

**CHAPTER 19**  
**ELECTRICAL CODE**

Section

- 19.01 Title.
- 19.02 Purpose.
- 19.03 State Electrical Codes. (Am. by Ord. 6954, 4-11-80)
- 19.04 Intent.
- 19.05 Scope.
- 19.06 Rules and Definitions.
- 19.07 Reserved for Future Use. (R. by Ord. 11,960, Adopted 11-4-97)
- 19.08 Electrical Inspection.
- 19.09 License Requirements.
- 19.10 Permit Required.
- 19.11 Penalty for Failure to Take out Permits.
- 19.12 Inspection.
- 19.13 Number of Inspections Allowed on Permit.
- 19.14 Fees.
- 19.15 Regulation of Sale of Electrical Appliances.
- 19.16 Underground Utility Entrance Facilities. (Cr. by Ord. 5405, 3-5-76)
- 19.17 Signs on Vehicles. (Cr. by Ord. 10,255, Adopted 5-7-91)
- 19.18 - 19.19 Reserved For Future Use.
- 19.20 Penalty. (Cr. by Ord. 5389, 2-18-76)

**19.01 TITLE.** This chapter shall be known as the Electrical Code of the City of Madison, Wisconsin.

**19.02 PURPOSE.** The purpose of this Code is the practical safeguarding of persons and of buildings and their contents from hazards arising from the use of electricity for light, heat, power, and for other purposes.

**19.03 STATE ELECTRICAL CODES.** This code does hereby incorporate, adopt and enforce, by reference, Wis. Admin. Code ch. SPS 316 (Wisconsin State Electrical Code Volume 2), ch. SPS 324 (Uniform Dwelling Code--Electrical Standards) and all subsequent amendments, additions and recodifications thereto. Chapter SPS 324 shall apply to all new one- and two-family residential buildings as well as alterations and additions to all existing one- and two-family residential buildings, to accessory buildings, and to new portions of moved buildings. (Am. by Ord. 12,052, 3-13-98; ORD-12-00035, 3-28-12)

**19.04 INTENT.**

- (1) The intent of this Code is to provide the minimum regulations for the installation of electrical systems and to provide safe and stable design, good workmanlike methods and for the uses of materials and equipment.
- (2) To provide for licensing of qualified persons, the issuing of permits, interpretation of codes, inspection of installations, enforcement of this Code, and to provide for penalties for violation thereof.

- (3) The sections contained in this Code shall be binding alike upon the owner of a building or premises, every person in charge of or responsible for or who causes the construction, repair, alteration or improvement of any electrical system devices, fixtures, or equipment, and upon every person licensed under the provisions of this Code.
- (4) This Code is not intended as a design specification nor an instruction manual for untrained persons.

**19.05 SCOPE.**

- (1) The provisions of this Code shall apply to all electrical work and installations in the City of Madison.
- (2) This Code provides for the administration and enforcement, permits, and fees, licenses, approval of materials, minimum installation standards, interpretations, and the correction of defective or obsolete installations.

**19.06 RULES AND DEFINITIONS.**

- (1) In the construction of this ordinance, the rules contained in this section shall be observed and applied except when the context clearly indicates otherwise.
  - (a) Words used in the present tense shall include the future.
  - (b) Words used in the singular form shall include the plural number, and the plural the singular.
  - (c) The word "shall" is mandatory and not discretionary.
  - (d) The word "may" is permissive.
  - (e) The phrase "used for" shall include but not be limited to the phrases "arranged for", "designed for", "intended for", "maintained for", and "occupied for".
  - (f) The word "he" shall mean person and not necessarily the male gender.
- (2) All definitions as set forth in Chapter 1 of the National Electrical Code and Wis. Admin. Code ch. SPS 316, Electrical Code, Volume 2 shall apply. (Am. by Ord. 12,052, 3-13-98; ORD-12-00035, 3-28-12)

**19.07 RESERVED FOR FUTURE USE.** (Licensing Board of Examiners and Appeals R. by Ord. 11,960, Adopted 11-4-97)**19.08 ELECTRICAL INSPECTION.**

- (1) Administration.
  - (a) To enforce the provisions of this chapter there is hereby created the Electrical Inspection subsection of the Mechanical Inspection section of the Building Inspection Division of the Department of Planning and Community and Economic Development and shall consist of an adequate number of Electrical Inspectors required to make the necessary inspections and investigations within a reasonable time.

