

CITY OF GRAPEVINE
Chapter 7, Buildings and Construction,
Article III, Electrical Code

ARTICLE III. - ELECTRICAL CODE

DIVISION 4. - INSTALLATION, EQUIPMENT AND MATERIALS STANDARDS

Sec 7-91. National Electric Code adopted; penalty.

- (a) There is hereby adopted by the city, for the purpose of prescribing regulations, governing conditions hazardous to life and property, that a certain 2020 Edition of the National Electric Code, {remainder of section unchanged}

Sec. 7-97. Amendments to the National Electric Code.

[The following are amendments to the 2020 Edition of the National Electric Code]

Article 100; add the following to definitions:

Engineering Supervision. Supervision by a Qualified State of Texas Licensed Professional Engineer engaged primarily in the design or maintenance of electrical installations.

Article 110.2; change the following to read as follows:

110.2 Approval. The conductors and equipment required or permitted by this Code shall be acceptable only if approved. Approval of equipment may be evident by listing and labeling of equipment by a Nationally Recognized Testing Lab (NRTL) with a certification mark of that laboratory or a qualified third party inspection agency or a field evaluation by a Field Evaluation Body accredited by either the International Code Council, International Accreditation Service AC354, or ANSI National Accreditation Board programs and approved by the AHJ.

Exception: Unlisted equipment that is relocated to another location within a jurisdiction or is field modified is subject to the approval by the AHJ. This approval may be by a field evaluation by a NRTL, a qualified third-party inspection agency, or a field evaluation by a Field Evaluation Body accredited by either the ICC IAS AC354 or ANAB programs and approved by the AHJ.

Informational Note No. 1: See 90.7, Examination of Equipment for Safety, and 110.3, Examination, Identification, Installation, and Use of Equipment. See definitions of Approved, Identified, Labeled, and Listed.

Informational Note No. 2: Manufacturer's self-certification of equipment may not necessarily comply with U.S. product safety standards as certified by an NRTL.

Informational Note No. 3: National Fire Protection Association (NFPA) 790 and 791 provide an example of an approved method for qualifying a third-party inspection agency.

Article 410.118; Change the following to read as follows:

410.118 Access to other boxes. Luminaires recessed in the ceilings, floors, or walls shall not be used to access outlet, pull, or junction boxes or conduit bodies, unless the box or conduit body is an integral part of the listed luminaire.

Exception: removable luminaires with a minimum measurement of 22 in. X 22 in. shall be permitted to be used as access to outlet, pull, junction boxes or conduit bodies.

Article 500.8 (A) (3); change to read as follows:

500.8 Equipment.

Articles 500 through 504 require equipment construction and installation that ensure safe performance under conditions of proper use and maintenance.

Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to installation and maintenance.

Informational Note No. 2: Since there is no consistent relationship between explosion properties and ignition temperature, the two are independent requirements.

Informational Note No. 3: Low ambient conditions require special consideration. Explosion proof or dust-ignition proof equipment may not be suitable for use at temperatures lower than -25°C (-13°F) unless they are identified for low-temperature service. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified as Class I, Division 1 at normal ambient temperature.

- (A) Suitability. Suitability of identified equipment shall be determined by one of the following:
- (1) Equipment listing or labeling;
 - (2) Evidence of equipment evaluation from a qualified testing laboratory or inspection agency concerned with product evaluation; or,
 - (3) Evidence acceptable to the authority having jurisdiction such as a manufacturer's self-evaluation or an engineering

judgment signed and sealed by a qualified licensed Professional Engineer in the State of Texas.

Informational Note: Additional documentation for equipment may include certificates demonstrating compliance with applicable equipment standards, indicating special conditions of use, and other pertinent information.

Article 505.7 (A); changed to read as follows:

505.7 Special Precaution. Article 505 requires equipment construction and installation that ensures safe performance under conditions of proper use and maintenance.

Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to the installation and maintenance of electrical equipment in hazardous (classified) locations.

Informational Note No. 2: Low ambient conditions require special consideration. Electrical equipment depending on the protection techniques described by 505.8(A) may not be suitable for use at temperatures lower than -20°C (-4°F) unless they are identified for use at lower temperatures. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified Class I, Zones 0, 1, or 2 at normal ambient temperature.

- (A) Implementation of Zone Classification System. Classification of areas, engineering and design, selection of equipment and wiring methods, installation, and inspection shall be performed by a qualified Registered licensed Professional Engineer in the State of Texas.

Article 625.40.1; Add to read as follows:

625.40.1 Knox Remote Power Box Required. All electric vehicle charging system locations shall have a Knox Remote Power Box (KRPB) to allow the Fire Department to remotely operate a shunt trip breaker to safely disconnect power to the charging station(s) compliant with all of the following:

- (1) The KRPB shall be located within 50 feet of, but not less than 30 feet from Charging station(s).
- (2) The location of the KRPB shall be at a point that allows the operator to be in-line-of-sight to the incident.
- (3) The KRPB shall be protected from physical damage including but not limited to motor vehicle impact.
- (4) The height of the KRPB shall be no less than 42" but not more than 48" measured vertically from grade.

- (5) A sign shall be placed adjacent to or on the structure supporting the KRPB stating "FIRE DEPARTMENT USE ONLY" with minimum 2" lettering.

Exception: Group R-3 buildings and their accessory structures on the same lot.

Article 695.6(A)(1); Change the following to read as follows:

695.6 (A) Supply Conductors.

(1) Services and On-Site Power Production Facilities.

Service conductors and conductors supplied by on-site power production facilities shall be physically routed outside a building(s) and shall be installed as service-entrance conductors in accordance with 230.6, 230.9, and Parts III and IV of Article 230. Where supply conductors cannot be physically routed outside of buildings, the conductors shall be permitted to be routed through the building(s) where installed in accordance with 230.6(1) or (2).

Article 710.15 A; Change the following to read as follows:

710.15 General

710.15(A) Supply Output.

Power supply to premises wiring systems fed by stand-alone or isolated microgrid power sources shall have adequate capacity to meet the calculated load in accordance with Article 220.