

WAC 296-46B-010 General.

Adopted standards.

(1) The ~~((2017))~~ 2020 edition of the National Electrical Code (NFPA 70 - ~~((2017))~~ 2020) published August, 2019 including Annex A, B, ~~((and))~~ C, and subsequent Errata and Tentative Interim Amendments issued by the National Fire Protection Association; Commercial Building Telecommunications Cabling Standard (ANSI/TIA-568-C series, February 2009); Commercial Building Standard for Telecommunications Pathway and Spaces (TIA-569-B, October 2004); Commercial Building Grounding and Bonding Requirements for Telecommunications (ANSI-TIA-607-B, August 2011); Residential Telecommunications Cable Standard (ANSI/TIA/EIA 570-B-2004); and the National Electrical Safety Code (NESC C2-2017 excluding Appendixes A and B) are hereby adopted by reference as part of this chapter.

~~((On July 1, 2020, the 2020 edition of the National Electrical Code (NFPA 70-2020 including Annex A, B, and C is hereby adopted by reference as part of this chapter and replaces the 2017 edition.))~~

This chapter will be followed where there is any conflict between this chapter and the above adopted standards.

The National Electrical Code will be followed where there is any conflict between the National Electrical Code and, ANSI/TIA/EIA 568-C, ANSI/TIA/EIA 569-B, ANSI/TIA/EIA 607-B, ANSI/TIA/EIA 570-B, or the NESC C2.

Adopted standards apply to installations when issue dates of electrical permits are on and after adoption dates except for:

(a) New one- and two-family dwellings, or multifamily dwellings where the issue date of building permits for the premises is before the adoption date; or

(b) New installations where plan review is required by WAC 296-46B-900 when plans are received and accepted for review before the adoption date.

Inspections - General.

(2) Electrical inspectors will give information as to the interpretation or application of the standards in this chapter, but will not lay out work or act as consultants for contractors, owners, or users.

(3) A variance from the electrical installation requirements of chapter 19.28 RCW or this chapter may be granted by the department or the city that has electrical inspection jurisdiction when it is assured that equivalent objectives can be achieved by establishing and maintaining effective safety.

(a) Any electrical permit holder may request a variance.

(b) The permit holder must make the request in writing, using a form provided by the department, to the chief electrical inspector or to the city that has electrical inspection jurisdiction. The request must include:

(i) A description of the installation as installed or proposed;

(ii) A detailed list of the applicable code violations;

(iii) A detailed list of safety violations;

(iv) A description of the proposal for meeting equivalent objectives for code and/or safety violations; and

(v) Appropriate variance application fee as listed in chapter 296-46B WAC, Part C.

(4) Electrical wiring or equipment subject to this chapter must be sufficiently accessible, at the time of inspection, to allow the inspector to visually inspect the installation to verify conformance with the NEC and any other electrical requirements of this chapter with the exception of not more than 8 feet of electrical conduit in a foundation of a one- or two-family dwelling or residential outbuilding for use as service entrance raceway.

(5) All required equipment grounding conductors installed in concealed cable or flexible conduit systems must be completely installed and made up at the time of the rough-in cover inspection.

(6) The installation of all structural elements and mechanical systems (e.g., framing, plumbing, ducting, etc.) must be complete in the area(s) where electrical inspection is requested. Prior to completion of an exterior wall cover inspection, either:

(a) The exterior shear panel/sheathing nail inspection must be completed by the building code inspector and, where siding nails or fasteners which penetrate into the wall cavity are to be used, all siding must be installed; or

(b) All wiring and device boxes must be a minimum of 2 1/2 inches from the exterior surface of the framing member; or

(c) All wiring and device boxes must be protected by a steel plate a minimum of 1/16 inch thick and of appropriate width and height installed to cover the area of the wiring or box.

(7) In order to meet the minimum electrical safety standards for installations, all materials, devices, appliances, and equipment, not exempted in chapter 19.28 RCW, must conform to applicable electrical product standards recognized by the department, be listed, or field evaluated. For any equipment that requires an amusement operating permit under chapter 67.42 RCW, the operating permit is prima facie evidence of an appropriate standard. Other than as authorized by the chief electrical inspector or a city authorized to do electrical inspection, equipment must not be energized until such standards are met.

(8) The state department of transportation is recognized as the inspection authority for telecommunications systems installations within the rights of way of state highways provided the department of transportation maintains and enforces an equal, higher or better standard of construction, and of materials, devices, appliances, and equipment than is required for telecommunications systems installations by chapter 19.28 RCW and this chapter.

Inspection move on buildings and structures.

(9) All buildings or structures relocated into or within the state:

(a) Other than residential, wired inside the United States (U.S.) must be inspected to ensure compliance with current requirements of chapter 19.28 RCW and the rules developed by the department.

(b) Wired outside the U.S. or Canada must be inspected to ensure compliance with all current requirements of chapter 19.28 RCW and the rules developed by the department.

(10) Residential buildings or structures wired in the U.S., to NEC requirements, and moved into or within a county, city, or town must be inspected to ensure compliance with the NEC requirements in effect at the time and place the original wiring was made. The building or structure must be inspected to ensure compliance with all cur-

rent requirements of chapter 19.28 RCW and the rules developed by the department if:

(a) The original occupancy classification of the building or structure is changed as a result of the move; or

(b) The building or structure has been substantially remodeled or rehabilitated as a result of the move.

(11) Residential buildings or structures wired in Canada to Canadian Electrical Code (CEC) standards and moved into or within a county, city, or town, must be inspected to ensure compliance with the following minimum safety requirements:

(a) Service, service grounding, and service bonding must comply with the current chapter 19.28 RCW and rules adopted by the department.

(b) Canadian Standards Association (CSA) listed Type NMD cable is allowed with the following qualifications:

(i) CSA listed Type NMD cable, American Wire Gauge #10 and smaller installed after 1964 utilizing an equipment grounding conductor smaller than the phase conductors, must be:

(A) Replaced with a cable utilizing a full-size equipment grounding conductor; or

(B) Protected by a ground fault circuit interrupter protection device.

(ii) CSA listed Type NMD cable, #8 AWG and larger, must:

(A) Utilize an equipment grounding conductor sized according to the requirements of the NEC in effect at the time of the installation;

(B) Be protected by a ground fault circuit interrupter protection device; or

(C) Be replaced.

(c) Other types of wiring and cable must be:

(i) Replaced with wiring listed or field evaluated in accordance with U.S. standards by a laboratory approved by the department; or

(ii) Protected by a ground fault circuit interrupter protection device and arc fault circuit protection device.

(d) Equipment, other than wiring or panelboards, manufactured and installed prior to 1997 must be listed and identified by laboratory labels approved by the department or CSA labels.

(e) All panelboards must be listed and identified by testing laboratory labels approved by the department with the following qualifications:

(i) CSA listed panelboards labeled "suitable for use as service equipment" will be considered to be approved as "suitable for use only as service equipment."

(ii) CSA listed panelboards used as panelboards as described in the NEC, must meet all current requirements of the NEC and this chapter.

(f) Any wiring or panelboards replaced or changed as a result of the move must meet current requirements of chapter 19.28 RCW and this chapter.

(g) The location, type, and ground fault circuit interrupter protection of receptacles and equipment in a bathroom, kitchen, basement, garage, or outdoor area must meet the Washington requirements in effect at the time the wiring was installed.

(h) 4, 15-ampere, kitchen small appliance circuits will be accepted in lieu of 2, 20-ampere, kitchen small appliance circuits. Receptacles will not be required to be added on kitchen peninsular or island counters.

(i) Spacing requirements for all other receptacles must meet the Washington requirements in effect at the time the wiring was installed.

(j) Receptacles installed above baseboard or fixed wall space heaters must be removed and the outlet box covered with a blank cover. The receptacle is required to be relocated as closely as possible to the existing location.

(k) Lighting outlet and switch locations must meet the Washington requirements in effect at the time the wiring was installed.

(l) Dedicated 20-ampere small appliance circuits are not required in dining rooms.

(m) Electric water heater branch circuits must be adequate for the load.

(n) The location, type, and circuit protection of feeders must meet the Washington requirements in effect at the time the wiring was installed.

Wiring methods for designated building occupancies.

(12) Wiring methods in educational or institutional facilities as defined in this chapter must be metallic or nonmetallic raceways, MI, MC, or AC cable. Places of assembly located within these facilities must comply with NEC 518.4(A).

(13) Assisted living facility generator systems may be wired and installed per NEC 517.

(14) Lawfully installed existing electrical installations that do not comply with the provisions of this chapter and remain in compliance with the code at the time of the installation, will be permitted to be continued without change (i.e., without circuitry or occupancy change). Additions, alterations, modifications, or repairs to the electrical system must conform to the current requirements of this chapter.

(15) See WAC 296-46B-406R for tamper-resistant receptacle requirements in psychiatric patient care facilities.

Traffic management systems.

(16) The department or city authorized to do electrical inspections will perform the electrical inspection and acceptance of traffic management systems within its jurisdiction. A traffic management system includes:

- (a) Traffic illumination systems;
- (b) Traffic signal systems;
- (c) Traffic monitoring systems;

(d) The electrical service cabinet and all related components and equipment installed on the load side of the service cabinet supplying electrical power to the traffic management system; and

(e) Signalization system(s) necessary for the operation of a light rail system.

A traffic management system can provide signalization for controlling vehicular traffic, pedestrian traffic, or rolling stock.

(17) The department or city authorized to do electrical inspections recognizes that traffic signal conductors, pole and bracket cables, signal displays, traffic signal controllers/cabinets and associated components used in traffic management systems are acceptable for the purpose of meeting the requirements of chapter 19.28 RCW provided they conform with the following standards or are listed on the Washington state department of transportation (WSDOT) qualified products list.

- (a) WSDOT/APWA standard specifications and plans;
- (b) WSDOT *Design Manual*;

- (c) International Municipal Signal Association (IMSA);
- (d) National Electrical Manufacturer's Association (NEMA);
- (e) Federal Standards 170/Controller Cabinets;
- (f) Manual for *Uniform Road, Bridge, and Municipal Construction*;
- (g) Institute of Transportation Engineers (ITE); or
- (h) Manual of *Uniform Traffic Control Devices (MUTCD)*.

(18) Associated induction detection loop or similar circuits will be accepted by the department or city authorized to do electrical inspections without inspection.

(19) For the licensing requirements of chapter 19.28 RCW, jurisdictions will be considered owners of traffic management systems when doing electrical work for another jurisdiction(s) under a valid interlocal agreement, as permitted by chapter 39.34 RCW. Interlocal agreements for traffic management systems must be filed with the department or city authorized to do electrical inspections prior to work being performed for this provision to apply.

(20) Jurisdictions, with an established electrical inspection authority, and WSDOT may perform electrical inspection on their rights of way for each other by interlocal agreement. They may not perform electrical inspection on other rights of way except as allowed in chapter 19.28 or 39.34 RCW.

(21) Underground installations.

(a) In other than open trenching, raceways will be considered "fished" according to the NEC and do not require visual inspection.

(b) The department or city authorized to do electrical inspections will conduct inspections in open trenching within its jurisdiction. The electrical work permit purchaser must coordinate the electrical inspection. A written request (e.g., letter, email, fax, etc.) for inspection, made to the department or city authorized to do electrical inspections office having the responsibility to perform the inspection, must be made a minimum of two working days prior to the day inspection is needed (e.g., two working days 10:00 a.m. Tuesday request for a 10:00 a.m. Thursday inspection, excluding holidays and weekends).

If, after proper written request, the department or city authorized to do electrical inspections fails to make an electrical inspection at the time requested, underground conduit may be covered after inspection by the local government jurisdiction's project inspector/designee. Written documentation of a local government jurisdiction inspection must be provided to the department or city authorized to do electrical inspections when requested. Written documentation will include:

- (i) Date and time of inspection;
- (ii) Location;
- (iii) Installing firm;
- (iv) Owner;
- (v) Type of conduit;
- (vi) Size of conduit;
- (vii) Depth of conduit; and
- (viii) Project inspector/designee name and contact information.

(22) Identification of traffic management system components. Local government jurisdictions or WSDOT may act as the certifying authority for the safety evaluation of all components.

(a) An electrical service cabinet must contain only listed components. The electrical service cabinet enclosure is not required to be listed but will conform to the standards in subsection (17) of this section.

(b) The local government jurisdiction must identify, as acceptable, the controller cabinet or system component(s) with an identification plate. The identification plate must be located inside the cabinet and may be attached with adhesive.

(23) Conductors of different circuits in same cable, enclosure, or raceway. All traffic management system circuits will be permitted to occupy the same cable, enclosure, or raceway without regard to voltage characteristics, provided all conductors are insulated for the maximum voltage of any conductor in the cable, enclosure, or raceway.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-100 General definitions. All definitions listed in the National Electrical Code and chapter 19.28 RCW are recognized in this chapter unless other specific definitions are given in this chapter and chapter 19.28 RCW. The definitions in this section apply to all parts of this chapter. Some sections may have definitions specific to that section.

"Accreditation" is a determination by the department that a laboratory meets the requirements of this chapter and is therefore authorized to evaluate electrical products that are for sale in the state of Washington.

"Administrative law judge" means an administrative law judge (ALJ) appointed pursuant to chapter 34.12 RCW and serving in board proceedings pursuant to chapter 19.28 RCW and this chapter.

"ANSI" means American National Standards Institute. Copies of ANSI standards are available from the National Conference of States on Building Codes and Standards, Inc.

"Appeal" is a request for review of a department action by the board as authorized by chapter 19.28 RCW.

"Appellant" means any person, firm, partnership, corporation, or other entity that has filed an appeal or request for board review.

"Appliance" means household appliance.

"ASTM" means the American Society for Testing and Materials. Copies of ASTM documents are available from ASTM International.

"AWG" means American Wire Gauge.

"Basement" means that portion of a building that is partly or completely below grade plane. A basement will be considered as a story above grade plane and not a basement where the finished surface of the floor above the basement is:

(a) More than 6 feet above grade plane;

(b) More than 6 feet above the finished ground level for more than 50% of the total building perimeter; or

(c) More than 12 feet above the finished ground level at any point. Also see "mezzanine" and "story."

"Board" means the electrical board established and authorized under chapter 19.28 RCW.

"Category list" is a list of manufacturing safety standards or product types determined by the department.

A "certified electrical product" is an electrical product to which a laboratory, accredited by the state of Washington, has the laboratory's certification mark attached.

A "certification mark" is a specified laboratory label, symbol, or other identifying mark that indicates the manufacturer produced the product in compliance with appropriate standards or that the product has been tested for specific end uses.

"Certificate of competency" includes the certificates of competency for master journey level electrician, master specialty electrician, journey level, and specialty electrician.

A laboratory "certification program" is a specified set of testing, inspection, and quality assurance procedures, including appropriate implementing authority, regulating the evaluation of electrical products for certification marking by an electrical products certification laboratory.

A "complete application" includes the submission of all appropriate fees, documentation, and forms.

"Chapter" means chapter 296-46B WAC unless expressly used for separate reference.

"Construction," for the purposes of chapter 19.28 RCW, means electrical construction.

"Coordination (selective)" as defined in NEC 100 must be determined and documented by a professional engineer registered under chapter 18.43 RCW.

"Department" means the department of labor and industries of the state of Washington.

"Director" means the director of the department, or the director's designee.

"Egress - Unobstructed (as applied to NEC 110.26 (C)(2)(a))" means an egress path that allows a worker to travel to the exit from any other area in the room containing the equipment described in NEC 110.26 (C)(2) without having to pass through that equipment's required working space.

"Electrical equipment" includes electrical conductors, conduit, raceway, apparatus, materials, components, and other electrical equipment not exempted by RCW 19.28.006(9). Any conduit/raceway of a type listed for electrical use is considered to be electrical equipment even if no wiring is installed in the conduit/raceway at the time of the conduit/raceway installation.

An "electrical products certification laboratory" is a laboratory or firm accredited by the state of Washington to perform certification of electrical products.

An "electrical products evaluation laboratory" is a laboratory or firm accredited by the state of Washington to perform on-site field evaluation of electrical products for safety.

"Field evaluated" means an electrical product to which a field evaluation mark is attached. Field evaluation must include job site inspection unless waived by the department, and may include component sampling and/or laboratory testing.

"Field evaluation mark" is a specified laboratory label, symbol, or other identifying mark indicating the manufacturer produced the product in essential compliance with appropriate standards or that the product has been evaluated for specific end uses.

A "field evaluation program" is a specified set of testing, inspection, and quality assurance procedures, including appropriate implementing authority regulating the testing and evaluation of electrical products for field evaluation marking.

The "filing" is the date the document is actually received in the office of the chief electrical inspector.

"Final judgment" means any money that is owed to the department under this chapter, including fees and penalties, or any money that is owed to the department as a result of an individual's or contractor's unsuccessful appeal of a citation.