- (b) The Electrical Inspectors, under an Inspection Supervisor and the Director of the Building Inspection Division, shall be responsible for the inspection of all electrical wiring as prescribed by the City ordinances.  
(Am. by Ord. 8081, 7-29-83; ORD-08-00109, 10-7-08)
  - (c) Any person who shall fail or neglect to comply with any lawful order of the Director of the Building Inspection Division issued pursuant to the provisions of this chapter may be assessed seventy-five dollars (\$75) per compliance inspection, as defined in Sec. 27.03(2), MGO, that does not result in compliance with the order. A thirty-five dollar (\$35) charge may be assessed when an inspector fails to gain entry to carry out a compliance inspection. (Am. by ORD-11-00057, 4-7-11)
  - (d) The Department of Planning and Community and Economic Development shall keep an accurate account of all unpaid inspection fees incurred for compliance inspection services rendered and report the same to the Finance Director, who shall annually prepare a statement of these special charges at each lot or parcel of land and report the same to the City Clerk, and the amount therein charged to each lot or parcel of land shall be by said Clerk entered in the tax roll as a special charge against said lot or parcel of land, and the same shall be collected in all respects like other special charges upon real estate as provided in Wis. Stat. § 66.0627. (Am. by ORD-11-00037, 3-8-11)  
(Secs. 19.08(1)(c) & (d) Cr. by ORD-10-00058, 6-11-10)
- (2) Electrical Inspector.
- (a) The Electrical Inspectors shall be Wisconsin Department of Safety and Professional Services Certified Commercial Electrical persons who are familiar with layout and inspection of electrical wiring and equipment and who shall have had at least two (2) years of practical experience as wireman, or trainee inspector or a combination of both. They shall be well versed in approved methods of electrical construction for safety to life and property, and the laws and ordinances pertaining thereto. (Am. by Ord. 12,322, Adopted 2-2-99; ORD-12-00035, 3-28-12)
  - (b) The Electrical Inspectors shall make inspections of all electrical wiring and equipment, shall have the right to enter any building during reasonable hours in the discharge of their duties, and shall have the authority to cause the disconnection of any wiring or equipment where such wiring or equipment in their judgment is dangerous to life or property, or may interfere with the work of the Fire Department.
  - (c) When any electrical wiring or equipment is found by the Electrical Inspectors to be dangerous to persons or property because it is defective, defectively installed, or not installed according to applicable codes, the person, firm, or corporation responsible for the electrical wiring or equipment shall be notified in writing and shall make any changes, alterations, or repairs required, in the judgment of the Electrical Inspector, to place such wiring or equipment in safe condition, and if such work is not completed within the period specified by the Electrical Inspector in said notice, the Electrical Inspector shall have the authority to order the disconnection of electrical service, and said wiring or equipment shall not be reenergized until written permission is obtained from the Electrical Inspector or his/her supervisors. (Am. by ORD-14-00012, 1-14-14)

- (d) The Plan Review and Building Inspection Division Supervisor may hold membership and represent the City of Madison in the International Association of Electrical Inspectors and the National Fire Protection Association with the consent of the Director of the Building Inspection Division, and may serve on any electrical committee or administrative office of these associations to which she or he may be appointed or elected. (Am. by Ord. 10,255, Adopted 5-7-91; ORD-08-00109, 10-7-08; ORD-14-00012, 1-14-14)
- (e) Inspectors shall not engage in the business of the sale, installation, or maintenance of electrical wiring, or equipment, either directly or indirectly, and they shall have no financial interest in any business firm, corporation, copartnership or concern licensed by or engaged in such business in the City of Madison, Wisconsin, at any time while holding such office as herein provided for.

**19.09 LICENSE REQUIRED.**

- (1) No person may work as an electrician or as an electrical contractor unless the person is licensed by or registered with the State of Wisconsin. No person may engage in the business of installing, repairing, or maintaining electrical wiring unless the person is licensed or registered as an electrical contractor by the State of Wisconsin.
- (2) No person may install, repair, or maintain electrical wiring unless the person is licensed as an electrician by the State of Wisconsin or unless the person is registered as a beginning electrician by the State of Wisconsin
- (3) No person who is not a master electrician may install, repair, or maintain electrical wiring unless a master electrician is at all times responsible for the person's work.
- (4) Subsections (1) to (3) do not apply to any of the following:
  - (a) A residential property owner who installs, repairs, or maintains electrical wiring on premises that the property owner owns and occupies as a single-family residence, provided that the Division may issue a permit to the residential property owner only if the person desiring such permit shows that the person is competent to do such work in conformity with all rules and regulations governing installation of electrical wiring in residences, and such person pays the same fee as required of electrical contractors under Section 19.14 of this chapter.
  - (b) A person engaged in maintaining or repairing electrical wiring within a facility or on premises owned or leased by the person or by an entity for which the person is an agent.
  - (c) A person engaged in installing, repairing, or maintaining electrical wiring, apparatus, or equipment for elevators and escalators.
  - (d) A person engaged in installing, repairing, or maintaining equipment or systems that operate at one hundred (100) volts or less.
  - (e) A person engaged in installing, repairing, or maintaining an electronic system designed to monitor a premise for the presence of an emergency, to issue an alarm for an emergency, or to detect and summon aid for an emergency.
  - (f) A person engaged in installing, repairing, or maintaining electrical wiring of transmission facilities, as defined in Wis. Stat. § 196.01 (12).
  - (g) A person engaged in installing, repairing, or maintaining manufactured equipment or a manufactured system that is designed to provide a function that is not primarily electrical in nature if the installation, repair, or maintenance does not involve the modification or installation of conductors beyond the disconnecting point or beyond the last junction, pull, or device box, whichever is nearer to the point where the person is performing the installation, repair, or maintenance.

