

VILLAGE OF GURNEE

2003-76
AN ORDINANCE ADOPTING THE 2002 NATIONAL ELECTRICAL CODE
(NFPA-70-2001), AS MODIFIED, AND AMENDING CHAPTER 18 OF THE GURNEE
MUNICIPAL CODE

ADOPTED BY THE PRESIDENT AND BOARD OF TRUSTEES

OF THE

VILLAGE OF GURNEE, ILLINOIS

ON

October 13, 2003

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of the Village of Gurnee, Lake County, Illinois,
this 13th day of October, 2003.**

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***AN ORDINANCE ADOPTING THE 2002 NATIONAL ELECTRIC CODE
(NFPA 70-2001), AS MODIFIED, AND AMENDING CHAPTER 18
ARTICLE V OF THE GURNEE MUNICIPAL CODE***

WHEREAS, at least three (3) copies of the 2002 National Electrical Code, published in book form by the National Fire Protection Association, and approved by the American National Standards Institute, have been on file in the office of the Village Clerk of the Village of Gurnee, Illinois, for public use, inspection, and examination continuously for more than 30 days prior to the date hereof, and copies thereof will hereafter be kept on file in said office for such public use, inspection, and examination; and

WHEREAS, prior to the aforesaid 30-day period, public notice was given in The Gurnee Review, a weekly newspaper having a general circulation in the Village of Gurnee, which notice stated that at least three (3) copies of said 2002 National Electrical Code, would be on file during said 30-day period, as well as subsequent thereto, and that the Corporate Authorities of the municipality would give consideration to and might adopt all or any part or parts of said 2002 National Electrical Code, by reference thereto without further printing, at any time after the lapse of 30 days or more subsequent to the aforesaid publication of said public notice, as shown by the certificate of publication on file in the office of said Village Clerk; and

WHEREAS, The President and Board of Trustees of the Village of Gurnee have determined that is in the best interest of the Village of Gurnee to amend the Gurnee Electrical Code (Chapter 18 Article V of the Gurnee Municipal Code) and adopt the 2002 National Electrical Code, as modified, as the standard by which all electrical work within the Village of Gurnee shall be performed.

NOW, THEREFORE, BE IT ORDAINED BY THE PRESIDENT AND THE BOARD OF TRUSTEES OF THE VILLAGE OF GURNEE, LAKE COUNTY, ILLINOIS, IN THE EXERCISE OF ITS HOME RULE POWERS, AS FOLLOWS:

SECTION I: That Chapter 18 Article V, entitled "Electrical Code" of the Gurnee Municipal Code is hereby deleted in its entirety and replaced with a new Chapter 18 Article V, entitled "Electrical Code", to provide as follows:

"CHAPTER 18 ARTICLE V. - ELECTRICAL CODE.

Sec. 18-131. Short title.

This Chapter shall be known and cited as the Gurnee Electrical Code.

Sec. 18-132. Electrical code created

There is created and established, in and for the Village of Gurnee, the Gurnee Electrical Code.

Sec. 18-133. Adoption of the 2002 National Electrical Code (NFPA 70-2001).

The 2002 National Electrical Code (NFPA 70-2001), as published by the National Fire Protection Association and approved by the American National Standards Institute, be and is hereby adopted as the Gurnee Electrical Code, governing the construction, alteration, addition repair, removal, replacement, maintenance, location and use of electrical wiring, equipment, and systems in the Village; and each and all of the regulations, provisions, penalties, conditions, definitions, stipulations, and referenced standards of said National Electrical Code, are hereby referred to, adopted, and made part hereof as if fully set out in this Chapter, with the adoptions, insertions, deletions, and modifications, if any, as are hereafter set forth in this Chapter.

Sec. 18-134. Amendment to 2002 National Electrical Code (NFPA 70-2001).

That the following Articles/Sections of the 2002 National Electrical Code are amended as follows:

Article 100 - Definitions

Article 100: For this section, the following definitions shall be added:

ADD: ***“Chief Electrical Inspector”*** The position designated by Community Development Director, which shall be known as the Electrical Inspector of Gurnee.

ADD: ***“Electrical Inspector”***:The position designated by the Village Administrator or designee or Community Development Director, which shall be known as the Building Inspector. The Building Inspector shall be trained by the Chief Electrical Inspector and or registered update classes.

ADD: ***“GFCI - Ground Fault Circuit Interrupter”***: At the end of this definition, add the following sentence: That all applications of this code and ordinance must be used to upgrade all structures if alterations are made on the electrical system, per Building Department.

ADD: ***“Illinois Licensed Electrical Contractor”***: The term means a contractor granted permission and who has tested in the State of Illinois and complies with the Municipal Act of Illinois.

ADD: **“Registered Electrical Contractor”**: The term means an Electrical Contractor who has registered with the Village of Gurnee and has updated insurance and has complied with all qualifications of the Village.

ADD: **“Screen Room”**: All structures that only use screens to separate the interior from the outside environment. It will be considered a wet location and follow the applicable codes and this ordinance.

ADD: **“Sleeping Room”**: Any room over 70 square feet that can have a door installed on its entry and has a closet in said room.

ADD: **“Three Season Room”**: Any structure attached or detached to a residential dwelling that has windows or barriers installed, with no heat, and the use is for something other than storage, must follow Section 210.52 - Dwelling Units Receptacle Outlets; and Section 210.70 - Lighting Outlets Required; and other applicable codes of this Ordinance.

Article 110 – Requirements for Electrical Installations

Section 110.5 This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

“Conductors. All conductors normally used to carry current shall be of copper. Where the National Electric Code provides other material for conductors, written permission must be obtained from the Building Department and placed in the permit records.”

Section 110.12: ***Mechanical Execution of Work***

Section 110.12 (c) At the end of this Sub-Section, the following Sub-Sections is added to read as follows:

- (d) All conductors must be installed after the wall finish has been installed, unless written permission is obtained from the Building Department with instructions.
- (e) All abandoned conduit, wire, or other electrical equipment and material must be removed. This includes low-voltage wiring, data processing cable, etc.
- (f) Free standing electrical distribution centers and motor control centers designed for floor installation must be mounted on a four inch (4”) thick concrete house-keeping pad.
- (g) All transformers where subject to physical damage, or where washing of floor with water is frequent (as decided by the Authority having jurisdiction), must be installed on a four inch (4”) thick concrete house-keeping pad, when installed on a floor.”

Section 110.26 (c): ***Access and Entrance to Working Space***

This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"At least one entrance of sufficient area being no smaller than thirty-two inches (32") of clear opening and six and one-half feet (6-1/2') high shall be provided to give access for working space around equipment, and large enough to remove the largest piece of equipment. When it is a hinged door, it shall open in the direction of egress and be equipped with panic bars, pressure plates, or other devices that are normally latched but open under simple pressure.

For equipment rated 1200 amp or larger; over six feet (6') wide; and contains over current devices, switching, or control devices, there shall be an entrance at each end of the working space."

Section 110.27(c): ***Warning Signs***

At the end of this Sub-Section, the following sentence shall be added: "All rooms that house electric panel boards, control centers, and transformer will be labeled as "ELECTRIC" to the satisfaction of the Authority Having Jurisdiction."

Section 110.33(a): Change this Sub-Section to read as follows:

Entrance. In place of not less than a minimum of twenty-four inches (24") of clear opening and six and one-half feet (6-1/2') high, insert no smaller than thirty-two inches (32") of clear opening and six and one-half feet (6-1/2') high shall be provided to give access to working space around electric equipment, and large enough to remove the largest piece of equipment. When it is a hinged door, it shall open in the direction of egress and be equipped with panic bars, pressure plates, or other devices that are normally latched but open under simple pressure."

Article 210 – Branch Circuits

Section 210.3 ***Rating***

At the end of this Sub-Section, the following sentence shall be added: "The minimum electric wire size for commercial and industrial building is a 12 awg wire for branch circuits."

Section 210.8: ***Ground-Fault Circuit-Interrupter Protection for Personnel***

Section 210.8(a)(8): At the end of this Sub-Section the following Sub-Section shall be added:

(9) **Dwelling Units.** All 125-volt single-phase 15 and 20 amp receptacles installed within six foot (6') horizontal measurement of a water bearing fixture (i.e. tubs, sinks, etc), shall be ground-fault interrupter protection for personnel. The GFCI protection must be from a receptacle in said room, or service panel. Protection from room to room for receptacles is not allowed."

Section 210.8(b): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Other than Dwelling Units. All 125-volt single phase 15 and 20 amp receptacles within six foot (6') horizontal measurement of all water bearing fixtures, or when installed in the locations specified below shall have ground-fault protection for personnel. The GFCI protection must be from a receptacle in said room, or service panel. Protection from room to room for receptacles is not allowed."

Section 210.8(b): At the end of this Sub-Section, the following Sub-Section shall be added:

"(4) Mechanical, Boiler, Electrical Room. All 125-volt single-phase 15 and 20 amp receptacles used as conveniences in these rooms shall be ground-fault protected for personnel."