"Fished wiring" is when cable or conduit is installed within the finished surfaces of an existing building or building structure (e.g., wall, floor or ceiling cavity).

"Household appliance" means utilization equipment installed in a dwelling unit that is built in standardized sizes or types and is installed or connected as a unit to perform one or more household functions such as food preparation, cooking, and cleaning. Includes appliances typically installed in a dwelling unit kitchen, clothes washing, drying, and water heating appliances, portable room air conditioning units and portable heaters, etc. Fixed electric space-heating equipment covered in NEC 424 (furnaces, baseboard and wall heaters, electric heat cable, etc.) and fixed air-conditioning/heat pump equipment (NEC 440) are not household appliances. Household appliance does not mean any utilization equipment that:

(a) Supplies electrical power, other than Class 2, to other utilization equipment; or

(b) Receives electrical power, other than Class 2, through other utilization equipment.

HVAC/refrigeration specific definitions:

(a) "HVAC/refrigeration" means heating, ventilation, air conditioning, and refrigeration.

(b) "HVAC/refrigeration component" means electrical power and limited energy components within the "HVAC/refrigeration system," including, but not limited to: Pumps, compressors, motors, heating coils, controls, switches, thermostats, humidistats, low-voltage damper controls, outdoor sensing controls, outside air dampers, stand-alone duct smoke detectors, air monitoring devices, zone control valves and equipment for monitoring of HVAC/refrigeration control panels and low-voltage connections. This definition excludes equipment and components of non-"HVAC/refrigeration control systems."

(c) "HVAC/refrigeration control panel" means an enclosed, manufactured assembly of electrical components designed specifically for the control of a HVAC/refrigeration system. Line voltage equipment that has low voltage, NEC Class 2 control or monitoring components incidental to the designed purpose of the equipment is not an HVAC/refrigeration control panel (e.g., combination starters).

(d) "HVAC/refrigeration control system" means a network system regulating and/or monitoring a HVAC/refrigeration system. Equipment of a HVAC/refrigeration control system includes, but is not limited to: Control panels, data centers, relays, contactors, sensors, and cables related to the monitoring and control of a HVAC/refrigeration system(s).

(e) "HVAC/refrigeration equipment" means the central unit primary to the function of the "HVAC/refrigeration system." HVAC/refrigeration includes, but is not limited to: Heat pumps, swamp coolers, furnaces, compressor packages, and boilers.

(f) "HVAC/refrigeration system" means a system of HVAC/refrigeration: Wiring, equipment, and components integrated to generate, deliver, or control heated, cooled, filtered, refrigerated, or conditioned air. This definition excludes non-HVAC/refrigeration control systems (e.g., fire alarm systems, intercom systems, building energy management systems, and similar non-HVAC/refrigeration systems).

"IBC" means the International Building Code. Copies of the IBC are available from the International Code Council.

An "individual" or "party" or "person" means an individual, firm, partnership, corporation, association, government subdivision or unit thereof, or other entity.

An "installation" includes the act of installing, connecting, repairing, modifying, or otherwise performing work on an electrical system, component, equipment, or wire except as exempted by WAC 296-46B-925. An installation is not the passive testing or operational programming of an electrical system, component, equipment, or wire. See "passive testing."

An "identification plate" is suitable for the environment and is a printed or etched adhesive label approved by the department or a phenolic or metallic plate or other similar material engraved in block letters at least 1/4 inch high unless specifically required to be larger by this chapter, suitable for the environment and application. The letters and the background must be in contrasting colors. Screws, rivets, permanent adhesive, or methods specifically described in this chapter must be used to affix an identification plate to the equipment or enclosure.

"Job site" means a specific worksite having a single address or specific physical location (e.g., a single-family residence, a building, a structure, a marina, an individual apartment building with a specific address, etc.).

"Journey level electrician" means a person who has been issued a journey level electrician certificate of competency by the department. The terms "journey level" and "journey person" in chapter 19.28 RCW are synonymous.

"Labeled" means an electrical product that bears a certification mark issued by a laboratory accredited by the state of Washington.

A "laboratory" may be either an electrical product(s) certification laboratory or an electrical product(s) evaluation laboratory.

A "laboratory operations control manual" is a document to establish laboratory operation procedures and may include a laboratory quality control manual.

"License" means a license required under chapter 19.28 RCW.

"Like-in-kind" means having the same overcurrent protection requirements and similar characteristics such as voltage requirement, current draw, short circuit characteristics, and function within the system and being in the same location. Like-in-kind also includes any equipment component authorized by the manufacturer as a suitable component replacement part.

For the purpose of WAC 296-46B-940, a "lineworker" is a person employed by a serving electrical utility or employed by a licensed general electrical contractor who carries, on their person, evidence that they:

(a) Have graduated from a department-approved lineworker's apprenticeship course; or

(b) Are currently registered in a department-approved lineworker's apprenticeship course and are working under the direct one hundred percent supervision of a journey level electrician or a graduate of a lineworker's apprenticeship course approved by the department. The training received in the lineworker's apprenticeship program must include training in applicable articles of the currently adopted National Electrical Code.

"Listed" means equipment has been listed and identified by a laboratory approved by the state of Washington for the appropriate equipment standard per this chapter.

"Low voltage" means:

(a) NEC, Class 1 power limited circuits at 30 volts maximum.

(b) NEC, Class 2 circuits powered by a Class 2 power supply as defined in NEC 725.121(A).

(c) NEC, Class 3 circuits powered by a Class 3 power supply as defined in NEC 725.121(A).

(d) Circuits of telecommunications systems as defined in chapter 19.28 RCW.

"Member of the firm" means the member(s) on file with the department of licensing for sole proprietorships/partnerships or with the secretary of state for corporations.

"Mezzanine" is the intermediate level or levels between the floor and ceiling of any story with an aggregate floor area of not more than one-third of the area of the room or space in which the level or levels are located. Also see "basement" and "story."

"NEC" means National Electrical Code. Copies of the NEC are available from the National Fire Protection Association.

"NEMA" means National Electrical Manufacturer's Association. Copies of NEMA standards are available from the National Electrical Manufacturer's Association.

"NESC" means National Electrical Safety Code. Copies of the NESC are available from the Institute of Electrical and Electronics Engineers, Inc.

"NETA" means International Electrical Testing Association, Inc. Copies of the NETA standards and information are available from the International Electrical Testing Association, Inc.

"NFPA" means the National Fire Protection Association. Copies of NFPA documents are available from the National Fire Protection Association.

"NRTL" means Nationally Recognized Testing Laboratory accredited by the federal Occupational Safety and Health Administration (OSHA) after meeting the requirements of 29 C.F.R. 1910.7.

A "new building" for the purposes of RCW 19.28.261 includes the setting of a manufactured, mobile, or modular building.

"Passive testing" (e.g., pressing of test buttons, use of testing equipment like voltage testers, clamp-on meters, removal of a device head where the wiring is terminated on a separate base plate, etc.) means testing that does not require any:

(a) Physical modification to the electrical system wiring; or

(b) Wiring to be disconnected or terminated, except as necessary for an approved electrical testing laboratory or approved engineer performing an equipment evaluation.

"Point of contact" or "point of connection" means the service point.

"Proceeding" means any matter regarding an appeal before the board including hearings before an administrative law judge.

"Public area or square" is an area where the public has general, clear, and unrestricted access.

A "quality control manual" is a document to maintain the quality control of the laboratory's method of operation. It consists of specified procedures and information for each test method responding to the requirements of the product standard. Specific information must be provided for portions of individual test methods when needed to comply

with the standard's criteria or otherwise support the laboratory's operation.

"RCW" means the Revised Code of Washington. Copies of electrical RCW are available from the department and the office of the code reviser.

"Readily accessible" means the definition as defined in NEC 100. In addition, it means that, except for keys, no tools or other devices are necessary to gain access (e.g., covers secured with screws, etc.).

"Service" or "served" means that as defined in RCW 34.05.010(19) when used in relation to department actions or proceedings.

A "sign," when required by the NEC, for use as an identification method (e.g., legibly marked, legible warning notice, marked, field marked, permanent plaque/directory, etc.) means "identification plate."

A "stand-alone amplified sound or public address system" is a system that has distinct wiring and equipment for audio signal generation, recording, processing, amplification, and reproduction. This definition does not apply to telecommunications installations.

"Story" is that portion of a building included between the upper surface of a floor and the upper surface of the floor or roof next above. Next above means vertically and not necessarily directly above. Also see "basement" and "mezzanine."

"Structure," for the purposes of this chapter and in addition to the definition in the NEC, means something constructed either in the field or factory that is used or intended for supporting or sheltering any use or occupancy as defined by the IBC.

"Supervision" for the purpose of supervising electrical trainees, means that the appropriately certified supervising electrician is on the same job site as the trainee being supervised. The trainee is not considered to be on the same job site if the supervising electrician and the trainee are working:

(a) In separate buildings at a single address (e.g., a campus, multibuilding industrial complex, multibuilding apartment complex, etc.) except for a single-family residence; or

(b) On an outdoor project (e.g., irrigation system, farm, street lighting, traffic signalization, etc.) where the trainee is more than 1000 feet from the supervising electrician or where the trainee is more than 200 feet from the supervising electrician and out of sight.

"System design review" means a set of design documents that include the manufacturer's installation information, a legible one-line diagram of the system design, and calculations used to determine voltage and current within the system. The one-line diagram must show the system equipment, devices, overcurrent protection, conductor sizing, grounding, ground fault protection if required, and any system interconnection points. The review must be available to the inspector during all inspections.

A "telecommunications local service provider" is a regulated or unregulated (e.g., by the Federal Communications Commission or the utilities and transportation commission as a telephone or telecommunications provider) firm providing telecommunications service ahead of the telecommunications network demarcation point to an end-user's facilities.

"TIA/EIA" means the Telecommunications Industries Association/Electronic Industries Association which publishes the TIA/EIA Telecommunications Building Wiring Standards. Standards and publications are adopted by TIA/EIA in accordance with the American National Standards Institute (ANSI) patent policy.

A "training school" is a Washington public community or technical college or not-for-profit nationally accredited technical or trade school licensed by the work force training and education coordinating board under chapter 28C.10 RCW.

"Under the control of a utility" for the purposes of RCW 19.28.091 and 19.28.101 is when electrical equipment is not owned by a utility and:

(a) Is located in a vault, room, closet, or similar enclosure that is secured by a lock or seal so that access is restricted to the utility's personnel; or

(b) The utility is obligated by contract to maintain the equipment and the contract provides that access to the equipment is restricted to the utility's personnel or other qualified personnel.

"UL" means Underwriters Laboratory.

"Utility" means an electrical utility.

"Utility system" means electrical equipment owned by or under the control of a serving utility that is used for the transmission or distribution of electricity from the source of supply to the point of contact and is defined in section 90.2 (b) (5) of the National Electrical Code, 1981 edition (see RCW 19.28.010(1)).

"Utilization voltage" means the voltage level employed by the utility's customer for connection to lighting fixtures, motors, heaters, or other electrically operated equipment other than power transformers.

"Variance" is a modification of the electrical requirements as adopted in chapter 19.28 RCW or any other requirements of this chapter that may be approved by the chief electrical inspector if assured that equivalent objectives can be achieved by establishing and maintaining effective safety.

"WAC" means the Washington Administrative Code. Copies of this chapter of the WAC are available from the department and the office of the code reviser.

AMENDATORY SECTION (Amending WSR 17-12-021, filed 5/30/17, effective 7/1/17)

WAC 296-46B-110 General—Requirements for electrical installations.

003 Examination, identification, installation, and use of equipment.

(1) Listed electrical conduit can only be installed and used in accordance with its listing (i.e., as an electrical raceway for electrical conductors). If used as a sleeve for electrical conductors or other listed electrical conduits, the installation of a listed electrical conduit will be assumed to be for use as an electrical raceway and must be installed as allowed by chapter 19.28 RCW and this chapter (e.g., owner exemption, electrical contractor, etc.).

EXCEPTION: Electrical nonmetallic elbow fittings may be connected to piping other than electrical conduit for the purposes of enclosing mechanical piping systems provided the elbows are distinctively marked to indicate their use as nonelectrical fittings prior to installation. For underground installations outside of buildings, elbows used for purposes other than electrical must be substantially painted to match the color of piping to which they are connected.

011 Deteriorating agents.

(2) Electrical equipment and wiring that has been submerged or exposed to water must comply with the following:

(a) All breakers, fuses, controllers, receptacles, lighting switches/dimmers, electric heaters, and any sealed device/equipment (e.g., relays, contactors, etc.) must be replaced.

(b) All other electrical equipment (e.g., wiring, breaker panelboards, disconnect switches, switchgear, motor control centers, boiler controls, HVAC/R equipment, electric motors, transformers, appliances, water heaters, and similar appliances) must be replaced or reconditioned by the original manufacturer or by its approved representative.

022 Identification of disconnecting means.

(3) For the purposes of legibly marking a disconnecting means, as required in NEC 110.22, an identification plate is required unless the disconnect is a circuit breaker/fused switch installed within a panelboard and the circuit breaker/fused switch is identified by a panelboard schedule. In other than dwelling units, the identification plate must include the identification designation of the circuit source panelboard that supplies the disconnecting means.

030 Over 1000 volts - General.

(4) Each cable operating at over 1000 volts and installed on customer-owned systems must be legibly marked in a permanent manner at each termination point and at each point the cable is accessible. The required marking must use phase designation, operating voltage, and circuit number if applicable.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-210 Wiring and protection—Branch circuits.

008(A) Dwelling units GFCI requirements.

(1) In a garage or unfinished basement, a red receptacle, with a red cover plate, supplying a fire alarm system is not required to have ground-fault circuit-interrupter protection. The receptacle must be identified for use only with the fire alarm system by an identification plate or engraved cover with letters at least 1/4 inch high.

(2) All fixed electrical equipment with exposed grounded metal parts within an enclosed shower area or within 5 feet of the top inside edge of a bathtub must have ground fault circuit interrupter protection.

008(B) Other than dwelling units - GFCI requirements.

(3) GFCI requirements. GFCI protection for personnel will not be required for:

(a) Three-phase receptacles unless specifically required elsewhere in the NEC; or

(b) Receptacles other than 125-volt, single phase, 15- or 20-ampere used for: Recreational vehicle supply equipment or for attachment of a mobile home supply cord (~~other than 125-volt, single phase, 15- or 20-ampere receptacles~~).

For the purposes of NEC 210.8(B), kitchen means any area where utensils, dishes, etc., are cleaned or where food or beverages are prepared or cooked.

011 Branch circuits.

(4) A raceway system or one dedicated 15-ampere minimum, 120 volt circuit must be taken to all unfinished space areas adaptable to future dwelling unit living areas that are not readily accessible to the

service or branch circuit panelboard. One circuit or raceway is required for each 480 square feet or less of unfinished space area. If the total adjacent unfinished space area is less than 480 square feet, the circuit can be an extension of an existing circuit. The circuits must terminate in a suitable box(es). The box must contain an identification of the intended purpose of the circuit(s). The branch circuit panelboard must have adequate space and capacity for the intended load(s).

013 Ground fault protection of equipment.

(5) Equipment ground fault protection systems required by the NEC must be tested prior to being placed into service to verify proper installation and operation of the system as determined by the manufacturer's published instructions. A firm having qualified personnel and proper equipment must perform the tests required. A copy of the manufacturer's performance testing instructions and a written performance acceptance test record signed by the person performing the test must be available at the time of inspection. The performance acceptance test record must include test details including, but not limited to, all trip settings and measurements taken during the test.

025 Common area branch circuits.

(6) For the purpose of NEC 210.25, loads for septic or water well systems that are shared by no more than two dwelling units may be supplied from either of the two dwelling units if approved by the local building official and local health department.

052 (A) (2) Dwelling unit receptacle outlets.

(7) For the purpose of NEC 210.52 (A)(2)(1), "similar openings" include the following configurations that are a permanent part of the dwelling configuration or finish:

(a) Window seating; and

(b) Bookcases or cabinets that extend from the floor to a level at least 5 feet 6 inches above the floor.

Any outlets eliminated by such window seating, bookcases, or cabinets must be installed elsewhere within the room.

~~(052(C) Countertops.~~

~~(8) A receptacle in a wall countertop space shall be permitted to serve as the receptacle for a peninsular countertop space where the spaces are contiguous and the receptacle is located within 8 feet of the outside edge of the peninsular countertop.)~~

AMENDATORY SECTION (Amending WSR 17-12-021, filed 5/30/17, effective 7/1/17)

WAC 296-46B-220 Wiring and protection—Branch circuit, feeder, and service calculations.