(Sec. 19.09 Rep. & Rec. by ORD-14-00031, Pub. 2-18-14, Eff. 4-1-14)



**19.10 PERMIT REQUIRED.**

- (1) It shall be unlawful for a person to enter upon the erection, construction, alteration or change of any electrical installation, work or wiring, except minor repair work as defined in Subsection (2) of this section, until a permit has been obtained from the Building Inspection Division of the Department of Planning and Community and Economic Development by a person properly licensed for the category of work to be performed as set forth in Section 19.09 of this Code. The application for permit shall describe the proposed installation or work and give the location of the premises where same is to be placed. No permit shall be issued unless satisfactory proof is furnished to the Building Inspection Division of the Department of Planning and Community and Economic Development that the applicant has been employed to perform the work or installation and will be responsible for the performance thereof in the manner required by ordinance and by law. The fees for such permit shall be paid in full at the time of submitting the permit application. An amended permit shall be used to correct any permit fees due for work that was performed and was not listed on the original permit. All applications for permits shall be signed by the license holder. (Am. by Ord. 8311, 5-11-84)
- (2) Minor repair work shall be construed to mean the replacement of broken or defective sockets, snap, push or toggle switches, convenience outlets, lighting fixtures and portable electric appliances.
- (3) The Building Inspection Division of the Department of Planning and Community and Economic Development shall furnish the license holder with application forms to be submitted upon application for the permit and payment of fees. (Am. by Ord. 8081, 7-29-83)
- (4) Any public or private institution employing a person carrying a Class A or Class AA license may elect to take out an annual permit in lieu of regular permits required by this Code for the purpose of repair or alteration of equipment in or on building structures or premises owned or occupied by said institution or plant. Said annual permit shall be issued upon payment of an annual fee in the sum of seventy-five dollars (\$75). Increases in electrical load shall be considered as new installations and separate additional permits shall be obtained for such alterations, additions or new installations that would increase the electrical load and the permit fee for the work shall be paid as set forth in Section 19.14. (Am. by Ord. 5387, 2-18-76)

- (5) Any public or private institution or industrial plant electing to employ an electrical contractor in lieu of full-time maintenance personnel to perform repairs and maintenance of electrical equipment in or about buildings or structures owned or occupied by said institution or plant shall be allowed the same election for annual permits as provided in above paragraph provided that the name of the contractor providing such service is on file with the Building Inspection Division of the Department of Planning and Community and Economic Development. In the event of the termination of the employment of said contractor, the Building Inspection Division of the Department of Planning and Community and Economic Development shall be notified of the name of the new contractor or properly licensed employee prior to any additional work being performed under the annual permit. The Building Inspection Division of the Department of Planning and Community and Economic Development must also be notified when continuous contract method is terminated. (Am. by Ord. 8081, 7-29-83)
- (6) Work performed under annual permits shall be inspected at regular intervals not exceeding six (6) months. It shall be the responsibility of the person, firm, or corporation to provide the inspector with a list of all new installations, alterations, or repairs which may have affected the electrical system.
- (7) Exception: In the event of an emergency occurring at night or days when the Building Inspection Division of the Department of Planning and Community and Economic Development office is closed, when the immediate initiation of work is necessary for the protection of fire, health or property, such necessary work may be done without previously obtaining a permit number provided required number is obtained on the morning of the first business day following the start of such work and application and fees follow within ten (10) days. (Am. by Ord. 8081, 7-29-83)
- (8) The license holder responsible for the work shall complete any supplemental permit mailed to him/her and return it to the Director of the Building Inspection Division prior to commencing work. Failure to return the supplemental permit prior to commencing work shall be deemed to be working without a permit. (Am. by Ord. 10,255, Adopted 5-7-91; ORD-14-00012, 1-14-14)  
(Am. by ORD-08-00109, 10-7-08)

#### **19.11 PENALTY FOR FAILURE TO TAKE OUT PERMITS.**

- (1) In addition to the penalty hereinafter provided for violations of this chapter, a double permit fee will be charged for failure to notify the Building Inspection Division of the Department of Planning and Community and Economic Development and obtain a permit number before work is started, except in cases of emergency, and such penalty, together with the permit fees, shall be paid to the City Treasurer before any further permits may be issued to the person doing such work. (Am. by Ord. 10,255, Adopted 5-7-91; ORD-08-00109, 10-7-08)
- (2) The payment of such doubled fees shall not relieve any person from fully complying with all of the regulations of this chapter, nor from any other penalties prescribed in this Code.



**19.12 INSPECTIONS.**

- (1) It shall be unlawful to connect up the electrical wiring and equipment of any building to any electrical supply lines or to turn on the current, unless a certificate of service inspection has been issued by an Electrical Inspector, and it shall be the duty of the electrical utility supplying electrical service to any building to secure a copy of the certificate of service inspection from the Electrical Inspector before supplying service to such building. (Am. by Ord. 12,349, 3-30-99)
- (2) Upon the completion of the construction and installation of the electrical wiring and equipment of any building, it shall be the duty of the firm, person, or corporation doing same to notify the Building Inspection Division of the Department of Planning and Community and Economic Development, who shall dispatch an Inspector to inspect the installation within two working days after the notice is given; and if the installation is found to be in compliance with the provisions of this chapter, s/he shall issue a certificate of service inspection authorizing connection to the electrical service and the turning on of the electrical service and the turning on of the current. All wires which are to be concealed shall be inspected before the concealment, and no other craft shall cover up or conceal such wires until the installation has been inspected and approved and officially tagged to this effect by the Electrical Inspector. (Am. by Ord. 10,255, Adopted 5-7-91; ORD-08-00109, 10-7-08)
- (3) Notifications for inspections may be made at the Building Inspection Division of the Department of Planning and Community and Economic Development office at any time during the working day. An electrical contractor who calls for an inspection and the work is not completed may be assessed twenty-five dollars (\$25) per inspection. Pursuant to Section 29.09, Madison General Ordinances, it is unlawful to occupy a building or permit a building to be occupied until final inspections have been made and a Certificate of Occupancy has been issued. (Am. by Ord. 11,783, 2-17-97; ORD-08-00109, 10-7-08)
- (4) A copy of the final certificate of service inspection shall be kept on file by the office of the Electrical Inspector. (Am. and Renum. by Ord. 12,349, 3-30-99)
- (5) The Department of Planning and Community and Economic Development shall keep an accurate account of all unpaid inspection fees for inspection services rendered. If the fees are not paid within the specified time, the Department shall fail to renew the contractor's license. (Cr. by Ord. 11,783, 2-17-97; Renum. by Ord. 12,349, 3-30-99)

