CITY COUNCIL

CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

ORDINANCE 19-20

BILL 20 (2019), CD2

A BILL FOR AN ORDINANCE

RELATING TO THE ADOPTION OF THE STATE ELECTRICAL CODE.

BE IT ORDAINED by the People of the City and County of Honolulu:

SECTION 1. Purpose. International building and construction standards have been developed and from time to time must be updated and amended for the protection of the public health and safety. Hawaii Revised Statutes Section 107-28 requires the governing body of each county to amend, adopt, and update the State building codes as they apply within their respective jurisdictions no later than two years after the adoption of the State building codes. The State of Hawaii Building Code Council adopted the National Electrical Code (2017), subject to State amendments, as the Hawaii State Electrical Code on August 21, 2018. It is deemed to be in the best interest of the public health, safety, and general welfare to adopt the Hawaii State Electrical Code, subject to the local amendments herein. The purpose of this ordinance is to adopt the State Electrical Code as adopted by the State of Hawaii on August 21, 2018, subject to certain amendments that apply to the City and County of Honolulu.

SECTION 2. Chapter 17, Revised Ordinances of Honolulu 1990 ("Electrical Code"), is repealed.

SECTION 3. The Revised Ordinances of Honolulu 1990 is amended by adding a new Chapter 17 to read as follows:

"Chapter 17.

ELECTRICAL CODE

Article 1. Electrical Code

Sec. 17-1.1 Adoption of the State Electrical Code.

The State Electrical Code, as adopted by the State of Hawaii on August 21, 2018, which adopts, with modifications, the National Electrical Code (NEC), NFPA 70, 2017 edition, as published and copyrighted by the National Fire Protection Association, is adopted by reference and made a part hereof, subject to the following amendments which, unless stated otherwise, are in the form of amendments to the NEC 2017 edition:

(1) Amending Section 90.2(B). Section 90.2(B) is amended by adding Subsection 90.2(B)(6) to read:

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(6) Scope. The provisions of this code shall apply to all electrical work and installations in the City and County of Honolulu except the following:

a. Electrical work on buildings or premises owned by or under the direct control of the United States or the State of Hawaii.

b. Electrical work by a public telephone or telegraph communication system subject to regulation by the public utilities commission of the State of Hawaii.

c. The physical placement and reassembly of an electric sign, X-ray equipment or household appliance.

d. Existing electrical installations, which complied with the laws, ordinances, and regulations in effect when the electrical work thereon was performed, provided that such installations shall be subject to the provisions of of Section 90.4.1(d).

e. Electrical work in accordance with the laws, ordinances, and regulations in effect prior to the effective date of this code under a permit therefor issued prior to such date.

f. Electrical work related to work regulated by HRS Chapter 397, as amended, relating to the Elevator Code, but not including electrical work for the supply of power to the control panels of elevators, dumbwaiters, escalators, moving walks and man lifts.

g. Replacement or repair of devices and apparatus of air conditioning and refrigeration systems, except electrical work on overcurrent devices which are not physically attached to, or physically mounted on, such systems.

h. Electrical work on any streetlight or traffic signal light owned by or under the direct control of the City and County of Honolulu.

i. Work performed by an electric utility on electrical installations and equipment owned by or under the direct control of the electric utility, and located on real property provided by the electric utility's customers pursuant to rules established by the public utilities commission of the State of Hawaii.

(2) Amending 90.2. Section 90.2 is amended by adding Section 90.2(D) to read:

(D) Interpretation-Same Subject Matter and Compliance. If there are two or more provisions in this code or any other ordinances or statutes, covering the same subject matter, the provisions which provide the greater safety to life or limb, property or public welfare shall prevail as determined by the Authority Having Jurisdiction (AHJ).

Compliance Required. No person shall do or cause to be done any electrical work which does not comply with the provisions of this code.

Compliance with state statutes. No person shall perform any work covered by this code in violation of the provisions of HRS Chapter 448E.

(3) Amending Article 90. Article 90 is amended by adding Section 90.10 to read:

90.10 General Provisions and Procedures.

(a) Authority. The AHJ shall administer and enforce the provisions of this code.

(b) Right of Entry. Upon presentation of proper credentials, the AHJ may enter, at reasonable times, any building, structure, or premises in the City and County of Honolulu to perform any duty imposed upon the AHJ by this code.

(c) Administrative Warrant. If the AHJ is unable to obtain the consent of a property owner or person in possession of real property to carry out any duty required of this code, or if such consent is denied, the AHJ may obtain an administrative warrant issued by any circuit or district court judge within the jurisdiction upon presenting the judge with an affidavit, confirmed by proper oath or affirmation, showing probable cause to believe that a violation of this code exists on the property. As an alternative, the AHJ may obtain an order issued by a court of competent jurisdiction that authorizes the AHJ to enter private property to abate a public nuisance by seizing, removing, repairing, altering, demolishing, or otherwise destroying private property pursuant to this code.