Section 210.21: **Outlet Devices.**

Section 210.21(a): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Lampholders. No lampholders shall be connected to a circuit that has an amperes rating of over 20 amps."

Section 210.21(b) (3): Receptacles

At the end of this Sub-Section, the following sentence shall be added:

"All receptacles shall be rated at the same size as the branch circuit rating."

Section 210.25: **Common Area Branch Circuits.**

Section 210.25: At the end of this Section, the following sentence shall be added:

"This requirement is also required for office building, warehouse building, retail building, etc., where multi-tenant building occurs."

Section 210.52: *Dwelling Unit Receptacles Outlets.*

Section 210.52(e): At the end of this Sub-Section, the following sentence shall be added:
"Exterior outlets must be installed with an offset in the structure, back-to-back installations are not allowed."

Section 210.52(f): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Laundry Areas. When the laundry area is over 30 square feet, a separate 20 amp circuit must be provided for the washer/dryer unit, as mandated in Section 210-11(c)(2). In addition to this, one 110 volt 15 amp receptacle must also be provided."

Section 210.52(g): *Basements and Garages.*

Section 210.52(g): At the end of this Sub-Section, the following sentence shall be added:

"At least one 20 amp convenience receptacle must be installed on a separate circuit."

Section 210.70: *Lighting Outlets Required.*

At the end of this Section, the following shall be added: "In all occupancies: stairs, halls, corridors, garages, and rooms of any shape, size, or location, with more than one entry and exit must have the lighting for that area switched at all exits and entries and the path of travel. When entering one room and leaving another, you must be able to turn on the light when entering and off when leaving at that point. The switch shall be located at the latch side of the door, and cannot be located at any point further than three-feet (3') in path of travel or behind objects. All entrance or exit doors that provide access to grade level must be provided with exterior illumination by a light located on the building."

Exception: Business with adequate night lighting.

Section 210.70(a)(3): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Storage or Equipment Spaces. At least one wall switch controlled lighting outlet shall be installed in attics; under floor spaces; utility rooms; basements; or spaces containing heating, air conditioning, refrigeration equipment, sign equipment, and spaces containing any equipment of any kind. In residential basements, the entire basement

must have adequate lighting of not less than fifteen-foot (15') candles of illumination thirty-inches (30") above finished floor."

Article 215 - Feeders

Section 215.2 Minimum Rating and Size.

Section 215.2(A)(4): At the end of this Sub-Section the following Sub-Section shall be added:

"(5) When an office complex of Group B, as defined by BOCA National Building Code or newest adopted code, is not over 200 square feet, fed from a common tenant panel in an accessible area and under one management metered plan, then all circuits in the office space must be able to be disconnected by one switch (i.e. lighting and power), except house-controlled exit lighting and the switch must be located by the front door of the tenant space."

Article 220 – Branch-Circuit, Feeder, and Service Calculations

220.3(b)(1): ***Specific Appliances or Loads.***

Section 220.3(b)(1): At the end of this Sub-Section, the following sentence shall be added:

"Individual circuits are required for each of the following: microwaves, trash compactors, dishwashers, freezers, refrigerators, furnaces, vacuum system, window air conditioners, circulation pumps, and garbage disposals."

220.3(b)(11): ***Other Outlets.***

Section 220.3(b)(11): At the end of this Sub-Section, the following sentence shall be added:

"Receptacle spacing for other than residential uses shall be set a maximum of twelve feet (12') on center along all walls, as specified in Section 210-52, in all conference rooms, office areas, lunch rooms, and waiting rooms, regardless of furniture layout. The volt-ampere (VA) calculation shall be calculated as specified in Article 220-3(b)(9) of this Section (but only 20 amp circuits are allowed). When a floor to ceiling glass (wall/window) is installed, receptacle spacing is not required."

Section 220.3(b)(11): After this Sub-Section, the following Sub-Section shall be added:

"(12) ***Openings Per Circuits.*** The maximum of electrical openings per circuits shall be nine (9) for 15 ampere branch circuits and eleven (11) for 20 ampere branch circuits."

Section 220.22: This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Feeder or Service Neutral Load. The feeder or service neutral load shall be the same size as the phase conductor. If nonlinear loads induce a large unbalanced load on the neutrals amperity rating, it must be increased to ample size per Table 310."

Article 225 – Outside Branch Circuits and Feeders

Section 225.1 ***Scope***

Section 225.1: At the end of this Sub-section, the following sentence shall be added:
"Except in existing installations, branch circuits and feeders may not utilize open conductors or open multi-conductor cables unless written permission is obtained from the Authority Having Jurisdiction."

Section 225.10: This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Wiring on Buildings. The installation of outside wiring on surfaces of buildings, signs, or poles, shall be permitted for circuits of not over 600 volts, nominal, and must only be installed in rigid galvanized metal conduit, galvanized intermediate metal conduit, or rigid aluminum conduit. When rigid aluminum conduit is used, it shall be installed in a manner as not to be exposed to mechanical damage. Rigid non-metallic conduit may only be used for grounding electrical conductor (GEC)."

Section 225.32: ***Location***

Section 225.32: At the end of this Section, the following sentence shall be added:

"A disconnecting means shall be located inside of the occupant's space and disconnect all power inside of said space."

Section 225-35: ***Access to Occupants***

Section 225.35: This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"In a multiple-occupancy building, each occupant shall have a main disconnecting means installed within the tenant space.

Exception: In single family dwelling units, it is permissible to have two (2) disconnecting means for 400 amp and large single phase services.

Exception: In use Group F-1, F-2, S-1, S-2, and U (i.e. factory, industrial, storage, utility, and miscellaneous as per 1996 BOCA National Building Code Section 302) or newest adopted code. The main disconnect means may be located on the outside of the occupant's space.

Exception: When an office complex of Group B, as defined by 1996 BOCA National Building Code or newest adopted code, not over 200 square feet, fed from a common tenant panel in an accessible area, and under one management metered plan, all circuits in the office space must be able to be disconnected by one switch (i.e. lighting and power), except house controlled exit lighting and the switch must be located by the front door of the tenant space."

Article 230 – Services

Section 230.1: Scope

Section 230.1: At the end of this Sub-Section, the following shall be added:

"Each occupancy must be metered individually by the applicable power company, regardless, unless an exception of this Ordinance applies. Each occupant of a multi-occupancy building must have at least one CE metering system installed for each tenant, under no circumstance or situation may tenants share Commonwealth Edison metering systems unless exceptions of the ordinance are met."

Section 230-Section B Overhead-Service Drops Conductors

Section 230.23: Size and Rating.

Section 230.23(a): At this end of this Sub-Section, the following shall be added: "All residential service revisions shall be a minimum 100 amp with twenty (20) circuit openings and have a main circuit breaker. The service entrance conductors must be a minimum of three (3) #3 copper wire and be installed in a minimum of not less than one and one-quarter inch (1-1/4") conduit. The panel must have 10% of spare space at final inspection.

All new single family dwelling units shall have a minimum of 200 amp service with at least forty (40) circuit openings and have a main circuit breaker. The service entrance conductors must be a minimum of three (3) 3/0 copper wires and be installed in a minimum of not less than a two inch (2") conduit. The panel must have 10% of spare space at final inspection.

Exception: Townhomes and apartments under 1400 square feet are allowed to have a 100 amp, twenty (20) circuit panel with main breaker.

For all industrial, commercial, and retail service entrances, must be a minimum of 100 amp with twenty-four (24) circuits with a main circuit breaker and be bolt-on type. Conductor must be a minimum of #3 copper for 100 amp; 1/0 copper for 150 amp; 3/0 copper for 200 amp; and 500 mcm copper for 400 amp. Panels are required to be bolt-on type and have 15% spare space on final inspection."

Section 230.23(c): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Grounded Conductors. The grounded conductors shall be the same size as the phase (ungrounded) conductors and be of copper."

Section 230.28: ***Service Masts as Supports.***

Section 230.28: At the end of this Section, the following shall be added:

"The raceway must be increased from one and one-quarter inch (1-1/4") to two inch (2"); and two inch (2") to two and one-half inch (2-1/2") conduit for mast attached. No mast attachment over 200 amp services."

Section 230-Section C *Underground Service-Lateral Conductors*

Section 230.31: ***Size and Rating***

Section 230.31(a): At this end of this Sub-Section, the following shall be added:

"All residential service revisions shall be a minimum 100 amp with twenty (20) circuit openings and have a main circuit breaker. The service entrance conductors must be a minimum of three (3) #3 copper wire and be installed in a minimum of not less than one and one-quarter inch (1-1/4") conduit. The panel must have 10% of spare space at final inspection.

All new single family dwelling units shall have a minimum of 200 amp service with at least forty (40) circuit openings and have a main circuit breaker. The service entrance conductors must be a minimum of three (3) 3/0 copper wires and be installed in a minimum of not less than a two inch (2") conduit. The panel must have 10% of spare space at final inspection.