**19.13 RESERVED FOR FUTURE USE.** (R. by Ord. 11,783, 2-17-97)

**19.14 FEES.**

(1) Permit Fees.

The following fees shall apply and are to be paid with building permit fees.

(a) New Buildings.

1. Group I.

The use group shall include new and additions to residential buildings in which families or households live or in which sleeping accommodations are provided for individuals with or without dining facilities excluding hotels, motels, and institutional buildings ..... \$.075 per sq. ft. of new building or addition.  
Minimum Fee \$20.00

2. Group II.

The use group shall include new and additions to general offices, professional offices, barber shops, beauty parlors, bowling centers, dry cleaning establishments, clinics, natatoriums, shelters, hotels, motels, taverns, restaurants, cafeterias, retail establishments, where manufactured products are bought and sold, repair garages, service stations, churches, assembly halls, theaters, exhibition buildings, educational institutions, hospitals, nursing homes, places of detention, gymnasiums, arenas, laboratories, lodge halls, funeral homes, libraries, skating rinks, dance halls, and armories ..... \$.10 per sq. ft. of new building or addition.  
Minimum Fee \$20.00

3. Group III.

The use group shall include new and additions to warehouses, freight terminals, storage buildings, vehicle storage garages, refrigeration storage, factories, machine shops, electric substations, sewage treatment plants, heating plants, steam and electric generating plants, transformer vaults, and other buildings not classified in Groups I, II, III and IV, except one story but not limited to accessory buildings such as tool sheds, storage buildings having a floor area of less than eighty (80) square feet are exempt..... \$.04 per sq. ft. of new building or addition.  
Minimum Fee \$20.00

NOTE: When an application is submitted for a property where only the shell of the property has been completed, the fee will be calculated at 50% of the total fee for that particular fee group. When an application is submitted for construction of the interior of a building where the shell of the building has been previously granted a permit, the fees shall be based on the square footage of that space as a percentage of the entire square footage of the subject building and that fee shall be calculated at 50% of the total fee for that particular fee group.

(Sec. 19.14(1)(a) Am. by Ord. 11,796, Adopted 2-18-97; Ord. 12,566, 5-3-00; Ord. 13,743, 12-15-04; ORD-12-00008, 1-24-12)

(b) Existing Buildings.1. Group V.

Miscellaneous remodeling, alterations, etc. - Fees will be based on the number of openings within the ranges listed in Table 1.

TABLE 1

\$2.00 per opening for the first 20 openings, plus  
 \$1.50 per opening for additional 21-40 openings, plus  
 \$1.00 per opening for additional 41-99 openings, plus  
 \$.50 per opening for all openings over 100.  
 Minimum fee \$15.00  
 Special Events Temporary Wiring Fee \$30.00  
 Service Charge \$30.00

In no case shall the fee exceed those as calculated for new buildings as listed in Sec. 19.14(1)(a)1., 2., and 3.

Openings include switches, convenience outlets, fixtures, and fixed appliance connections.

(Am. by Ord. 11,796, Adopted 2-18-97; ORD-12-00008, 1-24-12)

- (c) The fees for a change of location or replacement of equipment on the same premises shall be the same as that for a new installation.
- (d) For temporary wiring installed for the period of the construction of buildings, half the regular fee shall be paid.
- (e) The feeder serving the lower section of a split bus panel on a residence shall be exempt from the fees in this section.
- (f) No fees shall be charged for existing circuits reconnected on rewire or additions unless such circuit is altered or extended.
- (g) (R. by Ord. 11,946, 10-14-97)

(2) License Fees.

- (a) The fee for a new applicant for Class A license shall be one hundred twenty-five dollars (\$125). Renewal fee for each succeeding year shall be sixty dollars (\$60) on an active basis or twenty-five dollars (\$25) on an inactive basis.
  - (b) The fee for a new applicant for Class AA license shall be seventy-five dollars (\$75). Renewal fee for each succeeding year shall be sixty dollars (\$60) on an active basis or twenty-five dollars (\$25) on an inactive basis. (Am. by Ord. 11,392, Adopted 11-7-95)
  - (c) The fee for a new applicant for Class B license shall be seventy-five dollars (\$75). Renewal fee for each succeeding year shall be sixty dollars (\$60) on an active basis or twenty-five dollars (\$25) on an inactive basis.
- (Am. by Ord. 9366, 12-21-87)

**19.15 REGULATION OF SALE OF ELECTRICAL APPLIANCES.** It shall be unlawful for any contractor, dealer, individual, firm or corporation to offer for sale in the City of Madison any electrical appliance, apparatus, or materials which do not bear the seal, stamp, or identification of a testing firm or laboratory recognized by the City of Madison, which tests to published standards.