(d) Defective Electrical Installations.

(1) Whenever any electrical installation is found to have been installed, altered, changed, or reconstructed contrary to the provisions of this code or any other law; whenever any electrical installation is found to be in use contrary to the provisions of this code or any other law; or whenever any electrical installation, which complied with the existing laws, ordinances, and regulations in effect when the electrical work thereon was performed, is found to be unsafe or dangerous to persons or property, the AHJ may give the owner or the person in control of such installation a written notice stating the findings with respect to such installation or use and order the owner or such other person to make the corrections to be set forth in such written notice within ten days from the date of service of such notice or within such further time as the AHJ may allow.

(2) In addition, the AHJ may disconnect such installation from its source of electrical energy and order the supplying of electrical energy to such installation to be stopped. Thereafter, no person shall use or supply electrical energy to such installation before the corrections set forth in the notice have been made.

(e) Final Inspection Required.

(1) No person shall use or supply electrical energy to any electrical installation on which electrical work was or is being performed under a permit, before the AHJ has completed all inspections, provided, that the AHJ may authorize the use of, and the supply of electrical energy to, such installation before completion of such inspections when the use of, and the supply of electrical energy to, such installation will not endanger life or property and there is good cause for making such exception.

(2) No notice of completion shall be issued unless such installation has been inspected and approved in accordance with the following:

(A) The AHJ inspected and approved the roughing-in of the installation and the completed installation in the company of the duly licensed electrician performing the electrical work thereon;

(B) The AHJ inspected and approved the completed installation after all piping and tubing, including gas, steam, water, sewer, and furnace piping and tubing, located near such installation were in place, and in the case of an installation that is to be concealed, after all lathing strips, furring, bridging, backing, and headers were in place; and

(C) The AHJ inspection of the completed installation was not impaired by obstructions or concealments.

(f) Request for Inspection. Whenever any electric wiring, or portion thereof, is ready for inspection, the permittee shall notify the AHJ not less than 48 working hours before such inspection is desired, excluding Saturdays, Sundays, and holidays.

(g) No Concealment from Inspection. No person shall conceal, enclose, or cover, or cause or permit to be concealed, enclosed, or covered, any portion of any electrical wiring in any manner which will interfere with or prevent the inspection thereof, except when the AHJ having received a request for inspection fails to appear for the inspection without notification.

(h) Nothing in this code precludes the AHJ from initiating an investigation into potential violations of this code that are not reported.

(4) Amending Article 90. Article 90 is amended by adding Section 90.11 to read:

90.11 Non-liability for damages. The building official or any other officer or employee of the City and County of Honolulu charged with the enforcement of this code, acting in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered personally liable for damages that may accrue to persons or property as a result of or by reason of any act or omission in the discharge of such duties. A suit brought against the building official or such officer or employee because of such act or omission of the building official or such officer or employee in the enforcement of any provision of this code, or other pertinent laws or ordinances implemented through the enforcement of this code or enforced by the building official or such officer or employee, shall be defended by the City and County of Honolulu until final termination of such proceedings, and any judgment resulting therefrom shall be assumed by the City and County of Honolulu.

This code shall not be construed to relieve any person owning or operating any electrical installation or any person performing electrical work from liability for damages to anyone injured by any defect in such installation or such performance; however, the City and County of Honolulu, the building official, and any other agent, officer, or employee of the City and County of Honolulu shall not be held liable for such damages by reason of the issuance of any permit, performance of any inspection, or issuance of a certificate certifying that an electrical installation has been inspected and approved.

(5) Amending Article 90. Article 90 is amended by adding Section 90.12 to read:

90.12 Appeals. The discretionary decisions of the AHJ in the administration of this code and enforcement orders issued by the AHJ in the enforcement of this code may be appealed to the City and County of Honolulu building board of appeals, pursuant to ROH Chapter 16.

(6) Amending Article 90. Article 90 is amended by adding a new Section 90.13 to read:

90.13 Electrically charged fences or structures. No electrically charged fences or structures shall be installed, maintained, or used, except for insecticidal or agricultural purposes for which the AHJ may grant approval thereto in writing upon finding that measures adequate to protect the safety of the public have been taken by the person installing, maintaining, or using such fence or structure.

(7) Amending Article 90. Article 90 is amended by adding Section 90.14 to read:

90.14 Meter installation.

(a) Electric watt-hour meters shall not be installed to serve illegal dwelling units. No more than one electric watt-hour meter shall be installed to serve a legal dwelling unit, except as provided herein.

(b) One additional electric watt-hour meter may be installed to serve a legal dwelling unit, provided that:

(1) The meter measures electricity used solely for the purpose of charging an electric vehicle; and

(2) A permit is issued for the installation of the meter by the director of planning and permitting pursuant to ROH Chapter 18.

