CITY OF HOUSTON

ELECTRICAL CODE

THE ADMINISTRATIVE
CODE PROVISIONS
for the
NATIONAL ELECTRICAL CODE

Effective 09/01/2008

CONTENTS

Page

Chapter 1—TITLE AND GENERAL

Sec. 101. Title 1
102. Application to Existing Electrical Systems and Equipment 1
103. Definitions 2
104. Conflicting Provisions 4
105. Alternate Materials and Methods of Construction 4
106. Modifications 4
107. Tests 5
108. Hearing Procedures 5
109. Penalties 5

Chapter 2—ORGANIZATION AND ENFORCEMENT

Sec. 201. Powers and Duties 6
202. Unsafe Electrical Systems or Equipment 7
203. Electrical Board 7
204. Failure to Correct Work 9
205. Tampering 9
206. Display of License 9

Chapter 3—PERMITS AND INSPECTIONS

Sec. 301. Permits 10
302. Electrical Permits 11
303. Permit Issuance 12
304. Fees 13
305. Inspections 14
306. Connection Approval 15

Chapter 4—LICENSING AND REGISTRATION REQUIREMENTS

Sec. 401. License or Registration Required 16
402. Licenses and Registrations 16
403. Contractor Registration or License 18
404. Master Electrician 19
405. Line Master Electrician 19
406. Sign Master Electrician 19
407. Journeyman Electrician 20
408. Journeyman Lineman 20
409. Sign Journeyman Electrician 20
410. Residential Wireman (Residential Journeyman Electrician) 20
411. Apprentice Electrician 20
412. Maintenance Electrician 21
413. Residential Appliance Installer 21
414. Appeals from Licensing Decisions of Electrical Board 21
415. Registration Fees 21
416. License and Renewal Fees 22

417. Continuing Education for City License Renewal 23

Chapter 5—BUILDING STANDARDS

Sec. 501. Wiring Systems 24
502. Adopted Standards 24
503. Meters 24
504. Services 25
505. Nonmetallic Sheathed Cable 26
506. Conduit 26
507. Temporary Saw Poles 26
508. Electrical Material and Equipment 27
509. Electrical Fences 27
510. Location 27

Chapter 1
TITLE AND GENERAL

SECTION 101—TITLE

These regulations shall be known as the *City of Houston Electrical Code*, may be cited as such and will be referred to herein as "this code." This code shall be considered as a part of the *City of Houston Construction Code.*

The *City of Houston Construction Code* collectively includes this volume and certain other codes, pamphlets, specifications and documents that are adopted in or by reference through the Adopting Ordinance, which appears in the preamble of the *Building Code*.

All electrical licensing requirements shall be in accordance with this code or the Texas Electrical Safety and Licensing Act (*Texas Occupations Code*, Chapter 1305) and the Administrative Rules of the Texas Department of Licensing and Regulation, 16 *Texas Administrative Code*, Chapter 73.

SECTION 102—APPLICATION TO EXISTING ELECTRICAL SYSTEMS AND EQUIPMENT

102.1 Additions, Alterations or Repairs. Additions, alterations or repairs may be made to any electrical system and equipment without requiring the existing electrical system and equipment to comply with all the requirements of this code, provided the additions, alterations or repairs conform to that required for a new electrical system and equipment and provided further that no hazard to life, health or safety will be created by the additions, alterations or repairs.

Minor additions, alterations and repairs to existing electrical systems and equipment may be made in accordance with the law in effect at the time the original installation was made, when approved by the building official, if it is found that no hazard to life, health or safety will be created by the additions, alterations or repairs.

102.2 Existing Installations. Electrical systems and equipment lawfully in existence at the time of the adoption of this code may have their use, maintenance and repair continued if the use, maintenance and repair is in accordance with the original design and no hazard to life, health or property has been created by the electrical system and equipment.

102.3 Changes in Building Occupancy. Electrical systems and equipment that are part of any building or structure undergoing a change in use or occupancy, as defined in the *Building Code*, shall comply with all requirements of this code that may be applicable to the new use or occupancy.

102.4 Maintenance. All electrical systems and equipment, both existing and new, and all parts thereof, shall be maintained in proper operating condition in accordance with the original design and in a safe and hazard-free condition. All devices or safeguards that are required by this code shall be maintained in conformance with this code. The owner shall be responsible for the maintenance of the electrical system. To determine compliance with this subsection, the building official may cause any electrical system to be reinspected whenever there is reason to believe that the system is not being maintained in accordance with this section.

102.5 Moved Building. Electrical systems and equipment that are a part of buildings or structures moved into or within the city shall comply with the provisions of this code for new installations.

SECTION 103—DEFINITIONS

For the purpose of this code, certain terms, phrases, words and their derivatives shall be construed as specified in this section. Where terms are not defined, they shall have their ordinarily accepted meanings within the context in which they are used. Words used in the singular include the plural and the plural the singular. Words used in the masculine gender include the feminine and the feminine the masculine.

APPRENTICE ELECTRICIAN is a person undertaking "electrical work," as defined in this code, under the direct, personal supervision and control of either a licensed master electrician, line master electrician, sign master electrician, journeyman electrician, journeyman lineman, sign journeyman electrician, residential journeyman electrician or maintenance electrician.

APPROVED, as to materials, equipment and method of construction, refers to approval by the building official as the result of investigation and tests conducted by the building official, or by reason of accepted principles or tests by recognized authorities or technical or scientific organizations.

APPROVED AGENCY is an established and recognized agency regularly engaged in conducting tests or furnishing inspection services, when the agency has been approved by the building official after he or she finds that the agency provides reliable testing or inspection services.

BUILDING is a structure that stands alone or is cut off from adjoining structures by fire walls or two-hour fire barriers with all openings therein protected by approved fire-resistance rated assemblies.

BUILDING CODE is the *City of Houston Building Code.*

BUILDING OFFICIAL is the city's Director of Public Works and Engineering, or a duly authorized representative.

CITY is the City of Houston, being the jurisdiction that has adopted this code.

CITY CODE is the *Code of Ordinances, Houston, Texas.*

CONTRACTOR is a person, firm or corporation engaged in the business of performing electrical maintenance work, electrical work, outside electrical work, residential electrical work or sign electrical work.

ELECTRICAL DIVISION is the Electrical Division of the city's Public Works and Engineering Department.

ELECTRICAL DIVISION MANAGER is the person designated by the building official to be the Electrical Division Manager.

ELECTRICAL MAINTENANCE WORK is the keeping in safe repair of electrical installations, apparatus and equipment. The term "electrical maintenance work" shall include the repair or replacement of fixed motors, transformers or fixed appliances of the same type and rating in the same location. The term does not include the installation of additional electrical work, electrical equipment or electrical apparatus.

EXISTING PERMIT is a permit that is not finaled.

ELECTRICAL WORK is the installing, maintaining, altering, repairing or erecting of any wiring apparatus, devices, appliances, fixtures or equipment under the terms and provisions of this code, except poles and guy anchors installed by a telephone, telegraph, signal and/or electric utility company as a part of its distribution system.

FIREWALL is, for the purposes of this code, shall mean a minimum one hour fire barrier as defined in the *Building Code.*

JOURNEYMAN ELECTRICIAN is a person undertaking "electrical work," as defined in this code, under the supervision, direction and control of a licensed master electrician.

JOURNEYMAN LINEMAN is a person undertaking "outside electrical work," as defined in this code, under the supervision, direction and control of a licensed master or line master electrician.

LINE MASTER ELECTRICIAN is a person who is the holder of a line master electrician license issued under Chapter 4 of this code.

LINE MASTER ELECTRICIAN OF RECORD is a line master electrician who is engaged in a master-contractor relationship, as provided by Chapter 4 of this code.

LISTED and **LISTING** are terms referring to equipment and materials that are shown in a list published by an approved agency, which listing states that the equipment complies with recognized safety standards.

MAINTENANCE ELECTRICIAN is a person who is the holder of a maintenance electrician license issued under Chapter 4 of this code.

MASTER ELECTRICIAN is a person who is the holder of a master electrician license.

MASTER ELECTRICIAN OF RECORD is a master electrician who is engaged in a master-contractor relationship, as provided by Chapter 4 of this code.