**19.16 UNDERGROUND UTILITY ENTRANCE FACILITIES.**

- (1) Purpose. The Common Council of the City of Madison does hereby declare it to be the public policy of the City of Madison to favor underground electrical and communications facilities. The exercise of police power to implement this public policy is based on the public benefit received including (but not limited to) the following reasons:

- (a) Clearing scenic views;
- (b) Improving civic appearance;
- (c) Removing safety hazards which are a danger to pedestrians and motorists;
- (d) Overcoming the threat of temporary loss of service due to high winds and ice conditions;
- (e) Eliminating damage to overhead equipment by wildlife;
- (f) Eliminating damage to wildlife by overhead equipment;
- (g) Eliminating trimming of street trees required to prevent damage to overhead wires.

This ordinance is adopted to facilitate the orderly replacement and/or transfer from overhead facilities consistent with desirable aesthetic goals and sound economic practices. The Common Council of the City of Madison finds the utilities and other entities furnishing major utility services and other services transmitted by wire or coaxial cable have previously adopted policies of converting from overhead service to underground service.

- (2) Definitions. In this section the following definitions shall apply:

- (a) The term “underground entrance facilities” shall mean the conductors, cable, conduit and/or equipment necessary to transmit electrical or communications energy from the aerial or underground distribution system of the supplier to the main disconnect, junction or protector panel in or on the customer’s premises and shall include all electric, communications, signal and CATV facilities.
- (b) The term “electrical services” as used in this section shall mean the conductors and equipment for delivering energy from the electrical supply system to the wiring system of the premises served.
- (c) The term “permanent electrical service” as used in this section shall mean electrical services which are anticipated to remain in place or actually remain in place for more than a 90-day period of time, provided however that the term “permanent electrical service” shall not include overhead services of a temporary nature which are installed to provide electrical service during construction, remodeling, renovation, repair or demolition of bridges, structures, equipment or similar activities, or during emergencies or for tests or experiments relating to the public safety.

(Sec. 19.16(2) Am. by Ord. 8187, 12-15-83)

- (3) Areas of Application.

- (a) Central City Area. The requirements of Subsection (4) shall apply in that part of the City of Madison lying between Lake Monona and Lake Mendota bounded by the Yahara River on the northeast, and the line comprising the intersecting centerlines of Drake Street, Garfield Street, Monroe Street, Breese Terrace, University Avenue and Babcock Drive on the southwest. The reason for such application is because it is recognized that within this area the present overhead electric distribution system and telephone system are old by comparison with most of the rest of the distribution systems. Such systems are inadequate in capacity to supply new buildings which will ultimately replace old existing buildings and, because it is further recognized that the buildings in this area are the oldest in the City and are being replaced by new buildings on a gradual basis.

(b) Major Street Area. The provisions of this section shall also apply to buildings situated on property fronting on the following major streets, excepting those properties receiving utility or communication services from rear or side streets:

1. John Nolen Drive - Blair Street to Beltline;
2. Gammon Road - Mineral Point Road to Old Sauk Road;
3. Milwaukee Street - Walter Street to Stoughton Road;
4. Milwaukee Street - Stoughton Road to I-90;
5. Old Sauk Road - Old Middleton Road to Gammon Road;
6. University Avenue - Bassett Street to westerly city limits;
7. South Gammon Road - Seybold Road to Park Ridge Drive;
8. Fish Hatchery Road - Wingra Drive to Greenway Cross;
9. Mineral Point Road - Racine Road to West Beltline Highway;
10. Raymond Road - McKenna Boulevard to westerly city limits.

(Sec. 19.16(3)(b) Am. by Ord. 8187, 12-15-83)

(c) Underground Utility Districts. The requirements of Subsection (4) shall apply to properties located in Underground Utility Districts, as determined under Subsection (6).

(4) General.

(a) Any new building, sign, signal or structure requiring a separate permanent electrical service constructed in the areas described in Subsection (3) above after the effective date of this section shall be constructed with underground entrance facilities. (Am. by Ord. 8187, 12-15-83)

(b) Every existing building, sign, signal or structure requiring permanent electrical service in the area described in Subsection (3) above, which is being remodeled, and where the cost of such remodeling is estimated to exceed or actually exceeds fifty percent (50%) of the Assessor's full market value of said building, shall be constructed with underground entrance facilities. Except for properties located in an Underground Utility District, where the utilities' verified estimated costs to the customer of installing underground entrance facilities exceeds five percent (5%) of the total remodeling cost, the underground entrance facilities requirement of this subdivision (b) will be waived upon request to and the furnishing of written proof of qualification to the Building Inspection Division of the Department of Planning and Community and Economic Development. Said estimated customer costs must be verified with written estimates from the utilities which have been furnished to the Building Inspection Division of the Department of Planning and Community and Economic Development. (Am. by Ord. 8187, 12-15-83; ORD-08-00109, 10-7-08)