Exception: Townhomes and apartments under 1400 square feet are allowed to have a 100 amp, twenty (20) circuit panel with main breaker.

For all industrial, commercial, and retail service entrances, must be a minimum of 100 amp with twenty-four (24) circuits with a main circuit breaker and be bolt-on type. Conductor must be a minimum of #3 copper for 100 amp; 1/0 copper for 150 amp; 3/0 copper for 200 amp; and 500 mcm copper for 400 amp. All panels are required to be bolt-on type and have 15% spare space at final inspection."

Section 230.31(c): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Grounded Conductors. The grounded conductors shall be the same size as the phase (ungrounded) conductors and be of copper."

Section 230.41: ***Insulation of Service-Entrance Conductors.***

Section 230.41: The Exception shall be deleted in its entirety.

230.42: ***Minimum Size and Rating.***

Section 230.42(a): At this end of this Sub-Section, the following shall be added:

"All residential service revisions shall be a minimum 100 amp with twenty (20) circuit openings and have a main circuit breaker. The service entrance conductors must be a minimum of three (3) #3 copper wire and be installed in a minimum of not less than one and one-quarter inch (1-1/4") conduit. The panel must have 10% of spare space at final inspection.

All new single family dwelling units shall have a minimum of 200 amp service with at least forty (40) circuit openings and have a main circuit breaker. The service entrance conductors must be a minimum of three (3) 3/0 copper wires and be installed in a minimum of not less than a two inch (2") conduit. The panel must have 10% of spare space at final inspection.

Exception: Townhomes and apartments under 1400 square feet are allowed to have a 100 amp, twenty (20) circuit panel with main breaker.

For all industrial, commercial, and retail service entrances, must be a minimum of 100 amp with twenty-four (24) circuits with a main circuit breaker and be bolt-on type. Conductor must be a minimum of #3 copper for 100 amp; 1/0 copper for 150 amp; 3/0 copper for 200 amp; and 500 mcm copper for 400 amp. All panels are required to be bolt-on type and have 15% spare space at final inspection."

Section 230.42(c): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Grounded Conductors. The grounded conductors shall be the same size as the phase (ungrounded) conductors and be of copper."

Section 230.43: ***Wiring Methods for 600 Volts, Nominal, or Less.***

Section 230.43: The following Sub-Sections shall be deleted: (1); (2); (5); (6); (7); (8); (9); (12); (13); (14); (15); and (16) from the list of approved wiring methods of service entrance conductors.

Section 230.43(11): At the end of this Sub-Section, the following shall be added: "PVC may be used underground and must be encased in no less than four inches (4") of concrete and emerge up with rigid conduit to the termination point."

Section 230-Section F Service Equipment – Disconnecting Means

Section 230.70(a): At the end of this Sub-Section, the following sentence shall be added: "If the distance of the service must enter the building more than eight feet (8') of conductor length, then an over current service disconnecting means must be provided at point of entrance besides the main service disconnect."

Section 230.72(c): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Access to Occupants. In all multiple occupancy buildings, each occupant shall have a main disconnect means located in the occupant's space.

Exception: In use Group F-1, F-2, S-1, S-2, and U (i.e. factory, industrial, storage, utility, and miscellaneous as per 1996 BOCA National Building Code Section 302) or newest adopted code. The main disconnect means may be located on the outside of the occupant's space.

Exception: When an office complex of Group B, as defined by 1996 BOCA National Building Code or newest adopted code, not over 200 square feet, fed from a common tenant panel in an accessible area, and under one management metered plan, all circuits in the office space must be able to be disconnected by one switch (i.e. lighting and power), except house controlled exit lighting and the switch must be located by the front door of the tenant space."

VIII.

Services Exceeding 600 Volts, Nominal

Add the following statement after this Section title: "All installations of wire way systems must be listed for electrical applications, approved, and must follow Commonwealth Edison's specifications and requirements. When conflicts occur, ~~the Inspector must make the final decision~~ between Commonwealth Edison's specifications and requirements and this code, the stricter standard shall apply."

Article 240 – Overcurrent Protection

Section G - Circuit Breakers

Section 240.80: Method of Operation.

Section 240.80: At the end of this Section, the following shall be added: "All panel boards, except those used in residential occupancies, must have bolt-on type breakers and must have 15% spare spaces on final inspection."

Article 250 – Grounding

Section C Grounding Electrode System and Grounding Electrode Conductor

Section 250.50 At the end of this Sub-Section, the following paragraph shall be added: "Grounding electrode conductors must be installed in a raceway system."

Section 250.52(A)(7): At the end of this Sub-Section, the following Sub-Section shall be added:

"(8) Where plastic underground water piping or where a building receives water by a non-conductive type well, supplemental grounding electrodes must be installed outside of the building and used as the main grounding electrode. The two (2) grounding electrodes must be installed at twice the length of the ground electrode, or a minimum of sixteen feet (16') apart."

Section 250.66: This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

“Size of Alternating-Current Grounding Electrode Conductor. The size of the grounding electrode conductor of a grounded or ungrounded alternating current system shall not be less than given in Table 250-66, but never less than No. 4 AWG and made of copper only. The grounding electrode conductor must be installed from a direct

connection on the neutral buss bar in panel board, to the street side of the incoming water service ahead of any valves or connections, and be installed in a raceway system."

Table 250.66: ***Grounding Electrode Conductor for Alternating-Current System***

Table 250.66: Under the Headings "Size of Largest Service-Entrance Conductor or Equivalent Area for Parallel Conductors" and "Size of Grounding Electrode Conductor," delete the columns for "Aluminum or Copper-Clad Aluminum shall be deleted."

Article 300 – Wiring Methods

Section 300.4(a)(2): Change this Sub-Section to read as follows:

"Notches in Wood. No notching of any kind will be allowed for any type of wiring methods. All holes drilled must be no closer than 5/8 of one inch (5/8") from the front face of the stud."

Section 300.5 ***Underground Installations***

Section 300.5(c): At the end of this Sub-Section, the following Sentence shall be added: "Underground cable installed under sidewalks, roadways, driveways, aprons, parking lots, alley ways, and similar areas, shall be installed through a raceway sleeve that extends beyond the end of said areas."

Article 310 – Conductors for General Wiring

Section 310.2(b): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Conductor Material. Conductors in this Article shall be of only copper.

Exception: Other material can be installed where governed by the Illinois Commerce Commission."

Article 314 -Outlet, Device, Pull and Junction Boxes; Conduit Bodies; Fittings; and Manholes

Section 314.3 ***Nonmettalic Boxes***

Section 314.3 This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Nonmetallic Boxes and Conduit Bodies will only be allowed when listed for the application of its use. It is limited to installation on the outside of residential building (i.e. decks, landscaping lights, pools, spas, and receptacles remote from the structures); when installed for the purpose of floor boxes when installed in slab on grade installations; or when installed outside in ground, but only when deemed in a protected area by the Authority Having Jurisdiction."

Section 314.4 **Metal Boxes**

Section 314.4 At the end of this Sub-Section, the following paragraph shall be added:

"All conduit boxes for switches and receptacles and other devices must be a minimum of four inches (4") square and not less than one and one-half inches (1-1/2") deep (1900 box).

Exception No. 1: For remodeling situation where the wall finish is not removed.

Exception No. 2: Where structural damage will occur because of the installation of the four inch (4") square box.

Exception No. 3: When installed in masonry, a box over fourteen cubic inches (14") may be used."

Section 314.27 **Outlet Boxes**

Section 314.27(D) This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

(D) Boxes at Ceiling-Suspended (Paddle) Fan Outlets. All outlet boxes mounted on the ceiling more than two feet (2') from walls must be listed and installed for fan support.

Exception: In bath, laundry, utility, garages, unfinished basement, and in lay-in ceiling areas or smoke detectors."

Article 320 – Armored Cable: Type AC

This entire Article shall be deleted in its entirety.

Article 322 – Flat Cable Assemblies: Type FL

This entire Article shall be deleted in its entirety.

Article 324 – Flat Conductor Cable: Type FCC

This entire Article shall be deleted in its entirety.

Article 326 – Integrated Gas Spacer Cable: Type IGS

This entire Article shall be deleted in its entirety.

Article 328 – Medium Voltage Cable: Type MV

This entire Article shall be deleted in its entirety..

Article 330 – Metal-Clad Cable: Type MC

This entire Article shall be deleted in its entirety.

Article 332 – Mineral-Insulated, Metal-Sheathed Cable: Type MI

This entire Article shall be deleted in its entirety.

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

Section 334.10

This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Uses Permitted. Type NM, Type NMC, and Type NMS cables shall be permitted only for the use of temporary construction sites as prescribed in Article 527."

