

Low Voltage Electrical Installations
Department of Neighborhoods: Division of Building Inspection
Chris J. Zervos (1229)

ORD. 83-09

Amending Sections 1305.01, 1307.03, and 1311.05 in Chapter 13 of the Toledo Municipal Code so as to include the regulation of low voltage electrical installations.

SUMMARY & BACKGROUND:

Low voltage electrical installations refer to those electrical systems carrying less than 50 volts of electrical current, commonly used in telecommunication and data systems, fire security and energy management systems, and internet connections. The increase in low voltage electrical installations in both new construction as well as those installations retrofitted into existing, older structures, requires that practical safeguards be established. This ordinance creates basic regulatory provisions and inspections of low voltage electrical installations to protect the public from such life safety issues as electric shock and fires, and will also diminish consequential property damage. The ordinance enjoys the full support of the City's Electrical Board of Control, which has caused its creation. NOW, THEREFORE,

Be it ordained by the Council of the City of Toledo:

SECTION 1. The City of Toledo, through its Commissioner of Building Inspection and with the advice and consent of the Electrical Board of Control, has jurisdiction to regulate low voltage electrical installations in all commercial and residential structures of all occupancies and uses within the City. The enforcement standards of said installations are defined in the most current, State of Ohio-adopted editions of the National Electrical Code, Chapter 8, §725; the Electronic Industries Alliance (EIA)/Telecommunications Industry Association (TIA) Standards #568, #569, #570 and #607 as modified by the City's Electrical Board of Control; and the National Fire Protection Association (NFPA) publication #731 *Standard for the Installation of Electronic Premises Security Systems*, all of which, by referenced authority, are made a part of the Toledo Municipal Code. The low voltage electrical installations identified herein shall require permits and electrical inspections.

The scope of work covered shall include, but be not limited to, the installation of proper low voltage circuits, grounding systems, cable materials and cable installations; cable trays and ladder racks inside communication service entrance rooms, spaces and closets; open wiring systems for low voltage cables; unsecured and unprotected cable penetrations in firewalls; and the installations for the following low voltage devices and device systems:

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|--|------------------------------------|
| Access controls, camera & clock systems | Security systems |
| Commercial burglar alarm systems | Telecommunication systems |
| Residential fire & burglar alarm systems | Nurse's call systems |
| Energy management control systems | Lighting/light control systems |
| Public address, intercoms & sound systems | Comfort heating & cooling controls |
| Automated employee time/attendance systems | Low voltage circuits and equipment |

Specifically excluded are: cablevision systems, commercial fire alarm systems, residential doorbell systems, residential low voltage landscape lights, residential garage door openers, residential thermostats, and wiring on the utility side of the demarcation point.

SECTION 2. That Section 1305.01 of the Toledo Municipal Code, which currently reads:

1305.01. When required.

(a) No person shall commence with the work as noted below without first filing with the Building Official an application in writing and obtaining a formal permit or registration as provided for in 1313.09 Permits, (b) when not required, therefor:

(1) Construction, alteration, removal or demolition of a building or structure.

(2) Except for minor repairs as defined in Section 1305.02(f) and as may otherwise be provided in this Part Thirteen - Building Code, no heating, air conditioning, refrigeration, plumbing, hydronics or electrical system or parts thereof shall be installed, altered, removed, replaced or repaired without a separate permit therefor.

(3) The construction or alteration of a parking area or lot containing more than five parking spaces provided no separate permit shall be required when the parking area or lot is covered by a permit for a building or other development.

(b) Installation of domestic water service supply lines up to and including two-inch (that portion of the water supply system between the street curb stop and meter setting) including new, replacement or repair of existing services shall require a permit and shall be inspected by the Division of Building Inspection.

(1) All such installations, replacement or repairs shall be performed by licensed plumbing contractors with the exemptions as noted under Section 1311.10(b). Contractors must have on file with the Division of Building Inspection a valid plumber's bond as required by the Division of Water Regulations #503-13.

(2) All such installations, replacement or repairs shall conform to regulations as promulgated by the Division of Water.

(3) Permit fees and inspection procedures shall be as established by the Division of Building Inspection.