(c) Every existing building, sign, signal or structure in the area described in Subsection (3) above requiring permanent electric service, which has received or is eligible to receive a subdivision (b) waiver or in which electrical remodeling includes replacement of the entrance equipment, shall be constructed or reconstructed with entrance equipment sufficient to enable said building, sign, signal or structure to be connected with underground entrance facilities without further modification. (Cr. by Ord. 8187, 12-15-83)

(d) Installation of underground entrance facilities for all other services; transmitted by wires, coaxial cable, or any other conductors shall be made at the same time as any required electrical service modifications made pursuant to this Section. (Cr. by Ord. 8187, 12-15-83)

- (5) Throughout the City of Madison, when the total estimated electrical demand exceeds fifty (50) kw in any new building or any building which is being remodeled, and when the cost of remodeling is estimated, or exceeds fifty percent (50%) of the Assessor's full market value of said building, the owner shall provide vault space or space for pad-mounted transformers in accordance with applicable provisions of the Wisconsin Electrical Code and all applicable service rules of the electric utility providing service for such building.
- (6) Underground Utility Districts.
- (a) Declaration of Policy. Pursuant to the adopted Policy for Funding the Undergrounding of Overhead Utility Lines (RES-11-00256), or said policy as it is amended from time-to-time, the City may pursue the undergrounding of utility services in designated districts in combination with other capital improvement projects. While some properties in a district may already be served underground or have the facilities needed to accept underground service, some buildings in a district that are being served overhead will not be ready for underground service without a modification of the entrance facilities or internal wiring of the building. The purpose of this Subsection is to establish a mechanism that will give property owners sufficient time to ensure that their property can accept underground service, and provide these property owners with a portion of the funding for the necessary service modifications. The establishment of Underground Utility Districts under this Subsection represents an exercise of the police power of the City of Madison.
- (b) Establishment of Underground Utility District.
1. To establish an Underground Utility District, the Common Council shall adopt a resolution declaring the boundaries of the District and its intention to place overhead utility services underground in the District. This resolution shall describe the undergrounding project, the limits of the proposed District, a list of all the properties affected by the undergrounding project, and the estimated number of affected properties that are served overhead and are not ready to receive underground service.
  2. Before adopting this resolution, a notice shall be published in the official newspaper stating that the Board of Public Works will hold a public hearing on the creation of the Underground Utility District. Such notice shall be published as a Class I notice, under Wis. Stat. ch. 985, and mailed to every interested person whose post office address is known or can be ascertained with reasonable diligence, along with a summary of the requirements of property owners in Underground Utility Districts under this Subsection. The hearing shall commence not less than ten (10) days and not more than forty (40) days after such publication and mailing.
  3. The Board of Public Works shall hold a public hearing on the resolution and at the conclusion of the public hearing shall make a recommendation to the Common Council to take an action on the resolution.
  4. Upon adoption of the resolution by the Common Council, the Underground Utility District shall be deemed established. A copy of the resolution adopted by the Common Council shall be mailed to every interested person whose post office box is known or can be ascertained with reasonable diligence, along with a summary of the requirements of property owners in Underground Utility Districts under this Subsection.

- (c) Requirement to Modify Service. Every property owner in an Underground Utility District must modify the property's electrical services to accept underground service within twenty-four (24) months of the establishment of the District, unless the property owner is granted a modification deadline extension by the City Engineer under Subdivision (d), in which case the property owner has until the deadline established by the City Engineer to modify the property's electrical service. Any person who fails to modify the property's electrical service to accept underground service within this time period shall be subject to a forfeiture of not less than twenty-five (\$25) dollars and no more than one-hundred dollars (\$100). Each day a violation continues shall be considered a separate offense.
- (d) Modification Deadline Extension. A property owner may apply to the City Engineer for an extension of the time in which to modify electrical service as required under Subdivision (c). This application must be made within the twenty-four (24) month period and no extension will be granted if the application is made after this period. The City Engineer may grant an extension of time for compliance with the requirements of this Subsection if either of the following conditions are met:
1. The property owner meets the criteria for eligibility for loans for payment of special assessments or special charges as set forth in Subdivisions 4.082(2)(a)-(c) and (e), MGO.
  2. The cost of service modification is greater than three (3) times the maximum amount that the City will reimburse the property owner under Subdivision (e).
- (e) Reimbursement for Undergrounding Service Modifications.
1. Reimbursement. The City will reimburse an eligible property owner for fifty percent (50%) of all costs incurred by the property owner to modify the entrance facilities or internal wiring of the building to comply with the requirements of this Subsection, up to one-thousand dollars (\$1,000) adjusted annually on January 1 in accordance with the Construction Cost Index as published by the Engineering New Record or a similar index if the Engineering New Record index does not exist. The City Engineer shall maintain the annual maximum reimbursement amount.
  2. Eligibility. All properties in the Underground Utility District that, upon creation of the District, are served by overhead electrical service and are not ready to accept underground service without a modification of the entrance facilities or internal wiring of the building are eligible for reimbursement of the service modification costs under Paragraph 1, provided the modifications are made and completed, and an approved inspection is made, within twenty-four (24) months of the creation of the District, unless the City Engineer grants an extension under Subdivision (d), in which case the property owner has until the end of the extension period to make and complete the service modifications to be eligible for reimbursement under Paragraph 1.
  3. Application Requirements. An application for reimbursement under Paragraph 1 must include, as documentation of replacement and cost, a payment receipt from a licensed electrician for modifying the entrance facilities or internal wiring of the building to comply with the requirements of this Subsection, as well as documentation of an approved inspection by a City Electrical Inspector. Disputes regarding eligibility for a reimbursement may be appealed to the Board of Public Works.