(c) In addition to any other information required to be provided under ROH Chapter 18, the applicant for the additional electric watt-hour meter permitted under subsection (b) shall provide the director of planning and permitting with the following information along with the permit application:

(1) For each electric vehicle to be charged by electricity measured by the meter, a current certificate of motor vehicle registration issued to the applicant or an occupant of the applicant's dwelling unit to verify that the applicant or occupant is the registered owner of the electric vehicle; and

(2) A copy of a sales contract or a lease agreement for the electric vehicle.

(d) Within 15 days after either:

(1) An electric vehicle ceases to be under the registered ownership of the permittee or a resident of the permittee's dwelling unit; or

(2) The permittee no longer resides at the dwelling unit;

the permittee shall notify the director of planning and permitting and the utility company responsible for the installation of the electric meter of the occurrence of the event described in subdivision (1) or (2).

(e) Any person who violates the provisions of this section shall be subject to the penalties established in this code.

(8) Amending Article 90. Article 90 is amended by adding Section 90.15 to read:

90.15 Meter to measure created energy.

(a) One additional electric watt-hour meter or net metering informational meter may be installed in a legal dwelling unit, provided that:

(1) The meter is used solely for the purpose of measuring energy produced by a solar photovoltaic or other alternative energy system;

(2) The solar photovoltaic or other alternative energy system has been preapproved by the AHJ; and

(3) A permit is issued for the installation of the meter by the director of planning and permitting pursuant to ROH Chapter 18.

(b) The applicant for an additional electric watt-hour or net-energy metering informational meter shall provide the director of planning and permitting and the applicable public utility company with a copy of the net-energy metering agreement within 60 days after completion of the permit.

(c) Within 15 days after the permittee no longer resides at the dwelling unit where the meter is installed, the permittee shall notify the director of planning and permitting and remove or cause the removal of the meter from the dwelling.

(d) Any person who violates the provisions of this section shall be subject to the penalties provided in Section 90.16.

(e) For the purposes of this section "alternative energy system" includes any system that produces energy from a source other than fossil fuels, or uses a process which does not use fossil fuels. The source or process may include the sun, wind, or hydroelectric power.

(9) Amending Article 90. Article 90 is amended by adding a new Section 90.16 to read:

90.16 Violation—Penalties—Notice—Enforcement.

(a) General. It is unlawful for any person, firm, or corporation to perform any electrical work, or cause the same to be done, contrary to or in violation of any of the provisions of this code.

(b) Notice of Violation. Whenever any person, firm, or corporation violates any provision of this chapter, the AHJ may serve a notice of violation to the party responsible for the violation to make the building or structure or portion thereof comply with the requirements of this chapter. A notice of violation must be served upon responsible persons either personally or by certified mail. However, if the whereabouts of such persons are unknown and the same cannot be ascertained by the AHJ in the exercise of reasonable diligence and the AHJ makes an affidavit to that effect, then a notice of violation may be served by publishing the same once each week for two consecutive weeks in a daily or weekly publication in the City and County of Honolulu pursuant to HRS Section 1-28.5.

The notice of violation shall include at least the following information:

(1) Date of the notice;

(2) The name and address of the person noticed and the location of the violation;

(3) The section number of the ordinance, code or rule which has been violated;

(4) The nature of the violation; and

(5) The deadline for compliance with the notice.

(c) Criminal Prosecution.

(1) Any person, firm, or corporation violating any of the provisions of this code is deemed guilty of a misdemeanor, and each such person is deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any provisions of this code is committed, continued, or permitted, and upon conviction of any such violation such person is subject to punishment by a fine of not more than $1,000.00, or by imprisonment for not more than one year, or by both such fine and imprisonment.

(2) Any officer or inspector designated by the AHJ who has been deputized by the chief of police as a special officer for the purpose of enforcing the provisions of the building, plumbing, electrical, or housing codes (hereinafter referred to as "authorized personnel"), may arrest without warrant alleged violators by issuing a summons or citation in accordance with the procedure specified in this section. Nothing in this section shall be construed as barring such authorized personnel from initiating prosecution by warrant or such other judicial process as is permitted by statute or rule of court.

(3) Any authorized personnel designated by the AHJ, upon making an arrest for a violation of the building, plumbing, electrical, or housing codes, may take the name and address of the alleged violator and shall issue to such person in writing a summons or citation hereinafter described, notifying such person to answer the complaint to be entered against such person at a place and at a time provided in the summons or citation.

(4) There shall be provided for use by authorized personnel a form of summons or citation for use in citing violators of the building, plumbing, electrical, or housing codes which does not mandate the physical arrest of such violators. The form and content of such summons or citation shall be as adopted or prescribed by the administrative judge of the district court and shall be printed on a form commensurate with the form of other summonses or citations used in modern methods of arrest, so designed to include all necessary information to make the same valid within the laws and regulations of the State of Hawaii and the City and County of Honolulu.

(5) In every case when a citation is issued, the original of the same shall be given to the violator; provided, that the administrative judge of the district court may prescribe giving to the violator a copy of the citation and provide for the disposition of the original and any other copies.