(4) All properties where such installation, replacement or repairs are made shall be inspected by the Division of Building Inspection for compliance with Ordinance No. 102-75, backflow contamination prevention through the water service connection into the public water system.

be and the same is hereby repealed.

SECTION 3. That a new Section 1305 .01 of the Toledo Municipal Code titled "When Permits Are Required," to read:

1305.01. When required.

(a) No person shall commence with the work as noted below without first filing with the Building Official an application in writing and obtaining a formal permit or registration as provided for in 1313.09 Permits, (b) when not required, therefor:

(1) Construction, alteration, removal or demolition of a building or structure.

(2) Except for minor repairs as defined in Section 1305.02(f) and as may otherwise be provided in this Part Thirteen - Building Code, no heating, air conditioning, refrigeration, plumbing, hydronics or electrical system or parts thereof shall be installed, altered, removed, replaced or repaired without a separate permit therefor.

(3) The construction or alteration of a parking area or lot containing more than five parking spaces provided no separate permit shall be required when the parking area or lot is covered by a permit for a building or other development.

(b) Installation of domestic water service supply lines up to and including two-inch (that portion of the water supply system between the street curb stop and meter setting) including new, replacement or repair of existing services shall require a permit and shall be inspected by the Division of Building Inspection.

(1) All such installations, replacement or repairs shall be performed by licensed plumbing contractors with the exemptions as noted under Section 1311.10(b). Contractors must have on file with the Division of Building Inspection a valid plumber's bond as required by the Division of Water Regulations #503-13.

(2) All such installations, replacement or repairs shall conform to regulations as promulgated by the Division of Water.

(3) Permit fees and inspection procedures shall be as established by the Division of Building Inspection.

(4) All properties where such installation, replacement or repairs are made shall be inspected by the Division of Building Inspection for compliance with Ordinance No. 102-75, backflow contamination prevention through the water service connection into the public water system.

(c) All heating, air conditioning, refrigeration, plumbing, hydronics and electrical work, including low-voltage electrical installations, for which a separate permit is required.

be and the same is hereby enacted.

SECTION 4. That Section 1307.03 of the Toledo Municipal Code "Electrical fees", which currently reads:

1307.03. Electrical fees.

(a) Examination or registration fees.

Electrical contractor, general or residential \$200.00

Residential electrician journeyman \$100.00

Electrician journeyman \$100.00

Traveler journeyman \$100.00
 Electrician apprentice \$25.00

(b) Annual renewal fees.

Electrical contractor, general or residential \$140.00
 Electrician journeyman \$50.00
 Residential electrician journeyman \$50.00
 Electrician apprentice \$25.00
 Traveler journeyman \$100.00

(c) Permit fees. The cost of all permits will be on the basis of fees listed except when the total is less than the established minimum fee of forty dollars (\$40.00) for any permit.

(1) New residential 1, 2, or 3 family dwelling \$90.00 per unit

(2) Existing residential 1, 2, or 3 family alteration or addition

Base fee \$40.00 per unit

(must add separate fee for service change)

(3) Commercial - new, additions, alterations.

Base fee \$60.00

(add fee for service change and/or other items 4, 5, 9, 10, 11, 12 noted below)

(4) Commercial and industrial lighting circuits (includes new or replacement circuits and fixtures).

First circuit or fixture \$5.00

Each additional circuit or fixture \$1.50

Must add separate base fee - see Section 1307.03(c)(3)

Each drop-cord pendant is to be considered as a single fixture. Fixtures as supplied by manufacturer, regardless of number of tubes or lamps, whether installed individually or as assemblies, are to be considered as a single fixture.

(5) Commercial and industrial feed and power circuits per circuit \$6.00

Must add separate base fee - see Section 1307.03(c)(3)

(6) Temporary pole \$40.00 each

(7) Release of electrical services.

All occupancies \$40.00 per unit

(8) Electrical services.

All occupancies \$0.35 per amp

Note: Fees for multi-residential occupancy shall be based on total amp capacity per unit.

(9) Electrical heat units and heat zones.

