



City of Grand Island

Tuesday, February 28, 2012

Council Session

Item F3

#9366 - Consideration of Amending Chapter 15 of the Grand Island City Code Relative to Adopting the 2011 National Electrical Code

Staff Contact: Craig Lewis

Council Agenda Memo

From: Craig A. Lewis, Building Department Director

Meeting: February 28, 2012

Subject: City Code Amendments to Chapter 15, Electricity
Adoptions of the 2011 National Electrical Code

Item #'s: F-3

Presenter(s): Craig Lewis, Building Department Director

Background

This request is for City Council approval to modify the City Code by adopting the 2011 Edition of the National Electric Code. The City has for several decades adopted and enforced electrical codes to safeguard persons and property from the hazards arising from the use of electricity. The 2011 National Electric Code (NEC) is the current edition of the national standard for the installation of electrical wiring systems. Typically the State of Nebraska adopts the current edition of the NEC and requires local inspection programs to adopt and enforce the current regulations as part of the State approval of local programs.

Discussion

The proposed amendment to Chapter 15 of the Grand Island City code will adopt the current edition of the National Electric Code. The City's electrical board has reviewed the 2011 NEC and recommends approval with the local amendments as outlined in the proposed ordinance. The local amendments basically provide some restrictions and clarifications in the installation of required wiring.

Alternatives

It appears that the Council has the following alternatives concerning the issue at hand. The Council may:

1. Approve the ordinance.
2. Disapprove or /Deny the adoption of the ordinance.
3. Modify the ordinance to meet the wishes of the Council
4. Table the issue


Recommendation


The City Electrical Board and City Staff recommends that the City Council approve Ordinance No. 9366 adopting the 2011 NEC, with the local amendments identified and begin enforcement on March 30, 2012.


Sample Motion


Move to approve Ordinance No. 9366.

2011 National Electrical Code

 110.24 Available Fault current

 210.12 Arc-fault Circuit Protection, extension and modifications.

 404.2 Switches grounded circuit conductors

 406 Replacement devices, tamper or water resistant

ORDINANCE NO. 9366

An ordinance to amend Chapter 15 of the Grand Island City Code; to amend Section 15-1 pertaining to electricity; to amend Section 15-2 to adopt the 2011 National Electrical Code; to amend Section 15-3 pertaining to amendments to the National Electrical Code; to amend Section 15-8 pertaining to wiring; and to amend Section 15-41 pertaining to registration; to repeal Sections 15-1; 15-2; 15-3; 15-6; 15-8; and 15-41 as now existing, and any ordinance or parts of ordinances in conflict herewith; and to provide for publication and the effective date of this ordinance.

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE CITY OF GRAND ISLAND, NEBRASKA:

SECTION 1. Section 15-1 of the Grand Island City Code is hereby amended to read as follows:

§15-1. Applicability of Article

This article shall apply to all structures, constructed, assembled or placed within the City, and provides standards for electrical wiring as identified in the Nebraska State Electrical Act.

SECTION 2. Section 15-2 of the Grand Island City Code is hereby amended to read as follows:

§15-2. National Electrical Code Adopted

(A) There is hereby adopted by the City of Grand Island for the purpose of safeguarding persons and buildings from hazards arising from the use of electricity for light, heat, power, radio, signaling, and other purposes, that certain code known as the National Electrical Code, 2008- 2011 Edition, recommended by the National Fire Protection Association, except as modified by this section.

(B) The National Electrical Code adopted by subsection (A) above is modified by deleting Article 362, Article 210-52C Subsection 2 and 3, which are not adopted and shall have no force or effect. Articles 320, 330, 334, 348, and 352 are amended by §15-3 of the Grand Island City Code.

(C) One copy of the National Electrical Code, 2008- 2011 Edition, shall be on file in the city clerk's office for public use and inspection as provided by law.