Article 336 – Power and Control Tray Cable: Type TC

Section 336.10

This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Uses Permitted. Type TC cable will only be allowed for power, lighting, and single circuits where installed in a cable tray in an industrial establishment where the conditions of maintenance and supervision ensure that only qualified persons will service the installation.

Where the cable leaves the tray, it must be installed in a conduit system that is bonded and connected to the cable tray."

Article 338 – Service-Entrance Cable: Types SE and USE

This entire Article shall be deleted in its entirety.

Article 340 – Underground Feeder and Branch-Circuit Cable: Type UF

Section 340.10 This Section is deleted in its entirety and a new Section is added to read as follows:

"(a) Uses Permitted. Type UF cable shall be permitted for use only for ground lighting in a residential dwelling (see Section 300.5)".

FPN: See Section 310.10 for temperature limitation of conductors.

Article 348 – Flexible Metal Conduit

Section 348.10: ***Uses Permitted.***

Section 348.10: At the end of this Section, the following language shall be added:

"Flexible metallic conduit may be used in remodeling situations where the wall finish is not removed, and/or, where the installation of EMT is not feasible, and must have a grounding conductor installed in all lengths (regardless). The determination must be made by the Building Department. When flex is used, no more than twenty-four inches (24") may be exposed before termination or change over (i.e. when fishing down a wall, in cabinet work, etc.)."

Section 348.12 ***Uses Not Permitted.***

Section 348.12: At the end of this Sub-Section, the following Sub-Section and language shall be added:

"(8) Flexible metal conduit shall not be used in lengths exceeding six feet (6'), or in a daisy chain installation.

Exception: When alterations are made to the electrical system and the wall finish is not removed, flexible metal conduit may be allowed to exceed six feet (6') in length and must have a green grounding conductor installed with the supply conductors and connects to the fixture or appliance to the metal raceway system."

Section 348.60 ***Grounding and Bonding***

Section 348.60: This Section is deleted in its entirety and a new Section is added to read as follows:

"Grounding. All flexible metal conduit shall have a grounding conductor installed, no matter what length. Where an equipment

bonding jumper is required around flexible metal conduit, it shall be installed in accordance with Section 250.102."

Article 350 – Liquidtight Flexible Metal Conduit

Section 350.10: *Use Permitted*

Section 350.10(3): At the end of this Sub-Section, the following Sub-Section shall be added:

"Lengths over six foot (6') are not allowed. All liquidtight flexible metal conduit must have a green grounding conductor installed."

Article 352 – Rigid Nonmetallic Conduit (RNC)

Section 352.10: This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

Uses Permitted. Listed rigid nonmetallic conduit shall be permitted under the following conditions:

- (a) Inside of a structure when installed “beneath” a four-inch (4”) thick concrete slab. Where emerging through concrete, R.N.C. must change over to IMC or RMC.
- (b) R.N.C. shall be the only method use for under slab wiring methods and must emerge through the concrete floor, where corrosive soils are present.
- (c) In cinder fill.
- (d) Underground installation outside of structures may be used only when Article 300 Table 5 is followed, and may not extend more than sixteen inches (16”) above grade, if deemed a protected area by the Building Department, and special permission is obtained. If not, PVC must be changed over to IMC (intermediate metal conduit), or RMC (rigid metallic conduit), when emerging above grade level
- (e) All panels must be marked with a placard informing of PVC installation.
- (f) And as part of the wiring system as permitted in Section 314.3 of this Ordinance.

Exception: R.N.C. shall not be used when poured into concrete, pole bases, sign bases, concrete pads, etc. R.N.C. must be changed over to IMC or RMC, and may not emerge above grade if used for services or panel."

Article 354 – Nonmetallic Underground Conduit with Conductors: Type NUCC

This entire Article shall be deleted in its entirety.

Section 354.10: Uses Permitted

Section 354.10(2): This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"A sleeve must be used when used for pole bases, sign bases, or anytime a permanent structure outside of the building may be fed by this wiring method."

Article 356 – Liquidtight Flexible Nonmetallic Conduit: Type LFNC

This entire Article shall be deleted in its entirety.

Article 358 – Electrical Metallic Tubing (EMT)

Section 358.10: Uses Permitted.

Section 358.10: This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"Corrosion Protection. Electrical metallic tubing and its listed fittings shall be permitted to be installed in concrete, when installed above basement or grade, and must have a grounding conductor installed."

Section 358.12: Uses Not Permitted.

Section 350.12(6) At the end of this Sub-Section, the following Sub-Sections shall be added:

"(7) Where it is in direct contact with weather.

(8) When exposed to moisture, must follow other sections of the code and is considered a wet location - Section 300-6, Protection Against Corrosion; Section 370-15, Damp, Wet, Hazardous Locations. If not, EMT shall not be used."

Article 360 – Flexible Metal Tubing

This Article is deleted in its entirety and the following shall be added to read as follows:

"The provisions of Article 348 are hereby adopted and incorporated herein, as if fully set forth in this Article."

Article 362 - Electrical Nonmetallic Tubing

Section 362.10: This Section is deleted in its entirety and a new Section is added to read as follows:

Uses Permitted. The use of electrical nonmetallic tubing and fittings shall only be permitted for light carrying fiber optic branch lines; computer, phone or speaker wiring."

Article 378 - Nonmetallic Wireways

This entire Article shall be deleted in its entirety.

Article 382 – Nonmetallic Extensions

This entire Article shall be deleted in its entirety.

Article 386 – Surface Metal Raceways

Section 386.12: At the end of this Sub-Section, the following paragraph is added to read as follows:

"(13) The following types and sizes of surface metal raceway are not permitted: 200, 1500, 2000, and 2600."

Article 388 – Surface Nonmetallic Raceways

This entire Article shall be deleted in its entirety.

Article 392 – Cable Trays

Section 392.3: This Section is deleted in its entirety and a new Section is added to read as follows:

Uses Permitted. Cable trays shall only be permitted for the use as a support system for data, phone, and computer systems, if not used in industrial establishments under supervised maintenance conditions."

Article 394 – Concealed Knob-and-Tube Wiring

This entire Article shall be deleted in its entirety.

Article 396 – Messenger Supported Wiring

Section 396.10: This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

"In Temporary Construction Services. Messenger supported wiring shall only be permitted for temporary construction services where conditions of maintenance and supervision ensure that only qualified persons will service the installed messenger supported wiring."

Article 398 – Open Wiring on Insulators

This entire Article shall be deleted in its entirety.

Article 400 – Flexible Cords and Cables

Section 400.8: *Uses Not Permitted.*

Section 400.8: At the end of this Section, add the following:

"Flexible cords exceeding six feet (6') in length must receive the approval of the Building Department. All flexible cords must be equipped with a grounding conductor, and installed with an approved cord grip, strain relief, and have only one terminal point (cord cap)."

Article 408 – Switchboards and Panelboards

Section 408.1: *Scope*

Section 408.1: At the end of this Sub-Section, the following Sub-Section shall be added:

"(3) All switchboards, panel boards, and distribution boards for all industrial, commercial, and retail establishments must be of the bolt-on type and have a main breaker installed, unless only six (6) switches are installed for power."

Article 410 – Lighting Fixtures, Lampholders, Lamps, and Receptacles

410.4: *Luminaires (Fixtures) in Specific Locations.*

Section 410.4(d): At the end of this Sub-Section, the following Sub-Section shall be added:

"(e) **Sinks.** There shall be a lighting fixture installed directly over every kitchen sink in a dwelling unit. It must be of the recessed type, or surface-mounted fixture with enclosed bulbs."

Section 410.8: This Section is deleted in its entirety and a new Section is added to read as follows:

"Luminaires (Fixtures) in Clothes Closets.

(a) All closets, pantries, and storage areas over eight (8) square feet shall have lighting installed and located for adequate illumination, per Article 410-8.

(b) Type of Lighting. Lights installed in these areas shall be recessed cans or florescent fixtures with an enclosed bulb. Florescent screw-in bulbs will not be considered as an acceptable alternative."

Section 410.29: This Section is deleted in its entirety and a new Section is added to read as follows:

"Cord-Connected Showcases. No showcase shall be cord-connected unless it is listed and labeled by a nationally recognized testing laboratory (NRTL)."

410.30: ***Cord Connected Lampholders and Luminaires (Fixtures).***

Section 410.30(c)(2): At the end of this Sub-Section, the following shall be added:

"This type of lighting fixture shall not be installed inside of any structures, or on any structures, if installed on more than a 20 amp circuit. Only pole lights and ground lights will be accepted."

Article 422 – Appliances

Section 422.10:: ***Branch-Circuit Rating***

Section 422.10(A): At the end of this Sub-Section, the following sentence shall be added:

"Individual circuits are required for each of the following: microwaves, trash compactors, dishwashers, freezers, refrigerators, furnaces, vacuum systems, window air conditioners, circulation pumps, and garbage disposals."