012 Lighting load calculations.

In determining feeder and service entrance conductor sizes and equipment ratings, a building that is designed and constructed to comply with the currently adopted Washington state energy code unit lighting power allowance table and footnotes may be used in lieu of NEC 220.12. The requirements of NEC 220.12 (~~Exception No. 1~~) (B), items 1, 2, and 3 do not apply.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-225 Wiring and protection—Outside branch circuits and feeders.

019 Clearances from buildings for conductors.

(1) Add the following exception to NEC 225.19(A): Where the voltage between conductors does not exceed 300 and the roof area is guarded or isolated, a reduction in clearance to 3 feet shall be permitted.

~~((030 Number of supplies.~~

~~(2) For the purposes of NEC 225.30(A) and this section, a building/structure that is supplied from a remote service, may be supplied by no more than six feeders originating from the service equipment and with each feeder terminating in a single disconnecting means at the building/structure. The service equipment must contain overcurrent protection appropriate to each feeder. The building disconnecting means required by NEC 225.32 must be grouped, within sight, and all be within 10' of each other.)~~

032 Location of outside feeder disconnecting means.

~~((+3))~~ (2) The disconnecting means required by NEC 225.32 must be provided to disconnect all ungrounded conductors that supply or pass through a building/structure in accordance with the requirements of NEC 225.32 with the following exceptions.

(a) Outside location: A feeder disconnecting means, including that required by NEC 700, 701, or 702 for a generator, is considered in the building if installed on the outside of the building/structure or within sight and within fifteen feet of the building/structure. The building disconnecting means may supply only one building/structure unless the secondary building(s)/structure(s) has a separate building disconnecting means meeting the requirements of the NEC and this subsection. The disconnecting means must have an identification plate with at least one-half-inch high letters identifying:

- (i) The building/structure served; and
- (ii) Its function as the building/structure main disconnect(s).

(b) Inside location: The feeder disconnecting means may be installed anywhere inside a building or structure when there is a feeder disconnecting means, located elsewhere on the premises, with overcurrent protection sized for the feeder conductors.

036 Suitable for use as service equipment.

~~((+4))~~ (3) A generator disconnecting means installed per subsection ~~((+3))~~ (2)(a) or (b) of this section, is not required to be suitable for use as service equipment.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-250 Wiring and protection—Grounding and bonding.

028 (D)(3) Separately derived system with more than one enclosure.

(1) NEC 250.28 (D)(3) is amended to read: Where a separately derived system supplies more than a single enclosure, the system bonding jumper for each enclosure shall be sized in accordance with 250.28 (D)(1) based on the largest ungrounded feeder/tap conductor serving that enclosure, or a single system bonding jumper shall be installed at the source and sized in accordance with 250.28 (D)(1) based on the equivalent size of the largest supply conductor determined by the largest sum of the areas of the corresponding conductors of each set.

052 Grounding electrodes.

(2) Except for mobile/manufactured homes, a concrete encased grounding electrode must be installed and used at each new building or structure that is built upon a permanent concrete foundation. The electrode must comply, with NEC 250.52 (A)(3). Inspection of the electrode may be accomplished by the following methods:

(a) At the time of inspection of other work on the project, providing the concrete encased electrode is accessible for a visual inspection;

(b) At the time of the service inspection providing the installer has provided a method so the inspector can verify the continuity of the electrode conductor along its entire length, with a minimum 20 foot linear span between testing points (e.g., attaching a length of copper wire to one end of the electrode that reaches the location of the grounding electrode conductor that will enable the inspector to measure the resistance with a standard resistance tester). The concrete encased electrode does not have to be accessible for a visual inspection; or

(c) Other method when prior approval, on a job site basis, is given by the inspector.

If a special inspection trip is required to inspect a grounding electrode conductor, a trip fee will be charged for that inspection in addition to the normal permit fee.

Exception: If the concrete encased grounding electrode is not available for connection, a ground ring must be installed per NEC 250 or other grounding electrode installed per NEC 250 verified to measure 25 ohms or less to ground. Resistance verification testing must be performed by an independent firm having qualified personnel and proper equipment. A copy of the testing procedures used and a written resistance test record signed by the person performing the test must be available at the time of inspection. The resistance test record must include test details including, but not limited to, the type of test equipment used, the last calibration date of the test equipment, and all measurements taken during the test.

053 (A) (2) Resistance of rod, pipe, and plate electrodes.

(3) For rod, pipe, and plate electrodes other than those installed in accordance with the exception in subsection (2) of this section, if a ground resistance test is not performed to ensure a resistance to ground of 25 ohms or less, two or more electrodes as specified in NEC 250.52 must be installed a minimum of 6 feet apart. A temporary construction service is not required to have more than one made electrode.

(4) For services only, when multiple buildings or structures are located adjacent, but structurally separate from each other, any installed rod, pipe, or plate electrodes used for those services must be installed so that each building's or structure's electrodes are not less than 6 feet apart from the adjacent building's or structure's electrodes.

064 Grounding electrode conductor installation - Physical protection.

(5) Grounding electrode conductors will be considered to be not exposed to physical damage when the conductor(s) are:

(a) Buried more than 12 inches deep in the earth outside the building's footprint;

(b) Encased or covered by 2 inches of concrete or asphalt;

(c) Located inside the building footprint and protected by the building's structural elements or when inside and determined, by the inspector, to not be subject to physical damage; or

(d) Enclosed by a metal or nonmetallic raceway or enclosure. The raceway or enclosure must be approved to protect from severe physical damage if it is not protected by appropriate physical barriers from contact with vehicles, lawn mowers, and other equipment that might damage the conductor or enclosure.

068 Accessibility.

(6) The termination point of a grounding electrode conductor tap to the grounding electrode conductor must be accessible unless the connection is made using an exothermic or irreversible compression connection.

090 Bonding.

(7) Metallic stubs or valves used in nonmetallic plumbing systems are not required to be bonded to the electrical system unless required by an electrical equipment manufacturer's instructions.

(8) Hot and cold water plumbing lines are not required to be bonded together if, at the time of inspection, the inspector can determine the lines are mechanically and electrically joined by one or more metallic mixing valves.

104(B) Bonding - Other metal piping.

(9) For flexible metal gas piping, installed new or extended from an existing rigid metal piping system, either:

(a) Provide a copy of the manufacturer's bonding instructions to the inspector at the time of inspection and follow those instructions; or

(b) The bonding conductor for the gas system must:

(i) Be a minimum 6 AWG copper; and

(ii) Terminate at:

(A) An accessible location at the gas meter end of the gas piping system on either a solid iron gas pipe or a cast flexible gas piping fitting using a listed grounding connector; and

(B) Either the service equipment enclosure, service grounding electrode conductor or electrode, or neutral conductor bus in the service enclosure.

184 Solidly grounded neutral systems over 1000 volts.

(10) In addition to the requirements of NEC 250.184(A), the following applies for:

(a) Existing installations.

(i) The use of a concentric shield will be allowed for use as a neutral conductor for extension, replacement, or repair, if all of the following are complied with:

(A) The existing system uses the concentric shield as a neutral conductor;

(B) Each individual conductor contains a separate concentric shield sized to no less than thirty-three and one-half percent of the ampacity of the phase conductor for three-phase systems or one hundred percent of the ampacity of the phase conductor for single-phase systems;

(C) The new or replacement cable's concentric shield is enclosed inside an outer insulating jacket; and

(D) Existing cable (i.e., existing cable installed directly in the circuit between the work and the circuit's overcurrent device) successfully passes the following tests:

- A cable maintenance high potential dielectric test. The test must be performed in accordance with the cable manufacturer's instruction or the ((2011)) 2019 ANSI/NETA maintenance test specifications; and
- A resistance test of the cable shield. Resistance must be based on the type, size, and length of the conductor used as the cable shield using the conductor properties described in NEC Table 8 Conductor Properties.

An electrical engineer must provide a specific certification to the electrical plan review supervisor in writing that the test results of the maintenance high potential dielectric test and the resistance test have been reviewed by the electrical engineer and that the cable shield is appropriate for the installation. The electrical engineer must stamp the certification document with the engineer's stamp and signature. The document may be in the form of a letter or electrical plans.

Testing results are valid for a period of seven years from the date of testing. Cable will not be required to be tested at a shorter interval.

(ii) A concentric shield used as a neutral conductor in a multi-grounded system fulfills the requirements of an equipment grounding conductor.

(b) New installations.

(i) New installations do not include extensions of existing circuits.

(ii) The use of the concentric shield will not be allowed for use as a neutral conductor for new installations. A listed separate neutral conductor meeting the requirements of NEC 250.184(A) must be installed.

AMENDATORY SECTION (Amending WSR 17-12-021, filed 5/30/17, effective 7/1/17)

WAC 296-46B-334 Wiring methods and materials—Nonmetallic-sheathed cable.

010 Nonmetallic-sheathed cable.

(1) The building classification, for subsections (2), (3), and (4) of this section, will be as determined by the building official. For the purposes of this section, Type III, IV-HT and V may be as defined in the International Building Code adopted in the state of Washington. The installer must provide the inspector documentation substantiating the type of building construction and finish material rating(s) prior to any electrical inspection.

(2) This section replaces NEC 334.10(2). In multifamily dwellings, Type NM, Type NMC, and Type NMS cable(s) may be used in structures of Types III, IV-HT, and V construction except as prohibited in NEC 334.12.

(3) This section replaces NEC 334.10(3). In all other structures, Type NM, Type NMC, and Type NMS cable(s) may be used in structures of Types III, IV-HT, and V construction except as prohibited in NEC 334.12. All cable(s) must be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a

15-minute finish rating as identified in listings of fire-rated assemblies.

(4) This section replaces NEC 334.10(4). Cable trays in structures of Types III, IV-HT, and V construction, where the cable(s) is identified for the use, except as prohibited in NEC 334.12.

015 Exposed work.

(5) Where Type NMC cable is installed in shallow chases in plaster, masonry, concrete, adobe or similar material, the cable must be protected against nails or screws by:

(a) A steel plate at least 1/16 inch thick and covered with plaster, adobe, or similar finish; or

(b) Being recessed in a chase at least 2 3/4 inches deep, as measured from the finished surface, and covered with plaster, adobe, or similar finish. The cable(s) must be at least 2 1/2 inches from the finished surface.

(6) The requirements for nonmetallic sheathed cable protection in NEC 334.15(C) do not apply in crawl spaces.

AMENDATORY SECTION (Amending WSR 18-11-115, filed 5/22/18, effective 7/1/18)

WAC 296-46B-555 Special occupancies—Marinas, boatyards, floating buildings, and commercial and noncommercial docking facilities.

~~(1) ((Until September 1, 2019, the ground-fault protection level specified in 2017 NEC 555.3 is amended to allow a maximum of: 100 mA for overcurrent devices supplying feeder conductors not supplying primary windings of transformers; and 30 mA for overcurrent devices supplying branch circuit conductors, outlets, and feeder conductors supplying primary windings of transformers. On September 1, 2019, ground-fault protection for marinas, boatyards, and commercial and noncommercial docking facilities will be as published in the 2020 NEC.~~

~~((2))~~ (2) For the purposes of NEC ~~((555.5))~~ 555.7, transformer terminations must be located a minimum of 12 inches above the deck of a dock (datum plane requirements do not apply for this section).

~~((3))~~ (2) For the purposes of NEC ~~((555.7))~~ 555.4, adjacent means within sight.

~~((4))~~ (3) For the purposes of NEC ~~((555.9))~~ 555.30, all electrical connections must be installed a minimum of 12 inches above the deck of a pier unless the connections are ~~((approved for wet locations))~~ within junction boxes identified for wet locations, utilizing sealed wire connector systems listed and identified for submersion (datum plane requirements do not apply for this section).

~~((5))~~ (4) For the purposes of NEC ~~((555.10))~~ 555.31, all enclosures must be corrosion resistant. All gasketed enclosures must be arranged with a weep hole to discharge condensation.

~~((6))~~ (5) For the purposes of NEC ~~((555.11))~~ 555.32, gasketed enclosures are only required for wet locations.

~~((7))~~ (6) For the purposes of NEC ~~((555.13))~~ 555.34, the following wiring methods are allowed:

(a) All wiring installed in a damp or wet location must be suitable for wet locations.

(b) Extra-hard usage portable power cables rated not less than 75°C, 600 volts, listed for wet locations and sunlight resistance and

having an outer jacket rated for the environment are permitted. Portable power cables are permitted as a permanent wiring method under or within docks and piers or where provided with physical protection. The requirements of NEC (~~555.13 (B)(4)(b)~~) 555.34 (B)(3)(b) do not apply.

(c) Overhead wiring must be installed at the perimeter of areas where boats are moored, stored, moved, or serviced to avoid possible contact with masts and other parts of boats. NEC Article 398 open wiring on insulators is not an approved wiring method in or above any portion of a marina or docking facility.

(d) For the purposes of NEC (~~555.13 (B)(5)~~) 555.34 (B)(4), the wiring methods of Chapter 3 NEC will be permitted.

(~~(8)~~) (7) For the purposes of NEC (~~555.19~~) 555.33, receptacles must be mounted not less than 12 inches above the deck surface of the pier or dock (datum plane requirements do not apply for this section). Shore power receptacles that provide shore power for boats must be rated not less than 20 amperes and must be single outlet type and must be of the locking and grounding type or pin and sleeve type.

Floating buildings.

(8) Where shore power is provided, a disconnecting means must be located within sight of each floating building or similar facility. The disconnecting means must be installed adjacent to but not in or on the floating building or similar facility.

(9) NEC 555.53 is amended to read: The overcurrent protective device(s) that supply the floating building shall have ground-fault protection not exceeding 30 mA.

(10) Conductors operating in excess of 600 volts, nominal may not be installed on floating portions of a floating building or similar facility.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-705 Interconnected electric power production sources. (1) For utility interactive systems, any person making interconnections between a power production source and the utility distribution network must consult the serving utility and is required to meet all additional utility standards.

~~((031 Location of overcurrent protection.))~~ **011 Supply side source connections.**

(2) In addition to the requirements of NEC (~~(705.31)~~) 705.11, electric power production source conductors connected to the supply side of the service disconnecting means must be installed using wiring methods specified for service conductors in WAC 296-46B-230(7). The disconnecting means providing overcurrent protection for the electric power production source conductors must comply with NEC 230.82(6). This disconnect is not required to be grouped with the service disconnecting means for the building or structure. Grounding and bonding must be in accordance with (~~all applicable requirements for an additional service disconnect~~) NEC 250.25.

WAC 296-46B-901 General—Electrical work permits and fees.

General.

(1) When an electrical work permit is required by chapter 19.28 RCW or this chapter, inspections may not be made, equipment must not be energized, or services connected unless:

(a) A valid electrical work permit is obtained and posted per subsection (5) of this section;

(b) The classification or type of facility to be inspected and the exact scope and location of the electrical work to be performed are clearly shown on the electrical work permit;

(c) The address where the inspection is to be made is clearly identifiable from the street, road or highway that serves the premises; and

(d) Driving directions are provided for the inspectors' use.

(2) Except as allowed for annual permits and two-family dwellings, an electrical work permit is valid for only one specific job site address.

Permit - Responsibility for.

(3) Each person, firm, partnership, corporation, or other entity must furnish a valid electrical work permit for the installation, alteration, or other electrical work performed or to be performed solely by that entity. When the original purchaser is replaced, another entity may request, in writing, written approval from the chief electrical inspector to take responsibility for the work of the original installing entity under the original permit. If permission is not granted the entity must obtain a new permit for the remaining work.

Two or more entities may never work under the same permit. Each electrical work permit application must be signed by the electrical contractor's administrator (or designee) or the person, or authorized representative of the firm, partnership, corporation, or other entity that is performing the electrical installation or alteration. Permits purchased electronically do not require a handwritten signature. An entity designated to sign electrical permits must provide written authorization of the purchaser's designation when requested by the department or city that is authorized to do electrical inspections.

(4) Permits to be obtained by customers. Whenever a serving electrical utility performs work for a customer under one of the exemptions in WAC 296-46B-925 and the work is subject to inspection, the customer is responsible for obtaining all required permits.

(5) Except as allowed for Class B permits, where an electrical work permit is required, the work permit must be obtained and posted at the job site or the electrical work permit number must be conspicuously posted and identified as the electrical work permit number on or adjacent to the electrical service or feeder panel supplying power to the work prior to beginning any electrical work and at all times until the electrical inspection process is completed.

Exceptions:

(a) For an owner, an electrical work permit for emergency like-in-kind repairs to an existing electrical system(s) must be obtained no later than the next business day after the work is begun.

(b) For an electrical contractor, in a city's jurisdiction where the city is authorized to do electrical inspections and does not have

a provisional permit system, an electrical work permit for emergency like-in-kind repairs to an existing electrical system(s) must be obtained and posted, per the city's requirements at the job site no later than the next business day after the work is begun.

