EXHIBIT "A"

City of Mansfield

Amendments to the
2017 National Electrical Code (NFPA 70)

North Central Texas Council of Governments Region

The following sections, paragraphs, and sentences of the *2017 National Electrical Code (NEC)* are hereby amended as follows: Standard type is text from the *NEC*. Underlined type is text inserted. ~~Strikeouts~~ indicate existing words and phrases to be deleted from the *NEC*. A double asterisk (**) at the beginning of an article identifies an amendment carried over from the 2014 edition of the code and a triple asterisk (***) identifies a new or revised amendment with the 2017 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.

(Reason for Change: To better define the qualifications for engineering supervision. This term is used twenty four times in the 2017 National Electrical Code.)

***Article 110.2; add the following sentence to Article 110.2 Approval, add exception and informational notes 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 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 or qualified third party inspection agency 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 a Nationally Recognized Testing Lab (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.

(Reason for Change: To add clarity and provide more positive options for enforcement and approval of unlisted equipment.)

***Article 230.70 (A)(1); change to read as follows:*

230.70 (A)(1) Readily Accessible Location. The service disconnecting means shall be installed at a readily accessible location ~~either outside~~ on the exterior of ~~a~~ new or existing buildings or structures or ~~inside nearest the point of entrance of the service conductors~~ at a readily accessible location approved by the Building Official.

(Reason for Change: Carry over from previous amendments. To provide a means of disconnect for first responders in the event of an emergency. This requirement shall apply only to commercial or industrial buildings or structures.)

EXHIBIT "A"

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

500.8 Equipment. Articles 500 through 504 require equipment construction and installation standards 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 ~~owner's~~ engineering judgment signed and sealed by a qualified ~~Registered~~ 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.

(Reason for Change: Carry over from previous amendment with change to better define the qualifications for an engineering judgment.)

***Article 505.7(A); change 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 ~~persons Registered~~ licensed Professional Engineer in the State of Texas.

(Reason for Change: Carry over from previous amendment with change to better define the qualifications for an engineering judgment.)

****Article 600.6(A)(1) At Point of Entry to a Sign; Exception 1 change to read as follows:*

Exception No. 1: A disconnect shall not be required for branch circuit(s) or feeder conductor(s) passing through the sign where enclosed in a Chapter 3 listed raceway or metal-jacketed cable identified for the location. The conductor(s) shall not serve the sign body or sign enclosure where passing through.

**** Article 600.6(A)(1) At Point of Entry to a Sign; Exception 2 change to read as follows:*

Exception No. 2: A disconnect shall not be required at the point of entry to a sign enclosure, ~~or~~ sign body, or pole for branch circuit(s) or feeder conductor(s) that supply an internal panelboard(s) in a sign enclosure or sign body. The conductor(s) shall be enclosed in a Chapter 3 listed raceway or metal-jacketed cable identified for the location.

EXHIBIT "A"

The conductor(s) shall be routed to a device box which contains the disconnect. A field-applied permanent warning label that is visible during servicing shall be applied to the raceway at or near the point of entry into the sign enclosure or sign body. The warning label shall comply with 110.21(B) and state the following: “Danger. This raceway contains energized conductors.” The marking shall include the location of the disconnecting means for the energized conductor(s). The disconnecting means shall be capable of being locked in the open position in accordance with 110.25.

> **Informational Note (2017 Code):** The location of the disconnect is intended to allow service or maintenance personnel complete and local control of the disconnecting means.

(Reason for Change: This is a modification of the nationwide sign manufacturing practice that was standard before the 2014 Code revision. It is more reasonable but not less than the current code requirements. It provides local control of the disconnect by service personnel as the informational note suggests, while requiring a sign disconnect to be at or within sight of the sign. This also allows sign designers more flexibility in the placement of the disconnecting means in relation to the location of the sign.)

END