Amended by Ordinance No. 8990, effective 8-10-2005
Amended by Ordinance No. 9194, effective 11-1-2008

SECTION 3. Section 15-3 of the Grand Island City Code is hereby amended to read as

Approved as to Form	☐ _____
February 23, 2012	☐ City Attorney

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follows:

§15-3. Amendments to National Electrical Code, ~~2008~~ 2011 Edition

The following sections are adopted as amendments to the same numbered sections of the National Electrical Code, ~~2008-2011~~ Edition:

Article 320 – Armored cable (type AC)

320.10. Uses permitted. Armored cable may be used for indoor branch circuits when installed with a grounding conductor in the cable with the branch circuit conductors and sized to the overcurrent protective device. Anti short bushings shall be used.

320.12. Uses not permitted. Armored cable shall not be used in hazardous locations, where buried or in direct contact with the earth, concrete, cinder fill or where exposed to chemicals or acids.

Article 330 - Metal-Clad Cable (Type MC)

330.10. Uses Permitted. Metal-clad cable may be used for indoor branch circuit use only when installed with a grounding conductor in the cable with the circuit conductors and sized to the overcurrent protective device. Anti short bushing shall be used.

330.12. Uses Not Permitted. Metal-clad cable shall not be used in hazardous locations where subject to physical damage, buried in direct contact with the earth, concrete, cinder fill, or where exposed to chemicals or acids.

Article 334 – Nonmetallic-Sheathed Cable (Types NM, NMC, and NMS)

334.12. Uses Not Permitted. In any multifamily dwelling or structure exceeding three floors above grade. For the purpose of this article, the floor of a building shall be that floor that has fifty percent (50%) or more of the exterior wall surface area level with or above finished grade. One additional level that is the first level and not designed for human habitation and only for vehicle parking, storage or similar use shall be permitted.

Article 352 - Rigid Nonmetallic Conduit (PVC)

352.10. Uses Permitted

- (A) Where encased in concrete
- (B) Underground installations
- (C) For service entrances on the outside of buildings where not subject to physical damage
- (D) For raceways to feed subpanels
- (E) In wet locations where used with proper connections and fittings
- (F) For physical protection of ground wires

352.12. Uses Not Permitted

- ~~(A) In hazardous (classified) locations (except as provided in National Electrical Code Sections 503.3, 504.20, 514.8)~~
- ~~(B) For support of fixtures or other equipment~~
- ~~(C) Where subject to physical damage~~
- ~~(D) Where subject to ambient temperatures exceeding those for which the conduit is approved~~
- ~~(E) (A) In alleys or utility easements, the first section of conduit out of the ground~~
- ~~(F) (B) For branch circuits~~

Article 348 - Flexible Metal Conduit

348.10. Uses Permitted.

Flexible metal conduit may be used for fish work in old buildings or other places where rigid conduit is impractical to install. Special permission shall be obtained from the electrical inspector before it is used in ~~any installations~~ lengths longer than six feet.

Amended by Ordinance No. 8990, effective 8-10-2005

Amended by Ordinance No. 9194, effective 11-1-2008

SECTION 4. Section 15-6 of the Grand Island City Code is hereby amended to read as

follows:

§15-6. Service Entrances

~~(A)~~ Each service entrance with 2,000 amperes capacity or less shall be provided with a readily accessible

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main disconnecting device with appropriate overcurrent protection; provided, each service entrance larger than 2,000 amperes capacity shall comply with the provisions of the National Electric Code. The device shall disconnect all ungrounded conductors from the source of supply in one motion or operation of the hand. For overhead services, said overcurrent protection shall be installed within twenty-five (25) feet from the weatherhead, but within ten (10) feet from where the conductors enter the building. For underground services, said overcurrent protection shall be installed within ten (10) feet from where the conductors enter the building. No service entrance conductors shall be installed within the hollow spaces of a frame wall unless provided with overcurrent protection at their outer end. Attachment devices or insulators for the service drop shall be installed by the electrical contractor on the alley or easement side of the building in such a manner so that the clearances as required by this Code can be maintained by the utility company.

~~(B)-(A)~~ *Manufactured Homes.* Pedestals shall be required for power to manufactured homes on private lots, unless (1) the manufactured home comes with the service equipment factory installed or (2) the manufactured home is secured to a permanent foundation that complies with applicable building codes. This pedestal shall have proper overcurrent protection and provisions for metering.