(6) Fees must be paid in accordance with the inspection fee schedule in Part C of this chapter. The amount of the fee due is calculated based on the fee effective at the date payment is made. If the project is required to have an electrical plan review, the plan review fees will be based on the fees effective at the date the plans are received by the department for review. In a city where the department is doing inspections as the city's contractor, a supplemental fee may apply.

Permit - Requirements for.

(7) As required by chapter 19.28 RCW or this chapter, an electrical work permit is required for the installation, alteration, or maintenance of all electrical systems or equipment except for:

(a) Travel trailers;

(b) Class A basic electrical work which includes:

(i) The **like-in-kind replacement** of lamps; a single set of fuses; a single battery smaller than 150 amp hour; contactors, relays, timers, starters, circuit boards, or similar control components; one household appliance; circuit breakers; single-family residential luminaires and line voltage smoke or carbon monoxide alarms; a maximum of five snap switches, dimmers, receptacle outlets, thermostats, heating elements, luminaire ballasts or drivers/power supplies for single LED luminaires with an exact same ballast or driver/power supply; component(s) of electric signs, outline lighting, or skeleton neon tubing when replaced on-site by an appropriate electrical contractor and when the sign, outline lighting or skeleton neon tubing electrical system is not modified; one ten horsepower or smaller motor.

For the purposes of this section, "circuit breaker" means a circuit breaker that is used to provide overcurrent protection only for a branch circuit, as defined in NEC 100.

(ii) Induction detection loops described in WAC 296-46B-300(2) and used to control gate access devices;

(iii) Heat cable repair; and

(iv) Embedding premanufactured heat mats in tile grout where the mat is listed by an approved testing laboratory and comes from the manufacturer with preconnected lead-in conductors. All listing marks and lead-in conductor labels must be left intact and visible for evaluation and inspection by the installing electrician and the electrical inspector.

(v) The disconnection of electrical circuits from their overcurrent protection device for the specific purpose of removing the electrical wiring or equipment for disposal.

Unless specifically noted, the exemptions listed do not include: The replacement of an equipment unit, assembly, or enclosure that contains an exempted component or combination of components (e.g., an electrical furnace/heat pump, industrial milling machine, etc.) or any appliance/equipment described in this section for Class B permits.

In the department's jurisdiction, a provisional electrical work permit label may be posted in lieu of an electrical work permit. If a provisional electrical work permit label is used, an electrical work permit must be obtained within two working days after posting the provisional electrical work permit label. See WAC 296-46B-907(2) for provisional label requirements.

(c) The following types of systems and circuits are considered exempt from the requirements for licensing and permitting described in chapter 19.28 RCW. The electrical failure of these systems does not inherently or functionally compromise safety to life or property.

(i) Low-voltage thermocouple derived circuits;

(ii) Low-voltage circuits for residential: Garage doors and built-in vacuum systems;

(iii) Low-voltage circuits for underground: Landscape sprinkler systems, landscape lighting, and antennas for wireless animal containment fences.

For these types of systems and circuits to be considered exempt, the following conditions must be met:

(A) The power supplying the installation must be derived from a listed Class 2 power supply;

(B) The installation and termination of line voltage equipment and conductors supplying these systems is performed by appropriately licensed and certified electrical contractors and electricians;

(C) The conductors of these systems do not pass through fire-rated walls, fire-rated ceilings or fire-rated floors in other than residential units; and

(D) Conductors or luminaires are not installed in installations covered by the scope of Article 680 NEC (swimming pools, fountains, and similar installations).

(8) An electrical work permit is required for all installations of telecommunications systems on the customer side of the network demarcation point for projects greater than ten telecommunications outlets. All backbone installations regardless of size and all telecommunications cable or equipment installations involving penetrations of fire barriers or passing through hazardous locations require permits and inspections. For the purposes of determining the inspection threshold for telecommunications projects greater than ten outlets, the following will apply:

(a) An outlet is the combination of jacks and mounting hardware for those jacks, along with the associated cable and telecommunications closet terminations, that serve one workstation. In counting outlets to determine the inspection threshold, one outlet must not be associated with more than six standard four-pair cables or more than one twenty-five-pair cable. Therefore, installations of greater than sixty standard four-pair cables or ten standard twenty-five-pair cables require permits and inspections. (It is not the intent of the statute to allow large masses of cables to be run to workstations or spaces serving telecommunications equipment without inspection. Proper cable support and proper loading of building structural elements are safety concerns. When considering total associated cables, the telecommunications availability at one workstation may count as more than one outlet.)

(b) The installation of greater than ten outlets and the associated cables along any horizontal pathway from a telecommunications closet to work areas during any continuous ninety-day period requires a permit and inspection.

(c) All telecommunications installations within the residential dwelling units of single-family, duplex, and multifamily dwellings do not require permits or inspections. In residential multifamily dwellings, permits and inspections are required for all backbone installations, all fire barrier penetrations, and installations of greater than ten outlets in common areas.

(d) No permits or inspections are required for installation or replacement of cord and plug connected telecommunications equipment or for patch cord and jumper cross-connected equipment.

(e) Definitions of telecommunications technical terms will come from chapter 19.28 RCW, this chapter, TIA/EIA standards, and NEC.

Inspection and approval.

(9) Requests for inspections.

(a) Requests for inspections must be made no later than three working days after an entity completes its electrical/telecommunications installation or one working day after any part of the installation has been energized, whichever occurs first.

(b) Requests for after hours, weekend inspections, or temporary installations that will be energized for less than 48 hours must be made by contacting the local electrical inspection supervisor at least three working days prior to the requested date of inspection. The portal-to-portal inspection fees required for after hours or weekend inspections are in addition to the cost of the original electrical work permit.

(c) Inspections for annual electrical maintenance permits and annual telecommunications permits may be done on a regular schedule arranged by the permit holder with the department.

(10) Inspections will not be made until all permit fees are paid in full.

Permit - Duration/refunds.

(11) Electrical work permits will expire one year after the date of purchase unless permission is granted by the chief electrical inspector or when the permit is closed or completed by the inspector. Refunds are not available for:

(a) Expired electrical work permits;

(b) Electrical work permit fee items, within the department's jurisdiction, where the electrical installation has begun or an inspection requested for that work; or

(c) The first twenty-five dollars of each permit purchase - Application fee.

All refund requests must be made using the Request for Refund application form.

Permit - Annual telecommunications.

(12) The chief electrical inspector or city that is authorized to do electrical inspections can allow annual permits for the inspection of telecommunications installations to be purchased by a building owner or licensed electrical/telecommunications contractor. The owner's full-time telecommunications maintenance staff, or a licensed electrical/telecommunications contractor(s) can perform the work done under this annual permit. The permit holder is responsible for correcting all installation deficiencies. The permit holder must make available, to the electrical inspector, all records of all the telecommunications work performed and the valid electrical or telecommunications contractor's license numbers for all contractors working under the permit. Upon request, the chief electrical inspector may allow the annual permit to be used for multiple worksites or addresses.

Permit - Annual electrical.

(13) The chief electrical inspector or city that is authorized to do electrical inspections can allow annual permits for the inspection of electrical installations to be purchased by a building owner or licensed electrical contractor. This type of permit is available for commercial/industrial locations employing a full-time electrical maintenance staff or having a yearly maintenance contract with a licensed

electrical contractor. Upon request, the chief electrical inspector may allow the annual permit to be used for multiple worksites or addresses.

The permit holder is responsible for correcting all installation deficiencies. The permit holder must make available, to the electrical inspector, all records of all electrical work performed.

This type of electrical permit may be used for retrofit, replacement, maintenance, repair, upgrade, and alterations to electrical systems at a plant or building location. This type of permit does not include new or increased service or new square footage.

Permit - Temporary construction project installations.

(14) For temporary electrical installations, the department will consider a permit applicant to be the owner per RCW 19.28.261 under the conditions below:

Any person, firm, partnership, corporation, or other entity registered as a general contractor under chapter 18.27 RCW will be permitted to install a single electrical service per address for the purposes of temporary power during the construction phase of a project, when all of the following conditions are met:

(a) The installation is limited to the mounting and bracing of a preassembled pole or pedestal mounted service, the installation of a ground rod or ground plate, and the connection of the grounding electrode conductor to the ground rod or plate;

(b) The total service size does not exceed 200 amperes, 250 volts nominal;

(c) The service supplies no feeders;

(d) Branch circuits not exceeding 50 amperes each are permitted, provided such branch circuits supply only receptacles that are either part of the service equipment or are mounted on the same pole;

(e) The general contractor owns the electrical equipment;

(f) The general contractor has been hired by the property owner as the general contractor for the project;

(g) The general contractor must purchase an electrical work permit for the temporary service, request inspection, and obtain approval prior to energizing the service.

Posting of corrections.

(15) Electrical installations found to be not in compliance with approved standards must be corrected within fifteen calendar days of notification by the department as required in RCW 19.28.101(3). The notifications will be posted electronically on the electrical permit inspection results. A printed copy of the correction notification will be posted by the inspector at the job site for permits not purchased electronically.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-906 Inspection fees. To calculate inspection fees, the amperage is based on the conductor ampacity or the overcurrent device rating. The total fee must not be less than the number of progress inspection (one-half hour) units times the progress inspection fee rate from subsection (8) of this section, PROGRESS INSPECTIONS.

The amount of the fee due is calculated based on the fee effective at the date of a department assessed fee (e.g., plan review or fee due) or when the electrical permit is purchased.

(1) Residential.

(a) Single- and two-family residential (New Construction).

Notes:

- (1) Square footage is the area included within the surrounding exterior walls of a building exclusive of any interior courts. (This includes any floor area in an attached garage, basement, or unfinished living space.)
- (2) "Inspected with the service" means that a separate service inspection fee is included on the same electrical work permit.
- (3) "Inspected at the same time" means all wiring is to be ready for inspection during the initial inspection trip.
- (4) An "outbuilding" is a structure that serves a direct accessory function to the residence, such as a pump house or storage building. Outbuilding does not include buildings used for commercial type occupancies or additional dwelling occupancies.

| | |
|----------------------------------------------------------------------------------------------------------|---------|
| (i) First 1300 sq. ft. | \$94.20 |
| Each additional 500 sq. ft. or portion of | \$30.10 |
| (ii) Each outbuilding or detached garage - Inspected at the same time as a dwelling unit on the property | \$39.20 |
| (iii) Each outbuilding or detached garage - Inspected separately | \$62.00 |
| (iv) Each swimming pool - Inspected with the service | \$62.00 |
| (v) Each swimming pool - Inspected separately | \$94.20 |
| (vi) Each hot tub, spa, or sauna - Inspected with the service | \$39.20 |
| (vii) Each hot tub, spa, or sauna - Inspected separately | \$62.00 |
| (viii) Each septic pumping system - Inspected with the service | \$39.20 |
| (ix) Each septic pumping system - Inspected separately | \$62.00 |

(b) Multifamily residential and miscellaneous residential structures, services and feeders (New Construction).

Each service and/or feeder

| Ampacity | Service/Feeder | Additional Feeder |
|--------------|----------------|-------------------|
| 0 to 200 | \$101.60 | \$30.10 |
| 201 to 400 | \$126.30 | \$62.00 |
| 401 to 600 | \$173.50 | \$86.30 |
| 601 to 800 | \$222.70 | \$118.60 |
| 801 and over | \$317.60 | \$238.20 |

(c) Single or multifamily altered services or feeders including circuits.

(i) Each altered service and/or altered feeder

| Ampacity | Service/Feeder |
|--------------|----------------|
| 0 to 200 | \$86.30 |
| 201 to 600 | \$126.30 |
| 601 and over | \$190.40 |

(ii) Maintenance or repair of a meter or mast (no alterations to the service or feeder) \$46.70

(d) Single or multifamily residential circuits only (no service inspection).

Note:

Altered or added circuit fees are calculated per panelboard. Total cost of the alterations in an individual panel should not exceed the cost of a complete altered service or feeder of the same rating, as shown in subsection (1) RESIDENTIAL (c) (table) of this section.

| | |
|-----------------------------------------------|---------|
| (i) 1 to 4 circuits (see note above) | \$62.00 |
| (ii) Each additional circuit (see note above) | \$6.60 |

(e) Mobile homes and modular homes.

| | |
|--------------------------------------------------------|----------|
| (i) Mobile home or modular home service or feeder only | \$62.00 |
| (ii) Mobile home service and feeder | \$101.60 |

(f) Mobile home park sites and RV park sites.

Note:

For master service installations, see subsection (2) COMMERCIAL/INDUSTRIAL of this section.

- (i) First site service or site feeder \$62.00
- (ii) Each additional site service; or additional site feeder inspected at the same time as the first service or feeder \$39.20

(2) Commercial/industrial.

(a) New service or feeder, and additional new feeders inspected at the same time (includes circuits).

Note:

For large COMMERCIAL/INDUSTRIAL projects that include multiple feeders, "inspected at the same time" can be interpreted to include additional inspection trips for a single project. The additional inspections must be for electrical work specified on the permit at the time of purchase. The permit fee for such projects must be calculated using this section. However, the total fee must not be less than the number of progress inspection (one-half hour) units times the progress inspection fee rate from subsection (8) PROGRESS INSPECTIONS of this section.

| Ampacity | Service/Feeder | Additional Feeder |
|---------------|----------------|-------------------|
| 0 to 100 | \$101.60 | \$62.00 |
| 101 to 200 | \$123.70 | \$79.00 |
| 201 to 400 | \$238.20 | \$94.20 |
| 401 to 600 | \$277.60 | \$110.80 |
| 601 to 800 | \$359.10 | \$151.00 |
| 801 to 1000 | \$438.40 | \$182.70 |
| 1001 and over | \$478.30 | \$255.00 |

(b) Altered services/feeders (no circuits).

(i) Service/feeder

| Ampacity | Service/Feeder |
|---------------|----------------|
| 0 to 200 | \$101.60 |
| 201 to 600 | \$238.20 |
| 601 to 1000 | \$359.10 |
| 1001 and over | \$398.90 |

- (ii) Maintenance or repair of a meter or mast (no alterations to the service or feeder) \$86.30

(c) Circuits only.

Note:

Altered/added circuit fees are calculated per panelboard. Total cost of the alterations in a panel (or panels) should not exceed the cost of a new feeder (or feeders) of the same rating, as shown in subsection (2) COMMERCIAL/INDUSTRIAL (2)(a)(table) above.

- (i) First 5 circuits per branch circuit panel \$79.00
- (ii) Each additional circuit per branch circuit panel \$6.60
- (d) Over 600 volts surcharge per permit. \$79.00

(3) Temporary service(s).

Notes:

(1) See WAC 296-46B-590 for information about temporary installations.

(2) Temporary stage or concert inspections requested outside of normal business hours will be subject to the portal-to-portal hourly fees in subsection (11) OTHER INSPECTIONS. The fee for such after hours inspections will be the greater of the fee from this subsection or the portal-to-portal fee.

Temporary services, temporary stage or concert productions.

| Ampacity | Service/Feeder | Additional Feeder |
|--------------|----------------|-------------------|
| 0 to 60 | \$54.30 | \$27.80 |
| 61 to 100 | \$62.00 | \$30.10 |
| 101 to 200 | \$79.00 | \$39.20 |
| 201 to 400 | \$94.20 | \$46.80 |
| 401 to 600 | \$126.30 | \$62.00 |
| 601 and over | \$143.30 | \$71.30 |

(4) Irrigation machines, pumps, and equipment.

Irrigation machines.

- (a) Each tower - When inspected at the same time as a service and feeder from (2) COMMERCIAL/INDUSTRIAL \$6.60
- (b) Towers - When not inspected at the same time as a service and feeder - 1 to 6 towers \$94.20
- (c) Each additional tower \$6.60

(5) Miscellaneous - Commercial/industrial and residential.

(a) **A Class 2 low-voltage thermostat** and its associated cable controlling a single piece of utilization equipment or a single furnace and air conditioner combination.

- (i) First thermostat \$46.80
- (ii) Each additional thermostat inspected at the same time as the first \$14.50

(b) **Class 2 or 3 low-voltage systems and telecommunications systems.** Includes all telecommunications installations, fire alarm, nurse call, energy management control systems, industrial and automation control systems, lighting control systems, and similar Class 2 or 3 low-energy circuits and equipment not included in WAC 296-46B-908 for Class B work.

- (i) First 2500 sq. ft. or less \$54.30
- (ii) Each additional 2500 sq. ft. or portion thereof \$14.50

(c) Signs and outline lighting.

- (i) First sign (no service included) \$46.80
- (ii) Each additional sign inspected at the same time on the same building or structure \$22.10

(d) Berth at a marina or dock.

Note:

Five berths or more will be permitted to have the inspection fees based on appropriate service and feeder fees from section (2) COMMERCIAL/INDUSTRIAL above.