MULTIPLE OCCUPANCY BUILDING is a building that has more than one tenant regardless of whether the tenants' uses are of the same or different occupancy classifications or use groups as classified by the *Building Code*.

OCCUPANCY is the purpose for which a building, or part thereof, is used or intended to be used.

OUTSIDE ELECTRICAL WORK is the assembly, maintenance, installation and erection of all electrical equipment and appurtenances that are part of an outside distribution system generally located outside of any building. Work performed under this term shall include, but not be limited to, the installation, repair or maintenance of substations, street lighting, pole lines, underground duct banks, electrical decorations, traffic signals and parking lot lighting.

PERSON is an individual, partnership, corporation or other legal entity.

RESIDENTIAL APPLIANCE is equipment that is installed as a unit in a single family or multifamily dwelling that does not exceed four stories, is directly connected to an electrical circuit, and performs a specific function.

RESIDENTIAL APPLIANCE INSTALLATION is electrical work that is limited to the connection or disconnection of a residential appliance to an existing electrical circuit other than by inserting or removing a plug from an electrical outlet.

RESIDENTIAL APPLIANCE INSTALLATION CONTRACTING is the business of residential appliance installation.

RESIDENTIAL APPLIANCE INSTALLATION CONTRACTOR is a business entity, other than an electrical contractor or electrical sign contractor, that is engaged in residential appliance installation contracting.

RESIDENTIAL APPLIANCE INSTALLER is a person, other than a licensed electrician, who is licensed to perform residential appliance installation.

RESIDENTIAL ELECTRICAL WORK is the installation, maintenance, alteration, repair or erection of any wiring apparatus, devices, appliances, fixtures or equipment that by ordinance can be

wired with nonmetallic sheathed cable. This work will be limited to single family or multifamily dwellings (and their accessory structures) of wood frame construction not exceeding four stories.

RESIDENTIAL WIREMAN (RESIDENTIAL JOURNEYMAN ELECTRICIAN) is a person undertaking "residential electrical work" as defined in this code, under the supervision, direction and control of a licensed master electrician.

SIGN ELECTRICAL WORK is the manufacture or installation, or both, of electric signs, conductors and equipment for signs, outline lighting, and inside lighting with high-voltage gas tubes as defined in the *National Electrical Code*.

SIGN JOURNEYMAN ELECTRICIAN is a person undertaking "sign electrical work," as defined in this code, under the supervision, direction and control of a licensed master or sign master electrician.

SIGN MASTER ELECTRICIAN is a person who is the holder of a sign master electrician license issued under Chapter 4 of this code.

SIGN MASTER ELECTRICIAN OF RECORD is a sign master electrician who is engaged in a master-contractor relationship, as provided by Chapter 4 of this code.

STATE ELECTRICAL LICENSE is a license issued or recognized by the Texas Electrical Safety and Licensing Act (*Texas Occupations Code*, Chapter 1305).

TDLR is the Texas Department of Licensing and Regulation.

SECTION 104—CONFLICTING PROVISIONS

Where, in any specific case, different sections of the *City Code,* the *Building Code,* the *City of Houston Mechanical Code,* the *City of Houston Plumbing Code,* the *Residential Code for One- and Two-Family Dwellings of the City of Houston,* the *City of Houston Commercial Energy Conservation Code,* the *City of Houston Residential Energy Conservation Code,* the *City of Houston Fire Code* and this code specify different materials, methods of construction or other requirements, the most restrictive shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

SECTION 105—ALTERNATE MATERIALS AND METHODS OF CONSTRUCTION

The provisions of this code are not intended to prevent the use of any material or method of construction not specifically prescribed by this code, provided an alternate has been approved and its use authorized by the building official. The building official shall approve an alternate, provided he or she finds that the proposed design is satisfactory and complies with the provisions of this code and that the materials, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in suitability, strength, effectiveness, fire resistance, durability and safety.

The building official shall require that sufficient evidence or proof be submitted to substantiate any claims regarding the use of alternates. The details of any action granting approval of an alternate shall be recorded and entered in the files of the building official.

SECTION 106—MODIFICATIONS

Whenever there are practical difficulties involved in carrying out the provisions of this code, the building official may grant modifications for individual cases upon determining that: (1) a special individual reason makes the strict letter of this code technically impractical; (2) the modification is in conformity with the intent and purpose of this code; and (3) the modification does not lessen health, life safety and

fire safety requirements. The details of actions granting modifications shall be recorded and entered in the files of the building official.

SECTION 107—TESTS

Whenever there is insufficient evidence of compliance with any of the provisions of this code or evidence that materials or construction do not conform to the requirements of this code, the building official may require tests as evidence of compliance to be made at no expense to the city.

Test methods shall be as specified by this code or by other recognized test standards. In the absence of recognized and accepted test methods for the proposed alternate, the building official shall determine test procedures that are reasonably reliable and designate the use thereof.

All tests shall be made by an approved agency. Reports of tests shall be retained by the building official for the period required for the retention of public records.

SECTION 108—HEARING PROCEDURES

108.1 Hearing Notices. Whenever notice is to be given to any person concerning the right to a hearing, the notice may be given by personal delivery or by certified mail, return receipt requested.

If the notice relates to work being performed under a permit issued under this code, then the notice shall be given to the master electrician, line master electrician or sign master electrician who obtained the permit, as well as the contractor and the owner of the building.

If notice is being given to a building owner or to a tenant therein, and the building official is unable to determine the name or address of the person after checking the building and the applicable records of the Public Works and Engineering Department, the records of the County Appraisal District, and the records of the electrical utility company, notice shall be mailed to the billing address of the building as shown on the records of the electrical utility company and shall be posted on or in view of each entrance to the building. Additionally, if any notice is mailed to a building owner or a building tenant and is returned without delivery, notice shall be effective if posted on or in view of each entrance to the building.

108.2 Hearings. Except where otherwise specifically provided, all hearings held pursuant to this code shall be conducted by the director of Public Works and Engineering or a representative, who shall hereinafter be referred to as the hearing official. The director shall not designate any person to be a hearing official under this code who has taken any part in the investigation of the matter that is the subject of the hearing, nor any person who directly supervised the investigation. The hearing official shall consider only the evidence presented at the hearing in rendering a decision. The decision of the hearing official shall be set forth in writing and shall be served on each party in the same manner as a notice of a right to a hearing.

SECTION 109—PENALTIES

Any person who violates or causes a violation of any provision of this code shall be guilty of a misdemeanor and, upon conviction thereof, shall be punished by a fine of not more than $2,000.00 nor less than $400.00 unless otherwise specified herein; provided, however, if a person is convicted of any offense under this code that is also a violation of the penal laws of the State of Texas, the person shall be subject to the penalties set out in the penal laws of Texas for the offense. Each day that any violation continues shall constitute and be punishable as a separate offense.

Chapter 2

ORGANIZATION AND ENFORCEMENT

SECTION 201—POWERS AND DUTIES

201.1 General. The building official is hereby authorized and directed to enforce all provisions of this code.

201.2 Deputies. In accordance with procedures prescribed by law, the building official may appoint technical officers and inspectors and such other employees as shall be authorized from time to time.

201.3 Right of Entry. When it is necessary to make an inspection to enforce any of the provisions of this code, or whenever the building official has reasonable cause to believe that there exists in a building or upon a premises a condition that is contrary to or in violation of this code that makes the building or premises unsafe, dangerous or hazardous, the building official may enter the building or premises at all reasonable times to inspect the same or to perform any duty imposed on the building official by this code, provided that if the building or premises is occupied, the building official shall first present proper credentials and request entry. If entry is refused, the building official or an authorized representative shall have recourse to every remedy provided by law to secure entry.

When, due to emergency, immediate entry is necessary to protect life or property, or when the building official shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner or occupant or any other person having charge, care or control of any building or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the building official for the purpose of inspection and examination pursuant to this code.

201.4 Stop Order. Whenever any work is being done contrary to the provisions of this code, the building official may order the work stopped by notice in writing served on any persons engaged in the doing or causing the work to be done, and the persons shall forthwith stop the work until authorized by the building official to proceed with the work. At the time a stop order is issued, the person doing the work and the permit holder shall be given notice of a right to a hearing pursuant to Section 108 of this code. Upon request, a hearing shall be held within three business days unless the permit holder or the person doing the work requests an extension of time.