All occupancies \$6.00 each

Must add separate base fee - see Section 1307.03(c)(2) and (3)

Note: Heat zone is habitable area heated by an electric element or elements controlled by one heat limiting device (thermostat) either self-contained or remotely installed. This does not pertain to electric forced air furnaces or electric boilers.

(10) Electric strip heaters \$6.00 per element

Must add separate base fee - see Section 1307.03(c)(2) and (3)

(11) Motors.

Not exceeding 5 hp \$4.50

Over 5 hp to 100 hp \$4.50 plus

\$0.50/hp
Over 100 hp or fraction thereof \$60.00 plus
\$0.25/hp

Must add separate base fee - see Section 1307.03(c)(2) and (3)

Note: Group installations required for operation of a machine or components will be based on total rated horsepower at fees listed herein.

(12) Generators (AC and DC) \$40.00 minimum
or \$0.30/kw

Must add separate base fee - see Section 1307.03(c)(2) and (3)

(13) Electric signs.
Each circuit \$40.00

(14) Carnivals.
Carnival type rides and/or devices \$40.00 first device
Each additional device \$15.00
Maximum fee \$500.00

Note: Inspections for carnivals that are required to be made on days or at times other than Division of Inspection normal working days, Monday through Friday, from 7:30 a.m. to 4:00 p.m., will be established overtime costs based on hours in employee contracts.

(15) Mobile or manufactured homes \$0.35/amp
Installation inspection and/or alteration and/or conversion inspection.

Mobile home pedestal only
(no hookup to mobile home) \$0.35/amp

(16) Swimming pool bonding \$50.00

be and the same is hereby repealed.

SECTION 5. That a new Section 1307.03 of the Toledo Municipal Code "Electrical fees" to read:

1307.03. Electrical fees.

- (a) Examination or registration fees.
 - Electrical contractor, general or residential \$200.00
 - Residential electrician journeyman \$100.00
 - Electrician journeyman \$100.00
 - Traveler journeyman \$100.00
 - Electrician apprentice \$25.00

- Low-Voltage Electrical Contractors \$200.00
- Low-Voltage Electrical Journeyman Installers\$100.00
- Low Voltage Electrical Apprentice Installers \$50.00

Existing City of Toledo registered electrical contractors, journeyman, and apprentice electricians, and existing low voltage contractors and installers are considered qualified to install low voltage systems and must register with the City but are exempt from the initial registration fee. HVAC mechanical contractors, journeymen, and apprentices may install energy

management control systems and comfort heating & cooling control systems.

(b) Annual renewal fees.

- Electrical contractor, general or residential \$140.00
- Electrician journeyman \$50.00
- Residential electrician journeyman \$50.00
- Electrician apprentice \$25.00
- Traveler journeyman \$100.00

- Low-Voltage Electrical Contractors.....\$140.00
- Low-Voltage Electrical Journeyman Installers 75.00
- Low-Voltage Electrical Apprentice Installers..... 50.00

Existing City of Toledo registered electrical contractors, journeyman, and apprentice electricians are excluded from this requirement as their existing electrical registrations qualify them to make low voltage installations.

(c) Permit fees. The cost of all permits will be on the basis of fees listed except when the total is less than the established minimum fee of forty dollars (\$40.00) for any permit.

- (1) New residential 1, 2, or 3 family dwelling \$90.00 per unit
- (2) Existing residential 1, 2, or 3 family alteration or addition
 - Base fee \$40.00 per unit
 - (must add separate fee for service change)
- (3) Commercial - new, additions, alterations.
 - Base fee \$60.00
 - (add fee for service change and/or other items 4, 5, 9, 10, 11, 12 noted below)
- (4) Commercial and industrial lighting circuits (includes new or replacement circuits and fixtures).
 - First circuit or fixture \$5.00
 - Each additional circuit or fixture \$1.50
 - Must add separate base fee - see Section 1307.03(c)(3)
 - Each drop-cord pendant is to be considered as a single fixture. Fixtures as supplied by manufacturer, regardless of number of tubes or lamps, whether installed individually or as assemblies, are to be considered as a single fixture.
- (5) Commercial and industrial feed and power circuits per circuit \$6.00
 - Must add separate base fee - see Section 1307.03(c)(3)
- (6) Temporary pole \$40.00 each
- (7) Release of electrical services.
 - All occupancies \$40.00 per unit
- (8) Electrical services.
 - All occupancies \$0.35 per amp
 - Note: Fees for multi-residential occupancy shall be based on total amp capacity per unit.
- (9) Electrical heat units and heat zones.
 - All occupancies \$6.00 each

Must add separate base fee - see Section 1307.03(c)(2) and (3)

Note: Heat zone is habitable area heated by an electric element or elements controlled by one heat limiting device (thermostat) either self-contained or remotely installed. This does not pertain to electric forced air furnaces or electric boilers.

