"* as used in reference to materials or methods of construction, means that which

conforms to standards as set forth in Section 2.010 of this Code and that which meets the approval of the Director of the MABCD or designee(s) of electrical and elevator section or the Board of Electrical Appeals as the result of tests and investigations made by recognized technical or scientific organizations.

*"Board"* means the Board of Appeals appointed for electrical, elevator, alarm and renewable energy.

*"Building Code,"* as used in this Code, means Article 2 of this Code.

*"Code"* means the National Electrical Code, ASME Elevator Safety Codes, and Renewable Energy Codes as adopted by the MABCD, as the context of this Article may require.

*"Code Official"* as used in this Code, means the Director of the MABCD or designee(s) of electrical and elevator section.

*"Direct supervision"* means that the apprentice/helper is limited to the same structure and/or building site as the Journeyman or Master,

*"Electrical Contractor"* is a person, firm or corporation licensed to bid, plan, layout, install and supervise the installation of electrical wiring, or the installation of electrical equipment, devices or apparatus for light, heat or power purposes in or on any building or premises.

*"Field Experience"* means working under the direct supervision of a person having a valid Journeyman or Master certificate or attending trade related schooling. No more than one year of the requirement may be satisfied by trade related schooling. Schooling shall consist of a minimum of the required hours per state statute.

*"Helper"* means an individual who works as an employee in training under the direct

supervision of a Journeyman or Master (while performing electrical work). A helper is not a certified individual.

*"Job site"* is defined as the property that an individual permit is issued for.

*"Journeyman"* means an individual working for a licensed contractor as defined in this Section and engaged principally in the occupation of erecting, installing, altering, repairing, servicing or maintaining in any or all of the following classifications and who is duly certified as herein set forth to engage in such occupation: A Journeyman is responsible for the supervision of any apprentice/helper assigned to work with them.

*"Licensed contractor"* means a person, firm, partnership, corporation, limited liability company, association or combination thereof, who undertakes or offers to undertake for another, for hire, the planning, laying out, supervising and installing or making additions, alterations, and repairs in the installation of electrical, elevator, accessibility lift, alarm, or renewable energy.

*"Licensed trade"* or *"trade"* means the electrical, elevator, accessibility lift, alarm, or renewable energy, as the context of this article may require.

*"Master"* means an individual that holds a Master certificate issued pursuant to this article evidencing such person to be qualified to lay out, install, maintain and repair work in their area of expertise. A Master is responsible for the supervision of any apprentice/helper area of expertise. A Master is responsible for the supervision of any apprentice/helper assigned to work with them.

*"Person"* means a natural person, his heirs, executives, administrators or assigns, and

including a firm, partnership or corporation, its or their successors or assigns. Singular includes plural, male includes female.

*"Qualified Master"* or *"Qualified Person"* means an individual who holds a Master certificate issued pursuant to this article evidencing such person to be qualified to control and have authority of all technical work performed under the authority of the licensed contractor's enterprise, and assures quality control and is responsible for complying with all applicable laws, Codes and regulations. An individual shall not be the Qualified Master or Qualified Person for more than one licensed contractor's enterprise.

*"Temporary"* as used in this section is a period of time not to exceed ninety (90) days in a calendar year.

## ***SECTION 2.***

***SECTION 4.1.020 – Electrician's certificates – Application – Examination is hereby amended to read as follows:***

All applications for examination for a master electrician's certificate or a journeyman electrician's certificate or a residential wireman electrician's certificate shall be made to the office of the MABCD. MABCD shall establish a list of approved exams. The fee for an examination for a master electrician, journeyman electrician or residential wireman electrician shall be established by the Director of the MABCD, to cover the administrative costs.

Applicants for master electrician examination shall provide written documented proof of having a valid journeyman electrician certificate for a minimum of two (2) years.

Applicants for journeyman electrician and residential wireman electrician shall provide written

documented proof of at least two (2) years field experience in the electrical construction industry. “Field experience” means working under the direct supervision of a person having a valid journeyman certificate or master certificate or attending an accredited electrical trade school. No more than one (1) year of the requirement may be satisfied by trade related schooling. Schooling shall consist of a minimum of the required hours per state statute. Documentation shall be the following:

Written letter on company letterhead from employer(s) stating job description and dates of employment and signed by a person qualified in the electrical trade; and

Copy of a transcript or attendance record from an accredited electrical trade school.

The MABCD approved electrical examination will be administered in accordance with K.S.A. 12-1525 and amendments thereto, with a minimum passing score of seventy-five percent (75%).