Article 500 – Hazardous (Classified) Locations, Classes I, II, and III, Divisions 1 and 2

Section 500.1 **Scope - Articles 500 Through 504.**

Section 500.1 At the end of this Section, the following Sub-Section shall be added:

"(A) A sign must be installed on all entries into the area and be marked with the Classification and Division, and such entry shall be marked with the highest Classification and Division existing in the area."

Article 520- Theaters, Audience Areas, of Motion Picture and Television Studios, and Similar Locations

Section 520.47: This Section is deleted in its entirety and a new Section is added to read as follows:

"Backstage Lamps (Bare Bulbs). Lamps installed in backstage and ancillary areas must have covered or protected bulbs so as not to cause an accidental fire."

Section 520.63: This entire Section shall be deleted in its entirety.

Article 527 – Temporary Installations

Section 527.3: **Time Constraints.**

Section 527.3(b): At the end of this Sub-Section, the following paragraph shall be added:

"Extension cords must be a minimum of 3 x 14 AWG molded cords, and be approved. The cord must be as short as possible to the point of use. All temporary power must be approved."

Article 545 – Manufactured Buildings

This entire Article shall be deleted in its entirety.

Article 550 – Mobile Homes, Manufactured Homes, and Mobile Home Parks

This entire Article shall be deleted in its entirety.

Article 551 – Recreational Vehicles and Recreational Vehicle Park

This entire Article shall be deleted in its entirety.

Article 552 – Park Trailers

This entire Article shall be deleted in its entirety.

Article 553 – Floating Buildings

This entire Article shall be deleted in its entirety.

Article 555 – Marinas and Boatyards

This entire Article shall be deleted in its entirety.

Article 600 – Electric Signs and Outline Lighting

Section 600.1: At the end of this Section, the following sentence shall be added:

"All installations for electric signs and outline lighting shall be listed and labeled by a nationally recognized testing laboratory (NRTL) and shall be an approved installation."

Section 600.32: ***Neon Secondary Circuit Conductor, Over 1000 Volts, Nominal.***

Section 600.32(a): This Section is deleted in its entirety and a new Section is added to read as follows:

Wiring Method. Conductors shall only be installed in IMC, RMC, EMT, FMC, and LFMC, and be a minimum of 1/2 trade size; and be installed in accordance with the requirements of Chapter 3. Only one conductor shall be allowed in each conduit for high-voltage wiring systems."

Article 604 – Manufactured Wiring Systems

This entire Article shall be deleted in its entirety.

Article 605 – Office Furnishings (Consisting of Lighting Accessories and Wired Partitions)

Section 605.8: This Section is deleted in its entirety and a new Section is added to read as follows:

Freestanding-Type Partitions, Cord and Plug Connected. The freestanding-type partitions shall be wired to building power, as allowed in other sections of this Article. Cord and plug connected assemblies are not allowed."

Article 680 – Swimming Pools, Fountains, and Similar Installations

Section 680.4: *Approval of Equipment.*

Section 680.4: At the end of this Section, the following sentence shall be added:

"All equipment covered in this Section shall be listed and labeled by a NRTL."

Section 680.8: *Overhead Conductor Clearances.*

Section 680.8(A): At the end of this Sub-Section, the following sentence shall be added:

"No power lines may be over or within five feet (5') of the pool or horizontal to the pool."

Section 680.21: *Motors.*

Section 680.21(B): At the end of this Sub-Section, the following sentence shall be added:

"All 120 v or 240v single phase motors shall be protected by ground fault and must be listed and labeled by a NRTL."

Section 680.41: *Emergency Switch for Spas and Hot Tubs.*

Section 680.41: The language in the last sentence of this Section which reads:

"This requirement shall not apply to single-family dwellings" is hereby deleted and the following language is hereby added: "This requirement applies to all spas and hot tubs."

Section 680.71: *Protection*

Section 680.71: This Section is deleted in its entirety and a new Section is added to read as follows:

Protection. Hydromassage bathtubs and their associated electrical components shall be protected by a GFCI, face-less in the same room, located a minimum of five feet (5') from tub, or by GFCI breaker in the service panel. All 125 volt single-phase receptacles, not exceeding 30 amperes and located within fifteen (15) feet measured horizontally from the inside wall of a hydromassage tub, shall be protected by a ground fault circuit interruptor(s)."

Article 700 – Emergency Systems

Section 700.16: *Emergency Illumination.*

Section 700.16: The following language is hereby added to the end of this Section:

"Emergency lighting with battery back-up must be provided in the additional following locations: vaults, toilet rooms, electrical closets or rooms, switch gear rooms, and adjacent to the incoming electrical service. Where installed for electrical services or panel boards, it must light the face of the electrical equipment.

Exception: Residential

All exit lights will be updated to battery back-up regardless, unless on an emergency generator. Exit lights shall not be connected to general lighting or power circuits. However, they may share circuits serving night lights and emergency lights. Breakers for exits/battery light circuits shall be locked on. Battery back-up lighting must be installed to light the path of egress, even if a generator is used for emergency lighting."

Section 700.20: *Switch Requirements.*

Section 700.20: At the end of this Section, the following shall be added: "Circuit lock-on devices must be installed on all circuits providing power to emergency lighting, exit signs, fire alarm panels, and smoke detectors."

Article 720 – Circuits and Equipment Operating at Less than 50 Volts

Section 720.1: At the end of this Section, the following shall be added:

"Cables, wiring, etc., where permitted by this Code and Amendments, installed enclosed in building partitions, walls, or in anyway made inaccessible by building construction, shall be encased in a raceway system governed by these Amendments. Such raceway will protect the conductors during construction and provide ready means of replacement of conductors after building is complete without damaging the finish building. These raceways need to terminate in a box at the device and extended to underside of the structure, (to an accessible location) and the end of the raceway system must have a connector or bushing installed on the end. When passing through a wall, an approved sleeve must be installed and be fire-stopped.

When installed on the finished wall in a storage, warehouse, mechanical room, or similar area, a raceway system must be provided and extended to the under side of the deck out of the physical damage area.

Exception: Single family house.

When installed as free air, open joist, or exposed condition. The wire must be supported between every six (6) to eight (8) feet and be parallel and perpendicular to the building structure."

Article 725 – Class 1, Class 2, and Class 3 Remote-Control, Signaling, and Power-Limited Circuits

Section 725.1:

At the end of this Section, the following shall be added:

"Cables, wiring, etc., where permitted by this Code and Amendments, installed enclosed in building partitions, walls, or in anyway made inaccessible by building construction, shall be encased in a raceway system governed by these Amendments. Such raceway will protect the conductors during construction and provide ready means of replacement of conductors after building is complete without damaging the finish building. These raceways need to terminate in a box at the device and extended to underside of the structure, (to an accessible location) and the end of the raceway system must have a connector or bushing installed on the end. When passing through a wall, an approved sleeve must be installed and be fire-stopped.

When installed on the finished wall in a storage, warehouse, mechanical room, or similar area, a raceway system must be provided and extended to the under side of the deck out of the physical damage area.

Exception: Single family house."

Section 725.6

Mechanical Execution of Work.

Section 725.6:

At the end of this Section, the following shall be added:

"Class 1 power circuits over 30 volts and Class 3 circuits must follow wiring methods of Chapter 3 of the 2002 N.E.C. and this Ordinance."

Article 727 – Instrumentation Tray Cable: Type ITC

Section 727.1:

At the end of this Section, the following shall be added:

"Cables, wiring, etc., where permitted by this Code and Amendments, installed enclosed in building partitions, walls, or in anyway made

inaccessible by building construction, shall be encased in a raceway system governed by these Amendments. Such raceway will protect the conductors during construction and provide ready means of replacement of conductors after building is complete without damaging the finish building. These raceways need to terminate in a box at the device and extended to underside of the structure, (to an accessible location) and the end of the raceway system must have a connector or bushing installed on the end. When passing through a wall, an approved sleeve must be installed and be fire-stopped.

When installed on the finished wall in a storage, warehouse, mechanical room, or similar area, a raceway system must be provided and extended to the under side of the deck out of the physical damage area.

Exception: Single family house."

Article 760 – Fire Alarm Systems

Section 760.1: At the end of this Section, the following shall be added:

"Cables, wiring, etc., where permitted by this Code and Amendments, installed enclosed in building partitions, walls, or in anyway made inaccessible by building construction, shall be encased in a raceway system governed by these Amendments. Such raceway will protect the conductors during construction and provide ready means of replacement of conductors after building is complete without damaging the finish building. These raceways need to terminate in a box at the device and extended to underside of the structure, (to an accessible location) and the end of the raceway system must have a connector or bushing installed on the end. When passing through a wall, an approved sleeve must be installed and be fire-stopped.

When installed on the finished wall in a storage, warehouse, mechanical room, or similar area, a raceway system must be provided and extended to the under side of the deck out of the physical damage area.

All installations must follow N.F.P.A. 72 and the Gurnee Fire Department's "Exception" from said N.F.P.A. regulations.

Exception: Single family house."