(6) Every citation shall be consecutively numbered and each copy shall bear the number of its respective original.

(d) Administrative Enforcement. In lieu of or in addition to enforcement pursuant to subsection (c), if the AHJ determines that any person, firm, or corporation is not complying with a notice of violation issued pursuant to subsection (b), the AHJ may have the party responsible for the violation served, by mail or delivery, with an order pursuant to this subsection. A notice of order must be served upon responsible parties either personally or by certified mail. However, if the whereabouts of such parties are unknown and the same cannot be ascertained by the AHJ in the exercise of reasonable diligence and the AHJ makes an affidavit to that effect, then a notice of order may be served by publishing the same once each week for two consecutive weeks in a daily or weekly publication in the City and County of Honolulu pursuant to HRS Section 1-28.5.

(1) Contents of the Order.

(A) The order may require the party responsible for the violation to do any or all of the following:

(i) Correct the violation within the time specified in the order;

(ii) Pay a civil fine not to exceed $10,000 in the manner, at the place and before the date specified in the order; or

(iii) Pay a civil fine not to exceed $2,000 per day for each day in which the violation persists, in the manner and at the time and place specified in the order.

(B) The order shall advise the party responsible for the violation that the order shall become final 30 calendar days after the date of its delivery. The order shall also advise that the AHJ's action may be appealed to the building board of appeals.

(2) Effect of Order--Right to Appeal. The provisions of the order issued by the AHJ under this section shall become final 30 calendar days after the date of the delivery of the order. The party responsible for the violation may appeal the order to the building board of appeals as provided in ROH Chapter 16. The appeal must be received in writing on or before the date the order becomes final. However, an appeal to the building board of appeals shall not stay any provision of the order.

(3) Judicial Enforcement of Order. The AHJ may institute a civil action in any court of competent jurisdiction for the enforcement of any order issued pursuant to this section. Where the civil action has been instituted to enforce the civil fine imposed by the order, the AHJ need only show that the notice of violation and order were served, that a civil fine was imposed, the amount of the civil fine imposed, and that the fine imposed has not been paid.

(10) Amending Article 90. Article 90 is amended by adding Section 90.17 to read:

90.17 Permits and Inspection Fees

90.17.1 Permit required.

A building permit is required to perform work covered by this code as provided under ROH Chapter 18.

90.17.2 Charge for extra inspection.

(a) Extra Inspections. If, after notice to a permit holder, more than one inspection is necessary to ensure that deficient or defective electrical work under the permit has been corrected, the holder of the permit shall pay the City and County of Honolulu $200.00 for each additional inspection.

(b) Miscellaneous Inspections. For the inspection of any electrical installation not covered by a fee specified in this code, the person requesting the inspection shall pay the City and County of Honolulu $50.00 for each hour or portion thereof that is required to make the inspection and travel to and from the installation.

(c) Inspections Outside of Normal Business Hours. For a requested inspection of an electrical installation under a permit outside of normal business hours, the holder of the permit shall be charged at an hourly rate of $75.00 for a minimum of three hours. Eligibility for such inspection shall be as determined by the AHJ based upon the nature of the inspection requested and the availability of personnel to perform the inspection.

(11) Amending Article 90. Article 90 is amended by adding Section 90.18 to read:

90.18 Electrical Work within Flood Hazard Areas and Development Adjacent to Drainage Facilities

(a) General.

(1) The provisions contained in this section are applicable to the construction of all new electrical systems, and all renovations to and major alterations, additions, or reconstruction of existing electrical systems within the flood area district as delineated on the flood boundary and floodway maps and flood insurance rate maps,

and any amendments by the Federal Emergency Management Agency, on file with the department.

(2) These provisions shall also apply to developments adjacent to drainage facilities outside the flood hazard area which are determined to be within a floodway area or a flood fringe area in accordance with the Flood Hazard Areas, ROH Chapter 21A.

(b) Existing Electrical Systems. Any electrical system thereof which was lawful before the effective date of this article but which is not in conformity with the provisions of this article may be continued subject to the provisions of the Flood Hazard Areas, ROH Chapter 21A.

(c) Exemption. The provisions contained herein shall not apply:

(1) To electrical systems serving buildings and structures exempted from the flood hazard area provisions of the Flood Hazard Areas, ROH Chapter 21A; and

(2) To electrical systems serving buildings and structures which have been granted a flood hazard variance under the provisions of the Flood Hazard Areas, ROH Chapter 21A.

(d) For the purpose of this article, the following terms shall be as defined in the Flood Hazard Areas, ROH Chapter 21A:

"Base flood elevation";
"Flood fringe";
"Flood Hazard Area";
"Flood proof"; and
"Floodway".

(e) For electrical work on projects subject to the provisions of this article, the provisions of this section shall supplement the requirements of Section 90.2(D).

(1) Main Power Service. The incoming main commercial power service equipment, including all metering equipment, shall be located above the base flood elevation or in a waterproof enclosure or barrier with GFP on the main disconnecting means.