### ***SECTION 3.***

***SECTION. 4.1.025. - Electrician's certificates—Reciprocity is hereby amended to read as follows:***

Any person with written proof of successful completion of the required electrical master, journeyman or residential wireman electrician test pursuant to K.S.A. 12-1525 and amendments thereto, with a minimum score of seventy-five percent, and with proof of having obtained, since January 1, 2006, not less than 12 hours biennially of continuing education approved by the MABCD, shall be issued the appropriate license by the Director of the MABCD or the designated representative. The MABCD shall establish a list of approved exams and a uniform fee to be charged to all applicants for licenses.

### ***SECTION 4.***

***SECTION 4.1.050 – Electrical work performed by owner-occupants of owner-occupied or to be owner-occupied detached single-family dwellings is hereby amended to read as follows:***

*Repairs, Replacements, and Maintenance.* A person who has received approval of a schematic electrical drawing from the electrical inspector or showing the proper electrical symbols and all the circuitry for the complete project, shall be issued a permit to alter, repair, replace, or maintain any electrical work on the load side of the service panelboard in a single-family dwelling used exclusively for living purposes, including the usual accessory buildings in connection with such buildings in the event that such person is the bona fide owner of such dwelling and accessory buildings, and that the same are occupied by the owner, provided, that said owner shall personally perform all labor in connection therewith. Said person shall call for inspections and otherwise observe all the applicable provisions of this Code.

*New Installations in Existing Single-family Residences.* The owner-occupant of a detached single-family dwelling may obtain a permit for any electrical installations on the load side of the service panelboard in the main structure and the usual accessory buildings thereto upon fulfillment of exam and plan review requirements as outlined elsewhere in this section. The owner obtaining said permit shall personally purchase all materials and shall personally perform all labor in connection with the permitted project. The owner shall call for all inspections and otherwise observe all the applicable provisions of this Code.

*Electrical Installations by Owner-occupants Constructing New Single-family Residences.* Persons constructing a new detached single-family residence for their own personal use may be permitted to install all electrical work, on the load side of the service panelboard, in the main structure and the usual accessory structures thereto upon fulfillment of exam and plan review

requirements as outlined elsewhere in this section. The owner-occupant shall call for inspections and otherwise observe all of the applicable provisions of this Code; provided, however, that the service entrance raceway, service entrance conductors, meter base, grounding and service panelboard shall be installed by a licensed electrical contractor. The contractor shall obtain a separate permit and call for the service related inspections.

*Examinations and Plan Reviews for Installations Required.* Owner-occupants applying for permits for installations as outlined above shall first qualify themselves by successfully passing a simplified open book examination dealing with relevant provisions of the Electrical Code. The fee for said examination shall be established by the Director of the MABCD to cover the administrative costs. Successful passage of the examination shall qualify the applicant for future permits until the time of the adoption of another edition of the National Electrical Code by the MABCD.

Prior to permit approval, the applicant shall submit a plan of the installation drawn in a format acceptable in sufficient details to satisfy the Code official of the overall Code compliance of the anticipated drawing showing the proper electrical symbols and all the circuitry for the complete project. The fee for such plan review shall be established by the Director of the MABCD to cover the administrative costs. Plan submissions requiring extensive review and/or modification may be billed at a rate established by the Director of the MABCD to cover the administrative costs for each additional half hour or portion thereof beyond the original half hour upon prior notification to the applicant of such additional charges.

Permit fees shall be as set forth elsewhere in this Section and in Article 2 of this Code; provided, however, that each additional inspection owing to detected Code deficiencies requiring

correction shall be billed at a rate established by the Director of the MABCD to cover the administrative costs. Permits for electrical installations shall be limited to one in three years to each applicant unless a waiver is obtained, upon written application, from the Board of Electrical Appeals.

## **SECTION 5.**

***SECTION. 4.1.090. – Firm or corporation wiring is hereby amended to read as follows:***

### ***SECTION 4.1.090. - License - Firm or corporation wiring***

Any person not engaged in the business of electrical installation, within the scope of this Code, who has in his regular and permanent employ a person or persons who possess current and valid master electrician certificates, shall be permitted to have such person or persons to install electrical wiring or otherwise perform electrical work in or on buildings or premises that are owned, leased, operated or managed by him, provided that such person or persons first become the Qualified Master(s) for the business by obtaining the necessary license and all the necessary permits for such electrical work. This shall not be construed, however, to allow the installation of electrical wiring in new buildings or to additions to existing buildings. Permits shall be obtained for such work as required in Section 4.1.110 of this Code, and the same shall be issued to the person causing the work to be done.