- (i) Berth at a marina or dock \$62.00
- (ii) Each additional berth inspected at the same time \$39.20

(e) Yard pole, pedestal, or other meter loops only.

- (i) Yard pole, pedestal, or other meter loops only \$62.00
- (ii) Meters installed remote from the service equipment and inspected at the same time as a service, temporary service or other installations \$14.50

(f) Inspection appointment requested for outside of normal working hours.

Regular fee plus surcharge of: \$118.60

(g) Generators.

Note:

Permanently installed generators: Refer to the appropriate residential or commercial new/alterd service or feeder section.

Portable generators: Permanently installed transfer equipment for portable generators \$86.30

(h) Electrical - Annual permit fee.

Note:

See WAC 296-46B-901(13).

For commercial/industrial location employing full-time electrical maintenance staff or having a yearly maintenance contract with a licensed electrical contractor. Note, all yearly maintenance contracts must detail the number of contractor electricians necessary to complete the work required under the contract. This number will be used as a basis for calculating the appropriate fee. Each inspection is based on a 2-hour maximum.

| | Inspections | Fee |
|---------------------------------|--------------------|-------------|
| 1 to 3 plant electricians | 12 | \$2,284.20 |
| 4 to 6 plant electricians | 24 | \$4,571.00 |
| 7 to 12 plant electricians | 36 | \$6,856.20 |
| 13 to 25 plant electricians | (52) 48 | \$9,143.00 |
| More than 25 plant electricians | 52 | \$11,429.80 |

(i) Telecommunications - Annual permit fee.

Notes:

- (1) See WAC 296-46B-901(12).
- (2) Annual inspection time required may be estimated by the purchaser at the rate for "OTHER INSPECTIONS" in this section, charged portal-to-portal per hour.

For commercial/industrial location employing full-time telecommunications maintenance staff or having a yearly maintenance contract with a licensed electrical/telecommunications contractor.

| | |
|-------------------------------------------------------------------------------|----------|
| 2-hour minimum | \$188.80 |
| Each additional hour, or portion thereof, of portal-to-portal inspection time | \$94.20 |

(j) Permit requiring ditch cover inspection only.

| | |
|-----------------------------------|---------|
| Each 1/2 hour, or portion thereof | \$46.80 |
|-----------------------------------|---------|

(k) Cover inspection for elevator/conveyance installation. This item is only available to a licensed/registered elevator contractor. \$79.00

(6) Carnival inspections.

(a) First carnival field inspection each calendar year.

| | |
|----------------------------------------------------------------------------------------------------------------------------------|----------|
| (i) Each ride and generator truck | \$22.10 |
| (ii) Each remote distribution equipment, concession, or gaming show | \$6.60 |
| (iii) If the calculated fee for first carnival field inspection above is less than \$100.50, the minimum inspection fee will be: | \$118.60 |

(b) Subsequent carnival inspections.

| | |
|-------------------------------------------------------------------------------------------------|----------|
| (i) First ten rides, concessions, generators, remote distribution equipment, or gaming show | \$118.60 |
| (ii) Each additional ride, concession, generator, remote distribution equipment, or gaming show | \$6.60 |

(c) Concession(s) or ride(s) not part of a carnival.

| | |
|---------------------------------------------------------------------------------------------|---------|
| (i) First field inspection each year of a single concession or ride, not part of a carnival | \$94.20 |
| (ii) Subsequent inspection of a single concession or ride, not part of a carnival | \$62.00 |

(7) Trip fees.

| | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| (a) Requests by property owners to inspect existing installations. (This fee includes a maximum of one hour of inspection time. All inspection time exceeding one hour will be charged at the rate for progressive inspections.) | \$94.20 |
| (b) Submitter notifies the department that work is ready for inspection when it is not ready. | \$46.80 |
| (c) Additional inspection required because submitter has provided the wrong address or incomplete, improper or illegible directions for the site of the inspection. | \$46.80 |
| (d) More than one additional inspection required to inspect corrections; or for repeated neglect, carelessness, or improperly installed electrical work. | \$46.80 |
| (e) Each trip necessary to remove a noncompliance notice. | \$46.80 |
| (f) Corrections that have not been made in the prescribed time, unless an exception has been requested and granted. | \$46.80 |
| (g) Installations that are covered or concealed before inspection. | \$46.80 |

(8) Progress inspections.

Note:

The fees calculated in subsections (1) through (6) of this section will apply to all electrical work. This section will be applied to a permit where the permit holder has requested additional inspections beyond the number supported by the permit fee calculated at the rate in subsections (1) through (6) of this section.

On partial or progress inspections, each 1/2 hour. \$46.80

(9) Plan review.

| | |
|------------------------------------------------------------------------------------------------|---------|
| (a) Plan review fee is 35% of the electrical work permit fee as determined by WAC 296-46B-906. | 35% |
| (b) Plan review submission fee . | \$79.00 |

| | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| (c) Supplemental submissions of plans per hour or fraction of an hour of review time. | \$94.20 |
| (d) Plan review handling fee. | \$22.10 |
| (10) Out-of-state inspections. | |
| (a) Permit fees will be charged according to the fees listed in this section. | |
| (b) Travel expenses: | |
| All travel expenses and per diem for out-of-state inspections are billed following completion of each inspection(s). These expenses can include, but are not limited to: Inspector's travel time, travel cost and per diem at the state rate. Travel time is hourly based on the rate in subsection (11) of this section. | |
| (11) Other inspections. | |
| Inspections not covered by above inspection fees must be charged portal-to-portal per hour: | \$94.20 |
| (12) Variance request processing fee. | |
| Variance request processing fee. This fee is nonrefundable once the transaction has been validated. | \$94.20 |
| (13) Class B basic electrical work labels. | |
| (a) Block of twenty Class B basic electrical work labels (not refundable). | \$258.70 |
| (b) Reinspection of Class B basic electrical work to assure that corrections have been made (per 1/2 hour timed from leaving the previous inspection until the reinspection is completed). See WAC 296-46B-908(5). | \$46.80 |
| (c) Reinspection of Class B basic electrical work because of a failed inspection of another Class B label (per 1/2 hour from previous inspection until the reinspection is completed). See WAC 296-46B-908(5). | \$46.80 |
| (14) Provisional electrical work permit labels. | |
| Block of twenty provisional electrical work permit labels. | \$258.70 |

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-908 Class B permits.

Class B electrical work permit - Use.

(1) The Class B basic electrical random inspection process (Class B process) may only be used by:

- (a) Licensed electrical/telecommunication contractors; or
- (b) Health care, commercial, or industrial facilities using an employee(s) who is an appropriately certified electrician(s) after requesting, in writing, and receiving permission from the chief electrical inspector.

Each entity doing work must use a separate label.

(2) The Class B random inspection process is only available if the label is validated and the label or label number is posted before beginning the work.

(a) For Class B labels obtained after February 28, 2013:

- (i) Prior to, or immediately upon posting the Class B label/number, the purchaser must use the department's online Class B system to enter the job site information for an unused Class B label obtained by the purchaser. If the posting occurs on a weekend or a federal/state holiday, the purchaser must use the online system to enter the information no later than the first business day after posting the label/number;

(ii) The person identified as the installer on the Class B label must post the Class B label or label number, in a conspicuous permanent manner, at the:

(A) Main service/feeder location supplying the structure or system; or

(B) Purchaser's equipment, or on the equipment conductors if the equipment is not in place.

(iii) The Class B label is valid immediately upon the purchaser completing the job site information in the department's online Class B system, and posting of the Class B label or label number per (a)(ii) of this subsection.

(b) For Class B labels obtained before March 1, 2013:

(i) The purchaser must fully enter the job site information on the job site and contractor portions of the Class B label.

(ii) The person identified as the installer on the Class B label must post the completed job site copy, in a conspicuous permanent manner, at the:

(A) Main service/feeder location supplying the structure or system;

(B) Purchaser's equipment, or on the conductors if the equipment is not available.

(iii) The purchaser must return the contractor copy to the Department of Labor and Industries, Electrical Section, Chief Electrical Inspector, P.O. Box 44460, Olympia, WA 98504-4460 within fifteen working days after the job site portion of the Class B installation label is affixed.

(iv) The Class B label is valid immediately upon posting on the job site.

(3) Class B labels will be sold in blocks and are nonrefundable and nontransferable.

(4) Class B label installations will be inspected on a random basis as determined by the department.

(5) A progress inspection fee is required for any inspection required when a correction(s) is issued as a result of the inspection of a Class B label.

(6) Any entity using the Class B process may be audited for compliance with the provisions for purchasing, inspection, reporting of installations, and any other requirement of usage.

(7) A separate label is required for each line item listed below in subsection (10) of this section. For example, if the work includes an item under subsection (10)(a) and (b)(i) of this section, two labels are required.

(8) An entity using a Class B basic inspection label is restricted to using no more than two labels per week per job site.

(9) All Class B work must be completed within fifteen days after the label is validated. If the work is not completed, another Class B may be posted.

Except that, in a one- or two-family residential structure, a label is valid for ninety days after the label is validated, so long as all work described on the label is performed by the purchaser.

(10) Class B work includes the following:

(a) Extension of not more than one branch electrical circuit limited to 120 volts and 20 amps each where:

(i) No cover inspection is necessary. For the purposes of this section, cover inspection does not include work covered by any surface that may be removed for inspection without damaging the surface; and

(ii) The extension does not supply more than two outlets as defined by the NEC.

(b) Single like-in-kind replacement of:

(i) A motor larger than 10 horsepower; or

(ii) The internal wiring of a furnace, air conditioner, refrigeration unit or household appliance; or

(iii) An electric/gas/oil furnace not exceeding 240 volts and 100 amps and associated Class 2 low voltage wiring (i.e., altered and/or new low-voltage control wiring from the furnace to an existing and/or new thermostat, heat pump, air conditioner, condenser, etc.), when the furnace is connected to an existing branch circuit. For the purposes of this section, a boiler is not a furnace; or

(iv) An individually controlled electric room heater (e.g., baseboard, wall, fan forced air, etc.), air conditioning unit, heat pump unit, or refrigeration unit not exceeding 240 volts, 40 minimum circuit amps and associated Class 2 low voltage wiring when the unit is connected to an existing branch circuit; or

(v) Circuit modification required to install not more than five residential load control devices in a residence where installed as part of an energy conservation program sponsored by an electrical utility and where the circuit does not exceed 240 volts and 40 amps; or

(vi) A single, line-voltage flexible supply whip associated with (b)(i), (iii), or (iv) of this subsection, not over 6 feet in length, provided there are no modifications to the branch circuit/feeder load being supplied by the whip. May be done on the same Class B label with the replacement unit if done at the same time.

(c) The following low voltage systems:

(i) Repair and replacement of devices not exceeding 100 volt-amperes in Class 2, Class 3, or power limited low voltage systems in one- and two-family dwellings; or

(ii) Repair and replacement of devices not exceeding 100 volt-amperes in Class 2, Class 3, or power limited low voltage systems in other buildings, provided the equipment is not for fire alarm or nurse call systems and is not located in an area classified as hazardous by the NEC; or

(iii) The installation of Class 2 or 3 device(s) or wiring for thermostat, audio, security, burglar alarm, intercom, amplified sound, public address, or access control systems where the installation does not exceed twenty devices or five thousand square feet. This does not include fire alarm, nurse call, lighting control, industrial automation/control or energy management systems; or

(iv) Telecommunications cabling and equipment requiring inspection in RCW 19.28.470 where the installation does not exceed twenty devices or five thousand square feet;

(d) The replacement of not more than ten standard receptacles with GFCI (~~or~~), AFCI, or dual function AFCI/GFCI receptacles;

(e) The conversion of not more than ten snap switches to dimmers or occupancy sensors for the use of controlling a luminaire(s) conversion;

(f) The like-in-kind replacement of a maximum of twenty: Paddle fans, luminaires not exceeding 277 volts and 20 amperes; snap switches, dimmers, receptacle outlets, line voltage thermostats, heating elements, luminaire ballasts, or drivers/power supplies for single LED luminaires;

(g) The replacement of not more than two luminaires with paddle fans if a listed fan box has been previously installed to support the luminaires;

(h) The replacement of not more than four batteries rated not larger than 150 amp hours each that supply power to a single unit of equipment (e.g., uninterruptable power supply, photovoltaic storage system, control panel, etc.);

(i) The installation or repair of equipment powered by a stand-alone solar photovoltaic source where the:

(i) Electrical equipment requires no field assembly except for the attachment and electrical connection of the solar photovoltaic source to the equipment, the installation and attachment to a grounding electrode, and the placement of the equipment on a pad, pole, or other structure;

(ii) Solar photovoltaic source and the equipment operates at less than 15 volts DC;

(iii) Solar photovoltaic source is the only source of external power; and

(iv) Equipment and the solar photovoltaic source are appropriately labeled as a single unit. The label must be by an approved electrical testing laboratory or for equipment used for traffic control labeled according to WAC 296-46B-010(21).

(j) The installation or replacement of a single electric sign on an existing single 120-volt, 20-amp maximum branch circuit;

(k) The like-in-kind replacement of output cables consisting of a length of flexible EV cable and an electric vehicle connector when connected to fixed in place electric vehicle supply equipment.

(11) Class B basic electrical work does not include any work in:

(a) Areas classified as Class I, Class II, Class III, or Zone locations per NEC 500; or

(b) Areas regulated by NEC 517 or 680; or

(c) Any work where electrical plan review is required; or

(d) Fire alarm, nurse call, lighting control, industrial automation/control or energy management systems.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-915 Civil penalty schedule.

Notes:

Each day that a violation occurs on a job site may be a separate offense.

Once a violation of chapter 19.28 RCW or chapter 296-46B WAC becomes a final judgment, any additional violation within three years becomes a "second" or "additional" offense subject to an increased penalty as set forth in the following tables.

In case of serious noncompliance or a serious violation of the provisions of chapter 19.28 RCW or as described in WAC 296-46B-990, the department may double the penalty amount, up to ten thousand dollars shown in subsections (1) through ~~((13))~~ (14) of this section.

A person, firm, partnership, corporation or other entity who violates a provision of chapter 19.28 RCW or chapter 296-46B WAC is liable for a civil penalty based upon the following schedule.

(1) Offering to perform, submitting a bid for, advertising, installing or maintaining cables, conductors or equipment:

(a) That convey or utilize electrical current without having a valid electrical contractor's license; or

(b) Used for information generation, processing, or transporting of signals optically or electronically in telecommunications systems without having a valid telecommunications contractor's license.

| | |
|--------------------------|----------|
| First offense: | \$1,000 |
| Second offense: | \$2,000 |
| Third offense: | \$3,000 |
| Each offense thereafter: | \$10,000 |

(2) Employing an individual for the purposes of chapter 19.28 RCW who does not possess a valid certificate of competency or training certificate to do electrical work.

First offense: \$250
Each offense thereafter: \$500

(3) Performing electrical work without having a valid certificate of competency or electrical training certificate.

(a) Failing to visibly display a certificate (must possess a valid, active certificate).

First offense: \$50
Each offense thereafter: \$100

(b) Performing electrical work while not possessing a valid certificate or working outside the scope of a certificate.

First offense: \$250
Each offense thereafter: \$500

(4) Employing electricians and electrical trainees for the purposes of chapter 19.28 RCW in an improper ratio. Contractors found to have violated this section three times in a three-year period must be the subject of an electrical audit in accordance with WAC 296-46B-975.

First offense: \$250
Each offense thereafter: \$500

(5) Failing to provide proper supervision to an electrical trainee as required by chapter 19.28 RCW. Contractors found to have violated this section three times in a three-year period must be the subject of an electrical audit in accordance with WAC 296-46B-975.

First offense: \$250
Each offense thereafter: \$500

(6) Working as an electrical trainee without proper supervision as required by chapter 19.28 RCW.

First offense: \$50
Second offense: \$250
Each offense thereafter: \$500

(7) Offering, bidding, advertising, or performing electrical or telecommunications installations, alterations or maintenance outside the scope of the firm's specialty electrical or telecommunications contractors license.

First offense: \$500
Second offense: \$1,500
Third offense: \$3,000
Each offense thereafter: \$6,000

(8) Selling or exchanging electrical equipment associated with spas, hot tubs, swimming pools or hydromassage bathtubs which are not listed by an approved laboratory.

First offense: \$500
Second offense: \$1,000
Each offense thereafter: \$2,000

Definition:

The sale or exchange of electrical equipment associated with hot tubs, spas, swimming pools or hydromassage bathtubs includes to: "Sell, offer for sale, advertise, display for sale, dispose of by way of gift, loan, rental, lease, premium, barter or exchange."

(9) Covering or concealing installations prior to inspection.

First offense: \$250
Second offense: \$1,000
Each offense thereafter: \$2,000

(10) Failing to make corrections within fifteen days of notification by the department.

Exception:

Where an extension has been requested and granted, this penalty applies to corrections not completed within the extended time period.