Section 760.6 ***Mechanical Execution of Work***

Section 760.6: At the end of this Section, the following shall be added:

"The supports shall be a maximum of eight (8) feet and be parallel and perpendicular to the structure."

Section 760.10: *Fire Alarm Circuit Identification*

Section 760.10: At the end of this Section, the following shall be added:

"All fire alarm wiring not installed in a raceway, must be red in color and be approved. All splices must be made in an approved J-box and identified. Red low-voltage cable will only be allowed for fire alarm systems."

Article 770 – Optical Fiber Cables and Raceways

Section 770.1: At the end of this Section, the following shall be added:

"Cables, wiring, etc., where permitted by this Code and Amendments, installed enclosed in building partitions, walls, or in anyway made inaccessible by building construction, shall be encased in a raceway system governed by these Amendments. Such raceway will protect the conductors during construction and provide ready means of replacement of conductors after building is complete without damaging the finish building. These raceways need to terminate in a box at the device and extended to underside of the structure, (to an accessible location) and the end of the raceway system must have a connector or bushing installed on the end. When passing through a wall, an approved sleeve must be installed and be fire-stopped.

When installed on the finished wall in a storage, warehouse, mechanical room, or similar area, a raceway system must be provided and extended to the under side of the deck out of the physical damage area.

Exception: Single family house."

Article 780 – Closed-Loop and Programmed Power Distribution

This entire Article shall be deleted in its entirety.

Article 800 – Communications Circuits

Section 800: At the end of this Section, the following shall be added:

"Cables, wiring, etc., where permitted by this Code and Amendments, installed enclosed in building partitions, walls, or in anyway made inaccessible by building construction, shall be encased in a raceway system governed by these Amendments. Such raceway will protect the

conductors during construction and provide ready means of replacement of conductors after building is complete without damaging the finish building. These raceways need to terminate in a box at the device and extended to underside of the structure, (to an accessible location) and the end of the raceway system must have a connector or bushing installed on the end. When passing through a wall, an approved sleeve must be installed and be fire-stopped.

When installed on the finished wall in a storage, warehouse, mechanical room, or similar area, a raceway system must be provided and extended to the under side of the deck out of the physical damage area.

Exception: Single family house."

Section 800.6 ***Mechanical Execution of Work***

Section 800.6: At the end of this Section, the following shall be added:

"The supports shall be a maximum of eight (8) feet and be parallel and perpendicular to the structure."

Article 810 – Radio and Television Equipment

Section 810.1: At the end of this Section, the following shall be added:

"Cables, wiring, etc., where permitted by this Code and Amendments, installed enclosed in building partitions, walls, or in anyway made inaccessible by building construction, shall be encased in a raceway system governed by these Amendments. Such raceway will protect the conductors during construction and provide ready means of replacement of conductors after building is complete without damaging the finish building. These raceways need to terminate in a box at the device and extended to underside of the structure, (to an accessible location) and the end of the raceway system must have a connector or bushing installed on the end. When passing through a wall, an approved sleeve must be installed and be fire-stopped.

When installed on the finished wall in a storage, warehouse, mechanical room, or similar area, a raceway system must be provided and extended to the under side of the deck out of the physical damage area.

Exception: Single family house."

Article 820 – Community Antenna Television and Radio Distribution Systems

Section 820.1: At the end of this Section, the following shall be added:

"Cables, wiring, etc., where permitted by this Code and Amendments, installed enclosed in building partitions, walls, or in anyway made inaccessible by building construction, shall be encased in a raceway system governed by these Amendments. Such raceway will protect the conductors during construction and provide ready means of replacement of conductors after building is complete without damaging the finish building. These raceways need to terminate in a box at the device and extended to underside of the structure, (to an accessible location) and the end of the raceway system must have a connector or bushing installed on the end. When passing through a wall, an approved sleeve must be installed and be fire-stopped.

When installed on the finished wall in a storage, warehouse, mechanical room, or similar area, a raceway system must be provided and extended to the under side of the deck out of the physical damage area.

Exception: Single family house."

Article 830 – Network-Powered Broadband Communications Systems

Section 830.1:

At the end of this Section, the following shall be added:

"Cables, wiring, etc., where permitted by this Code and Amendments, installed enclosed in building partitions, walls, or in anyway made inaccessible by building construction, shall be encased in a raceway system governed by these Amendments. Such raceway will protect the conductors during construction and provide ready means of replacement of conductors after building is complete without damaging the finish building. These raceways need to terminate in a box at the device and extended to underside of the structure, (to an accessible location) and the end of the raceway system must have a connector or bushing installed on the end. When passing through a wall, an approved sleeve must be installed and be fire-stopped.

When installed on the finished wall in a storage, warehouse, mechanical room, or similar area, a raceway system must be provided and extended to the under side of the deck out of the physical damage area.

Exception: Single family house."

Sec. 18-135. Special requirements for structures in the village.

A. Read-O-Matic (R.O.M.)

In commercial and residential buildings, a conduit shall be provided for the R.O.M. from the water meter to an approved, unobstructed location on the outside wall of the structure.

- B. Fine Print Note (FPN)
All FPN's of the National Electrical Code will be enforced as part of this Ordinance.
- C. Exposed Wiring
All exposed electrical, data, phone, security, fire, etc. wiring, must be installed in a work-like manner. This means parallel and perpendicular to the building structure and supported a maximum of eight feet (8').
- D. Smoke Detectors (Residential)
In addition to other applicable codes, smoke detectors shall be placed in furnace rooms, or in the area of the furnace and in all bedrooms. This detector must be 110-volt with battery back-up and be interconnected with all other detectors.
- E. Voltage Drop
There shall be no more than a 5% voltage drop in any electrical wiring system. This also includes street lighting and parking lot lighting.
- F. Street Lighting
Any repairs done to the Village of Gurnee's street lighting/wiring system, must be done to the requirements of the Village's standards and must be inspected. In-ground splicing will only be allowed by written form, or an approved hand hole must be used for splicing of wire. All hard surface entries over easements must have street lighting sleeves installed under the hard surface and be capped off for future use (two inches {2"} or larger).
- G. Future Wiring
One empty three-quarter inch (3/4") raceway system must be installed from the basement to the attic in an accessible area.
- H. Outside Inground Wiring
All outside inground wiring junction boxes that are installed near where traffic could come in contact (drive over) must be installed in a grade level hand hole.
- I. Sleeping Rooms
All Sleeping Rooms must have a 110 volt, battery back-up, interconnected smoke detector located inside each Sleeping Room

and outside of the Sleeping Room, within 15-feet of entrance to said Sleeping Room.

Sec. 18-136.

Explanation of building and regulation requirements.

A. ELECTRICAL PERMITS

1. Permits.

- a. All persons, firms, companies, or corporations shall before beginning any installation, alteration, or change of electrical, communication, data, and alarm wiring/equipment in the Village of Gurnee, must obtain a permit for such work from the Building Department.
- b. The Illinois electrical contractor must be registered in the Village of Gurnee and hold the proper insurance per the requirements of this Ordinance.
- c. Where a registered electrical contractor is found doing work without a permit, the Building Department shall cite the contractor, who shall be subject to the penalties provided in this Ordinance. The contractor may request a hearing before the Electrical Commission to appeal the decision or the penalties prescribed by the Building Department. Said hearing shall be conducted within a reasonable time.
- d. Members of the Electrical Commission in a hearing shall determine whether a contractor is guilty of a violation of, or noncompliance with, this Ordinance, and upon a finding of guilty, determine whether the penalty prescribed by the Building Department is reasonable, pursuant to this Ordinance. All action taken by the Electrical Commission will be placed in the contractor's file and will be kept for a period of at least five (5) years. Any decision or action of the Electrical Commission is reviewable by a court of proper jurisdiction pursuant to 735 ILCS 5/3-101 et seq.
- e. Permits for the installation, alteration, or change of electrical, communication, data, and alarm wiring/equipment shall be issued upon receipt of an application and review of the Building Department. Such permit will be made out on a printed form to be furnished by the Building Department.

2. *Permit Cards.*

Permit cards shall be posted in plain view inside the building, near the entrance, or near the electrical service. Permits for electrical, communication, data, or alarm work shall be valid for a period of six (6) months from date of issue. Electrical work listed on other permits shall be valid for the length of that permit, and no refunds shall be made once work has been started.

3. *Permit and Inspection Fees.*

- a. Fees for electrical work shall be those fees as provided for in the current fee schedule as adopted by the Village of Gurnee. Where no permit fees are in the current fee schedule, then the minimum fee shall be the greater of five percent (5%) of the total cost of the job or fifty dollars (\$50.00).
- b. For work that has been started without first obtaining a permit, the permit fees shall then be up to ten times the normal fee and the firm doing the work may be cited for violation of this Ordinance as provided herein.