- (10) Electric strip heaters \$6.00 per element

Must add separate base fee - see Section 1307.03(c)(2) and (3)

- (11) Motors.

Not exceeding 5 hp \$4.50

Over 5 hp to 100 hp \$4.50 plus \$0.50/hp

Over 100 hp or fraction thereof \$60.00 plus \$0.25/hp

Must add separate base fee - see Section 1307.03(c)(2) and (3)

Note: Group installations required for operation of a machine or components will be based on total rated horsepower at fees listed herein.

- (12) Generators (AC and DC) \$40.00 minimum or \$0.30/kw

Must add separate base fee - see Section 1307.03(c)(2) and (3)

- (13) Electric signs.

Each circuit \$40.00

- (14) Carnivals.

Carnival type rides and/or devices \$40.00 first device

Each additional device \$15.00

Maximum fee \$500.00

Note: Inspections for carnivals that are required to be made on days or at times other than Division of Inspection normal working days, Monday through Friday, from 7:30 a.m. to 4:00 p.m., will be established overtime costs based on hours in employee contracts.

- (15) Mobile or manufactured homes \$0.35/amp

Installation inspection and/or alteration and/or conversion inspection.

Mobile home pedestal only

(no hookup to mobile home) \$0.35/amp

- (16) Swimming pool bonding \$50.00

- (17) Low-voltage electrical permit fees.....

Residential \$40.00 per unit

Commercial

\$40.00 per 5,000 square feet;

\$100.00 over 5,000 square feet plus \$2.00 per device, which include but are not limited to:

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|-----------------|----------------------|----------------------|
| Access controls | Annunciators | Bells |
| Cameras | Card Readers | Clocks |
| Dimmers | Door contracts | Horns |
| HVAC controls | Indicator lights | Intercoms |
| Lights | Outlets (voice/data) | Panels |
| Panic Buttons | Speakers | Temperature controls |

Stop Work Fee	Time clocks Existing language found in TMC §1307.09	Transformers
Reinspection Fee	Existing language found in TMC §1307.10	

be and the same is hereby enacted.

SECTION 6. That Section 1311.05 of the Toledo Municipal Code, which currently reads:

1311.05. Classes of certificates of qualification.

(a) General. It is the intent that this section of this code is meant solely to regulate the qualifications of persons, firms or corporations involved in the building construction industry and all experience, training and testing required in this and other related sections must be related directly to building construction.

(1) Contractor. There shall be created in each of the mechanical trades a classification known as contractor.

(2) Apprentice. There shall be created in each of the mechanical trades a classification known as apprentice.

(3) Journeyman. There shall be created in each of the mechanical trades a classification known as journeyman.

(4) Traveler journeyman. There shall be created in each of the mechanical trades a classification known as traveler journeyman and shall possess the qualifications as provided in Section 1311.03(b).

(b) Electrical.

(1) "Electrical contractor, general" means one who has the ability to design and lay out a complete electrical system for all occupancies governed by the Ohio Building Code and the Toledo Municipal Code and shall possess the following qualifications.

A. The applicant shall be licensed and provide a copy of a valid certification of qualification from the Ohio Construction Industry Examining Board prior to obtaining a certificate of registration from the City.

