

DIVISION 3. ELECTRICAL CODE

Sec. 14-241. Electrical code. In order to prevent the rapid deterioration of electrical materials and equipment from severe atmospheric and underground corrosive action and to maintain minimum standards adopted by the City over the years, and with the following additions, deletions, and revisions, the National Electrical Code, 2002 edition, a copy of which, authenticated by the signatures of the Mayor and City Secretary, made public record by this Section, and on file in the City Secretary's office, is incorporated by reference and adopted as the City of Corpus Christi Electrical Code:

(1) Article 80, Administration and Enforcement, is not adopted.

(2) Article 90 – Introduction, Section 90.2 - Scope, Subsection 90.2(B) – Not Covered is amended by revising paragraph (5)(c) and adding a new paragraph (6) to read as follows:

90.2(b) Not Covered. This Code does not cover the following.

(5) Installations under the exclusive control of an electric utility where such installations.

b. Are located in legally established irrevocable easements, which have been filed for record with the county clerk's office, rights-of-way, or by other agreements either designated by or recognized by public service commissions, utility commissions, or other regulatory agencies having jurisdiction for such installations, or

(6) Installations of exterior lighting on property owned or leased by the utility, in public streets or alley rights-of-way, and in irrevocable utility or electric easements. If the easement on which the outdoor lighting is being installed is not shown on a plat that is filed for record with the county clerk's office, the electrical utility must present a map or survey showing the location of the easement and the location of the proposed outdoor lighting.

(3) Article 90 – Introduction is amended by adding a new Section 90.10 – Individual metering required to read as follows:

90.10 Individual metering required. A building or buildings containing more than five (5) dwelling units must provide for individual metering or submetering of each dwelling unit.

CHAPTER 2 WIRING AND PROTECTION

(4) Section 210.19 is amended by adding a new subsection (C) to read as follows:

210.19 Conductors – Minimum Ampacity and Size.

(C) Minimum ampereage. All circuits, except lighting circuits, must have a minimum current capacity of twenty (20) amperes.

(5) Section 220.3(B) is amended by adding new subsection (D) to read as follows:

220.3 Computation of Branch Circuit Loads.

(D) Maximum number of fixtures and receptacles.

(1) Not more than ten (10) incandescent lighting fixtures and/or general use receptacles (duplex) must be installed on a one hundred twenty (120) volt branch circuit.

(2) Not more than three (3) electrical connections or receptacles (duplex) must be installed on each of the required small appliance circuits in dwellings. Any electrical connections used to power equipment reduce the number of receptacles allowed on the small appliance circuit by the number of separate connections.

(3) Not more than three (3) receptacles (duplex) must be installed on each required bathroom circuit in dwellings.

(4) For circuits supplying lighting fixtures having ballasts, transformers, or autotransformers, the computed load based on the total ampere ratings of such fixtures must determine the number of fixtures on a lighting circuit.

(6) Section 210.52(B)(1) is revised to read as follows:

210.52 Dwelling Unit Receptacle Outlets.

(b) Small Appliances.

(1) Receptacle Outlets Served. In the kitchen, pantry, breakfast room, dining room, laundry/utility room, or similar area of a dwelling unit, the two or more 20 ampere small appliance branch circuits required by Section 210.11(C)(1) shall serve all receptacle outlets covered by Sections 210.52(A) and (C) and receptacle outlets for refrigeration equipment.

(7) Section 210.52(B)(2) is amended by adding a new exception 3 to read as follows:

210.52 Dwelling Unit Receptacle Outlets.

(b) Small Appliances.

(2)

Exception No. 3: A receptacle or electrical connection installed to power a vent hood located in a kitchen above a cooking surface.

(8) Article 210 Part III is amended by adding a new Section 210.53 to read as follows:

210.531 Receptacles Required For Non-Dwellings. The following listed buildings must have a minimum of one (1) receptacle installed for every twenty (20) feet measured horizontally around the interior wall at the floor level of each room, excluding storage rooms:

Office Buildings

Bank Buildings

Restaurants

Mechanical Garages

Taverns

Studios

(9) Section 230 Part I is amended by adding a new section 230.11 to read as follows:

230.11 Service-Entrance Conductor and Subfeed Installation Methods. Service-entrance conductors and sub feeds to electrical distribution panels must run in conduits or raceways. A masthead used for support of service drop conductors must extend not less than forty-two (42) inches above the roof and must be two (2) inches or larger rigid metal conduit.

(10) Section 230.70 is amended by adding a new subsections (D) and (E) to read as follows:

230.70 General. Means shall be provided to disconnect all conductors in a building or other structure from the service-entrance connectors.

(D) Minimum Fault Current Protection. All electrical service entrance equipment, except for temporary construction loops, must be provided with fault current protection of not less than twenty-two thousand (22,000) amps. When approved by the building official or his authorized representative, the provisions of this article need not apply to any particular installation for which compliance with the National Electrical Code has been certified by a professional registered engineer in the State of Texas.

(E) Exception For Certain Lighting Fixtures Installed on Poles. A service disconnect means is not required on a pole with a lighting fixture, if:

(1) The pole is in a location accessible to the public, such as in parking lots, parks, etc., and a disconnecting means is installed in the circuit powering the fixture at a secure location, or

(2) The fixture and all wiring providing power to the fixture are under the exclusive control of an electric distribution utility.

