

**Recommended Amendments to the
2020 National Electrical Code**

*** Amendments Specific to the City of Murphy**

**** NCTCOG Recommended Amendment**

***** Modified NCTCOG Recommended Amendment**

***Add Section 90.10. Building and Fire Codes Appeal Board**

Section 90.10 Building and Fire Codes Appeal Board

Add Section 90.11 to read as follows:

90.11 General. The Building and Fire Codes Appeal Board shall be in accordance with Chapter 24, Article 24.02 of the City of Murphy Code of Ordinances.

****Article 100; add the following to definition:**

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

(Reason: To better define the qualifications for engineering supervision.)

****Article 400.8 Field Identification Required: Change the following to read as follows**

408.4 Field Identification Required.

(A) Circuit Directory or Circuit Identification.

Every circuit and circuit modification shall be legibly identified as to its clear, evident, and specific purpose or use. The identification shall include an approved degree of detail that allows each circuit to be distinguished from all others. Spare positions that contain unused overcurrent devices or switches shall be described accordingly. The identification shall be included in a circuit directory that is located on the face or inside of, or in an approved location adjacent and permanently affixed the panel door in the case of a panelboard and at each switch or circuit breaker in a switchboard or switchgear. No circuit shall be described in a manner that depends on transient conditions of occupancy.

(Reason: To add clarity and provide more positive options for enforcement and approval)

****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.

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(Reason: To add clarity and provide more positive options for enforcement and approval. This will allow access to boxes not integral with the luminaire. This measurement aligns with the limited access above a lay-in ceiling measurement in 110.26(A)(4).)

**** Article 422.31 B: Change the following to read as follows**

422.31 B Appliances Rated over 300 Volt-Amperes

(B) Appliances Rated over 300 Volt-Amperes. For permanently connected appliances rated over 300 volt-amperes, the branch-circuit switch or circuit breaker shall be permitted to serve as the disconnecting means where the switch or circuit breaker is within sight from ~~the appliance or be~~ and is readily accessible to the appliance it serves or be is capable of being locked in the open position in accordance with 110.25 and is readily accessible to the appliance it serves.

Informational Note No. 1: For appliances employing unit switches, see 422.34.

Informational Note No 2: The following means of access are considered to constitute readily accessible for this code change when conforming to the additional access requirements of the I Codes:

1. A permanent stair.
2. A pull-down stair with a minimum 300 lb. (136 kg) capacity.
3. An access door from an upper floor level.

(Reason: To add clarity and provide more positive options for enforcement and approval)

**** 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.
- (3) Evidence acceptable to the authority having jurisdiction such as a manufacturer's self-evaluation or ~~an owner's engineering judgment.~~ an engineering judgment signed and sealed by a qualified Registered licensed Professional Engineer in the State of Texas.

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

****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 persons Registered licensed Professional Engineer in the State of Texas.

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

****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).

~~Exception: The supply conductors within the fire pump room shall not be required to meet 230.6 (1) or (2)~~

(Reason: To add clarity and provide more positive options for enforcement and approval. All Fire Pump rooms are not Fire Rated as on all 4 sides. There are Fault Currents that could exceed 150,000-190,000 amps and protection of these Service Conductors is essential and conflict with other codes specifically 230.70(A)(1).)

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****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 ~~be permitted to have less capacity than the calculated load. The capacity of the sum of all sources of the stand-alone supply shall be equal to or greater than the load posed by the largest single utilization equipment connected to the system. Calculated general lighting loads shall not be considered as a single load~~ have adequate capacity to meet the calculated load in accordance with Article 220.

~~Informational Note: For general use loads the system capacity can be calculated using the sum of the capacity of the firm sources, such as generators and ESS inverters. For specialty loads intended to be powered directly from a variable source, the capacity can be calculated using the sum of the variable sources, such as PV or wind inverters, or the combined capacity of both firm and variable sources.~~

(Reason: To add clarity and provide more positive options for enforcement and approval. Unless amended, standby systems would not be required to meet any load demanded by their standby definitions.)