(2) "Electrical contractor, residential" means one who has the ability to design and lay out a complete electrical system for installation in one, two and three-family residential occupancies and shall possess the following qualifications:

A. Must have a completion certificate from a Department of Labor approved apprenticeship course in residential electrical construction approved by the Electrical Board of Control, a valid certificate of qualification as a journeyman electrician in residential electrical construction and present notarized documentation to the Commissioner of Building Inspection that the applicant has been certified or licensed in a governmental unit by means of qualification testing deemed equivalent to the City's testing by the Electrical Board of Control; and

B. Shall have been employed and worked as the primary occupation in residential electrical construction with experience as deemed appropriate by the Electrical Board of Control for a minimum of six thousand (6,000) hours during a period of not less than four (4) consecutive years immediately prior to filing the application for examination. In lieu of four (4)

consecutive years of experience, aggregate work experience of not less than eight thousand (8,000) hours in six (6) calendar years will be acceptable.

(3) "Electrician journeyman, general" means one who:

A. Has learned the trade of building construction electrician and must have completed an accredited electrical building construction apprenticeship course approved by the U. S. Department of Labor Bureau of Apprenticeship and Training and approved by the Electrical Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to the approved accredited apprenticeship program; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a building construction journeyman electrician for a period of time equivalent to that required for the approved apprenticeship program as set forth in subsection (b)(3)A. hereof or;

C. Shall have graduated from a college approved by the Board of Control with a bachelor's degree in electrical engineering or had school training approved by the Board of Control equivalent to such experience.

D. To insure journeyman stay abreast of the code changes all journeymen shall be required to show successful completion of ten hours of Board approved continuing education courses within twelve (12) months after the City of Toledo adopts the updated National Electrical Code. If the applicant fails to submit the required continuing education during the renewal period, he or she must reapply for the initial exam.

(4) "Electrician apprentice" means one who is enrolled in an accredited electrical building construction apprenticeship course approved by the U.S. Department of Labor Bureau of Apprenticeship and Training and by the Board of Control or is enrolled in a recognized apprenticeship program approved by the Board of Control.

(5) "Residential electrician journeyman " means one who:

A. Has learned the trade of residential electrician and must have completed a recognized residential electrical training program approved by the Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to a recognized residential electrical training program approved by the Board of Control under the direct control of an electrical contractor, who is presently certified to perform work within the City; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a residential electrician in a governmental jurisdiction for a period of time equivalent to that required for the approved residential electrical training program as set forth in subsection (b) (5) A. hereof or;

C. Shall have graduated from a college approved by the Board of Control or had school training approved by the Board of Control equivalent to such experience.

(c) Plumbing.

(1) "Plumbing contractor" or "hydronics contractor" means one who has the ability to design and lay out a complete plumbing system including waste, vent and potable water lines and/or hydronic heating system, for all occupancies governed by the Ohio Building Code and the Toledo Municipal Code and shall possess the following qualifications:

A. The applicant shall be licensed and provide a copy of a valid certificate of qualification from the Ohio Construction Industry Examining Board prior to obtaining a certificate of registration from the City.

(2) "Plumber journeyman" or "hydronics journeyman" means one who:

A. Has learned the trade of plumbing or hydronics and must have completed a recognized apprenticeship course approved by the Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to a recognized apprenticeship program approved by the Board of Control under the direct control of a plumbing contractor or hydronics contractor, who is presently certified to perform work within the City; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a plumber journeyman in a governmental jurisdiction for a period of time equivalent to that required for the approved apprenticeship program as set forth in subsection (c)(2)A. hereof.

(3) "Plumber apprentice" or "hydronics apprentice" means one who, as principal occupation, is enrolled in an apprenticeship course approved by the Board of Control or is engaged in a recognized apprenticeship program approved by the Board of Control under the direct supervision of a plumbing contractor or hydronics contractor who is presently certified to perform work within the City.

(d) Comfort Heating and Cooling (HVAC).

(1) "HVAC contractor" means one who has the ability to design and lay out a complete comfort heating and cooling forced air system for all occupancies governed by the Ohio Building Code and the Toledo Municipal Code and shall possess the following qualifications:

A. The applicant shall be licensed and provide a copy of a valid certificate of qualification from the Ohio Construction Industry Examining Board prior to obtaining a certificate of registration from the City.