## **SECTION 6.**

***SECTION. 4.1.120. - Work exempt from permit is hereby amended to read as follows:***

The following work shall be exempt from the requirement for a permit.

- (a). Listed cord and plug connected temporary decorative lighting;
- (b). Communication wiring except as required by Chapter 3.40 of the Code of the City of

Wichita.

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.

*"Temporary"* as used in this section is a period of time not to exceed ninety (90) days in a calendar year.

## **SECTION 7.**

***SECTION 4.2.010 – Installation standards is hereby amended to read as follows:***

All electrical installations made shall be in strict conformity with the provisions of this Code. If sections contained within this Code, in a given situation, do not prescribe a specific type or class of material or specific standards of construction, then the standards as set forth and contained in the National Electrical Code, 2023 Edition including Informative Annex C (Conduit and Tubing Fill Tables), as published by the National Fire Protection Association as N.F.P.A. No. 70-2023, as presently constituted and as may be hereinafter amended, shall apply, with the exception of Section 225.30(b) of such publication. Said N.F.P.A. No. 70-2023, was adopted by the National Fire Protection Association at its 2022 June Technical Session and approved as an American National Standard on September 1, 2022. By this publication, all provisions of such publication, with noted exceptions, are adopted by reference and made a part of this Code, and this Section as though fully set forth herein.

## **SECTION 8.**

***SECTION. 4.2.035. – Working space about electrical service is hereby amended to read as follows:***

Section 110.26(A)(3) of the National Electrical Code (NEC) shall be amended to read as follows:

***Exception #4:*** One- and two-family and multifamily dwellings, electrical service equipment panels located in garages, basements or accessory structures, a footing or stem wall that is located below the electric panel shall be permitted to extend not more than 12 inches beyond the front of the electric panel.

***SECTION 9.***

***SECTION. 4.2.037. – Ground Fault Protection of Equipment – Performance Testing is hereby deleted.***

***SECTION 10.***

***SECTION. 4.2.038. – Arc Energy Reduction – Performance Testing is hereby deleted.***

***SECTION 11.***

***SECTION 4.2.045 – Services – Other than one-family and two-family dwellings - Maximum amps, volts, length, etc. is hereby amended to read as follows:***

Section 230.70 of the National Electrical Code (NEC) shall be amended to read as follows:

(a). Service Length. Unfused service entrance conductors shall not be extended more than fifteen feet inside any building.

***SECTION 12.***

***SECTION 4.2.055 – Feeder or branch circuit – disconnecting means – location is hereby amended to read as follows:***

Section 225.32 of the National Electrical Code (NEC) shall be amended to read:

(a). For Commercial feeders and Branch Circuits.

(1). The disconnecting means shall be installed either inside or outside of the building or structure served or where the conductors pass through the building or structure and shall meet the requirements of Section 225.34. The disconnecting means, if installed on the exterior of the building or structure, shall be at a readily accessible location nearest the point of entrance of the conductors. The disconnecting means, if installed inside the building or structure, shall be at a readily accessible location and located so the total length of conductor shall not be extended more than fifteen (15) feet inside of the building or structure. For the purposes of this section, the requirements of Section 230.6 shall be utilized.

(b). For one-family and two-family dwellings and their accessory structures.

(1). The disconnecting means shall be installed outside on the building or structure served. The disconnecting means shall be at a readily accessible location. The conductors shall terminate in the disconnecting means prior to entering the structure.

NEC exceptions permitted.

### ***SECTION 13.***

***SECTION. 4.2.060. - Branch circuit panelboard requirements is hereby deleted.***

### ***SECTION 14.***

***SECTION. 4.2.070. - Conductor requirements is hereby amended to read as follows:***

(a). Commercial and Industrial.

(1). Type. All commercial and industrial wiring conductors rated one hundred (100) amperes or less, including all service conductors shall be copper.

(2). Minimum Size. The minimum branch circuit wiring conductor size shall be No. 12 AWG copper.

(b). Residential.

(1). All residential and accessory building wiring conductors less than ninety (90) amperes shall be copper.

Note: Grounding conductors installed in the same raceway or cable with the above listed aluminum conductors may be allowed to be aluminum when sized per Article 250 of the currently adopted National Electrical Code.