4. *Remodeling or Reconstruction.*

If 40% of any structure is being remodeled, reconstructed, added to, and said remodeling, reconstruction, or addition requires the issuance of a permit, said structure must be brought-up to the current codes. Disputes regarding what percentage of structure is being remodeled or reconstructed shall be resolved as any other appeal to the Electrical Commission.

5. *Service Change or Upgrade.*

If any part of the service is altered, the service must be upgraded in its entirety per the latest code and this Ordinance.

B. *INSPECTIONS*

1. *Inspections Required:*

- a. Service Inspection: Before power to service may be energized, a service inspection shall be performed. When said inspection is performed and meets said code as prescribed by this Ordinance, a green “Pass” sticker will be paced on the

incoming service, which gives the power company the right to energize said service.

- b. Transformer Inspection: Before any private transformer (not CE's) may be left on for power, whether step up or step down, an inspection must be performed to ensure provisions of this Ordinance are followed. After said inspection a green "Pass" sticker will be placed on transformer and may be energized. If alterations of 25% are made on electrical systems having transformers installed, a transformer inspection may be required by the Building Inspector, and then a sticker will be placed on said transformer.
- c. Rough-In Inspection: All installations or alterations to the electrical, communication, data, and alarm system/equipment must receive an approved inspection from the Building Department prior to work being concealed. The contractor shall notify the Building Department no less than a twenty-four (24) hours in advance of the required inspection. No wire shall be installed in piping systems until after the walls and ceiling are finished (rocked). Written permission from the Building Department may be acquired to proceed with wire installation before wall finish.
- d. Conductor Fill Inspection: After branch circuit wiring is installed in the piping system and before devices are installed, there shall be an inspection made. If any violations are found, they must be corrected before work may continue.
- e. Open Ceiling Inspection: All installations or alterations to the electrical, communication, data, and alarm systems/equipment, must receive an approved inspection from the Building Department prior to the work being concealed. The contractor shall notify the Building Department for the required inspection.
- f. Final Inspection: A final inspection is required upon completion of the permitted work. The electrical contractor must receive a final approved inspection by the Building Department. The contractor shall notify the Building Department no less than twenty-four (24) hours in advance of the required inspection. Said contractor shall have a representative of said company at final inspection with proper devices to completely inspect all work that was performed on request of the Building Department.

- g. Re-Inspection: There shall be a re-inspection fee of fifty dollars (\$50.00) for all inspections made after the first required inspection. After each additional re-inspection of the required inspection, the fee will double (i.e. \$50.00, \$100.00, \$200.00, etc.). The re-inspection fee must be paid prior to any re-inspections being scheduled. If installation of work is not conforming to this Code and Ordinance in a timely fashion after a re-inspection is performed and still is not in compliance, the person, firm, company or corporation committing the violation or failing to comply shall be subject to the penalties provided by this Ordinance.
- h. Certificate of Occupancy: A certificate of occupancy will not be issued for a building or structure if the electrical, communication, data, or alarm installations and equipment are not in compliance with the Code and Ordinance.
- i. Periodic Inspections: The Building Inspector may periodically make inspections of existing electrical, communication, data, and alarm systems/equipment, within the Village of Gurnee. If said systems or part of systems are found to be unsafe, or in a state of disrepair, the Building Inspector will, in writing, request from the person, firm, or corporation responsible for said system, to correct said system in a reasonable amount of time. Any such person, firm, or corporation that fails to correct said problem shall be subject to the penalties provided in this ordinance. . The 2000 Edition of NFPA 73 is hereby adopted for any and all inspections of existing electrical, communications, data, and alarm system equipment.

C. INSPECTORS

1. Authority of the Building Inspectors.

The inspectors are hereby empowered to fine, to issue a stop work order, or to order the discontinuance of any electrical service which serves any wire, equipment, or devices which are deemed hazardous to life, safety, or any situation which may be found to be an electrical shock hazard, provided that every decision of the inspectors are subject to appeal as provided in this Ordinance.

2. Appeals.

Any person, firm, company, or corporation may appeal the decision, interpretation, or findings made by the Building Inspector to the Electrical Commission as established by the Village of

Gurnee. The procedures to be followed shall be those set forth in 735 ILCS 5/3-101 et seq. The Building Department may order that all or any part of work performed be redone, subject to an appeal for a hearing before the Electrical Commission. Appeals of the stop work order, order of discontinuance, or fines/penalties shall be made in writing to the Village Administrator or his/her designee.

3. *Duties of Inspectors.*

Such Inspector shall be charged with the duties of enforcing the provisions, rules and regulations, fixing standards, and specifications for the regulation and use for electrical equipment as defined in the Ordinance and prescribed in any other Ordinances of the Village of Gurnee. He/she shall be subordinate and responsible to the Village Administrator or his/her designee, who shall have the administrative authority under this Ordinance.

4. *Chief Electrical Inspector.*

The position designated by the Village Administrator or his/her designee, which shall be known as the Electrical Inspector and who shall be appointed in the same manner as other Village employees by the President and the Board of Trustees.

5. *Building Inspectors.*

The position designated by the Village Administrator or his/her designee, which shall have the authority to perform all the duties of the Electrical Inspector as prescribed in this Ordinance, and trained by the Chief Electrical Inspector and/or by registered update classes.

D. *ELECTRIC COMMISSION*

1. *Electrical Commission.*

The Commission is hereby created and governed by the Illinois Municipal Code (65 ILCS). The Electrical Commission of the Village of Gurnee shall consist of five (5) members, plus the Chief Electrical Inspector. The five (5) members shall consist of a representative of the following: electrical power company, electrical contractor, Journeyman electrician, Village of Gurnee Fire Protection Service, and electrical engineer. The Chief Electrical Inspector shall also serve as ex-officio chairman of such Commission. All members of the Commission must and shall be appointed by the Village President and with the consent of the

Village Board of Trustees. Such members serve at the pleasure of the Village President for a term not to exceed the term of the appointing Village President.

2. *Duties of the Electrical Commission:*

Said Commission shall be and is hereby charged with the duties of recommending safe and practical standards and specifications for installing, altering, and use of electrical, communication, data, and alarm wiring, equipment, and installation of said systems to meet the necessities and conditions that prevail in the Village of Gurnee. The Commission may, from time to time, as needed or when occasion demands, as the interest of the public requires, recommend such changes in the standards and specifications as they may unanimously agree are necessary. If any changes are made to any of the provisions set forth in this Ordinance, a copy of said changes shall be filed in the office of the Village Clerk and the Building Department for a period of thirty (30) days for review. Such recommendations made by the Electrical Commission are subject to the approval by the Village Board of Trustees.

E. *LIABILITY*

The inspection and control of the installation of electrical, communication, data, and alarm wiring and equipment, or the granting of inspection certificates by the Building Department, shall not render the Village of Gurnee liable on account of such inspections, control of granting of such inspection, or lessen the liability of persons, firms, or corporations owning or installing of said equipment and wiring.

F. *REGISTRATION*

1. *Insurance Requirements.*

All electrical contractor applicants shall provide a certificate of insurance with the Village of Gurnee named as the Certificate Holder, indicating a compressive general liability policy with minimum bodily injury limits of \$300,000/\$500,000 and property damage of \$300,000/\$500,000. The electrical contractor applicant shall also provide proof of workman's compensation coverage as required by the State of Illinois.

2. *Illinois Electrical Contractor.*

As herein defined, Electrical Contractors that furnish the Building Department with bonafide proof of their current electrical contractor's license and said copy of such registration shall remain on file in the Building Department for one year. The only electrical contractor registration that will be accepted will be a registration from an Illinois municipality that follows and complies with requirements substantially similar to those found in this Ordinance, and that tests and registers contractors in the same manner as this Ordinance.

3. *Electrical Contractor Registration.*

Any person, firm, or corporation engaged in the business of electrical contracting as herein defined in this Ordinance shall register by examination with the Building Department, in a manner hereinafter set forth in this Ordinance. However, if such person, firm, or corporation has already registered for the current year in an area under the jurisdiction of another governmental body that provides for substantially similar requirements to the Village of Gurnee, such as another city, village, or county within the State of Illinois, such electrical contractor shall not be required to pay a registration fee for the Village of Gurnee, but shall tender proof of certification and proof of insurance, and four (4) hours of update classes, per fiscal year. It is provided further, that the minimum qualification imposed by other licensing governing body authority, which will be recognized for purposes of the foregoing reciprocity under this Ordinance, shall be composed substantially of the provisions contained herein, as well as an examination prior to licensing equal or superior to the comprehensiveness of the examination required by the Village of Gurnee.

4. *Examination.*

- a. Application for electrical contractor certification of registration shall be made in writing to the Building Department, or Northeast Suburban Division of Electrical Inspectors, stating the name and place of business of the applicant, the name of the principal of the firm who will be responsible for the work, and who will be taking the examination in the name of the firm involved. Such application shall be accompanied by a notarized affidavit stating to the effect that the applicant or (his) (her) (their) representative has had a minimum of five (5) years of practical experience in the installation, alteration, and/or repair of electrical wiring, equipment, and apparatus, or an experience equivalent thereto.