(2) "HVAC journeyman" means one who:

A. Has learned the trade of heating, ventilation and air conditioning and must have completed a recognized apprenticeship course approved by the Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to a recognized apprenticeship program approved by the Board of Control under the direct control of a HVAC contractor, who is presently certified to perform work within the City; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a HVAC journeyman in a governmental jurisdiction for a period of time equivalent to that required for the approved apprenticeship program as set forth in subsection (d)(2)A. hereof.

(3) "HVAC apprentice" means one who, as a principal occupation, is enrolled in an apprenticeship course approved by the Board of Control or is engaged in a recognized apprenticeship program approved by the Board of Control under the direct control of a HVAC contractor, who is presently certified to perform work within the City.

(e) Refrigeration.

(1) "Refrigeration contractor" means any person who proceeds with or has charge of laying out or installation, alteration, replacement or repair of any refrigerating system or any piping, apparatus, appliance, device or accessory connected therewith for all occupancies

governed by the Ohio Building Code and the Toledo Municipal Code and shall possess the following qualifications:

A. The applicant shall be licensed and provide a copy of a valid certificate of qualification from the Ohio Construction Industry Examining Board prior to obtaining a certificate of registration from the City.

(2) "Refrigeration journeyman" means one who:

A. Has learned the trade of refrigeration and must have completed a recognized apprenticeship course approved by the Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to a recognized apprenticeship program approved by the Board of Control, under the direct control of a refrigeration contractor, who is presently certified to perform work within the City; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a refrigeration journeyman in a governmental jurisdiction for a period of time equivalent to that required for the approved apprenticeship program as set forth in subsection (e)(2)A. hereof.

(3) "Refrigeration apprentice" means one who, as a principal occupation, is enrolled in a recognized apprenticeship course, approved by the Board of Control or is engaged in a recognized apprenticeship program approved by the Board of Control under the direct control of a refrigeration contractor, who is presently certified to perform work within the City.

be and the same is hereby repealed.

SECTION 7. That a new Section 1311.05 of the Toledo Municipal Code Titled "Classes of certificates of qualification" to read:

1311.05. Classes of certificates of qualification.

(a) General. It is the intent that this section of this code is meant solely to regulate the qualifications of persons, firms or corporations involved in the building construction industry and all experience, training and testing required in this and other related sections must be related directly to building construction.

(1) Contractor. There shall be created in each of the mechanical trades a classification known as contractor.

(2) Apprentice. There shall be created in each of the mechanical trades a classification known as apprentice.

(3) Journeyman. There shall be created in each of the mechanical trades a classification known as journeyman.

(4) Traveler journeyman. There shall be created in each of the mechanical trades a classification known as traveler journeyman and shall possess the qualifications as provided in Section 1311.03(b).

(b) Electrical.

(1) "Electrical contractor, general" means one who has the ability to design and lay out a complete electrical system for all occupancies governed by the Ohio Building Code and the Toledo Municipal Code and shall possess the following qualifications.

A. The applicant shall be licensed and provide a copy of a valid certification of qualification from the Ohio Construction Industry Examining Board prior to obtaining a certificate of registration from the City.

(2) "Electrical contractor, residential" means one who has the ability to design and lay out a complete electrical system for installation in one, two and three-family residential occupancies and shall possess the following qualifications:

A. Must have a completion certificate from a Department of Labor approved apprenticeship course in residential electrical construction approved by the Electrical Board of Control, a valid certificate of qualification as a journeyman electrician in residential electrical construction and present notarized documentation to the Commissioner of Building Inspection that the applicant has been certified or licensed in a governmental unit by means of qualification testing deemed equivalent to the City's testing by the Electrical Board of Control; and

B. Shall have been employed and worked as the primary occupation in residential electrical construction with experience as deemed appropriate by the Electrical Board of Control for a minimum of six thousand (6,000) hours during a period of not less than four (4) consecutive years immediately prior to filing the application for examination. In lieu of four (4) consecutive years of experience, aggregate work experience of not less than eight thousand (8,000) hours in six (6) calendar years will be acceptable.