A stop order shall remain in effect pending any hearing that has been requested, unless the stop order is withdrawn by the building official.

201.5 Authority to Disconnect Utilities in Emergencies. The building official shall have the authority to have the utility company disconnect any electric power or energy service supplied to a building or any electrical system or equipment regulated by this code in case of emergency when necessary to eliminate an immediate hazard to life or property. The building official shall, whenever possible, notify the serving utility and the owner and occupant of the building (or user of the electrical system or equipment if the owner is not located in a building) of the decision prior to the disconnection and shall notify those persons in writing of the disconnection immediately thereafter. The notice shall also inform the owner and occupant of the building (or the user if the electrical system or equipment is not within a building) of a right to a hearing pursuant to Section 108 of this code. Upon request, a hearing shall be conducted within three business days unless the owner requests an extension of time.

201.6 Authority to Condemn Electrical System and Equipment. Whenever the building official ascertains that any electrical system or equipment regulated by this code has become hazardous to life, health or property, the building official shall order in writing that the electrical system or equipment be

either removed or restored to a safe condition, as appropriate. The written notice itself shall fix a time limit for compliance with the order and shall inform the owner and the occupant of the right to a hearing pursuant to Section 108 of this code. No person shall use or maintain any defective electrical system or equipment after receiving a notice.

When equipment or installation is to be disconnected, a written notice of the disconnection and causes therefor shall be given within 24 hours to the serving utility and to the owner and occupant of the building, structure or premises. The notice shall inform the owner and occupant of the right to a hearing pursuant to Section 108 of this code. Upon request, a hearing shall be conducted within three business days unless the owner requests an extension.

When any electrical system or equipment is maintained in violation of this code, and in violation of a notice issued pursuant to this section, the building official shall institute any appropriate action to prevent, restrain, correct or abate the violation.

201.7 Connection after Order to Disconnect. No person shall either make connections from any energy source or power supply or supply power to any electrical system or equipment that has been disconnected or ordered to be discontinued by the building official, until the building official authorizes the reconnection and use of the electrical system or equipment.

201.8 Liability. Except as otherwise provided by law, the building official shall not personally be liable in damages for any act or omission arising out of any official action taken to implement and enforce the provisions of this code. Additionally, except as otherwise provided by law, the building official shall not personally be liable in damages for any action or omission taken in the course and scope of employment. Where and to the extent consistent with the provisions of Article X of Chapter 2 of the *City Code*, the city shall provide legal representation and indemnification for any suit brought against the building official or other employees because of acts or omissions performed in the enforcement of this code.

201.9 Cooperation of Other Officials and Officers. The building official may request, and shall receive so far as is required in the discharge of their duties, the assistance and cooperation of other officials of the city.

SECTION 202—UNSAFE ELECTRICAL SYSTEMS OR EQUIPMENT

All electrical systems or equipment regulated by this code that are unsafe, or that constitute a fire hazard, have sustained disaster damage or are otherwise dangerous to human life are, for the purpose of this section, unsafe. Any use of electrical systems or equipment regulated by this code constituting a hazard to safety, health or public welfare by reason of inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster damage or abandonment is, for the purpose of this section, an unsafe use.

All unsafe electrical systems or equipment shall be abated by repair, rehabilitation, demolition or removal in accordance with the procedures set forth by law for the abatement of dangerous buildings. As an alternative, the building official or another employee or official of the city as designated by the governing body may institute any other appropriate action to prevent, restrain, correct or abate the violation.

SECTION 203—ELECTRICAL BOARD

203.1 Electrical Board Composition. There is hereby created an Electrical Board consisting of 11 members. Position Nos. 1 through 10 shall be filled by persons appointed by the mayor and confirmed by the City Council. Each of the 11 positions of the board shall be numbered. The mayor shall designate a member to be chairman.

Position Nos. 1, 2, 3 and 4 shall be filled by duly licensed master electricians.

Position No. 5 shall be filled by an electrical engineer in the employ of an electric utility company operating under a city franchise.

Position Nos. 6 and 7 shall be filled by consulting or practicing engineers who are directly connected with the electrical construction industry and are licensed professional engineers of the State of Texas.

Position Nos. 8, 9 and 10 shall be filled by representatives from the city at large.

Position No. 11 shall be filled by the Electrical Division Manager, who shall serve as secretary of the Electrical Board. The Electrical Division Manager, from time to time, may designate, in writing, a member of the city's Electrical Inspection Section to act as his or her duly authorized representative. The representative shall be entitled to all rights and privileges of the position. A copy of the designation, specifying the dates the person shall act as representative of the Electrical Division Manager shall be filed with the minutes of the Board.

203.2 Eligibility of Board Members. A person who meets the qualifications for the positions set forth in Section 203.1 shall not be disqualified from serving on the Board or from performing any duties of board membership because the person is employed by the IBEW, IEC, NECA or any other labor or trade organization that provides or sponsors electrician training. The provisions of this section shall be regarded as an exception to Section 18-3 of the *City Code*.

203.3 Compensation and Terms. Each member of the Board shall receive $50 per diem for services while attending meetings of the Board. A member of the board who is employed by the city shall be paid only for those meetings he or she attends that are neither held during, nor continue beyond, regular working hours.

The terms of office for appointees to Position Nos. 1, 3, 5, 7 and 9 shall expire on the 2nd day of January of odd-numbered years, and the terms of office for appointees to Position Nos. 2, 4, 6, 8 and 10 shall expire on the 2nd day of January of even-numbered years. However, each member shall continue in office until a successor has been appointed and qualified. The adoption of this code shall not terminate the term of office of any person currently serving on the Board. Any person who is currently serving on the Board shall continue to serve in the position for which he or she was appointed and confirmed until a successor is appointed and qualified.

203.4 Methods of Transacting Business. Half of the members then serving on the Board present at any meeting shall constitute a quorum for the transaction of any business of the Board. A majority vote of the members present at any meeting at which a quorum is present shall prevail.

203.5 Legal Counsel. Any board meeting and hearing shall be attended by an attorney from the city's legal staff when requested by the Board. The attorney's sole duty shall be to advise the Board members of legal matters that may arise.

203.6 Duties of the Board. The duties and responsibilities of the Board shall include the following:

1. Hear all cases involving revocation of a license or registration.

2. Conduct those hearings and appeals that are provided in this code to be conducted by the Electrical Board.

3. Hear appeals from decisions of the building official concerning interpretation of this code and the use of alternate materials and wiring methods; provided, however, the Board shall not have jurisdiction to hear any matter that is the subject of any case pending before the municipal courts.

203.7 Appeals to Electrical Board. Any interested person dissatisfied with a decision of the building official concerning interpretations of this code or the use of alternate materials and wiring methods shall have the right to appeal to the Board pursuant to the following procedures. Petitions for hearings before the Board shall be in writing and filed with the secretary of the Board. A hearing on the matter shall be

held by the Board within 30 calendar days of the date the petition was filed. The Board shall affirm, modify or reverse the action or decision of the building official and shall render all decisions and findings in writing to the building official who shall cause a duplicate copy to be mailed to the appellant.

Any interested person aggrieved and affected by a decision of the Board may appeal to the City Council by delivering a written notice of appeal to the City Secretary within 10 calendar days from the date of deposit of the decision of the Board in the mail. Appeals are subject to and shall be made as provided by City Council Rule 12. See Section 2-2 of the *City Code*.

SECTION 204—FAILURE TO CORRECT WORK

If any electrical contractor, master electrician, line master electrician or sign master electrician fails to correct any defect, error or deficiency in any of his or her work installed under the authority of an electrical permit within 10 calendar days after written notification thereof, the building official may serve the master and contractor with notice that a hearing will be held by the Electrical Board at which time the building official will seek either the suspension or revocation of the contractor's and master's licenses. In the notice, the building official shall specify the grounds on which he or she will rely in seeking the suspension or revocation of the licenses. This section shall be cumulative of all other remedies provided for under the laws of the State of Texas and ordinances of the city and may be applied in addition to prosecution for any applicable crimes committed.

SECTION 205—TAMPERING

It shall be unlawful for any person to bridge, tamper with or change from its original installation, any fuse of any type installed in any panelboard, main switch or switchboard, or to alter or change any circuit breaker so that the fuse or circuit breaker will not function properly. It is a defense to prosecution under this section that the work was done upon previous approval of the building official.