First offense: \$250
Second offense: \$1,000
Each offense thereafter: \$2,000

(11) Failing to get an inspection or obtain an electrical/telecommunications work permit or post a provisional electrical work permit label prior to beginning the electrical/telecommunications installation or alteration.

Exception:

In cases of emergency repairs, for owners, to existing electrical/telecommunications systems, this penalty will not be charged if the permit is obtained and posted no later than the business day following beginning work on the emergency repair.

(a) Standard/provisional permit offenses:

| | |
|--------------------------|---------|
| First offense: | \$250 |
| Second offense: | \$1,000 |
| Each offense thereafter: | \$2,000 |

(b) Class B offenses:

Failure to post a Class B label or number for Class B eligible work:

| | |
|--------------------------|---------|
| First offense: | \$100 |
| Second offense: | \$250 |
| Each offense thereafter: | \$1,000 |

(c) For other Class B offenses:

| | |
|--------------------------|---------|
| First offense: | \$100 |
| Second offense: | \$250 |
| Each offense thereafter: | \$1,000 |

(12) Violating chapter 19.28 RCW duties of the electrical/telecommunications administrator or master electrician.

(a) Failing to be a member of the firm or a supervisory employee and must be available during working hours to carry out the duties of an administrator or master electrician.

| | |
|--------------------------|---------|
| First offense: | \$1,000 |
| Second offense: | \$1,500 |
| Each offense thereafter: | \$3,000 |

(b) Failing to ensure that all electrical work complies with the electrical installation laws and rules of the state.

| | |
|--------------------------|---------|
| First offense: | \$100 |
| Second offense: | \$250 |
| Third offense: | \$1,000 |
| Each offense thereafter: | \$3,000 |

(c) Failing to ensure that the proper electrical safety procedures are used.

| | |
|--------------------------|---------|
| First offense: | \$500 |
| Second offense: | \$1,500 |
| Each offense thereafter: | \$3,000 |

(d) Failing to ensure that inspections are obtained and that all electrical labels, permits, and certificates required to perform electrical work are used.

Standard/provisional permit offenses:

| | |
|--------------------------|-------|
| First offense: | \$250 |
| Each offense thereafter: | \$500 |

Class B offenses:

| | |
|--------------------------|---------|
| First offense: | \$100 |
| Second offense: | \$250 |
| Each offense thereafter: | \$1,000 |

(e) Failing to ensure that all electrical licenses, required to perform electrical work are used (i.e., work performed must be in the allowed scope of work for the contractor).

| | |
|--------------------------|---------|
| First offense: | \$500 |
| Second offense: | \$1,500 |
| Third offense: | \$3,000 |
| Each offense thereafter: | \$6,000 |

(f) Failing to see that corrective notices issued by an inspecting authority are complied with within fifteen days.

Exception: Where an extension has been requested and granted, this penalty applies to corrections not completed within the extended time period.

| | |
|--------------------------|---------|
| First offense: | \$250 |
| Second offense: | \$1,000 |
| Each offense thereafter: | \$2,000 |

(g) Failing to notify the department in writing within ten days if the master electrician or administrator terminates the relationship with the electrical contractor.

| | |
|--------------------------|---------|
| First offense: | \$500 |
| Second offense: | \$1,000 |
| Each offense thereafter: | \$3,000 |

(13) Causing or failing to correct a serious violation.

A serious violation is a violation of chapter 19.28 RCW or 296-46B WAC that creates a hazard of fire or a danger to life safety.

| | |
|--------------------------|---------|
| First offense: | \$1,000 |
| Second offense: | \$3,000 |
| Each offense thereafter: | \$5,000 |

(14) Violating any of the provisions of chapter 19.28 RCW or chapter 296-46B WAC which are not identified in subsections (1) through (12) of this section.

(a) RCW 19.28.161 through 19.28.271 and the rules developed pursuant to them.

| | |
|--------------------------|-------|
| First offense: | \$250 |
| Each offense thereafter: | \$500 |

(b) All other chapter 19.28 RCW provisions and the rules developed pursuant to them.

| | |
|--------------------------|---------|
| First offense: | \$250 |
| Second offense: | \$750 |
| Each offense thereafter: | \$2,000 |

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-920 Electrical/telecommunications license/certificate types and scope of work. (1) **General electrical (01):** A general electrical license and/or certificate encompasses all phases and all types of electrical and telecommunications installations and minor plumbing under RCW 18.106.150. For the purposes of RCW 18.106.150, the like-in-kind replacement includes the appliance or any component part of the appliance (e.g., such as, but not limited to, the thermostat in a water heater).

Specialties.

(2) All specialties listed in this subsection may perform the electrical work described within their specific specialty as allowed by the occupancy and location described within the specialty's scope of work. Except for residential (02), the scope of work for these specialties does not include plumbing work regulated under chapter 18.106 RCW. See RCW 18.106.150 for plumbing exceptions for the residential (02) specialty. For the purposes of RCW 18.106.150, the like-in-kind replacement includes the appliance or any component part of the appliance (e.g., such as, but not limited to, the thermostat in a water heater). **Specialty** (limited) electrical licenses and/or certificates are as follows:

(a) **Residential (02):** Limited to the telecommunications, low voltage, and line voltage wiring of one- and two-family dwellings, or multifamily dwellings of types III, IV or V construction when there are not more than six stories of multifamily dwellings of types III, IV or V construction above grade or above types I or II construction.

All wiring is limited to nonmetallic sheathed cable, except for services and/or feeders, exposed installations where physical protection is required, and for wiring buried below grade.

(i) This specialty also includes the wiring for ancillary structures located on the same property and under the same ownership as the dwelling structure(s) such as, but not limited to: Appliances, equipment, swimming pools, septic pumping systems, domestic water systems, limited energy systems (e.g., doorbells, intercoms, fire alarm, burglar alarm, energy control, HVAC/refrigeration, etc.), multifamily complex offices/garages, site lighting when supplied from the residence or ancillary structure, and other structures directly associated with the functionality of the residential units.

(ii) This specialty does not include wiring of:

(A) Any portion of any occupancy of types I or II construction;
or

(B) Occupancies defined in WAC 296-46B-900(1), or commercial occupancies such as: Motels, hotels, offices, assisted living facilities, or stores; or

(C) Services, generators, HVAC/refrigeration equipment, fire pumps or other equipment that serve other than one- and two-family dwellings, or multifamily dwellings of types III, IV, or V construction or ancillary structures; or

(D) Interconnected electric power production sources not connected to equipment that supplies one- and two-family dwellings, or multifamily dwellings of types III, IV or V construction, or ancillary structures; or

(E) Any portion of wiring for conveyances regulated under chapter 70.87 RCW serving more than one residential dwelling unit.

(iii) For the purposes of this section, classification of types of construction are as determined by the local building official.

(iv) See RCW 18.106.150 for plumbing exceptions for the residential (02) specialty.

(b) **Pump and irrigation (03):** Limited to the electrical connection of circuits, feeders, controls, low voltage, related telecommunications, and services to supply: Domestic water systems and public water systems include but are not limited to pumps, pressurization, filtration, treatment, or other equipment and controls, and irrigation water pumps, circular irrigating system's pumps and pump houses.

This specialty may also perform the work defined in (c) of this subsection.

Also see RCW 18.106.010 (10)(c).

(c) **Domestic pump (03A):** Limited to the extension of a branch circuit, which is supplied and installed by others, to signaling circuits, motor control circuits, motor control devices, and pumps which do not exceed 7 1/2 horsepower at 250 volts AC single phase input power, regardless of motor controller output or motor voltage/phase, used in residential potable water or residential sewage disposal systems. Domestic water systems and public water systems include but are not limited to pumps, pressurization, filtration, treatment, or other equipment and controls.

Also see RCW 18.106.010 (10)(c).

(d) **Signs (04):** Limited to placement and connection of signs and outline lighting, the electrical supply, related telecommunications, controls and associated circuit extensions thereto; and the installation of a maximum 60 ampere, 120/240 volt single phase service to supply power to a remote sign only. This specialty may service, maintain, repair, or install retrofit kits within housings of existing exterior

luminaires that are mounted on a pole or other structure with like-in-kind or retrofit kit components.

(i) Electrical licensing/certification is not required to:

(A) Clean the nonelectrical parts of an electric sign;

(B) Form or pour a concrete pole base used to support a sign;

(C) Operate machinery used to assist an electrician in mounting an electric sign or sign supporting pole; or

(D) Assemble the structural parts of a billboard.

(ii) Electrical licensing/certification is required to: Install, modify, or maintain a sign, sign supporting pole, sign face, sign ballast, lamp socket, lamp holder, disconnect switch, or any other part of a listed electric sign.

(e) **Limited energy system (06):** Limited to the installation of signaling and power limited circuits and related equipment. This specialty is restricted to low-voltage circuits. This specialty includes the installation of telecommunications, HVAC/refrigeration low-voltage wiring, fire protection signaling systems, intrusion alarms, energy management and control systems, industrial and automation control systems, lighting control systems, commercial and residential amplified sound, public address systems, and such similar low-energy circuits and equipment in all occupancies and locations.

(i) For the purposes of this section, when a line voltage connection is removed and reconnected to a replacement component located inside the control cabinet, the replacement must be like-in-kind or replaced using the equipment manufacturer's authorized replacement component. The line voltage circuit is limited to 120 volts 20 amps maximum and must have a means of disconnect.

(ii) The limited energy systems (06) specialty may repair or replace line voltage connections terminated inside the cabinet to power supplies internal to the low voltage equipment provided there are no modifications to the characteristics of the branch circuit/feeder load being supplied by the circuit.

(iii) The limited energy systems (06) specialty may not replace or modify the line voltage circuit or cabling or alter the means of connection of the line voltage circuit to the power supply or to the control cabinet.

Limited energy electrical contractors may perform all telecommunications work under their specialty (06) electrical license and administrator's certificate.

(f) **HVAC/refrigeration systems:**

(i) See WAC 296-46B-100 for specific HVAC/refrigeration definitions.

(ii) For the purposes of this section when a component is replaced, the replacement must be like-in-kind or made using the equipment manufacturer's authorized replacement component.

(iii) The HVAC/refrigeration specialties described in (f)(v) and (vi) of this subsection may:

(A) Install HVAC/refrigeration: Telecommunications, Class 2 low-voltage control circuit wiring/components in all residential occupancies;

(B) Install, repair, replace, and maintain line voltage components within HVAC/refrigeration equipment. Such line voltage components include product illumination luminaires installed within and powered from the HVAC/refrigeration system (e.g., reach-in beverage coolers, frozen food cases, produce cases, etc.) and new or replaced factory authorized accessories such as internally mounted outlets;

(C) Repair, replace, or maintain the internal components of the HVAC/refrigeration equipment disconnecting means or controller so long as the disconnecting means or controller is not located within a motor control center or panelboard;

(D) Install, repair, replace, and maintain short sections of raceway to provide physical protection for low-voltage cables. For the purposes of this section a short section cannot mechanically interconnect two devices, junction boxes, or other equipment or components; and

(E) Repair, replace, or maintain line voltage flexible supply whips not over six feet in length, provided there are no modifications to the characteristics of the branch circuit/feeder load being supplied by the whip other than a reduction in the HVAC unit's rated maximum overcurrent protection size. There is no limitation on the whip raceway method (e.g., metallic replaced by nonmetallic).

(iv) The HVAC/refrigeration specialties described in (f)(v) and (vi) of this subsection may not:

(A) Install line voltage controllers or disconnect switches external to HVAC/refrigeration equipment;

Exception: If HVAC/R equipment is being replaced, this specialty may remove and replace a disconnecting means enclosure mounted on the surface of the HVAC/R equipment with a like-in-kind disconnecting means enclosure rated not more than 20 amperes and 120 volts using the existing wiring method. When performing this work, this specialty may install up to ten feet of raceway to provide physical protection for nonmetallic cables, but the raceway may not terminate in a panelboard.

(B) Install, repair, replace, or maintain:

- Integrated building control systems, other than HVAC/refrigeration systems;

- Single stand-alone line voltage equipment or components (e.g., heat cable, wall heaters, radiant panel heaters, baseboard heaters, contactors, motor starters, and similar equipment) unless the equipment or component:

Is exclusively controlled by the HVAC/refrigeration system and requires the additional external connection to a mechanical system(s) (e.g., connection to water piping, gas piping, refrigerant system, ducting for the HVAC/refrigeration system, gas fireplace flume, ventilating systems, etc. (i.e., as in the ducting connection to a bathroom fan)). The external connection of the equipment/component to the mechanical system must be required as an integral component allowing the operation of the HVAC/refrigeration system; or

Contains a HVAC/refrigeration mechanical system(s) (e.g., water piping, gas piping, refrigerant system, etc.) within the equipment (e.g., "through-the-wall" air conditioning units, self-contained refrigeration equipment, etc.);

- Luminaires that serve as a building or structure lighting source, even if mechanically connected to a HVAC/refrigeration system (e.g., troffer luminaire used as a return air device, lighting within a walk-in cooler/freezer used for personnel illumination);

- Raceway/conduit systems;

- Line voltage: Service, feeder, or branch circuit conductors. However, if a structure's feeder/branch circuit supplies HVAC/refrigeration equipment containing a supplementary overcurrent protection device(s), this specialty may install the conductors from the supplementary overcurrent device(s) to the supplemental HVAC/refrigeration equipment if the supplementary overcurrent device and the HVAC/refrigeration equipment being supplied are located within sight of each other; or

- Panelboards, switchboards, or motor control centers external to HVAC/refrigeration system.

(v) HVAC/refrigeration **(06A)** :

(A) This specialty is not limited by voltage, phase, or amperage.

(B) No unsupervised electrical trainee can install, repair, replace, or maintain any part of a HVAC/refrigeration system that contains any circuit rated over 600 volts whether the circuit is energized or deenergized.

(C) This specialty may:

- Install HVAC/refrigeration: Telecommunications, Class 2 low-voltage control circuit wiring/components in other than residential occupancies:

That have no more than three stories on/above grade; or

Regardless of the number of stories above grade if the installation:

(~~• Does not pass between stories;~~)

- Is made in a previously occupied and wired space; and

- Is restricted to the HVAC/refrigeration system;

- Repair, replace, and maintain HVAC/refrigeration: Telecommunications, Class 2 low-voltage control circuit wiring/components in all occupancies regardless of the number of stories on/above grade.

- Install a bonding conductor for metal gas piping to an existing accessible grounding electrode conductor or grounding electrode only when terminations can be made external to electrical panelboards, switchboards, or other distribution equipment.

(D) This specialty may not install, repair, replace, or maintain: Any electrical wiring governed under article(s) 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, or 516 NEC (i.e., classified locations) located outside the HVAC/refrigeration equipment.

(vi) HVAC/refrigeration - Restricted **(06B)** :

(A) This specialty may not perform any electrical work where the primary electrical power connection to the HVAC/refrigeration system exceeds: 250 volts, single phase, or 120 amps.

(B) This specialty may install, repair, replace, or maintain HVAC/refrigeration: Telecommunications, Class 2 low-voltage control circuit wiring/components in other than residential occupancies that have no more than three stories on/above grade.

(C) This specialty may not install, repair, replace, or maintain:

- The allowed telecommunications/low-voltage HVAC/refrigeration wiring in a conduit/raceway system; or

- Any electrical work governed under article(s) 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, or 516 NEC (i.e., classified locations).

(g) **Nonresidential maintenance (07)**: Limited to maintenance, repair and replacement of like-in-kind existing electrical equipment and conductors. This specialty does not include maintenance activities in residential dwellings defined in (a) of this subsection for the purposes of accumulating training experience toward qualification for the residential **(02)** specialty electrician examination.

(i) This specialty includes the installation and connections of temporary conductors and equipment for the purpose of load testing, not to exceed 600 volts.

(ii) For the purposes of replacement of electrical equipment, where the new equipment has a lower ampere rating than the equipment being replaced and there are no modifications to the ampacity rating of the existing conductors, this specialty may replace a device(s) that provides overcurrent or overload protection for the new equipment with a device(s) having a lower ampere rating in accordance with the nameplate rating of the new equipment.

(iii) This specialty may perform the work defined in (h), (i), (j), (k), and (l) of this subsection.

(h) **Nonresidential lighting maintenance and lighting retrofit (07A):** Limited to working within the housing of existing nonresidential luminaires for work related to repair, service, maintenance of luminaires and installation of energy efficiency lighting retrofit upgrades. This specialty includes replacement of (~~lamps,~~) ballasts, sockets, and the installation of listed lighting retrofit reflectors and kits. All work is limited to the luminaire body, except remote located ballasts may be replaced or retrofitted with approved products. This specialty does not include installing new luminaires or branch circuits; moving or relocating existing luminaires; or altering existing branch circuits.