(3) "Electrician journeyman, general" means one who:

A. Has learned the trade of building construction electrician and must have completed an accredited electrical building construction apprenticeship course approved by the U. S. Department of Labor Bureau of Apprenticeship and Training and approved by the Electrical Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to the approved accredited apprenticeship program; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a building construction journeyman electrician for a period of time equivalent to that required for the approved apprenticeship program as set forth in subsection (b)(3)A. hereof or:

C. Shall have graduated from a college approved by the Board of Control with a bachelor's degree in electrical engineering or had school training approved by the Board of Control equivalent to such experience.

D. To insure journeyman stay abreast of the code changes all journeymen shall be required to show successful completion of ten hours of Board approved continuing education courses within twelve (12) months after the City of Toledo adopts the updated National Electrical Code. If the applicant fails to submit the required continuing education during the renewal period, he or she must reapply for the initial exam.

(4) "Electrician apprentice" means one who is enrolled in an accredited electrical building construction apprenticeship course approved by the U.S. Department of Labor Bureau of Apprenticeship and Training and by the Board of Control or is enrolled in a recognized apprenticeship program approved by the Board of Control.

(5) "Residential electrician journeyman" means one who:

A. Has learned the trade of residential electrician and must have completed a recognized residential electrical training program approved by the Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant

successfully completed a training program equivalent to a recognized residential electrical training program approved by the Board of Control under the direct control of an electrical contractor, who is presently certified to perform work within the City; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a residential electrician in a governmental jurisdiction for a period of time equivalent to that required for the approved residential electrical training program as set forth in subsection (b) (5) A. hereof or;

C. Shall have graduated from a college approved by the Board of Control or had school training approved by the Board of Control equivalent to such experience.

(6) "Low voltage electrical contractor" means one who has the ability to design and lay out a complete low voltage/teledata electrical system for all occupancies governed by the Ohio Building Code, the Residential Code of Ohio, and the Toledo Municipal Code and shall possess the following qualifications.

A. Must have a completion certificate from a Department of Labor approved apprenticeship course in the low voltage/teledata construction industry approved by the Electrical Board of Control or a similar program approved by the Electrical Board of Control; a valid certificate of qualification as a Journeyman low voltage / teledata installer in the low voltage/teledata construction industry and present notarized documentation to the Commissioner of Building Inspection that the applicant has been certified or licensed in a governmental unit by means of qualification testing deemed equivalent to the testing procedures of the Electrical Board of Control of the City of Toledo; and

B. Shall have been employed and worked as the primary occupation as a technician in the low voltage/teledata construction industry with experience as deemed appropriate by the Electrical Board of Control for a minimum of four thousand (4,000) hours during a period of not less than four (4) consecutive years immediately prior to filing the application for examination.

(7) "Low voltage journeyman installer" means one who has:

A. Learned the trade of low voltage / teledata installer and must have completed an accredited low voltage / teledata electrical construction apprenticeship course approved by the U. S. Department of Labor Bureau of Apprenticeship and Training and approved by the Electrical Board of Control; or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to the approved accredited apprenticeship program; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a low voltage / teledata construction installer for a period of time equivalent to that required for the approved apprenticeship program as set forth in subsection §1311.05(b)(7)A. hereof; or

C. Shall have graduated from a college approved by the Electrical Board of Control with a bachelor's degree in electrical engineering or had school training approved by the Electrical Board of Control equivalent to such experience.

D. To insure journeyman/installer stay current with code changes, all installers shall be required to show successful completion of eight (8) hours of Board approved continuing education courses twelve (12) months after the City of Toledo adopts each National Electrical Code up-date. If the applicant fails to submit the required continuing education during the renewal period, the applicant must reapply for the initial exam.

(8) "Low Voltage Apprentice Installer" means one who is enrolled in an accredited low voltage / teledata construction apprenticeship course approved by the US Department of Labor Bureau of Apprenticeship and Training and by the Electrical Board of Control, or is enrolled in a recognized apprenticeship program approved by the Electrical Board of Control. A recognized apprenticeship program shall consist of one hundred sixty (160) hours of classroom training for three (3) years and four thousand, five hundred (4,500) hours of on-the-job work experience for the same three-year period. Verification of work experience shall be in the form of tax filing documents from the period identified, letters of reference from employers defining the scope of work actually performed, certificates of completion from recognized training centers, etc.

(c) Plumbing.