SECTION 206—DISPLAY OF LICENSE

A contractor shall display the contractor's business name and the number of the license issued by the state or the city on each vehicle owned or operated by the contractor.

The information required to be displayed must be:

1. Printed in letters and numbers that are at least two inches high and 3/8 inches in width and in a color that contrasts with the color of the background surface; and

2. Permanently affixed in conspicuous places on both sides of the vehicle.

Chapter 3

PERMITS AND INSPECTIONS

SECTION 301—PERMITS

301.1 Permits Required. It shall be unlawful for any person to install, alter, repair, replace or remodel any electrical system or equipment regulated by this code, except as specified in Section 301.2, or cause the same to be done, unless the person has a current permit for the work or is working under the supervision of a person who has a permit.

301.2 Exempt Work. Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this code or any other laws or ordinances.

An electrical permit shall not be required for the following:

1. Motors, office furnishings (as defined by NFPA 70, Article 605) or other appliances energized by means of a cord or cable having an attachment plug end to be connected to an approved receptacle when the cord or cable is permitted by this code. Note: This exception does not apply to manufactured wiring systems as defined in NFPA 70, Article 604.

2. Repair or replacement of fixed motors, transformers or fixed approved appliances of the same type and rating in the same location.

3. Temporary decorative lighting, which shall not be in place more than 90 calendar days.

4. Repair or replacement of current-carrying parts of a switch, contactor or control device.

5. Reinstallation of attachment plug receptacles, but not the outlets therefor.

6. Repair or replacement of any overcurrent device of the same capacity in the same location.

7. Installation of temporary wiring, apparatus, devices, appliances or equipment used by a recognized electrical training school or college for the purpose of training, which installation shall not be in place more than 90 calendar days.

8. Electrical wiring, devices, appliances, apparatus or equipment operating at less than 50 volts and not capable of supplying or controlling more than 50 watts of power.

9. Sound equipment, private or public telephone system, thermostat wiring or burglar alarm system, provided, however, a permit shall be required to wire any such system to the source of electricity.

10. Installation and maintenance of railway crossing signal devices, when performed by due authority of the railroad in accordance with the standards of the American Railroad Association, and in collaboration with and with the approval of the Director of the Department of Public Works and Engineering of the city.

11. The installation, maintenance or alteration of electrical wiring, apparatus, devices, appliances or equipment to be installed by an electric utility company for its own use in the generation, transmission, distribution, sale or utilization of electrical energy. However, no electric utility company shall do any wiring on a customer's premises other than wiring that is a part of the company's distribution system, which shall be construed to include metering equipment, wherever located, and transformer vaults in which the company's transformers are located; nor shall any of its employees do any work other than that done for said company as provided for herein by virtue of this exception.

12. Erection, assembly, installation, repair, maintenance or servicing of elevator equipment, X-ray equipment, proton therapy equipment, and medical electronic equipment, other than for the power wiring

connection of the first component, provided that the components of the equipment can be rendered safe from fire and shock hazards during operation by disconnection from electrical power sources.

13. Removal of electrical wiring.

301.3 Franchised Work. Except as otherwise provided by law, no person or electric utility company that does not operate under a franchise granted by the city shall have the right to install any electrical conduit, wires, ducts, poles or equipment of any character for the transmission, distribution or utilization of electric energy, or for the operation of signals or the transmission of intelligence on, over or under the streets in the city, without first obtaining from the City Council a franchise right or grant for the particular installation so desired to be made, and any installation so made under a franchise or grant shall be in strict conformity with all rules, regulations and ordinances of the city pertaining thereto. Compliance with this provision shall not be construed to excuse compliance with any other provision of the ordinances of the city.

301.4 Annual Maintenance Permit. Upon making written application and payment of all applicable fees, a person having ownership or control over property may obtain an annual permit for the keeping in safe repair of any and all electrical installations, apparatus and equipment in the building and on the property on which the building is located if he or she employs a person as a full-time employee who will actually perform the electrical maintenance work. A "full-time employee" shall mean an employee who works for the maintenance permit holder at least 36 hours per week. A permit for maintenance electrical work shall be valid for only one premises.

The fee for an annual maintenance permit shall be $200.00 and shall be paid to the building official. An annual maintenance permit shall expire on September 30th of each year.

301.5 Permits Issued to Licensed Contractor. No permit shall be issued under any master electrician license or registration unless the master electrician is in compliance with the requirements of Section 403 of this code or is employed by an electrical contractor who is in compliance with that section.

SECTION 302—ELECTRICAL PERMITS

302.1 Application. To obtain an electrical permit, the applicant shall first file an application on a form furnished by the Building Inspection Division for that purpose. Each application shall:

1. Identify and describe the work to be covered by the permit for which the application is made.

2. Describe the land on which the proposed work is to be done by the legal description, street address or similar description that will readily identify and definitely locate the proposed building or work.

3. Indicate the use or occupancy for which the proposed work is intended.

4. Be accompanied by plans, diagrams, computations and other data as required in Section 302.2.

5. Be signed or authorized electronically by the properly licensed master electrician, line master electrician or sign master electrician, as applicable.

6. Give such other data and information as may be required by the building official.

7. Identify the name of the electrical contractor who has contracted for the work.

A master electrician may apply for a permit for any electrical work. A line master electrician may apply only for a permit relating to outside electrical work. A sign master electrician may apply only for a permit relating to sign electrical work.

302.2 Plans and Specifications. Plans, calculations, diagrams and other data shall be submitted in two or more sets with each application for a permit. The building official may require all plans, computations and specifications to be prepared by a master electrician of record and/or prepared and sealed by a

professional engineer licensed in the State of Texas in compliance with The Texas Engineering Practice Act (*Texas Occupations Code*, Chapter 1001).

> **EXCEPTION:** The building official may waive the submission of plans, calculations, etc., if he determines that the nature of the work is such that review of plans is not necessary to obtain compliance with this code.

302.3 Information on Plans. Plans shall be drawn to scale and shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and all relevant laws, ordinances, rules and regulations.

SECTION 303—PERMIT ISSUANCE

303.1 Issuance. The application, plans and specifications and other data filed by an applicant for a permit shall be reviewed by the building official. The plans may be reviewed by other departments of the city to verify compliance with any applicable laws under their jurisdiction. If the building official finds that the work described in an application for a permit and the plans, specifications and other data filed therewith conform to the requirements of this code and other pertinent laws and ordinances, and that all applicable fees have been paid, the building official shall issue a permit therefor to the applicant.

When the building official issues a permit where plans are required, the building official shall endorse in writing or stamp the plans and specifications "APPROVED." Approved plans and specifications shall not be changed, modified or altered without authorization from the building official, and all work shall be done in accordance with the approved plans.

The building official may issue a permit for the construction of part of an electrical system before the entire plans and specifications for the whole system have been submitted or approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holder of the permit shall proceed at his or her own risk without assurance that the permit for the entire building, structure or building service will be granted.

303.2 Retention of Plans. One set of approved plans and specifications shall be returned to the applicant and shall be kept on the site of the building or work at all times during which the work authorized by the permit is in progress. One set of approved plans, specifications and computations shall be retained by the building official until final approval of the work.

303.3 Validity of Permit. The issuance of a permit or approval of plans and specifications shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other applicable law. No permit presuming to give authority to violate or cancel the provisions of law shall be valid.

The issuance of a permit based on plans, specifications and other data shall not prevent the building official from thereafter requiring the correction of errors in the plans, specifications and other data, or from preventing building operations being carried on thereunder when in violation of this code or of any other applicable law.

303.4 Expiration. For purposes of this subsection, the determination of whether work has commenced under a permit or whether work has been abandoned under a permit shall be based upon whether the permit holder requests an inspection of the work performed under the permit by the building official. If work is not commenced under a permit within 180 days of the date of issuance or is abandoned at any time for a period of 180 consecutive days, the permit shall lapse. An elapsed permit shall expire 180 days following the date that it lapsed unless, before the 180th day following the date that the permit lapsed, the permit holder obtains reactivation of the permit by:

1. Requesting reactivation of the permit by the building official and

2. Requesting an inspection of work performed under the permit by the building official.

A permit may only be reactivated one time, and it shall expire if the work is again abandoned for a period of 180 consecutive days. In order to recommence work under an expired permit, the permit holder shall pay the full permit fee applicable and submit plans that comply with this code for the previously uninspected portion of the work.