(i) **Residential maintenance (07B):** This specialty is limited to residential dwellings as defined in WAC 296-46B-920 (2)(a), multistory dwelling structures with no commercial facilities, and the interior of dwelling units in multistory structures with commercial facilities. This specialty may maintain, repair, or replace (like-in-kind) existing electrical utilization equipment, and all permit exempted work as defined in WAC 296-46B-901.

This specialty is limited to equipment and circuits to a maximum of 250 volts, 60 amperes, and single phase maximum.

This specialty may disconnect and reconnect low-voltage control and line voltage supply whips not over six feet in length provided there are no modifications to the characteristics of the branch circuit or whip.

For the purpose of this specialty, "electrical equipment" does not include electrical conductors, raceway or conduit systems external to the equipment or whip. This specialty cannot perform any plumbing work regulated under chapter 18.106 RCW.

(j) **Restricted nonresidential maintenance (07C):** This specialty may maintain, repair, or replace (like-in-kind) existing electrical utilization equipment, and all permit exempted work as defined in WAC 296-46B-901 except for the replacement or repair of circuit breakers.

This specialty is limited to equipment and circuits to a maximum of 277 volts and 20 amperes for lighting branch circuits only and/or maximum 250 volts and 60 amperes for other circuits.

The replacement of luminaires is limited to in-place replacement required by failure of the luminaire to operate. Luminaires installed in suspended lay-in tile ceilings may be relocated providing: The original field installed luminaire supply whip is not extended or relocated to a new supply point; or if a manufactured wiring assembly supplies luminaire power, a luminaire may be relocated no more than eight feet providing the manufactured wiring assembly circuiting is not changed.

This specialty may disconnect and reconnect low-voltage control and line voltage supply whips not over six feet in length provided there are no modifications to the characteristics of the branch circuit. For the purpose of this specialty, "electrical equipment" does not include electrical conductors, raceway or conduit systems external to the equipment or whip.

This specialty may perform the work defined in (h) and (i) of this subsection.

This specialty cannot perform any work governed under Article(s) 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, or 516 NEC (i.e., classified locations). This specialty cannot perform any plumbing work regulated under chapter 18.106 RCW.

(k) **Appliance repair (07D)**: Servicing, maintaining, repairing, or replacing household appliances, small commercial/industrial appliances, and other small electrical utilization equipment.

(i) For the purposes of this subsection:

(A) The appliance or electrical utilization equipment must be self-contained and built to standardized sizes or types. The appliance/equipment must be connected as a single unit to a single source of electrical power limited to a maximum of 250 volts, 60 amperes, single phase.

(B) Appliances and electrical utilization equipment include, but are not limited to: Ovens, office equipment, vehicle repair equipment, commercial kitchen equipment, self-contained hot tubs and spas, grinders, and scales.

(C) Appliances and utilization equipment do not include systems and equipment such as: Alarm/energy management/similar systems, luminaires, furnaces/heaters/air conditioners/heat pumps, sewage disposal equipment, door/gate/similar equipment, or individual components installed so as to create a system (e.g., pumps, switches, controllers, etc.).

(ii) This specialty includes:

(A) The in-place like-in-kind replacement of the appliance or equipment if the same unmodified electrical circuit is used to supply the equipment being replaced. This specialty also includes the like-in-kind replacement of electrical components within the appliance or equipment;

(B) The disconnection and reconnection of low-voltage control and line voltage supply whips not over six feet in length provided there are no modifications to the characteristics of the branch circuit; and

(C) The installation of an outlet box and outlet at an existing appliance or equipment location when converting the appliance from a permanent electrical connection to a plug and cord connection. Other than the installation of the outlet box and outlet, there can be no modification to the existing branch circuit supplying the appliance or equipment.

(iii) This specialty does not include:

(A) The installation, repair, or modification of branch circuits conductors, services, feeders, panelboards, disconnect switches, or raceway/conductor systems interconnecting multiple appliances, equipment, or other electrical components.

(B) Any work governed under Article(s) 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, or 516 NEC (i.e., classified locations).

(C) Any plumbing work regulated under chapter 18.106 RCW.

(l) **Equipment repair (07E)**: Servicing, maintaining, repairing, or replacing utilization equipment.

See RCW 19.28.095 for the equipment repair scope of work and definitions. This specialty cannot perform any plumbing work regulated under chapter 18.106 RCW.

(m) **Telecommunications (09)**: Limited to the installation, maintenance, and testing of telecommunications systems, equipment, and associated hardware, pathway systems, and cable management systems.

(i) This specialty includes:

(A) Installation of open wiring systems of telecommunications cables.

(B) Surface nonmetallic raceways designated and used exclusively for telecommunications.

(C) Optical fiber innerduct raceway.

(D) Underground raceways designated and used exclusively for telecommunications and installed for additions or extensions to existing telecommunications systems not to exceed fifty feet inside the building.

(E) Incidental short sections of circular or surface metal raceway, not to exceed ten feet, for access or protection of telecommunications cabling and installation of cable trays and ladder racks in telecommunications service entrance rooms, spaces, or closets.

(F) Audio or paging systems where the amplification is integrated into the telephone system equipment.

(G) Audio or paging systems where the amplification is provided by equipment listed as an accessory to the telephone system equipment and requires the telephone system for the audio or paging system to function.

(H) Closed circuit video monitoring systems if there is no integration of line or low-voltage controls for cameras and equipment. Remote controlled cameras and equipment are considered (intrusion) security systems and must be installed by appropriately licensed electrical contractors and certified electricians.

(I) Customer satellite and conventional antenna systems receiving a telecommunications service provider's signal. All receiving equipment is on the customer side of the telecommunications network demarcation point.

(ii) This specialty does not include horizontal cabling used for fire protection signaling systems, intrusion alarms, access control systems, patient monitoring systems, energy management control systems, industrial and automation control systems, HVAC/refrigeration control systems, lighting control systems, and stand-alone amplified sound or public address systems. Telecommunications systems may interface with other building signal systems including security, alarms, and energy management at cross-connection junctions within telecommunications closets or at extended points of demarcation. Telecommunications systems do not include the installation or termination of premises line voltage service, feeder, or branch circuit conductors or equipment. Horizontal cabling for a telecommunications outlet, necessary to interface with any of these systems outside of a telecommunications closet, is the work of the telecommunications contractor.

(n) **Door, gate, and similar systems (10):** This specialty may install, service, maintain, repair, or replace door/gate/similar systems electrical operator wiring and equipment.

(i) For the purposes of this subsection, door/gate/similar systems electrical operator systems include electric gates, doors, windows, awnings, movable partitions, curtains and similar systems. These systems include, but are not limited to: Electric gate/door/similar systems operators, control push buttons, key switches, key pads, pull cords, air and electric treadle, air and electric sensing edges, coil cords, take-up reels, clocks, photo electric cells, loop detectors, motion detectors, remote radio and receivers, antenna, timers, lock-out switches, stand-alone release device with smoke detection, strobe light, annunciator, control panels, wiring and termination of conductors.

(ii) This specialty includes:

(A) Low-voltage, NEC Class 2, door/gate/similar systems electrical operator systems where the door/gate/similar systems electrical operator system is not connected to other systems.

(B) Branch circuits originating in a listed door/gate/similar systems electric operator control panel that supplies only door/gate/

similar systems system components providing: The branch circuit does not exceed 600 volts, 20 amperes and the component is within sight of the listed door/gate/similar systems electric operator control panel.

(C) Reconnection of line voltage power to a listed door/gate/similar systems electric operator control panel is permitted provided:

- There are no modifications to the characteristics of the branch circuit/feeder;
- The circuit/feeder does not exceed 600 volts, 20 amperes; and
- The conductor or conduit extending from the branch circuit/feeder disconnecting means or junction box does not exceed six feet in length.

(iii) This specialty does not include any work governed under Article(s) 500, 501, 502, 503, 504, 505, 510, 511, 513, 514, 515, or 516 NEC (i.e., classified locations). This specialty may not install, repair, or replace branch circuit (line voltage) conductors, services, feeders, panelboards, or disconnect switches supplying the door/gate/similar systems electric operator control panel.

(3) A specialty electrical contractor, other than the **(06)** limited energy specialty electrical contractor, may only perform telecommunications work within the equipment or occupancy limitations of their specialty electrical contractor's license. Any other telecommunications work requires a telecommunications contractor's license.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-925 Electrical/telecommunications contractor's license.

General.

(1) The department will issue an electrical/telecommunications contractor's license that will expire twenty-four months following the date of issue to a person, firm, partnership, corporation or other entity that complies with requirements for such license in chapter 19.28 RCW. An electrical/telecommunications contractor's license will not be issued to or renewed for a person, firm, or partnership unless the Social Security number, date of birth, and legal address of each member(s) (see WAC 296-46B-100 definition for member), are submitted with the application. The department may issue an electrical/telecommunications contractor's license for a period greater or less than twenty-four months for the purpose of equalizing the number of electrical contractor's licenses that expire each month. The department may prorate the electrical/telecommunications contractor's license fee according to the license period.

The applicant, upon application and renewal, must provide the department with the Social Security number, date of birth, and legal address of each member(s).

(2) Combination specialty contractor's license. The department may issue a combination specialty contractor's license to a firm that qualifies for more than one specialty electrical contractor's license. The assigned administrator must be certified in all specialties applicable to the combination specialty contractor's license. The license will plainly indicate the specialty licenses' codes included in the combination license. An administrator assigned to a telecommunications

contractor must be certified as a telecommunications administrator. A combination license will not be issued for telecommunications (09).

(3) See RCW 19.28.041(7) for a contractor doing domestic pumping work as defined in RCW 18.106.010 (10)(c).

(4) The department may deny application, renewal, change of assignment of administrator/master electrician, reinstatement, or issuance of an electrical/telecommunications contractor's license if a firm, an owner, partner, member, or corporate officer owes money as a result of an outstanding final judgment(s) under chapter 19.28 RCW.

Electrical/telecommunications contractor bond, cash or securities deposit.

(5) Bond, cash, or securities deposit.

(a) The electrical/telecommunications contractor may furnish the department with a cash or security deposit to meet the bond requirements in lieu of posting a bond. A cash or security deposit assigned to the department for bond requirements will be held in place for one year after the contractor's license is expired, revoked, or the owner notifies the department in writing that the company is no longer doing business in the state of Washington as an electrical/telecommunications contractor. Upon written request, the cash or security deposit will then be released by the department providing there is no pending legal action against the contractor under chapter 19.28 RCW of which the department has been notified.

(b) See RCW 19.28.041(7) for a contractor doing domestic pumping work as defined in RCW 18.106.010 (10)(c).

Telecommunications contractor insurance.

(6) To obtain a telecommunications contractor's license, the applicant must provide the department with an original certificate of insurance naming the department of labor and industries, electrical section as the certificate holder. Insurance coverage must be no less than twenty thousand dollars for injury or damages to property, fifty thousand dollars for injury or damage including death to any one person, and one hundred thousand dollars for injury or damage including death to more than one person. The insurance will be considered a continuing obligation unless canceled by the insurance company. The insurance company must notify the department in writing ten days prior to the effective date of said cancellation or failure to renew.

(7) The telecommunications contractor may furnish the department with an assigned account to meet the insurance requirements in lieu of a certificate of insurance. An account assigned to the department for insurance requirements will be held in place for three years after the contractor's license is expired, revoked, or the owner notifies the department in writing that the company is no longer doing business in the state of Washington as a telecommunications contractor. Upon written request, the account then will be released by the department providing there is no pending legal action against the contractor under chapter 19.28 RCW of which the department has been notified.

Electrical/telecommunications contractor exemptions.

(8) The following types of systems and circuits are considered exempt from the requirements for licensing and permitting described in chapter 19.28 RCW. The electrical failure of these systems does not inherently or functionally compromise safety to life or property.

Low-voltage thermocouple derived circuits and low-voltage circuits for:

(a) (~~Built-in~~) Residential: Garage doors and built-in vacuum systems (~~and garage doors~~); and

(b) Underground: Landscape sprinkler systems, landscape lighting, and antennas for wireless animal containment fences.

For these types of systems and circuits to be considered exempt, the following conditions must be met:

(c) The power supplying the installation must be derived from a listed Class 2 power supply;

(d) The installation and termination of line voltage equipment and conductors supplying these systems is performed by appropriately licensed and certified electrical contractors and electricians;

(e) The conductors of these systems do not pass through fire-rated walls, fire-rated ceilings or fire-rated floors in other than residential units; and

(f) Conductors or luminaires are not installed in installations covered by the scope of Article 680 NEC (swimming pools, fountains, and similar installations).

(9) Firms who clean and/or replace lamps in luminaires are not included in the requirements for licensing in chapter 19.28 RCW. This exemption does not apply to electric signs as defined in the NEC.

(10) Firms who install listed plug and cord connected utilization equipment are not included in the requirements for licensing in chapter 19.28 RCW. The plug and cord must be a single listed unit consisting of a molded plug and cord and not exceeding 250 volt 60 ampere single phase. The plug and cord can be field installed per the manufacturer's instructions and the product listing requirements. The utilization equipment must be a single manufactured unit, including the plug and cord, that does not require any electrical field assembly except for the installation of the plug and cord and is allowed to be plug and cord connected by the NEC. Firms who perform field electrical servicing, maintaining, or repairing of plug and cord connected utilization equipment other than household appliances are not included in this exemption.

(11) Firms regulated by the Federal Communications Commission or the utilities and transportation commission, supplying telecommunications service to an end-user's property, are not required to be licensed as a telecommunications contractor under chapter 19.28 RCW for telecommunications installations made ahead of the telecommunications network demarcation point.

(12) Unregulated firms, supplying telecommunications service to an end-user's property, are not required to be licensed as a telecommunications contractor under chapter 19.28 RCW for telecommunications installations made ahead of the telecommunications network demarcation point.

(13) Leaseholders. For electrical installations, maintenance, or alterations to existing buildings only, any person, firm, partnership, corporation, or other entity holding a valid, signed lease from the property owner authorizing the leaseholder to perform electrical work, on the property the leaseholder occupies, will be allowed to purchase an electrical permit(s) and do electrical work on or within the property described in the lease. The lessee and/or his or her regularly employed employees must perform the electrical installation, maintenance and alteration.

The lessee who performs the electrical maintenance or installation work must be the sole occupant of the property or space. Property owners or leaseholders cannot perform electrical work on new buildings for rent, sale, or lease, without the proper electrical licensing and

certification. For the purposes of this section, electrical work associated with setting a manufactured, mobile, or modular building is considered electrical work on a new building. Refer to RCW 19.28.261 for exemptions from licensing and certification.

(14) Assisting a householder. A friend, neighbor, relative, or other person (including a certified electrician) may assist a householder, at his/her residence in the performance of electrical work on the condition that the householder is present when the work is performed and the person assisting the householder does not accept money or other forms of compensation for the volunteer work. For the purposes of this subsection, a residence is a single-family residence.

(15) Volunteering to do electrical work. There are no exceptions from the electrical contractor's license or electrician certification requirements to allow persons to perform volunteer electrical work for anyone other than a householder or a nonprofit organization as allowed by RCW 19.28.091(7). For the purpose of this section, volunteer means that there is no remuneration or receiving of goods or services in return for electrical installations performed.

(16) Farms or place of business. See RCW 19.28.261 for licensing/certification exemptions allowed for the owner(s) of a farm or other place of business and for the employees of the owner.

(17) The licensing and certification requirements of chapter 19.28 RCW do not apply to persons or firms who remove electrical wiring and/or equipment for the purpose of disposal when all conductors, raceways, and equipment to be disposed of have been physically separated from the source of power by a properly certified electrician employed by a licensed electrical contractor, or person(s) meeting the exemptions listed in RCW 19.28.261. Removal of a component or only a portion of an equipment unit is considered electrical maintenance and does not qualify for this exemption.

Exemptions - Electrical utility and electrical utility's contractor.

(18) Electrical utility exemptions.

(a) Utility system exemption - RCW 19.28.010(1) and 19.28.091(1).

(i) Neither a serving electrical utility nor a contractor or subcontractor employed by the serving electrical utility is required to have an electrical contractor's license for work on the "utility system" or on service connections or on meters or other apparatus used to measure the consumption of electricity.

(ii) Exemption from inspection. The work of a serving electrical utility and its contractor(s) on the work exempted by NEC 90.2 (b) (5), 1981 edition, is not subject to inspection.

(b) Street/area lighting exemption - RCW 19.28.091 (2) (a).

(i) On:

(A) Publicly owned streets, parks, athletic/play fields, beaches, and similar areas where the public has general, clear, and unrestricted access; or

(B) Outside area lighting installed on a utility owned pole(s) that is used to support the utility's electric distribution wiring or equipment that supplies a private property owner's property, the serving electrical utility is considered to be an owner and is not required to have an electrical contractor's license or electrical permit to install or work on wiring or equipment, owned by the utility and used in the lighting of those streets/areas.