- b. Before an electrical contractor's certificate of registration shall be issued to the applicant, following reasonable advance notice, he/she shall present himself/herself for examination before the Village of Gurnee, or the Northeast Suburban Division of Electrical Inspectors at a time and place set by these associations. Said Northeast Suburban Division of Electrical Inspectors, or Village of Gurnee, shall examine such applicant as to his/her practical knowledge of the installation and alteration of electrical wiring, equipment, and his/her knowledge of the rules and regulations for the installation of electrical wiring devices and equipment as set forth in the State Statutes of Illinois, the National Electrical Code, and filed here with and incorporated hereby. Such examination shall be in whole or part, in writing and shall be of practical character as shall be determined by the Inspector, but sufficiently strict to thoroughly test the experience and qualifications of the applicant. No certificate of registration shall issue to any electrical contractor who fails to achieve a minimum passing grade of 70% on said examination.
- c. The written portion of the examination will be received from a testing agency and graded by said corporation as designated by the Village of Gurnee's Building Department.

5. *Renewal Fee for Electrical Contractor Licenses.*

Initial registration will be for a period of one (1) year. Thereafter, each renewal will be on a one-year cycle. As a prerequisite for renewal, each contractor will be required to provide proof of continuing education in the electrical field for a minimum of four (4) contact hours, or will be required to take a renewal test prepared by the Northwestern Suburban Division of Electrical Inspectors, if available, based on code changes in the most recent N.E.C. (NFPA-70). This requirement will demonstrate continuing competency in the electrical trade.

The fee for registration as an electrical contractor shall be seventy-five dollars (\$75.00) per annum, which sum shall be paid by the applicant to the Village of Gurnee. The certificate of registration issued thereunder shall expire on the 30th day of April. Each contractor must show for re-registration that he/she has received at least one code update class by a registered firm for each new Code period, or four (4) contact hours. This requirement must be met within one year after the newest Code is published. Any license held by an electrical contractor who fails this requirement shall be suspended until the requirement is met.

6. *Electrical Contractor Registration Shall Not Be Loaned Or Assigned.*

Registrations issued by the Village of Gurnee shall not be loaned, rented, assigned, or transferred. Each and every registration may, after hearing, be suspended or revoked by the Electrical Commission upon failure or refusal of the electrical contractor to comply with the rules and regulations of the Village of Gurnee and the provisions of this Ordinance.

7. *Specialty Registration.*

A specialty registration shall be required of persons engaged in heating, air conditioning, sign installations, maintenance electrical work, and homeowner electrical work as follows:

- a. Heating and Air Conditioning Contractors: Shall be subject to a specialty registration which restricts their work to the installation of circuits required for the operations of their equipment only in a residential application. This special type of registration only permits the installation of gas-fired furnaces and applicable equipment and condensing units for residential applications. In no case, shall this type of registration give the right to install electric in an industrial, commercial, retail, or hazardous area. A test prepared by the Building Department will be required for all persons that will wire the units. This test will be good for a one-year (1) period, and will have to be taken each year. The year is from May 1st to April 30th.
- b. Sign Contractors: Shall be subject to a specialty type of registration and permit which restricts their work to the installation of circuits required for their operation of their equipment only. In no case shall this specialty registration permit the installation of circuits in excess of 20 amps, single phase; or longer than thirty (30) feet; or any circuits in industrial or hazardous areas.
- c. Maintenance Electricians: Shall be subject to a specialty type registration and permit which restricts their work to the replacement of parts of the machinery. If the machinery must be moved, altered, or power requirements change, than an Illinois electrical contractor must be employed and permits must be taken to meet the means of the work.

d. Owner/Occupants: Shall be subject to a specialty type registration which restricts their work to their own single-family dwelling, who may perform electrical work in conformance with this Ordinance. An owner/occupant is limited to working on additions of 500 square feet or less, or accessory buildings on their own property. An owner/occupant is defined as the owner and occupant of a single-family residential dwelling, who may be qualified in accordance with the following paragraph:

(i) Every applicant shall submit proof of his/her experience in the installation and/or repair of electrical lighting and power wiring and equipment. Every applicant shall be required to answer a reasonable number of questions to show that he/she has sufficient knowledge and technical training to perform the installation, alterations, repair, and maintenance of electrical wiring and equipment of residential occupancy authorized by permits approved by the Building Department. Applicants may be required to answer questions in the form of a written test, and pass said examination to the satisfaction of the Building Inspector.

(ii) All owner/occupants that do their own wiring shall reside in said premises for no less than one (1) year after completion of work.

(iii) Plans submitted for permit must show: number of outlets, number of outlets on each circuit, size of wire used, type of wire, type and size of breaker that will be used, and grounding methods and materials to be used.

G. PENALTY

Any person, firm, company, or corporation who shall violate any of the provisions of this ordinance, or who shall fail to comply therewith, or who shall violate or fail to comply with any order made thereunder within the time duly fixed for compliance shall severally for each and every violation and act of noncompliance respectively, shall be fined not less than two hundred and fifty dollars (\$250.00) and not more than seven hundred and fifty dollars (\$750.00), and the permit or registration of the contractor may be suspended for not more than one year. Each day during which any violation or noncompliance continues shall constitute a separate offense. Further, the Building Department may issue an order to stop any further work upon the building or property where such noncompliance or violation is occurring, order the closure of

the building or property where such noncompliance or violation is occurring, until said noncompliance or violation is mitigated to the satisfaction of the Building Department. Decisions of the Building Department are subject to appeal as provided in this Ordinance.”

SECTION II. Nothing in this Ordinance shall be construed to affect any suit or proceeding pending in any court, or any rights acquired, or liability incurred, or any cause or causes of action arising, acquired, or existing under any act or ordinance or portion thereof hereby repealed or amended by this Ordinance; nor shall any just or legal right, claim, penalty, or remedy of any character of the corporate authority existing on the effective date hereof be lost, impaired, or affected by this Ordinance.

SECTION III: All ordinances or parts of ordinances in conflict herewith are to the extent of such conflict, hereby repealed.

SECTION IV: If any provision, clause, sentence, paragraph, section, or part of this ordinance or application thereof to any person, firm, corporation, public agency or circumstance, shall, for any reason, be adjudged by a court of competent jurisdiction to be unconstitutional or invalid, said judgment shall not affect, impair or invalidate the remainder of this ordinance and the application of such provision to other persons, firms, corporation, or circumstances, but shall be confined in its operation to the provision, clause, sentence, paragraph, section, or part thereof directly involved in the controversy in which such judgment shall have been rendered and to the person firm, corporation, or circumstances involved. It is hereby declared to be the legislative intent of the Corporate Authorities that this ordinance would have been adopted had such unconstitutional or invalid provision, clause, sentence, paragraph, section, or part therefore not been included.

SECTION V: This ordinance shall be in full force and effect from and after its passage and approval and publication in pamphlet form as required by law.

Passed and approved this 13th day of October, 2003.

	Ayes:	Nays:	Absent/Abstain:
Thomas A. Chamberlain	X	_____	_____
Ray Damijonaitis	X	_____	_____
Kristina Kovarik	X	_____	_____
Jeanne E. Balmes	X	_____	_____
Karen Wasser	X	_____	_____
Barbara Thoma	X	_____	_____

APPROVED:

By: *Donald F Rudny* Date: 10/13/03
DONALD F RUDNY, President

ATTEST:

By: *Mary Jo Kallross*
MARY JO KOLLROSS, Village Clerk

Presented and read, or reading having been waived, at a duly convened meeting of the Corporate Authorities on October 13, 2003.

I hereby certify that the above ordinance was published in pamphlet form on Oct 13, 2003, as provided by law.

Mary Jo Kallross
MARY JO KOLLROSS, Village Clerk

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STATE OF ILLINOIS)
)
COUNTY OF LAKE) SS

CERTIFICATE

I, Mary Jo Kollross, certify that I am the duly elected and acting Municipal Clerk of the Village of Gurnee, Lake County, Illinois.

I certify that on October 13th, 2003, the Corporate Authorities of such municipality passed and approved Ordinance No. 2003- 76, entitled "*AN ORDINANCE ADOPTING THE 2002 NATIONAL ELECTRICAL CODE (NFPA 70-2002), AS MODIFIED, AND AMENDING CHAPTER 18, ARTICLE V OF THE GURNEE MUNICIPAL CODE*" which provided by its terms that it should be published in pamphlet form.

The pamphlet form of Ordinance No. 2003- 76, including the Ordinance and a cover sheet thereof, was prepared, and a copy of such Ordinance was posted in the municipal building, commencing on October 13, 2003, and continuing for at least ten days thereafter. Copies of such Ordinance were also available for public inspection upon request in the office of the Municipal Clerk.

DATED at Gurnee, Illinois this 13th day of October, 2003.



Village Clerk