~~(C)-(B)~~ *Provisions for Metering.* Provisions for metering shall be in accordance with standards set out by the Grand Island Utilities Department.

~~(D)-(C)~~ *Electrical Service Panels for Dwellings.* The minimum size of electrical panel that can be installed in a dwelling shall be 20 circuit for 100 amp, 30 circuit for a 150 amp, and 40 circuit for a 200 amp.

(D) *Multiple Family Units.* New multiple family units constructed in compliance with Chapter 8 of the Grand Island Code may be allowed up to 6 switches, one switch per unit. All switches shall be grouped together in one listed and approved assembly.

(E) *Number of Services.* One electrical service shall be provided for each tract or parcel of land, except upon written request and approval by the Utilities Director and Building Department Director, and/or their respective designee, and in conformance with the National Electrical Code.

(F) *Multiple Occupancy Building.* Each tenant shall have access to their disconnecting means and overcurrent protection. This disconnecting means and overcurrent protection shall not be guarded by locked doors.

Exceptions:

- (1) The disconnecting means and overcurrent protection are located in the tenant space.
- (2) All electrical equipment is located in a common area with access to all tenants.
- (3) Electrical equipment is located outside.

Amended by Ordinance No. 8990, effective 8-10-2005

Amended by Ordinance No. 9194, effective 11-1-2008

SECTION 5. Section 15-8 of the Grand Island City Code is hereby amended to read as follows:

§15-8. Wiring In Single and Multiple-Family Units

(A) Multiple family units may have branch circuits in individual units wired with nonmetallic sheathed cable if construction complies with Chapter 8 of the Grand Island City Code.

(B) Existing residential buildings containing more than six family units not having a two-hour fire wall rating separation as provided in Chapter 8 of the Grand Island City Code shall be wired with Electrical Metallic Tubing (EMT type) in compliance with the provisions of this chapter.

(C) All wiring in basements below the floor joist on exterior walls shall be wired with metallic tubing (EMT type). All electrical wiring in unfinished basements below the floor joist level on interior and exterior walls shall be guarded. All feeders from the main panel to the individual apartments in multiple family units shall be in conduit. The electrical panels shall be the circuit breaker type.

SECTION 6. Section 15-41 of the Grand Island City Code is hereby amended to read as follows:

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§15-41. Registration; Required

No person shall be engaged in the installation of any electrical wiring, fixtures, equipment, or devices for any purpose whatsoever in the City without having registered in the office of the Building Department.

(A) *Examination; Required.* Any applicant for a license or registration certificate shall pass an examination before the Board of Examination, unless he or she is the holder of a valid State of Nebraska Electricians License.

(B) *Licenses; Expiration; Renewal.* All journeyman electrician's and master electrician's licenses or certificates of registration issued by the electrical board shall expire on December 31 of the year in which such license or certificates are issued, but such licenses or certificates may be renewed within thirty days thereafter upon application and payment of fees in accordance with the City of Grand Island Fee Schedule.

~~Notice of the expiration date of all licenses issued pursuant to this article shall be mailed to all such license holders not less than fifteen days before such date. Such notice shall be sent to the last known address of the license holder.~~

Any master electrician or journeyman electrician who does not renew his or her license or certificate of registration pursuant to this article within the thirty day grace period provided by this section shall automatically forfeit such license or certificate. In the event of forfeiture of a license or certificate in this manner, the holder thereof may apply for and qualify to recover such lapsed license by applying to the electrical board for renewal.

SECTION 7. Sections 15-1; 15-2; 15-3; 15-6; 15-8; and 15-41 as now existing, and any ordinances or parts of ordinances in conflict herewith are repealed.

SECTION 8. The validity of any section, subsection, sentence, clause, or phrase of this ordinance shall not affect the validity or enforceability of any other section, subsection, sentence, clause, or phrase thereof.

SECTION 9. That this ordinance shall be in force and take effect March 30, 2012 and shall be published within fifteen days in one issue of the Grand Island Independent as provided by law.

Enacted: February 28, 2012.

Jay Vavricek, Mayor

Attest:

RaNae Edwards, City Clerk