(Sec. 19.16 Cr. by Ord. 5405, 3-5-76; Am. by ORD-11-00081, Pub. 6-16-11, Eff. 11-1-11)

**19.17 SIGNS ON VEHICLES.**

Every electrical contractor vehicle in use for the sale of electrical services in the City of Madison shall display a sign of 225 square inches. The company name letters shall be at least two inches high. Failure to comply will subject the company to penalties in Madison General Ordinances Section 19.20. All legible existing vehicle signs will be allowed to remain as of the effective date of this ordinance. (Am. by Ord. 11,392, Adopted 11-7-95)

**19.18 - 19.19 RESERVED FOR FUTURE USE.****19.20 PENALTY.**

Any person who shall violate any of the provisions of this chapter or fail to comply with any of its requirements or who shall neglect or refuse to comply with a lawful order of the Director of the Building Inspection Division or her/his designee, issued pursuant to the provisions of this chapter, shall be subject to a forfeiture of not less than ten dollars (\$10) nor more than one thousand dollars (\$1,000) for each and every violation thereof. Each day or portion thereof such violation continues shall be considered a separate offense. (Am. by Ord. 11,392, Adopted 11-7-95; Ord. 13,725, 11-9-04; Ord. 13,760, Adopted 12-14-04; ORD-05-00019, 2-15-05; ORD-08-00109, 10-7-08; ORD-12-00035, 3-28-12; ORD-13-00101, 6-12-13)



INDEX TO ELECTRICAL CODE

-A-

ADMINISTRATION ..... 19.08(1)

ANNUAL PERMIT - See PERMITS, ANNUAL

APPEALS - See BUILDING CODE, FIRE CODE & LICENSING APPEALS BOARD ..... 27.10, 29.18

APPLIANCES, REGULATION OF SALE ..... 19.15

-B-

BOARD - LICENSING BOARD OF EXAMINERS AND APPEALS - See  
BUILDING CODE, FIRE CODE & LICENSING APPEALS BOARD

Licenses

    Applicant's qualifications ..... 19.09(6)(d)

    Examinations ..... 19.09(7)(a) and (f)

    Revocations or suspensions ..... 19.07(7), (8) and (9)

    Supplemental permits ..... 19.09(10)

BOND REQUIRED FOR LICENSE ..... 19.09(2)

BUILDING INSPECTION - See BUILDING INSPECTION DIVISION

-C-

CERTIFICATE OF INSPECTION ..... 19.12(1), (4) and (5)

    See also INSPECTION

CONTRACTORS REQUIRED TO HAVE LICENSES ..... 19.09(1)

-D-

DEFECTIVE WIRING OR EQUIPMENT ..... 19.08(2)(c)

DEFINITIONS AND RULES ..... 19.06

DISCONNECTING WIRING, EQUIPMENT OR SERVICE ..... 19.08(2)(b) and (c)

-E-

ELECTRICAL APPLIANCES, REGULATION OF SALE ..... 19.15

ELECTRICAL BOARD OF EXAMINERS AND APPEALS  
 See BOARD - LICENSING BOARD OF EXAMINERS AND APPEALS

ELECTRICAL INSPECTORS - See INSPECTOR, ELECTRICAL

ELECTRICIANS, CLASSES OF LICENSES ..... 19.09(4)

-F-

FEES ..... 19.14  
     Compliance Inspection..... 19.08(1)(c)  
     Licenses ..... 19.09((b)-(d), 19.14(2)  
     Permits ..... 19.10(1), (3), (4), 19.14(1)  
         Equipment replacement or location change ..... 19.14(1)(c)  
         Exceptions..... 19.14(1)(e) and (f)  
         Existing buildings ..... 19.14(1)(b)  
         Temporary wiring ..... 19.14(1)(d)

-I-

INACTIVE LICENSE - See LICENSES, INACTIVE

BUILDING INSPECTION DIVISION  
     Application forms for license obtained from ..... 19.09(7)(e)  
     Licensee to keep informed on change of address or employment ..... 19.09(4)(f)  
     To be notified upon completion of electrical wiring installation ..... 19.12(2)

INSPECTIONS  
     Annual permits, work under to be inspected every six months ..... 19.10(6)  
     Certificate of Inspection  
         Conformity with City Ordinances, Wisconsin Statutes required ..... 19.12(4)  
         Connecting electrical wiring or equipment unlawful without..... 19.12(1)  
         Copy filed by Electrical Inspector ..... 19.12(5)  
     Building Inspection Division to be notified upon completion of electrical wiring installation ..... 19.12(2)  
     Electrical Inspectors responsible for ..... 19.08(2)  
     Number allowed on permit ..... 19.13  
     Wires to be concealed must be inspected..... 19.12(2)