(2) Stationary and Portable Equipment. Switchgear, control centers, transformers, distribution and power or lighting panels shall be located above the base flood elevation or in a waterproof enclosure or barrier, with the ground fault protector (GFP) on the main disconnecting means. Stationary and portable electrical equipment shall be permitted to be located below the base flood elevation provided that the circuit and equipment shall be protected with the ground-fault circuit interrupter (GFCI), except a sump pump and its circuit may be without GFCI. In cases where GFCI cannot be installed because of amperage size or usage, GFP shall be installed.

(3) Normal and Emergency Lighting Circuits. All normal lighting circuits extending into areas below the base flood elevation shall be energized from a common distribution panel located above the base flood elevation or in a waterproof enclosure or barrier with GFP. All emergency lighting circuits into areas below the base flood elevation shall be energized from an independent distribution panel also located above the base flood elevation or in a waterproof enclosure or barrier with GFP.

(4) Emergency Lighting Requirements. All components of emergency lighting systems installed below the base flood elevation shall be so located that no component of the emergency lighting system is within reach of personnel working at floor level in the areas where emergency lighting systems are utilized unless the emergency lighting circuits are provided with GFCI. The emergency lighting may be furnished by a storage battery, prime mover generator system, a separate commercial power supply system, the same commercial power system, or a combination thereof, subject to the following provisions:

(i) Storage Battery (including battery operated lighting units). Battery operated lighting units shall be completely self-contained and shall indicate the state of charge of the battery at all times. Lighting units shall automatically provide light when the normal source of lighting in the areas is de-energized.

(ii) Separate Commercial Power Supply System. This source of energy shall have a degree of reliability satisfactory to the AHJ. A system fed from a transformer other than that used for the regular supply and not on the same poles (except service pole) as the regular supply is deemed to have the required degree of reliability. A secondary circuit fed from the same primary circuit as the regular supply shall be regarded as a separate system.

(iii) Separate Commercial Power Supply System. The system shall be an underground secondary system and a separate service shall be connected on the line side of that service switch or breaker of the regular service.

(5) Receptacle Circuits below Base Flood Elevation. Receptacle circuits shall be permitted to be installed below the base flood elevation, provided that these circuits shall be protected with GFCI.

(12) Amending Article 100. Article 100 is amended by amending the definition of "Authority having jurisdiction" and adding definitions of "Department," "Duly licensed electrician," "Electrical wiring," "Electrical work," "Emergency electrical work," "Ground fault protector (GFP)," and "Maintenance work" to read:

"Authority Having Jurisdiction" or "AHJ" means the director of planning and permitting of the City and County of Honolulu or the director's authorized representative.

"Department" means the department of planning and permitting of the City and County of Honolulu.

"**Duly licensed electrician"** means any person licensed as an electrician under the provisions of HRS Chapter 448E.

"Electrical wiring" means any conductor, material, device, fitting, apparatus, appliance, fixture or equipment, constituting a part of or connected to any electrical installation, attached or fastened to any building, structure, or premises and which installation or portion thereof is designed, intended, or used to generate, transmit, transform, or utilize electrical energy within the scope and purpose of the SEC of this chapter.

"Electrical work" means the installation, alteration, reconstruction, or repair of electrical wiring.

"Emergency electrical work" means repair of electrical wiring to restore electrical service to a building following a fire, remedy a power failure, and protect persons and property against short circuiting and open circuits.

"Ground fault protector (GFP)" means a device or equipment which disconnects all ungrounded conductors of the faulted circuit to protect wiring and equipment from damage.

"Maintenance work" means the keeping in repair and operation of any electrical installation, apparatus, fixtures, appliance, or equipment.

(13) Amending Section 101.1. Section 101.1 is amended to read:

This chapter shall be known as the "Electrical Code of the City and County of Honolulu" and is referred to in this chapter as "this code."

(14) Amending Section 220.12. Exception No. 2 of Section 220.12 is amended to read:

Exception No. 2: Where a building is designed and constructed to comply with an energy code adopted by the local authority and specifying an overall lighting density of less than 13.5 volt-amperes/m^2 (1.2 volt-amperes/ft^2), the unit lighting loads in Table 220.12 for office and bank areas within the building shall be permitted to be reduced by 11 volt-amperes/m^2 (1 volt-amperes/ft^2).

(15) Amending Section 336.10(9). Section 336.10(9) is amended to read:

(9) In one- and two-family dwelling units, Type TC-ER cable containing both power and control conductors that is identified for pulling through structural members shall be permitted. Type TC-ER cable used as interior wiring shall be installed per the requirements of Part II of Article 334 and, where installed as exterior wiring, shall be installed per the requirements of Part II of Article 340.

Exception: Where used to connect a generator and associated equipment having terminals rated 75°C (140°F) or higher, the cable shall not be limited in ampacity by 334.80 or 340.80.