## **SECTION 15.**

**SECTION. 4.2.090. - Color Code—Branch circuits** *is hereby amended to read as follows:*

Where installed in raceways, as cable or as open work, all conductors connected to the same system shall conform to the following color Code:

(1). Three-phase, four-wire 120/208 volt - phase A - black, phase B - red, phase C - blue, grounded conductor - white;

(2). Three-phase, four-wire 277/480 volt—phase A - brown, phase B - orange, phase C - yellow, grounded conductor - gray.

(3) The grounded conductor of a three wire 240 volt delta system shall be identified by alternating white and red stripes encircling the conductor.

(4). The grounded conductor of a three wire 480 volt delta system shall be identified by alternating gray and orange stripes encircling the conductor.

(5). Ungrounded circuit conductors used as switch legs or travelers between 3-way and 4-way switches shall be of colors other than those specified in (1) and (2) above, or permanently identified as a traveler or switch leg.

(6). All conductor sizes 6 AWG or smaller shall be identified by a continuous outer finish along its entire length. Sizes larger than 6 AWG shall be identified, at time of installation, by distinctive color markings at its terminations. This marking shall encircle the conductor or insulation.

(7). All circuit conductors of the same color shall be connected to the same ungrounded conductor throughout the premises wiring system(s).

**SECTION 16.**

**SECTION. 4.2.135. - Type NM, NMC and NMS cable ran exposed in unfinished basements is hereby deleted.**

**SECTION 17.**

**SECTION. 4.2.140. - Arc-making devices—Clearance from gas meters is hereby deleted.**

**SECTION 18.**

**SECTION. 4.2.150. - Ceiling grid support wires is hereby amended to read as follows:**

The following is added to the Section 300.11(B) of the National Electrical Code (NEC):

**Exception No. #2:** MC cable or flexible metal conduit may be attached to the ceiling grid support wires serving lighting fixtures located within the ceiling grid area where all the following conditions apply.

(1). The MC cable or flexible metal conduit must not be larger than trade size ½ inch.

(2). Only a single MC cable or flexible metal conduit may be attached per ceiling grid support wire.

(3). Only clips or devices approved for the purpose may be used to attach the MC cable or flex to the support wires.

Fire Rated ceiling assemblies shall not be used to support electrical raceways and all raceways installed within fire rated ceiling assemblies shall be provided with independent support.

## **SECTION 19.**

***SECTION 4.2.165. – Sewage ejector pumps and sump pumps is hereby amended to read as follows:***

***SECTION. 4.2.165. - Sewage ejector pumps and sump pumps – GFCI Protection is hereby amended to read as follows:***

Ground fault circuit interrupter protection shall not be required on a sewage ejector pump or sump pump that is cord and plug connected to a single receptacle installed on an individual motor branch circuit.

## **SECTION 20.**

***SECTION 4.2.167 – Dwelling Unit GFCI protection for 250-volt receptacles is hereby amended to read as follows:***

Section 210.8(a) of the National Electrical Code (NEC) shall be amended to read as follows:

All 125-volt, and effective January 1, 2027, all 250-volt receptacles installed in the locations specified in 210.8(A)(1) through (A)(11) and supplied by single-phase branch circuits rated 150-volts to ground shall have ground-fault circuit interrupter protection for personnel.

## **SECTION 21.**

***SECTION 4.2.169 – Outdoor Outlets – GFCI protection – 250-volt*** is hereby amended to read as follows:

Section 210.8(f) of the National Electrical Code (NEC) shall be amended to read as follows:

Effective January 1, 2027, all outdoor outlets for dwellings, other than those covered in 210.8(A)(3), Exception to (3), that are supplied by single-phase branch circuits rated 150 volts to ground or less, 50 amperes or less, shall have ground-fault circuit-interrupter protection for personnel.

***SECTION 22.***

***SECTION 4.2.180 – Nonmetallic-sheathed cable – Type MN, MMC, and NMS – Uses Permitted*** is hereby amended to read as follows:

Section 334.10(1) – (5) of the National Electrical Code (NEC) shall be amended to read as follows:

(a). Uses permitted: Type NM, Type NMC and Type NMS cable shall be permitted in the following locations only:

- (1). In one and two-family dwellings and their accessory structures.
- (2). Within Residential Group R2 multifamily (apartment building), where the structure does not exceed three floors above or below grade, and the structure is not mixed use or mixed occupancy.
- (3). In Residential Group R3 and Residential Group R4 occupancies as defined in the International Building Code (IBC), with a maximum of 16 residents.