INSPECTORS, ELECTRICAL ..... 19.08

- Authority ..... 19.08(2)(b)-(d)
- Certificate of Inspection issued by ..... 19.12
- Defective wiring or equipment, written notice to person responsible ..... 19.08(2)(c)
- Disconnecting dangerous wiring, equipment or electrical service ..... 19.08(2)(b) and (c)
- Duties ..... 19.08(2)(b)-(d)
- Prohibited from engaging in electrical business in Madison, Wisconsin ..... 19.08(2)(e)
- Qualifications ..... 19.08(2)(a)
- Restrictions ..... 19.08(2)(e)
- Right of entry to buildings ..... 19.08(2)(b)
- Supervised by Inspection Supervisor and Assistant Director for Development Assistance ..... 19.08(1)(b)

INTENT OF CODE ..... 19.04

-L-

LICENSES ..... 19.09(7)(i),19.10,19.14(2)

- Annual permit for Class A and B licenses ..... 19.10(4)-(7)
- Application forms ..... 19.09(7)(e)
- Bond required ..... 19.09(2)
- Classes of ..... 19.09(4)
- Contractors required to have ..... 19.09(1)
- Elevator Specialist License - Class AE
  - Definition ..... 19.09(4)(c)
  - Examination ..... 19.09(7)(a)
  - Fees ..... 19.09(7)(c), 19.14(2)(b)
  - Qualifications ..... 19.09(6)(b)
  - Restrictions ..... 19.09(8)(a)
  - Type of work performed by licensee ..... 19.09(5)(c)
- Examinations ..... 19.09(7)(a) and (g)
- Expiration date ..... 19.09(3)
- Failure to pass examination ..... 19.09(7)(g)
- Fees ..... 19.09(7)(b)-(d), 19.14(2)
- Inactive licenses
  - Examination ..... 19.09(9)(a)
  - Fee ..... 19.09(9)(a)
  - Qualifications ..... 19.09(9)(b)
  - Requirements to activate license ..... 19.09(9)(d)
  - Time limit ..... 19.09(9)(c)
- Building Inspection Division to be informed
  - of changes of address or employment ..... 19.09(4)(f)

LICENSES - Continued

Maintenance Electrician’s License - Class B

Annual permit may be issued.....19.10(4)  
 Definition..... 19.09(4)(d)  
 Examination..... 19.09(7)(a)  
 Fee..... 19.09(7)(d), 19.14(2)(c)  
     Annual permit.....19.10(4)  
 Qualifications..... 19.09(6)(c)  
 Type of work to be performed..... 19.09(5)(c)

Master Electrician’s License - Class A

Annual permit may be issued.....19.10(4)  
 Definition..... 19.09(4)(a)  
 Examination..... 19.09(7)(a)  
 Fees..... 19.09(7)(b), 19.14(2)(a)  
     Annual permit.....19.10(4)  
 Qualifications..... 19.09(6)(a)  
 Restrictions..... 19.09(8)(a) and (b)  
 Type of work to be performed..... 19.09(5)(a)

Master Electrician’s Restricted License - Class AA

Definition..... 19.09(4)(b)  
 Examination..... 19.09(7)(a)  
 Fees..... 19.09(7)(c), 19.14(2)(b)  
 Qualifications..... 19.09(6)(a)  
 Restrictions..... 19.08(8)(a)  
 Type of work to be performed..... 19.09(5)(b)

Penalty for failure to renew.....19.09(3)  
 Persons holding comparable city, state or village license may qualify..... 19.09(7)(i)  
 Renewal..... 19.09(3) and (4)(e), 19.14(2)  
 Requirements..... 19.09  
 Restrictions..... 19.09(8)  
 Revocation or suspension..... 19.07(10)  
 Single-family residence owner may qualify..... 19.09(1)  
 Temporary license not to be issued..... 19.09(3) and (7)(a)  
 Type of work licensees may perform.....19.09(5)

-M-

MINOR REPAIR WORK

Defined.....9.10(2)  
 May be performed without permit..... 19.10(1)

-N-

NATIONAL ELECTRICAL CODE DEFINITIONS TO APPLY.....19.06(2)

-P-

PENALTIES ..... 19.09(3), 19.11, 19.20

PERMITS

Annual permits ..... 19.10(4)-(7)

    Fees ..... 19.10(4)

    Inspection of work ..... 19.10(6)

Appeal notice ..... 19.07(3)

Application ..... 19.10(1) and (3)

Exceptions ..... 19.10(7), 19.14(1)(f) and (g)

Fees ..... 19.10(1),(3) and (4), 19.14(1)

Minor repair work may be performed without permit ..... 19.10(1)

Penalty for failure to take out ..... 19.11

Requirements ..... 19.10(1)

Single-family residence owner’s permit ..... 19.09(1), 19.14

Supplemental ..... 19.10(8)

-R-

RENEWAL OF LICENSE ..... 19.09(3) and (4)(e), 19.14(2)

REPAIR WORK, MINOR defined ..... 19.10(2)

REVOCAION OR SUSPENSION OF LICENSE ..... 19.09(10)

RULES AND DEFINITIONS ..... 19.06

-S-

SIGNS ON VEHICLES ..... 19.17

-U-

UNDERGROUND UTILITY ENTRANCE FACILITIES ..... 19.16

    Areas of application ..... 19.16(3)

    Definitions ..... 19.16(2)

    Existing buildings, signs, signals, structures ..... 19.16(4)(b)

    New buildings, signs, signals, structures ..... 19.16(4)(a)

    Vault space for transformers to be provided by certain building owners ..... 19.16(5)

-W-

WISCONSIN ELECTRICAL CODE TO APPLY ..... 19.03, 19.06(2)