(16) Amending Section 406.4(D)(4). Exception No. 2 of Section 406.4(D)(4) is amended to read:

Exception No. 2: Section 210.12(D), Exception shall not apply to replacement of receptacles.

(17) Amending Section 505.9(E)(2). Section 505.9(E)(2) is amended by amending the second paragraph to read:

Metric threaded fittings installed into explosion-proof or flameproof equipment entries shall have a class of fit of at least 6g/6H and be made up with at least five threads fully engaged

(18) Amending Section 590.4(G). Section 590.4(G) is amended to read:

590.4(G) Splices. A box, conduit body, or other enclosure, with a cover installed, shall be required for all splices.

Exception: On construction sites, a box, conduit body, or other enclosure shall not be required for either of the following conditions:

(1) The circuit conductors being spliced are all comprised entirely of nonmetallic multi-conductor cord or cable assemblies and the equipment grounding continuity is maintained with or without the box.

(2) The circuit conductors being spliced are all comprised entirely of metal sheathed cable assemblies terminated in listed fittings that mechanically secure the cable sheath to maintain effective electrical continuity.

(19) Amending Section 625.17(B). Section 625.17(B) is amended to read:

(B) Output Cable to the Electric Vehicle. The output cable to the electric vehicle shall be one of the following:

(1) Listed Type EV, EVJ, EVE, EVJE, EVT, or EVJT flexible cable as specified in Table 400.4.

(2) An integral part of listed electric vehicle supply equipment

Informational Note: For information and listing requirements for electric vehicle supply equipment, see UL Standards 2594-2016, *Standard for Electric Vehicle Supply Equipment,* and UL 2202-2009, *Standard for Electric Vehicle (EV) Charging System Equipment.*

(20) Amending Section 625.44(A). Section 625.44(A) is amended to read:

625.44(A) Portable Equipment. Portable equipment shall be connected to the premises wiring systems by one or more of the following methods:

(1) A nonlocking, 2-pole, 3-wire grounding-type receptacle outlet rated at 125 volts, single phase, 15 or 20 amperes

(2) A nonlocking, 2-pole, 3-wire grounding-type receptacle outlet rated at 250 volts, single phase, 15 or 20 amperes

(3) A nonlocking, 2-pole, 3-wire or 3-pole, 4-wire grounding-type receptacle outlet rated at 250 volts, single phase, 30 or 50 amperes

(4) A nonlocking, 2-pole, 3-wire grounding-type receptacle outlet rated at 60 volts dc maximum, 15 or 20 amperes

The length of the power supply cord, if provided, between the receptacle outlet and the equipment shall be in accordance with 625.17(A)(3).

(21) Amending Section 625. Section 625 is amended by adding Section 625.54 to read:

625.54 Ground-Fault Circuit-Interrupter Protection for Personnel. All single-phase receptacles installed for the connection of electric vehicle charging that are rated 150 volts to ground or less, and 50 amperes or less shall have ground-fault circuit-interrupter protection for personnel.

(22) Amending Section 625. Section 625 is amended by adding Section 625.56 to read:

625.56 Receptacle Enclosures. All receptacles installed in a wet location for electric vehicle charging shall have an enclosure that is weatherproof with the attachment plug cap inserted or removed.

(23) Amending Section 682.2. Section 682.2 is amended by adding a definition of "Pier" to read:

Pier. A structure extending over the water and supported on a fixed foundation, or on flotation, that provides access to the water.

(24) Amending Section 682.15. Section 682.15 is amended to read:

682.15 Ground-Fault Circuit-Interrupter (GFCI) Protection. Ground-fault protection shall be provided in accordance with (A) and (B).

(A) Receptacles. Fifteen- and 20-ampere single-phase, 125-volt through 250-volt receptacles installed outdoors and in or on floating buildings or structures within the electrical datum plane area shall be provided with GFCI protection for personnel. The GFCI protection device shall be located not less than 300 mm (12 in.) above the established electrical datum plane.

(B) Feeder and Branch Circuit Conductors. Feeder and branch circuit conductors that are installed on piers shall be provided with ground-fault protection set to open at currents exceeding 30 mA. Coordination with downstream groundfault protection shall be permitted at the feeder overcurrent protective device.

Exception: Transformer secondary conductors of a separately derived system that do not exceed 3 m (10 ft) and are installed in a raceway shall be permitted to be installed without ground-fault protection. This exception shall also apply to the supply terminals of the equipment supplied by the transformer secondary conductors.

(25) Amending Section 690.56(C). Section 690.56(C) is amended to read:

690.56(C) Buildings with Rapid Shutdown. Buildings with PV systems shall have permanent labels as described in 690.56(C)(1) through (C)(3).

(26) Amending Section 695.14(F). Section 695.14(F) of the SEC is amended to read: **695.14(F) Generator Control Wiring Methods**. Control conductors installed between the fire pump power transfer switch and the standby generator supplying the fire pump during normal power loss shall be kept entirely independent of all other wiring. The integrity of the generator remote start circuit shall be monitored for broken, disconnected, or shorted wires. Loss of integrity shall start the generator(s).