> **EXCEPTION:** The building official may, upon request, perform a final inspection of work for which the permit has expired or reactivate a permit for the purpose of issuing a certificate of occupancy or a certificate of compliance.

303.5 Validity. A permit shall be valid only for work done under the supervision of the master electrician, line master electrician or sign master electrician who signed the application. A new permit must be obtained if the person who signed the application ceases to supervise the work. The cost of the new permit shall be 50 percent of the original fee. In the case of the death of the master, the permits will be transferred to the new master at a fee of 50 percent of the original fees, up to a maximum fee of $50.00 per permit.

303.6 Suspension or Revocation. The building official may, in writing, suspend or revoke a permit and may revoke approval of any plans issued under the provisions of this code whenever the permit is issued in error or on the basis of incorrect information supplied, or in violation of any ordinance or law. Any suspension or revocation shall be accompanied by notice of a right to a hearing as provided in Section 108 of this code. Upon written request, the hearing shall be afforded within three business days from receipt of the request.

SECTION 304—FEES

304.1 Permit Fees. The fee for each permit shall be as set forth in Section 117 of the *Building Code.*

Additions to existing work shall be charged for at the same rate as for new work. The moving and relocating of electrical equipment for which a permit inspection fee is not otherwise provided for in Section 117 of the *Building Code*, will be charged at the minimum fee.

304.2 Plan Review Fees. Where plans are lost or changed so as to require an additional plan review or when a plan review is required and there is no building permit is required, a plan review fee shall be charged at the rate shown in Section 117 of the *Building Code*.

304.3 Expiration of Plan Review. Applications for which no permit is issued within 180 calendar days following the date of application shall expire by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the building official. The building official may extend the time for action by the applicant for a period not exceeding 180 calendar days on request by the applicant showing that circumstances beyond the control of the applicant have prevented action from being taken. No application shall be extended more than once. In order to renew action on an application after expiration, the applicant shall resubmit plans.

304.4 Investigation Fees: Work without a Permit.

1. **Investigation.** Whenever any work for which a permit is required by this code has been commenced without first obtaining a permit, a special investigation shall be made before a permit may be issued for the work.

2. **Fee.** An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee, which is intended to cover additional costs associated with inspection of work commenced without a permit, shall be equal to the amount of the permit fee that would be required by this code if a permit were to be issued. The payment of an

investigation fee shall not exempt any person from compliance with all other provisions of this code or from any criminal penalty prescribed by law.

304.5 Fee Refunds.

1. The building official may authorize the refunding of any fee paid hereunder that was erroneously paid or collected if the fee has been paid or collected because of an error made by one or more city employees. This provision shall not be applicable if the error was caused by incorrect information provided by the applicant.

2. The building official may authorize the refunding of not more than 90 percent of the amount in excess of $25.00 of the permit fee paid when no work has been done under a permit issued in accordance with this code. If work has been done under the permit, no refund may be authorized.

3. The building official shall not authorize the refunding of any fee paid except upon written application filed by the original permittee no later than 180 calendar days after payment of the fee.

304.6 Registration Fees. The fee for each registration shall be as set forth in Section 414 of this code.

304.7 License or Registration Suspension. When the building official has authorized work to begin prior to the issuance of a permit due to an emergency situation, any failure on the part of the contractor to pay all applicable permit fees within 20 calendar days of the date the building official has authorized the work to begin shall be grounds for the suspension of the contractor's and master's licenses or registrations. At least 10 calendar days prior to the suspension, the building official shall give the contractor and master notice of the date the licenses will be suspended if the fees are not paid and inform the contractor and master that they may have a hearing before the Electrical Board if either or both of them submit a written request therefor to the secretary of the Board at least three business days prior to the date the suspension will become effective. If the contractor and/or master timely requests a hearing, the suspension shall not become effective until the Board has heard the matter and rendered its decision as to whether all applicable permit fees have been paid. If the board finds that all applicable permit fees have not been paid, the contractor's and master's licenses or registrations shall be suspended until they have been paid. If the contractors's and master's licenses or registrations remain suspended for six months, the licenses or registrations shall automatically be revoked.

SECTION 305—INSPECTIONS

305.1 General. All electrical systems and equipment installed under provisions of this code shall be subject to inspection by the building official. No portion of any electrical system intended to be concealed shall be concealed until inspected and approved. Neither the building official nor the city shall be liable for expenses entailed in the removal or replacement of any material required to allow inspection. When the installation of the electrical system and equipment is complete, an additional and final inspection shall be made. Electrical systems and equipment regulated by this code shall not be connected to the energy source until authorized by the building official.

305.2 Operation of Electrical Equipment. The requirements of this section shall not be construed to prohibit the operation of any electrical system or equipment installed to replace existing equipment. The Building Inspection Division shall endeavor to inspect work within three working days following the receipt of a request. In any instance in which the inspection is not made within three working days, the requestor may submit a written notice of inspection request to the Electrical Division Manager who shall ensure that the inspection is completed by the end of the next city work day following receipt of the written request.

305.3 Inspection Requests. It shall be the duty of the person doing the work authorized by a permit to notify the building official that the work is ready for inspection.

305.4 Other Inspections. In addition to the called inspections required by this code, the building official may make or require other inspections of any work to ascertain compliance with the provisions of this code and other applicable laws. If a permit has not been issued for the work and city inspectors are refused permission to inspect, they may obtain a search warrant as authorized by law to make the inspections.

305.5 Moving and Relocating of Work. The moving and relocating of electrical equipment for which a permit inspection fee is not otherwise provided for in Section 117 of the *Building Code* will be charged at the minimum fee.

305.6 Reinspections. A reinspection fee in the amount specified in Section 117 of the *Building Code* shall be assessed for each inspection or reinspection when the portion of work for which inspection is called is not complete or when corrections called for are not made.

This provision is not to be interpreted as requiring reinspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for inspection or reinspection.

SECTION 306—CONNECTION APPROVAL

306.1 Energy Connections. Any electrical system or equipment regulated by this code shall not be connected to a source of energy or power until approved by the building official.

306.2 Temporary Connections. The building official may authorize the temporary connection, with proper permits, of electrical systems or equipment to a source of energy or power for the purpose of testing the equipment, or for use under a temporary certificate of occupancy.

> **EXCEPTION:** In an emergency situation where power is inadvertently interrupted, the Building Official may authorize a temporary connection, subject to later permitting and inspection.

No permit for temporary use shall be valid for a period longer than 90 calendar days. Except as otherwise provided below, at expiration of the authorized period, the building official shall issue written instructions to the electric utility company or other person having control of the supply of energy to the installation to disconnect service to the temporary installation, unless he or she has granted a permanent approval or an additional temporary approval. At least 10 calendar days prior to the proposed date of disconnection, the building official shall give written notice to the electric utility company or other person having control of the supply of power to the temporary installation and to the owner of the building, setting forth the date that the electricity will be disconnected unless permanent approval of the connection has been obtained or an additional permit for temporary use has been issued. The notice shall be posted on or in view of each principal entrance to the building for the information of all persons who occupy the building. Any person affected by the proposed disconnection of electricity may request a hearing on the matter. The request shall be in writing and delivered to the office of the Electrical Division Manager at least three city work days prior to the proposed date of disconnection. If a hearing is requested, a hearing date shall be set by the building official, and the hearing shall be held prior to the disconnection of the electricity, unless the person asking for the hearing requests a delay in that hearing.

Chapter 4

LICENSING AND REGISTRATION REQUIREMENTS

SECTION 401—LICENSE OR REGISTRATION REQUIRED

401.1 General. There is hereby established a city licensing or registration requirement for contractors and for persons performing electrical maintenance work, electrical work, outside electrical work, residential electrical work and sign electrical work.

401.2 Required. It shall be unlawful for any person who does not hold a current and valid applicable city license or registration issued under this chapter or an applicable state electrical license to perform electrical work, electrical maintenance work, outside electrical work, residential electrical work or sign electrical work.

It shall be unlawful for any person to employ or utilize any person who does not hold a current and valid applicable city license or registration issued under this chapter or an applicable state electrical license to perform electrical work, electrical maintenance work, outside electrical work, residential electrical work or sign electrical work.