(11) Section 250.52(A)(5) is revised to read as follows:

(5) Rod and Pipe Electrodes. Rod and pipe electrodes shall not be less than 2.5. m (8 ft) in length and shall consist of the following materials.

(a) Electrodes of pipe or conduit shall not be shall be smaller than metric designator 21(trade size $\frac{3}{4}$), and must be made of brass or copper.

(b) Nonferrous rods shall not be less than 13 mm (1/2 in.) in diameter.

CHAPTER 3 WIRING METHODS AND MATERIALS

(12) Section 300.1 is amended by adding a new subsection (D) to read as follows:

300.1 Scope.

(D). Raceways or metal clad cables in commercial buildings. All commercial buildings must be wired in electrical conduits or with metal clad cables, except as provided herein.

(1) Exceptions to raceways or metal clad cables.

(a) Raceways or metal clad cables will not be required when structures, which were originally constructed and used as single-family, single-story, residential-use buildings, are converted to commercial usage if, at the time the building is converted to commercial usage, the preexisting electrical wiring, equipment, and fixtures in such structures conform to all other applicable provisions of this code.

(b) To obtain the benefit of the exemption granted by this article, the owner or occupant of such building must obtain an inspection for a certificate of occupancy as required.

© Any installation of new electrical wiring, fixtures or apparatus installed in any building which was converted to commercial usage, or any rewiring of such structure must be wired in raceways or metal clad cables.

(2) Construction/development temporary buildings. Temporary buildings, the uses of which are incidental to construction operations or sale of lots during development being conducted on the same or adjoining tract or subdivision and which must be removed upon completion of development, are not required to be wired in raceways or metal clad cables.

(12) Section 300.3 is amended by adding a new subsection (D) to read as follows:

300.3 Conductors.

(D) Prohibited Conductors. The use of aluminum conductors of No. 2 gauge and smaller is prohibited in electrical wiring installations, except that exterior, overhead conductors are exempted from this prohibition.

(13) Section 300.5 is amended by adding a new subsection (L) to read as follows:

300.5 Underground Installations.

(L) Non-metallic Electrical Conduit Required. Only non-metallic electrical conduit may be installed underground. The use of metallic electrical conduits is prohibited in underground installations.

(14) Table 310.5 is amended by adding a new Exception No. 11 to read as follows:

Table 310.5 Minimum Size of Conductors

Exception No. 11: The minimum size conductor that may be used on any circuit, except a lighting circuit, is 12.

CHAPTER 4 EQUIPMENT FOR GENERAL USE

(15) Article 408 Part III is amended by adding new Sections 408.22 and 408.23, to read as follows:

408.22 Spare Raceways. For each panel a spare one-inch raceway must be installed from the panel to an accessible location.

Exception No. 1: A spare raceway is not required if there is no access in the attic or from floor above or below the panel.

Exception No. 2: A spare raceway is not required if the walls and ceiling adjacent to panel are not covered.

408.23 Spare Circuits. One (1) spare circuit must be installed for every five (5) circuits in all new buildings.

(16) Section 440.11 is revised to read as follows:

440.11. General.

(A) Purpose. The provisions of Part B are intended to require disconnecting means capable of disconnecting air-conditioning and refrigerating equipment, including motor-compressors and controllers from the circuit conductors. See Figure 430.1.

(B) Branch Circuits. A disconnecting means must be provided in the ungrounded conductors of each branch circuit to electrically operated air conditioning components.

© **Fusible disconnect.** A fusible disconnect switch must be installed for single phase air conditioning equipment of five (5) tons rating or less.

(D) Integrally install components. Disconnecting means must not be required on equipment with integrally installed disconnecting means.

(17) The initial paragraph of Section 440.14 is revised to read as follows:

440.14. Location. Disconnecting means shall be located within sight from, readily accessible from, and within six (6) feet of the air-conditioning or refrigerating equipment. The disconnecting means shall be permitted to be installed on or within the air-conditioning or refrigerating equipment.

CHAPTER 5 SPECIAL OCCUPANCIES

(18) Section 514.8 is revised to read as follows:

514.8. Underground Wiring. Underground wiring shall be installed in schedule 80 Electrical PVC. Any portion of electrical wiring or equipment that is below the surface of a Class I, Division 1, or Class 1, Division 2 location [as classified in Table 514.3(B)(1) and Table 514.3(B)(2)] shall be considered to be in a Class I, Division 1 location that shall extend at least to the point of emergence above grade. Refer to Table 300.5.

Exception No. 1: Type MI cable shall be permitted where it is installed in accordance with Article 332.

Exception No. 2: Rigid nonmetallic conduit complying with Article 352 shall be permitted where buried under not less than 600 mm (2 ft) of cover. An equipment grounding conductor shall be included to provide electrical continuity of the raceway system and for grounding of non-current-carrying metal parts.

CHAPTER 6 SPECIAL EQUIPMENT

(19) Chapter 6 is amended by adding a new Article 696 to read as follows:

ARTICLE 696 -- ELECTRICALLY-CHARGED FENCING

696.1 Electrically-charged fencing. Installation of electrically-charged fencing for the purpose of security, animal containment and other similar uses must be under approved Underwriters' Laboratories, or any other nationally recognized testing agency, devices. Upon installation such fencing must be clearly identified with signage not to exceed a fifty-foot maximum spacing on this electrical fencing. The signage must be legible from a distance of five (5) feet and must be properly maintained while fence is in use.