(27) Amending Section 700.10(D). Section 700.10(D) is amended to read:

(D) Fire Protection. Emergency systems shall meet the additional requirements in (D)(1) through (D)(3) in the following occupancies:

(1) Assembly occupancies for not less than 1000 persons

(2) Buildings above 23 m (75 ft) in height

(3) Educational occupancies with more than 300 occupants

(1) Feeder-Circuit Wiring. Feeder-circuit wiring shall meet one of the following conditions:

(1) The cable or raceway is installed in spaces or areas that are fully protected by an approved automatic fire suppression system.

(2) The cable or raceway is protected by a listed electrical circuit protective system with a minimum 2-hour fire rating.

Informational Note No. 1: Electrical circuit protective systems could include but not be limited to thermal barriers or a protective shaft and are tested to UL 1724, *Fire Tests for Electrical Circuit Protection Systems*.

Informational Note No. 2: The listing organization provides information for electrical circuit protective systems on proper installation requirements to maintain the fire rating.

(3) The cable or raceway is a listed fire-resistive cable system with a minimum 2-hour fire rating.

Informational Note No. 1: Fire-resistive cables are tested to ANSI/UL 2196, *Tests for Fire Resistive Cables*.

Informational Note No. 2: The listing organization provides information for fire-resistive cable systems on proper installation requirements to maintain the fire rating.

(4) The cable or raceway is protected by a listed fire-rated assembly that has a minimum fire rating of 2 hours and contains only emergency circuits.

(5) The cable or raceway is encased in a minimum of 50 mm (2 in.) of concrete.

(28) Amending Section 700.10(D)(3). Section 700.10(D)(3) is amended to read:

700.10(D)(3) Generator Control Wiring. Control conductors installed between the transfer equipment and the emergency generator shall be kept entirely independent of all other wiring and shall meet the conditions of 700.10(D)(1). The integrity of the generator remote start circuit shall be monitored for broken, disconnected, or shorted wires. Loss of integrity shall start the generator(s).

(29) Amending Section 725.2. Section 725.2 is amended by adding a definition of "Nominal current" to read:

Nominal Current. The designated current per conductor as specified by equipment design.

Informational Note: One example of nominal current is 4-pair Power over Ethernet (PoE) applications based on IEEE 802.3-2015, *IEEE Standard for Ethernet*, that supplies current over 2 or 4 twisted pairs. The nominal current for 60-watt PoE power-sourcing equipment is 0.3 amperes per conductor, where the current in one conductor can be 0.36 amperes and another conductor can be 0.24 amperes.

(30) Amending Section 725.121(C). Section 725.121(C) is amended to read:

725.121(C) Marking. The power sources for limited power circuits in 725.121(A)(3) and limited power circuits for listed audio/video, information, and communications technology (equipment), and listed industrial equipment in 725.121(A)(4) shall have a label indicating the maximum voltage and maximum current or maximum voltage and nominal current output for each connection point. Where multiple connection points have the same rating, a single label shall be permitted to be used. The effective date shall be January 1, 2018.

Exception: Marking shall not be required for power sources providing 0.3 amperes nominal current or less per conductor.

(31) Amending Section 725.144(A). Section 725.144(A) is amended to read:

725.144(A) Use of Class 2 or Class 3 Cables to Transmit Power and Data. Where Types CL3P, CL2P, CL3R, CL2R, CL3, or CL2 transmit power and data, the ampacity ratings in Table 725.144 shall apply to the nominal current at an ambient temperature of 30°C (86°F). For ambient temperatures above 30°C (86°F), the correction factors of 310.15(B)(2) shall apply.

Exception: Compliance with Table 725.144 shall not be required for installations where the nominal current does not exceed 0.3 amperes in any conductor.

(32) Amending Section 725.144(B). The first paragraph of Section 725.144(B) is amended to read:

725.144(B) Use of Class 2-LP or Class 3-LP Cables to Transmit Power and Data. Types CL3PLP, CL2P-LP, CL3R-LP, CL2R-LP, CL3-LP, or CL2-LP shall be permitted to supply power to equipment at a current level up to the marked ampere limit located immediately following the suffix LP and shall be permitted to transmit data to the equipment. For ambient temperatures above 30°C (86°F), the correction factors of 310.15(B)(2) shall apply. The Class 2-LP and Class 3-LP cables shall comply with the following, as applicable:

(33) Amending Section 770.110(A)(2). Section 770.110(A)(2) is amended to read:

770.110(A)(2) Communications Raceways. Optical fiber cables shall be permitted to be installed in plenum communications raceways, riser communications raceways, and general-purpose communications raceways selected in accordance with Table 800.154(b), listed in accordance with 800.182, and installed in accordance with 800.113 and, 362.24 through 362.56, where the requirements applicable to electrical nonmetallic tubing (ENT) apply.