The city shall not issue new electrical licenses other than contractor licenses. A person who holds a current and valid city electrical license may renew such license as provided in this code.

A person who holds a current valid state electrical license is not *required* to hold a city registration, provided that a holder of a state electrical contractor license or a state electrical sign contractor license must hold a city registration to perform work as a contractor.

401.3 Contractors. Any licensed or registered electrical contractor may contract with another licensed or registered electrical contractor for electrical work. A licensed or registered electrician employed by the prime electrical contractor may have direct, personal supervision and control of the project.

401.4 Documentation. A holder of a state electrical license, a city license, or a city registration must carry such documentation on his or her person at all times while performing the work for which he or she is licensed or registered.

SECTION 402—LICENSES AND REGISTRATIONS

402.1 Applications. Applications for all licenses and registrations shall be made in writing to the Electrical Division, stating the name and address of the applicant, the applicant's appropriate state electrical license, if applicable, and such other relevant information as may be required by the Electrical Division.

Before a license or registration is issued under this code, the applicant must pay the fee required for the license or registration as set forth in Sections 414 and 415 of this code.

402.2 Duration of City License or Registration. Any city license issued under previous versions of the *City of Houston Electrical Code* prior to September 1, 2004, and valid as of such date, shall remain in effect until September 1, 2006, unless renewed for successive one-year terms. Any registration issued under this chapter shall expire on the expiration date of the registrant's state electrical license or upon suspension of such license.

402.3 License or Registration Issuance. Upon determining that an applicant meets all of this chapter's requirements for a license or registration, the Electrical Division shall issue the license or registration. No license or registration issued in accordance with the provisions of this chapter shall be assignable or

transferable. Any registration issued under this chapter shall expire on the expiration date of the registrant's state license or upon suspension of such license.

402.4 Revoked License or Registration. City licenses issued under previous versions of the *City of Houston Electrical Code* and licenses and registrations issued under this chapter may be revoked for any reason defined in this code, provided, however, if the Electrical Board finds that the public interest will be adequately protected by the issuance of a warning or by a suspension of the license or registration for a definite period of time not exceeding one year, it shall issue a warning or order a suspension. If a registration is revoked, the Electrical Board shall not accept an application from that person for a new registration for one year following the date of revocation. Notice shall be sent to TDLR of any disciplinary action taken by the Electrical Board against any master or contractor.

402.5 Revocation Reasons. Following 10 calendar days' notice by personal delivery or certified mail and after a hearing before the Electrical Board, at which the person may be accompanied by an attorney at law of their choice, the Electrical Board may revoke or suspend that person's license or registration for any of the following reasons:

1. Fraud or misrepresentation in obtaining a city license, registration, or permit.

2. Violating on more than one occasion, either willfully or maliciously, or by reason of incompetence, any provision of this code.

3. Defrauding of any person for whom a service has been rendered, or contracted to be rendered.

4. Securing a permit for electrical work not actually performed by the master electrician, line master electrician, or sign master electrician ("master") or by licensed employees under the master's control, supervision, direction and responsibility. (This is intended to prevent a master from securing a permit for the purpose of evading the spirit and intent of this code by entering into any simulated scheme, transaction or device whereby electrical work will be done by persons who are not employees of the master or employees of the master's employer.)

5. Securing a permit under any pretext for an installation concerning which the applicant has no valid contract. (This is intended to prevent a master electrician, line master electrician or sign master electrician from securing a permit for the purpose of evading the spirit and intent of this code by any simulated scheme, transaction or device, or performing electrical work without a valid permit.)

6. Performing any electrical work as defined herein for which no electrical permit has been obtained.

7. For failure of any master electrician, line master electrician or sign master electrician to provide full-time active participation and day-to-day management of all electricians performing work under all permits issued under his or her signature.

8. Acting as a master electrician, line master electrician or sign master electrician for more than one electrical contractor (including him- or herself if self employed) at one time, unless the master owns more than 50 percent of the electrical contracting business.

The Electrical Division may withhold the issuance of a registration to an applicant by the same process used for revocation or suspension as described above. In addition to constituting grounds for revocation or suspension of a license or registration, violation of any of Items 1-8 are declared to be unlawful. Criminal prosecution shall not preclude administrative action by the Electrical Division or Electrical Board and vice versa.

402.6 License or Registration Transfer. No master electrician, line master electrician or sign master electrician shall assign or in any way convey his or her city license or registration, use thereof or any rights thereunder to anyone by power of attorney or any other process or become involved in any type of agreement, assignment or use whereby he or she will not have supervision, direction, control or

responsibility for the electrical work for which an electrical permit has been obtained under his or her city license or registration.

402.7 City License. A person who holds a license issued pursuant to this code may renew his or her city license by paying the annual renewal fee provided in Section 415.

SECTION 403—CONTRACTOR REGISTRATION OR LICENSE

403.1 General. No person shall undertake any work as a contractor unless that person has been registered with the city as a contractor or unless that person holds a current and valid city license as a contractor.

An applicant for a contractor registration must have a valid state license as an electrical contractor, an electrical sign contractor, or a residential appliance installation contractor.

403.2 Contractor's Responsibility. The licensed or registered contractor will be responsible for ensuring that all work performed under his or her license or registration is properly permitted, that all personnel working under his or her license are properly licensed or registered, and that all work is performed in accordance with this code.

403.3 Scope of License or Registration. In the event that the applicant is or has employed a line master electrician or a sign master electrician in lieu of a master electrician, the scope of the contractor license or registration will be restricted to that work for which the applicant or the master is licensed.

403.4 Contractor's Records. For purpose of enforcing this section, the building official may, during normal working hours, examine and make copies of contracts, employment records, and payroll records for the preceding 24 months. Should the contractor fail or refuse to make a full, true and accurate disclosure of these records, the building official may, after written notification by certified mail, withhold the issuance of electrical permits to that contractor and master electrician until there has been a full and accurate disclosure of the records. This provision shall be cumulative of all other remedies provided herein.

403.5 Termination of Master-Contractor Relationship. Upon the death or termination of the designated master electrician, sign master electrician or line master electrician, the contractor shall be permitted to continue operating under the master's license or registration for a period not to exceed 30 calendar days from the date of the termination of the relationship. When the relationship terminates due to the death of the master electrician, sign master electrician or line master electrician, no additional permits will be granted until a new master is employed and all active permits under the deceased master are repermitted. When the relationship terminates due to termination of the master electrician, sign master electrician or line master electrician, no additional permits will be granted until a new master is employed and all existing permits, active and inactive, under the former master are repermitted.

403.6 Master-Contractor Relationship. The master and the contractor shall register with the Electrical Division. Upon termination of the master-contractor relationship, notice shall be given by the master or the contractor to the building official within five city work days. The termination of the master shall cause all permits taken out under the terminated master's license to be voided 30 calendar days after the date of termination. No additional permits will be granted until a new master is employed and all existing active permits under the previous master are repermitted. The master must play an active role in the business for which he or she is the registered master. This section in no way shall be construed as preventing the master from having other sources of income.

403.7 Contractor Business Location. To apply for a registration, an applicant must provide to the city a physical address (not a post office box).

403.8 Insurance. To apply for a city contractor's license, an applicant must provide evidence of the following to the Electrical Division:

1. That the applicant is a city licensed master electrician, line master electrician or sign master electrician or has such a person in his or her employment as a full-time employee.

2. That applicant is in compliance with Section 1305.159(a)(3) of the Texas Occupations Code regarding workers' compensation coverage.

SECTION 404—MASTER ELECTRICIAN

A master electrician may:

1. Perform all electrical work, including electrical work performed by a sign master electrician and a line master electrician.

2. Supervise an electrician.

3. Serve as a master electrician of record for a contractor.

SECTION 405—LINE MASTER ELECTRICIAN

405.1 A line master electrician may:

1. Perform outside electrical work as defined in this code.

2. Supervise an electrician performing outside electrical work.

3. Serve as a line master electrician of record for a contractor.

405.2 License. A line master electrician license shall authorize only outside electrical work. The line master electrician will otherwise be under the same rules, regulations, rights, privileges and duties imposed on or enjoyed by a master electrician.