The utility provided to the property and serving these structures shall be 120/240 volt single-phase services only.

All electrical wiring associated with common area panels and separate structures, are considered commercial applications. NM, NMC, and NMS and SE type cable assemblies shall not be permitted.

### ***SECTION 23.***

***SECTION 4.2.186 – Receptacle behind a Range or Sink is hereby deleted.***

### ***SECTION 24.***

***SECTION 4.2.193 – Lighting outlets required is hereby amended to read as follows:***

The following requirements for lighting outlets are in addition to the requirements in the latest edition of the National Electrical Code adopted by the MABCD.

- (a). Residential unfinished basements. Each storage area and all future habitable spaces, as defined by the currently adopted Building Code, that are in the framed-in stage shall have a lighting outlet with a wall-mounted switch for each area or room. Lighting outlets containing a switch shall be controlled by a wall switch.
- (b). Commercial storage units. Each storage unit with an allowable area greater than 100 square foot shall have a lighting outlet inside the unit with a switch located at the usual point of entry to the storage unit. This luminaire shall be of the type that has a completely enclosed light source.
- (c). Override. Interior storage units shall be allowed to have automatic light sensors with override only.

*Exception:* Structures that are not on a permanent foundation.

**SECTION 25.**

**SECTION. 4.2.195. - Pools shall not be located under overhead wiring is hereby deleted.**

**SECTION 26.**

**SECTION. 4.2.200. - Permitted use of multiplex cable is hereby amended to read as follows:**

Multiplex cable may be installed as an approved wiring method for outdoor aerial use only, with the following restrictions.

- (1). Permitted for outside aerial use only.
- (2). Minimum wire size shall be: #6 aluminum or #8 copper per Table 310.
- (3). In all cases, the phase conductors and the neutral conductor must be insulated and identified.
- (4). The ampacity of the conductors must comply with the values for the respective size and conductor material as listed in the seventy-five-degree column of the Ampacity Tables of the latest adopted edition of the National Electrical Code.

**SECTION 27.**

**SECTION 4.2.230. – Provisions for heating units is hereby amended to read as follows:**

**SECTION. 4.2.230. - Provisions for heating units (P-tacs).**

Where a heating unit is installed for the unit or space intended for human occupancy per the requirements set forth in Article 5, the heating unit shall be directly wired into the building

wiring with a disconnecting means installed in a readily accessible location within sight from the heating unit.

***SECTION 28.***

The originals of Sections 4.A.050, 4.1.020, 4.1.025, 4.1.050, 4.1.090, 4.1.120, 4.2.010, 4.2.035, 4.2.037, 4.2.038, 4.2.045, 4.2.055, 4.2.060, 4.2.070, 4.2.090, 4.2.135, 4.2.140, 4.2.150, 4.2.165, 4.2.167, 4.2.169, 4.2.180, 4.2.186, 4.2.193, 4.2.195, 4.2.200, and 4.2.230 as written prior to the passage of this Resolution, are hereby repealed.

***SECTION 29.***

The originals of Sections 4.2.037, 4.2.038, 4.2.060, 4.2.135, 4.2.140, 4.2.186, and 4.2.195 have been deleted.

***SECTION 30.***

This Resolution shall be included in the Wichita-Sedgwick County Unified Building and Trade Code, and shall be effective on January 1, 2025.

Commissioners present and voting were:

PETER F. MEITZNER	<u>AYE</u>
SARAH LOPEZ	<u>AYE</u>
DAVID T. DENNIS	<u>ABSENT</u>
RYAN K. BATY	<u>AYE</u>
JAMES M. HOWELL	<u>AYE</u>

Dated this 1<sup>st</sup> day of May, 2024.

BOARD OF COUNTY COMMISSIONERS  
OF SEDGWICK COUNTY, KANSAS

ATTEST:

\_\_\_\_\_  
KELLY B. ARNOLD, County Clerk

\_\_\_\_\_  
RYAN BATY, Chairman  
Commissioner, Fourth District

\_\_\_\_\_  
SARAH LOPEZ, Chair Pro Tem  
Commissioner, Second District

APPROVED AS TO FORM:

\_\_\_\_\_  
Armand L. Shukaev  
Assistant County Counselor

\_\_\_\_\_  
PETER F. MEITZNER  
Commissioner, First District

\_\_\_\_\_  
DAVID T. DENNIS  
Commissioner, Third District

\_\_\_\_\_  
JAMES M. HOWELL  
Commissioner, Fifth District