(34) Amending Section 840.2. Section 840.2 is amended by adding a definition of "Nominal current" to read:

Nominal Current. The designated current per conductor as specified by equipment design.

Informational Note: One example of nominal current is 4-pair Power over Ethernet (PoE) applications based on IEEE 802.3-2015, *IEEE Standard for Ethernet*, that supplies current over 2 or 4 twisted pairs. The nominal current for 60-watt PoE power-sourcing equipment is 0.3 amperes per conductor, where the current in one conductor can be 0.36 amperes and another conductor can be 0.24 amperes.

(35) Amending Section 840.160. Section 840.160 is amended to read:

840.160 Powering Circuits. Communications cables, in addition to carrying the communications circuit, shall also be permitted to carry circuits for powering communications equipment. Installations of listed communications cables shall comply with 725.144 where listed communications cables are used in place of Class 2 and Class 3 cables.

Exception: Compliance with 725.144 shall not be required for installations of listed 4-pair communications cables where the nominal current does not exceed 0.3 amperes in any conductor."

A BILL FOR AN ORDINANCE

SECTION 4. This ordinance takes effect 90 days after its approval. During this time between approval of this ordinance and its effective date, work governed by this code shall be allowed to conform to the requirements of this code in lieu of the existing electrical code of the City and County of Honolulu.

INTRODUCED BY:

Ann Kobayashi (br)

DATE OF INTRODUCTION:

April 4, 2019
Honolulu, Hawaii

Councilmembers

APPROVED AS TO FORM AND LEGALITY:

Deputy Corporation Counsel

APPROVED this 22nd day of August, 2019.

KIRK CALDWELL, Mayor
City and County of Honolulu

CITY COUNCIL
CITY AND COUNTY OF HONOLULU
HONOLULU, HAWAII

CERTIFICATE

ORDINANCE 19-20

BILL 20 (2019), CD2

Introduced: 04/04/19 By: ANN KOBAYASHI – BY REQUEST Committee: ZONING, PLANNING AND HOUSING

Title: A BILL FOR AN ORDINANCE RELATING TO THE ADOPTION OF THE STATE ELECTRICAL CODE.

Voting Legend: * = Aye w/Reservations

04/17/19	COUNCIL	BILL PASSED FIRST READING AND REFERRED TO COMMITTEE ON ZONING AND HOUSING. 9 AYES: ANDERSON, ELEFANTE, FORMBY, FUKUNAGA, KOBAYASHI, MANAHAN, MENOR, PINE, TSUNEYOSHI.
04/25/19	ZONING AND HOUSING	CR-138 – BILL REPORTED OUT OF COMMITTEE FOR PASSAGE ON SECOND READING AND SCHEDULING OF A PUBLIC HEARING AS AMENDED IN CD1 FORM. 4 AYES: ANDERSON, FORMBY, FUKUNAGA, PINE. 2 EXCUSED: MENOR, TSUNEYOSHI.
04/27/19	PUBLISH	PUBLIC HEARING NOTICE PUBLISHED IN THE HONOLULU STAR-ADVERTISER.
		NOTE: COUNCILMEMBER WATERS TOOK OFFICE ON MONDAY, MAY 6, 2019.
05/08/19	COUNCIL/PUBLIC HEARING	CR-138 ADOPTED. BILL PASSED SECOND READING AS AMENDED, PUBLIC HEARING CLOSED AND REFERRED TO COMMITTEE ON ZONING, PLANNING AND HOUSING. 9 AYES: ANDERSON, ELEFANTE, FUKUNAGA, KOBAYASHI*, MANAHAN, MENOR, PINE, TSUNEYOSHI, WATERS.
		CC-173 ANDERSON - COUNCIL STANDING COMMITTEE ASSIGNMENTS.
		CC-181 ANDERSON – RE-REFERRAL OF BILLS, RESOLUTIONS AND COMMUNICATIONS.
05/15/19	PUBLISH	SECOND READING NOTICE PUBLISHED IN THE HONOLULU STAR-ADVERTISER.
07/25/19	ZONING, PLANNING AND HOUSING	CR-228 – BILL REPORTED OUT OF COMMITTEE FOR PASSAGE ON THIRD READING AS AMENDED IN CD2 FORM. 5 AYES: ELEFANTE, KOBAYASHI, MANAHAN, MENOR, WATERS.
08/07/19	COUNCIL	CR-228 ADOPTED AND BILL 20 (2019), CD2 PASSED THIRD READING AS AMENDED. 9 AYES: ANDERSON, ELEFANTE, FUKUNAGA, KOBAYASHI, MANAHAN, MENOR, PINE, TSUNEYOSHI, WATERS.

I hereby certify that the above is a true record of action by the Council of the City and County of Honolulu on this BILL.

For GLEN I. TAKAHASHI, CITY CLERK

IKAIKA ANDERSON, CHAIR AND PRESIDING OFFICER