(1) "Plumbing contractor" or "hydronics contractor" means one who has the ability to design and lay out a complete plumbing system including waste, vent and potable water lines and/or hydronic heating system, for all occupancies governed by the Ohio Building Code and the Toledo Municipal Code and shall possess the following qualifications:

A. The applicant shall be licensed and provide a copy of a valid certificate of qualification from the Ohio Construction Industry Examining Board prior to obtaining a certificate of registration from the City.

(2) "Plumber journeyman" or "hydronics journeyman" means one who:

A. Has learned the trade of plumbing or hydronics and must have completed a recognized apprenticeship course approved by the Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to a recognized apprenticeship program approved by the Board of Control under the direct control of a plumbing contractor or hydronics contractor, who is presently certified to perform work within the City; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a plumber journeyman in a governmental jurisdiction for a period of time equivalent to that required for the approved apprenticeship program as set forth in subsection (c)(2)A. hereof.

(3) "Plumber apprentice" or "hydronics apprentice" means one who, as principal occupation, is enrolled in an apprenticeship course approved by the Board of Control or is engaged in a recognized apprenticeship program approved by the Board of Control under the direct supervision of a plumbing contractor or hydronics contractor who is presently certified to perform work within the City.

(d) Comfort Heating and Cooling (HVAC).

(1) "HVAC contractor" means one who has the ability to design and lay out a complete comfort heating and cooling forced air system for all occupancies governed by the Ohio Building Code and the Toledo Municipal Code and shall possess the following qualifications:

A. The applicant shall be licensed and provide a copy of a valid certificate of qualification from the Ohio Construction Industry Examining Board prior to obtaining a certificate of registration from the City.

(2) "HVAC journeyman" means one who:

A. Has learned the trade of heating, ventilation and air conditioning and must have completed a recognized apprenticeship course approved by the Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to a recognized apprenticeship program approved by the Board of Control under the direct control of a HVAC contractor, who is presently certified to perform work within the City; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a HVAC journeyman in a governmental jurisdiction for a period of time equivalent to that required for the approved apprenticeship program as set forth in subsection (d)(2)A. hereof.

(3) "HVAC apprentice" means one who, as a principal occupation, is enrolled in an apprenticeship course approved by the Board of Control or is engaged in a recognized apprenticeship program approved by the Board of Control under the direct control of a HVAC contractor, who is presently certified to perform work within the City.

(e) Refrigeration.

(1) "Refrigeration contractor" means any person who proceeds with or has charge of laying out or installation, alteration, replacement or repair of any refrigerating system or any piping, apparatus, appliance, device or accessory connected therewith for all occupancies governed by the Ohio Building Code and the Toledo Municipal Code and shall possess the following qualifications:

A. The applicant shall be licensed and provide a copy of a valid certificate of qualification from the Ohio Construction Industry Examining Board prior to obtaining a certificate of registration from the City.

(2) "Refrigeration journeyman" means one who:

A. Has learned the trade of refrigeration and must have completed a recognized apprenticeship course approved by the Board of Control or must submit documentation to the Commissioner of Building Inspection that the applicant successfully completed a training program equivalent to a recognized apprenticeship program approved by the Board of Control, under the direct control of a refrigeration contractor, who is presently certified to perform work within the City; or

B. Presents documentation to the Commissioner of Building Inspection that the applicant was employed as a refrigeration journeyman in a governmental jurisdiction for a period of time equivalent to that required for the approved apprenticeship program as set forth in subsection (e)(2)A. hereof.

(3) "Refrigeration apprentice" means one who, as a principal occupation, is enrolled in a recognized apprenticeship course, approved by the Board of Control or is engaged in a

recognized apprenticeship program approved by the Board of Control under the direct control of a refrigeration contractor, who is presently certified to perform work within the City.

be and the same is hereby enacted.

SECTION 8. That this Ordinance hereby shall be in force and take effect within thirty (30) days of its passage.

Passed: _____: yeas _____, nays _____.

Attest: _____
Clerk of Council

President of Council

Approved: _____

Mayor

I hereby certify that the above is a true and correct copy of an Ordinance passed by Council _____.

Attest: _____
Clerk of Council