SECTION 406—SIGN MASTER ELECTRICIAN

406.1 General. A sign master electrician may:

1. Perform sign electrical work.

2. Supervise an electrician performing sign electrical work.

3. Serve as a sign master electrician of record for a contractor.

406.2 License or Registration. Sign master electricians shall also comply with requirements as set out in the Sign Code, Chapter 46 of the *Building Code*. The sign master electrician license shall authorize only electrical sign work. The sign master electrician will otherwise be under the same rules, regulations, rights, privileges and duties imposed on or enjoyed by a master electrician.

406.3 Scope of Work. A sign master electrician shall be permitted to manufacture, install and do wiring that is required to connect the sign, outline lighting or inside lighting to an existing circuit or circuits that have been approved by the building official for connection of the specific load covered by the permit issued. Should the available circuit or circuits not be adequate for the specific sign and outline lighting load to be connected, then a contractor shall be employed by the owner or the owner's agent to install the necessary wiring required to provide the required capacity and circuits for the proposed signs and outline

lighting. However, a sign master electrician shall be permitted to install the necessary service and circuits for an isolated sign and/or outline lighting installation.

406.4 Isolated Sign. For the purposes of this section, an isolated sign and/or outline lighting installation shall be defined as an installation in which neither the meter nor service supplying the installation or any of the signs or outline lighting are mounted on or in any building or structure that is not a part of the signs or outline lighting.

406.5 Circuits. As applied in this section, signs or outline lighting on the exterior of a building must have the circuit or circuits available on the exterior of the building. Nothing herein is intended to limit or repeal the effect of the Sign Code, but shall be cumulative thereof.

406.6 Shop Inspection. All work performed and materials, apparatus, devices, appliances, fixtures or equipment used shall conform with the full requirements of this chapter. Any electric sign built within the city, that is not listed and labeled, for installation within the city shall have a shop inspection by the building official before the sign is shipped out of the shop. The shop inspection fee shall be separate from and shall be double that required for signs as specified in the *Building Code.* After approval by the building official, an inspector shall attach an approval label or stamp to the sign. Signs constructed outside the city, but erected within the city, shall be subject to the same rules and regulations as apply to signs constructed within the city, except that inspections shall be performed by an approved agency.

SECTION 407—JOURNEYMAN ELECTRICIAN

No person shall undertake any work as a journeyman electrician unless the person has received a city or state electrical license as a journeyman electrician.

SECTION 408—JOURNEYMAN LINEMAN

No person shall undertake any work as a journeyman lineman unless the person has received a state or city electrical license as a journeyman electrician or a journeyman lineman.

SECTION 409—SIGN JOURNEYMAN ELECTRICIAN

No person shall undertake any work as a sign journeyman electrician unless the person has received a state or city electrical license as a sign journeyman electrician or a journeyman electrician.

SECTION 410—RESIDENTIAL WIREMAN (RESIDENTIAL JOURNEYMAN ELECTRICIAN)

No person shall undertake any work as a residential wireman (residential journeyman electrician) unless the person has received a state or city electrical license as a residential wireman or a journeyman electrician.

SECTION 411—APPRENTICE ELECTRICIAN

411.1 General. No person shall undertake any work as an apprentice electrician unless the person has received a state or city electrical license as an apprentice electrician.

411.2 Work Performed. An apprentice electrician licensed under this section shall be permitted to perform work as an apprentice, an apprentice lineman, a sign apprentice electrician, residential apprentice

and an apprentice maintenance electrician under the supervision of a master electrician, journeyman electrician, maintenance electrician, or a residential wireman.

SECTION 412—MAINTENANCE ELECTRICIAN

412.1 General. No person shall undertake work as a maintenance electrician unless the person has received a state or city electrical license as a maintenance electrician or a journeyman electrician.

412.2 Work Performed. A maintenance electrician licensed under this section shall be permitted to perform electrical maintenance work under the general supervision of a master electrician, on behalf of an electrical contractor.

412.3 Exempt work. A maintenance electrician license is not required if:

1. The work is performed by a person who does not engage in electrical work for the public;

2. The work is performed by a person regularly employed as a maintenance person or maintenance electrician for a business; and

3. The electrical work does not involve the installation of electrical equipment during new construction as defined by rules adopted under Chapter 151 of the *Texas Tax Code*.

SECTION 413—RESIDENTIAL APPLIANCE INSTALLER

413.1 General. No person shall undertake work as a residential appliance installer unless the person has received a state electrical license as a residential appliance installer or any other license recognized for such purpose in this code.

413.2 Work Performed. A residential appliance installer listed under this section shall be permitted to perform work defined as residential appliance installation.

SECTION 414—APPEALS FROM LICENSING DECISIONS OF ELECTRICAL BOARD

Any holder of a license or registration whose license or registration has been revoked, placed on probation, or suspended shall have the right of appeal to City Council as provided in Section 203.7 of this code. The City Council shall affirm, modify or reverse the action and/or decision of the Electrical Board. The action of the City Council shall be final. If no appeal is taken within the time and in the manner herein above provided, the ruling of the Electrical Board shall be final. The action of the Electrical Board shall be in effect during the appeal process before City Council and will remain in effect until modified or reversed by action of City Council on the appeal. The action of the Electrical Board shall remain in effect unless and/or until reversed or modified as provided for herein. In the event of suspension or revocation of licenses or registrations, the effective date will be 10 calendar days immediately following the action of the Electrical Board. A master whose license or registration has been suspended or revoked will not be issued any new permits after the action of the Electrical Board or during the 10 calendar day period following the action of the Electrical Board. All licenses and registrations shall be submitted to the secretary of the Electrical Board within 10 calendar days after the date of revocation or suspension.

SECTION 415—REGISTRATION FEES

To obtain a registration, an applicant shall pay the applicable registration fee as follows:

TYPE	REGISTRATION
Contractor	$150
Master Electrician of Record	$150
Sign Master Electrician of Record	$150
Residential Appliance Installation Contractor	$150

All fees shall be prorated for each month the license is to be in effect based on a 12 month period.

An administrative fee as set forth in Section 117 of the Building Code shall be charged upon the preparation of each fee or deposit receipt issued by the building official. This fee shall apply regardless of whether the fee or deposit is payable pursuant to this code or the *City Code*. This fee shall be in addition to all other applicable fees or deposits. When paid for a deposit or fee receipt, this fee shall neither constitute nor be refundable as a part of the deposit.

SECTION 416—LICENSE AND RENEWAL FEES

To obtain a contractor license or renew an existing city license the applicant shall pay the applicable city license fee as follows:

LICENSE TYPE	LICENSE FEE	RENEWAL FEE
Contractor	$150	$150
Master Electrician of Record	N/A	$150
Sign Master Electrician of Record	N/A	$150
Line Master Electrician of Record	N/A	$150
Master Electrician	N/A	$75
Sign Master Electrician	N/A	$75
Line Master Electrician	N/A	$75
Journeyman Electrician	N/A	$40
Journeyman Lineman	N/A	$40
Sign Journeyman	N/A	$40
Residential Wireman	N/A	$25
Maintenance Electrician	N/A	$25
Apprentice	N/A	$15

All fees shall be prorated for each month the license is to be in effect based on a 12 month period.

An administrative fee as set forth in Section 117 of the Building Code shall be charged upon the preparation of each fee or deposit receipt issued by the building official. This fee shall apply regardless of whether the fee or deposit is payable pursuant to this code or the *City Code*. This fee shall be in

addition to all other applicable fees or deposits. When paid for a deposit or fee receipt, this fee shall neither constitute nor be refundable as a part of the deposit.

SECTION 417—CONTINUING EDUCATION FOR CITY LICENSE RENEWAL

417.1 General. Master electricians and journeyman electricians shall annually complete a four hour code review course, approved by the city or state, based on the *National Electrical Code*.

Chapter 5
BUILDING STANDARDS

SECTION 501—WIRING SYSTEMS

501.1 General. Any type of wiring or wiring systems may be used in the city as approved in the *National Electrical Code* adopted in Section 502, except where specifically provided herein.

Refer to Section 403 of the *Building Code* for high-rise building requirements and to Chapter 46 of the *Building Code* for the Sign Code.

501.2 Electric Utility Company. All changes in the service standards and area practices that are promulgated by the electric utility company shall be submitted to the Electrical Board for review and comment at least 30 calendar days prior to enactment.

For the purposes of this code, the distribution system of any electric, telephone, telegraph, signal and/or electric utility company shall not extend to any electrical apparatus or equipment that the company does not own or control.

If a licensed or registered contractor needs access to metering and service equipment under control of an electric utility company to perform certain electrical work, the electric utility company must unlock and/or make accessible all metering and service equipment within four hours of the time the contractor requests the action, if possible. Licensed or registered contractors may access metering and service equipment.

SECTION 502—ADOPTED STANDARDS

The following codes, pamphlets and specifications are hereby adopted, authentic copies of which are filed with the City Secretary as part of this code, and shall govern and be observed and followed in all electrical wiring and in the construction, installation, repair, alteration, operation and maintenance of electrical wiring apparatus or fixtures:

(1) The *National Fire Protection Association Pamphlet No.* 70, *National Electrical Code*, 2008 Edition.

(2) The *2007 National Electrical Safety Code.* When the provisions of the *National Electrical Safety Code* and the *National Electrical Code* are in conflict, the *National Electrical Code* shall prevail.

In case of conflict between the provisions of the standards listed in the above paragraphs and the provisions of this code, the provisions of this code shall prevail.

SECTION 503—METERS

503.1 General. The meter cabinets and electrical metering equipment through which service is rendered by the electric utility company to domestic establishments and buildings combining domestic establishments with commercial or industrial usage shall be installed where readily accessible on the exterior of the building. Fireproof meter cabinets or meters sockets shall be approved by the electric utility company and installed by the master electrician performing the work, said meter cabinets to be located so the center of the opening of the meter dial shall not be less than 5 feet (1524 mm) nor more than 6 feet (1829 mm) above mean ground level so that the cabinet is readily accessible to the electric utility company for service. On apartment buildings, where space limitations will not permit placing all meters at the same height, they may be arranged in two tiers, with the openings for the meter dials in

lower tiers as near as practicable to 5 feet (1524 mm) above the mean ground level and second tier placed as near as practicable above the first. Where space limitations will not permit placing of meter cabinets as outlined above, the electric utility company, subject to the approval of the building official, may determine the arrangement to be used. All service outlets shall be located so as to permit placing the electric utility company's service wires on the wall of the building next to the supply. Locations may also be modified with the approval of the building official for occupancies intended primarily for handicapped persons.

503.2 Location of Meters. Meters will be located on a building so as to be accessible as determined by the electric utility company and may only be placed on the front or street side of the building with the written consent of the owners filed with the building official.

503.3 Relocation of Meters. Where meters are installed in inaccessible places in houses or buildings and the electric utility company desires to relocate said meter loops for convenience in the rendering of its service, it may, upon request to the building official, have a licensed or registered contractor reinstall meter loops to a point where the same would be located if the house or building were having a new system of wiring installed, and all the work done at the request of the electric utility company shall be performed without cost to the owner unless the location is the result of the wiring having been condemned by the building official for practices in violation of the provisions of this code or any applicable city ordinance.

503.4 Separate Meters. No permit, certificate or other authorization issued by the city under the provisions of this code for the construction or occupancy of a new apartment house or conversion to a condominium shall be issued unless the construction plan submitted by the applicant as part of the process for the approval of the permit, certificate or other authorization provides for individual electric metering by the utility company or submetering by the owner of each dwelling unit for the measurement of the quantity of electricity, if any, consumed by the occupants within that dwelling unit in accordance with the provisions of Chapter 184 of the *Texas Utilities Code* and regulations issued thereunder.

SECTION 504 – SERVICES AND FEEDERS

504.1 General. All services, feeders, and underground branch circuits shall be installed in raceways, busways, or metal sheath cables approved by this code.

EXCEPTIONS:

1. Type SE multi-conductor cable having a bond wire and an insulated neutral wire will be permitted for feeders on wood-frame residential occupancies, provided the conductors have a disconnecting means and are protected by an approved current-limiting device. Each feeder shall be installed only in a location or in a manner that is not subject to mechanical damage and shall also be installed in accordance with other sections of this code and the *National Electrical Code*.

2. Aerial feeders.

3. Feeders in cable trays.

504.2 Service Disconnect. Service disconnecting means shall be located so that the height to the center of the operating handle shall not be less than 4 feet (1219 mm) and not more than 6 feet 7 inches (2.0 m) above the floor of finish grade, except as installed in freestanding or building-type switchgear built to the National Electrical Manufacturers Association's specifications. When necessary to install tiered metering on multifamily dwellings, it shall be permissible to vary the heights of the disconnecting means within 2 feet 6 inches to 6 feet 6 inches (762 mm to 2.0 m) above finished grade.

504.3 Grounding Electrode System. All grounding electrodes as described in the *National Electrical Code*, 2008 Edition, Section 250.52(A) (1) through (A) (6), that are present at each building or structure

served shall be bonded together to form the grounding electrode system. Grounding electrodes as described in the *National Electrical Code*, 2008 Edition, Sections 250.52 (A) (1), (A) (2), (A) (3), and (A) (7), shall be supplemented with a rod electrode as described in Section 250.52 (A) (5) (b). Where no other grounding electrode is present a rod electrode shall be permitted to be the sole grounding electrode.

> **EXCEPTION:** Concrete-encased electrodes of existing buildings or structures shall not be required to be part of the grounding electrode system where the steel reinforcing bars or rods are not accessible for use without disturbing the concrete.

504.4 Metal wireways. All metal wireways with parallel conductors with an ampacity over 800 amperes shall have insulated step bus conductors.

SECTION 505—NONMETALLIC SHEATHED CABLE

505.1 Residential structures. Nonmetallic sheathed cable shall be allowed in R-2 (apartments only), R-3, and R-4 occupancies (and their accessory structures), none of which may exceed four (4) stories. When the residential occupancy is allowed to be constructed above another occupancy, in accordance with the Building Code; the use of the nonmetallic sheathed cable shall be limited to four (4) stories of the residential occupancy, in buildings not to exceed five (5) stories.

505.2 Change of Occupancy. Where a portion of an existing R-3 (residence) constructed prior to 9/1/08 has a change of occupancy to a B (office) or M (retail) the use of existing copper nonmetallic sheathed cable with equipment grounding conductor shall be permitted when all of the following conditions are met:

1. The resident who occupies the R-3 dwelling operates the business.
2. The office or retail use is limited to 40 percent of the building.
3. Limited to wood construction.
4. Both the R-3 and the business are on the same meter.
5. It will not cause an unsafe condition.

505.3 Temporary installations. Nonmetallic sheathed cable shall be permitted for temporary installations.

SECTION 506—CONDUIT

Electrical metallic tubing (EMT) shall not be buried in ground or embedded in concrete supported by earth. Flexible or pliable raceways shall be used only for temporary work, branch circuits, and for permanent connections to vibrating, rotating and movable equipment and fixtures.

SECTION 507—TEMPORARY SAW POLES

Temporary saw poles shall be constructed of weatherproof electrical materials consisting of a minimum of 60-ampere switch or circuit breaker panel and grounded receptacle mounted on at least a solid 4-inch by 4-inch (102 mm by 102 mm) timber or equivalent wood structure. Service conductors shall be 6 AWG or larger installed in conduit.

SECTION 508—ELECTRICAL MATERIAL AND EQUIPMENT

No electrical materials, apparatus, devices, appliances, fixtures, or equipment shall be sold or installed in the city unless they are in conformance with the provisions of this code, the laws of the State of Texas and any applicable rules and regulations issued under the authority of the state statutes.

The maker's name, trademark, or other identification symbol shall be placed on all electrical materials, apparatus, devices, appliances, fixtures, and equipment used or installed under the provisions of this code.

All electrical materials and equipment shall be listed and labeled for intended use and shall be included in a list published by an approved agency.

EXCEPTION: Proton therapy equipment, when in its experimental stage.

SECTION 509—ELECTRICAL FENCES

This code does not regulate electrically charged fences installed in accordance with Section 28-10 of the *City Code*.

SECTION 510—LOCATION

510.1 Except as otherwise provided in this Code, no electrical system, or part thereof, shall be located in any lot other than the lot that is the site of the building, structure, or premises served by such facilities unless the electrical system, or part thereof, is located in an easement.