(ii) On other privately or publicly owned property (e.g., private streets, parking lots, businesses, schools, etc.), the serving utility is not required to have an electrical contractor's license or electrician

cal permit to install or work on outside street/area lighting where the light(s) is supplied directly from the utility system and installed according to the NESC or NEC.

This work is considered to be utility type work.

An electric utility is not allowed to install or work on street/area lighting:

(A) When the area is privately or publicly owned and the public does not have general, clear, and otherwise unrestricted access such as: Industrial property, residential property, or other property where the public's access is restricted in any manner.

(B) Where the lighting is supplied from a source of power derived from a customer-owned electrical system.

(C) Where the lighting or wiring is attached to a building or other customer-owned structure.

(D) If the utility does not directly perform the installation or work, it may only contract the work to an appropriately licensed electrical contractor(s). See RCW 19.28.091(3).

(c) Customer-owned equipment exemption - RCW 19.28.091 (2)(b). A serving electrical utility is not required to have an electrical contractor's license to work on electrical equipment owned by a commercial, industrial, or public institution customer if:

(i) The utility has not solicited such work; and

(ii) Such equipment:

(A) Is located outside a building or structure; and

(B) The work performed is ahead of the secondary side of the customer's transformer(s) which supplies power at the customer's utilization voltage.

If the utility does not directly perform the installation or work, it may only contract the work to an appropriately licensed electrical contractor(s). See RCW 19.28.091(3).

This work is considered to be utility type work.

The owner will provide the electrical work permit and be responsible for requesting inspections and for ensuring the work is installed per chapter 19.28 RCW and this chapter.

Exemptions - Electrical utility telecommunications transition equipment installations, maintenance and repair.

(19) No license, inspection or other permit will be required by the department of any electric utility or, of any person, firm, partnership or corporation or other entity employed or retained by an electric utility or its contractor, because of work in connection with the installation, maintenance, or repair of telecommunications transition equipment located ahead of the utility's telecommunications network demarcation point on the outside of a building or other structure when the work is performed by a qualified person consistent with the requirements of the National Electric Code (NEC) except as provided in (a) and (b) of this subsection:

(a) The following exceptions to the NEC will be permitted:

(i) An additional service disconnect supplying power to the transition equipment can be connected on the supply side of the main service disconnect supplying general power to the building;

(ii) Service entrance disconnects may be separated when clearly labeled;

(iii) The service disconnect used for supplying power to the transition equipment must be connected to the grounding electrode system using:

(A) #8 AWG copper or larger grounding electrode conductor if protected from physical damage; or

(B) #6 AWG copper or larger grounding electrode conductor if not protected from physical damage;

(iv) Use of equipment or materials that have been listed/field evaluated by a recognized independent testing laboratory or the department;

(v) Low-voltage circuits do not require a separate disconnecting means and may be grounded to the transition equipment grounding system;

(vi) Any other variance to the NEC must be approved by the department.

(b) A variance recommended by a joint utility standards group composed of representatives of both public and private utilities or certified by a professional engineer will be approved by the department unless the recommendation is inconsistent with meeting equivalent objectives for public safety.

(c) For the purposes of this section, a qualified worker is employed by a utility or its contractor and is familiar with the construction or operation of such lines and/or equipment that concerns his/her position and who is proficient with respect to the safety hazards connected therewith, or, one who has passed a journey status examination for the particular branch of the electrical trades with which he/she may be connected or is in a recognized training or apprenticeship course and is supervised by a journey level person.

(d) Although the utility is responsible for inspection and approval of the installation, including the selection of material and equipment, the department reserves the right to audit worker qualifications and inspect such installations semiannually for conformance with the requirements of (a), (b) and (c) of this subsection but will not collect a permit fee for such inspection or audit.

(e) If a utility fails to meet the requirements of this section, the department may require the utility to develop and submit a remedial action plan and schedule to attain compliance with this section which may be enforced by the department.

(f) This exemption will be in addition to any other exemption provided in chapter 19.28 RCW, this chapter or other applicable law.

Exemptions - Independent electrical power production equipment exemption.

(20) An independent electrical power production entity is not required to have an electrical contractor's license to work on electrical equipment used to produce or transmit electrical power if:

(a) The entity is:

(i) The owner or operator of the generating facility is regulated by the Federal Energy Regulatory Commission (FERC);

(ii) A municipal utility, or other form of governmental electric utility, or by an electrical cooperative or mutual corporation; or

(iii) The owner or operator of the generating facility is an independent electrical power producer and the facility generates electrical power only for sale to one or more:

(A) Electrical utilities regulated by FERC, municipal utility, or other form of governmental utility, or to an electric cooperative or mutual corporation; and

(B) The electrical power generated by the facility is not used for self-generation or any other on- or off-site function other than sale to one or more utilities regulated by FERC or by one or more

state public utilities commissions, or to a PUD, municipal utility, or other form of governmental electric utility, or to an electric cooperative or mutual corporation.

(b) The entity must supply the chief electrical inspector a valid master business license issued by the department of licensing, state of Washington so that the entity's status as a revenue generating business can be confirmed.

(c) The entity has entered into an agreement to sell electricity to a utility or to a third party; and

(d) The electrical equipment is used to transmit electricity from the terminals of an electrical generating unit located on premises to the point of interconnection with a utility system.

(e) The electrical power production facility's generation capacity exceeds 100 KVA.

(f) Notwithstanding that a generating facility may be granted an exemption pursuant to this section, the facility will be subject to all the requirements of chapter 19.28 RCW if the facility at any time in the future ceases to comply with the requirements for exemption. All site facilities not exclusively and directly required to generate and/or distribute the electrical power generated on the site are subject to all the licensing and inspection requirements of chapter 19.28 RCW. All facility services, feeders, and circuits not exclusively and directly required to generate and/or distribute the electrical power (e.g., lights, outlets, etc.) must comply with all requirements of chapter 19.28 RCW for licensing and inspection. Facility circuits supplied to equipment required for the function of generation equipment (e.g., block heaters, power supplies, wind generator tower circuits, etc.) must comply with all requirements of chapter 19.28 RCW for licensing and inspection up to and including the equipment termination point.

(g) The generation equipment must not be mounted on or in any building or structure not required for generation of power (e.g., schools, offices, residences, apartment buildings, hospitals, etc.).

Exemptions - Telegraph and telephone utility and telegraph and telephone utility's contractor.

(21) Telegraph and telephone utility exempted equipment and installations. No person, firm, partnership, corporation, or other entity is required to have an electrical contractor's license for work on electrical equipment and installations thereof that are exempted by RCW 19.28.151. For the purposes of this exemption, "building or buildings used exclusively for that purpose" may mean any separate building or space of a building where the space is separated from the remainder of the building by a two-hour fire wall. The telecommunications or telegraph equipment within such a space must supply telephone or telegraph service to other customer's buildings (i.e., telecommunications or telegraph equipment cannot solely supply the building containing the telephone/telegraph space).

Exemptions - Manufacturers of electrical/telecommunications products.

(22) Manufacturers of electrical/telecommunications systems products will be allowed to utilize a manufacturer's authorized factory-trained technician to perform initial calibration, testing, adjustment, modification incidental to the startup and checkout of the equipment, or replacement of components within the confines of the specific product, without permit or required licensing:

(a) Provided the product:

(i) Has not been previously energized;

(ii) Has been recalled by the Consumer Product Safety Commission;
(iii) Is within the manufacturer's written warranty period, a period not to exceed one year from date of original installation of the new product; or

(iv) The manufacturer is working under the written request and supervision of an appropriately licensed electrical contractor.

(b) Except for the replacement of individual components, as allowed above, this exemption does not include the on-site assembly, installation, removal, or replacement of the electrical product. Modifications to the equipment, as designated above, must not include any changes to the original intended configuration nor changes or contact with external or field-connected components or wiring.

(c) The manufacturer will be responsible for obtaining any required reapproval/recertification from the original listing or field evaluation laboratory.

(d) The manufacturer must notify the department if any modifications have been made or reapproval/recertification is required.

Premanufactured electric power generation equipment assemblies and control gear.

(23) Premanufactured electric power generation equipment assemblies and control gear.

(a) Manufacturers of premanufactured electric power generation equipment assemblies and control gear will be allowed to utilize a manufacturer's authorized factory-trained technician to perform initial calibration, testing, adjustment, modification incidental to the startup and checkout of the equipment, or replacement of components within the confines of the specific product, without permit or required licensing, provided:

(i) For transfer equipment, the product has not been previously energized or is within the manufacturer's written warranty period;

(ii) Modifications to the equipment, as designated above, must not include any changes to the original intended configuration nor changes or contact with external or field-connected components or wiring;

(iii) The manufacturer will be responsible for obtaining any required reapproval/recertification from the original listing or field evaluation laboratory; or

(iv) The manufacturer must notify the department if any modifications have been made or reapproval/recertification is required.

(b) Premanufactured electric power generation equipment assemblies are made up of reciprocating internal combustion engines and the associated control gear equipment. Control gear equipment includes control logic, metering, and annunciation for the operation and the quality of power being generated by the reciprocating internal combustion engine and does not have the function of distribution of power.

(c) Modifications of a transfer switch must not include changes to the original intended configuration or changes or contact with externally field-connected components.

(d) For the purposes of this subsection, the following work on premanufactured electric power generation equipment assemblies is not exempt from the requirements of chapter 19.28 RCW:

(i) Installation or connection of conduit or wiring between the power generation unit, transfer switch, control gear;

(ii) Installation of the transfer switch;

(iii) Connections between the power generation unit, transfer switch, control gear, and utility's transmission or distribution systems;

(iv) Connections between the power generation unit, transfer switch, control gear, and any building or structure; or

(v) Test connections with any part of:

(A) The utility's transmission or distribution system; or

(B) The building or structure.

(24) The installation, maintenance, or repair of a medical device deemed in compliance with chapter 19.28 RCW is exempt from licensing requirements under RCW 19.28.091, certification requirements under RCW 19.28.161, and inspection and permitting requirements under RCW 19.28.101. This exemption does not include work providing electrical feeds into the power distribution unit or installation of conduits and raceways. This exemption covers only those factory engineers or third-party service companies with equivalent training who are qualified to perform such service.

(25) Coincidental electrical/plumbing work. See RCW 19.28.091(8) for the plumber exemption. For the purposes of RCW 19.28.091(8), the like-in-kind replacement includes the appliance or any component part of the appliance such as, but not limited to, the thermostat in a water heater.

(26) Nothing in this section will alter or amend any other exemptions from or requirement for licensure or inspection, chapter 19.28 RCW or this chapter.

Photovoltaic equipment.

(27) See WAC 296-46B-690 for specific exemptions related to photovoltaic installations.

Submersible well pump installers.

(28) Firms that install submersible pumps and associated wiring in well casings, (excluding connection of pump wiring at the top of the wellhead) are not included in the requirements for licensing in chapter 19.28 RCW.

EXCEPTION: For testing purposes of a new submersible pump, well drillers and submersible pump installers registered under chapter 18.27 RCW may temporarily connect a submersible well pump to a portable generator with cord and plug output. All temporary wiring and equipment must be removed immediately upon completion of testing.

AMENDATORY SECTION (Amending WSR 17-12-021, filed 5/30/17, effective 7/1/17)

WAC 296-46B-935 Administrator certificate.

General.

(1) The department will deny application, renewal, change of assignment, reinstatement, or issuance of an administrator or master electrician certificate if an individual owes money as a result of an outstanding final judgment(s) under chapter 19.28 RCW.

(2) For special accommodation see WAC 296-46B-960.

(3) An applicant will not be issued a specialty administrator certificate that is a subspecialty of a certificate the applicant currently holds (i.e., the applicant is not eligible to take the domestic well administrator examination if the applicant currently possesses a pump and irrigation administrator certificate).

Qualifying for examination.

(4) There are no qualification requirements for taking an administrator certificate examination. Applicants should contact the testing agency directly.

Original - Administrator certificates.

(5) The scope of work for electrical administrators is described in WAC 296-46B-920. The department will issue an original administrator certificate to a general administrator, or specialty administrator who:

(a) Successfully completes the appropriate administrator examination; and

(b) Submits the appropriate examination passing report from the testing agency with the applicant's: Date of birth, mailing address, and Social Security number; and

(c) Pays all appropriate fees as listed in WAC 296-46B-909.

For an examination report to be considered, all the above must be submitted within ninety days after the completion of the examination. After ninety days, the applicant will be required to successfully re-take the complete examination. An individual's original administrator certificate will expire on their birth date at least one year, and not more than three years, from the date of original issue.

Combination - Specialty administrator certificate.

(6) The department may issue a combination specialty administrator certificate to an individual who qualifies for more than one specialty administrators' certificate. The combination specialty administrators' certificate will plainly indicate the specialty administrator's certificate(s) the holder has qualified for. Telecommunications cannot be issued a combination because the renewal requirements are different from those required for electrical administrators.

Renewal - Administrator certificate.

(7) An individual must apply for renewal of their administrator certificate on or before the expiration date of the certificate. The individual may not apply for renewal more than ninety days prior to the expiration date. Renewed certificates are valid for three years, with the exception of telecommunications administrators, who will be renewed for two years.

(8) An individual may renew their administrator certificate within ninety days after the expiration date without reexamination if the individual pays the late renewal fee listed in WAC 296-46B-909.

(9) All renewals received more than ninety days after the expiration date of the certificate will be denied. The administrator will be required to pass the appropriate administrator examination before being recertified.

(10) All applicants for certificate renewal must:

(a) Submit a complete renewal application;

(b) Pay all appropriate fees as listed in WAC 296-46B-909; and

(c) Complete the continuing education requirements described in WAC 296-46B-970. Continuing education classes are only valid when all the requirements of WAC 296-46B-970 are completed.

Telecommunications administrators are not required to provide continuing education information.

Continuing education for pump and irrigation **(03)** and domestic pump **(03A)** administrators may be comprised of fifty percent electrical and fifty percent plumbing instruction.

(11) An individual who has not completed the required hours of continuing education can renew an administrator's certificate if the individual applies for renewal on or before the certificate expires and pays the appropriate renewal fee. However, the certificate will be placed in an inactive status.

When the certificate is placed in inactive status, an assigned administrator will be automatically unassigned from the electrical contractor. The electrical contractor will be notified of the unassignment and has ninety days to replace the administrator. An assignment fee will then be required per WAC 296-46B-909.

The inactive certificate will be returned to current status upon validation, by the department, of the required continuing education requirements. If the certificate renewal date occurs during the inactive period, the certificate must be renewed on or before the renewal date to allow the return to current status.

(12) An individual may renew a suspended administrator's certificate by submitting a complete renewal application including obtaining and submitting the continuing education required for renewal. However, the certificate will remain in a suspended status for the duration of the suspension period. Before the suspended administrator's certificate can be activated, the holder must pass the appropriate administrator examination in accordance with RCW (~~(19.28.211(2))~~) 19.28.061 (2)(a).

(13) An individual may not renew a revoked administrator's certificate.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-940 Electrician/certificate of competency required.

General.

(1) The department will deny application, renewal, reinstatement, or issuance of a certificate or permit if an individual owes money as a result of an outstanding final judgment(s) under chapter 19.28 RCW.

(2) The scope of work for electricians is described in WAC 296-46B-920.

Electrician - Certificate of competency required.

(3) To work in the electrical construction trade, an individual must possess, wear, and visibly display on the front of the upper body, a current valid:

(a) Master journey level electrician certificate of competency issued by the department;

(b) Journey level electrician certificate of competency issued by the department;

(c) Master specialty electrician certificate of competency issued by the department;

(d) Specialty electrician certificate of competency issued by the department; or

(e) Electrical training certificate, learning the trade in the proper ratio, per RCW 19.28.161, under the supervision of a certified master journey level electrician, journey level electrician, master specialty electrician working in their specialty, or specialty electrician working in their specialty.

The certificate may be worn inside the outer layer of clothing when outer protective clothing (e.g., rain gear when outside in the rain, arc flash, welding gear, etc.) is required. The certificate must be worn inside the protective clothing so that when the protective clothing is removed, the certificate is visible. A cold weather jacket or similar apparel is not protective clothing.

The certificate may be worn inside the outer layer of clothing when working in an attic or crawl space or when operating equipment (e.g., drill motor, conduit threading machine, etc.) where wearing the certificate may pose an unsafe condition for the individual.

The certificate must be immediately available for examination at all times.

When working as a certified electrician, the electrician must not display a training certificate.

When supervising a trainee(s), the supervising electrician's certificate must be appropriate for the work being performed by the trainee(s). For the purposes of this section, supervising a trainee is considered to be working in the electrical construction trade.

Any person working as an electrician or trainee must also possess a government issued photo identification and immediately present that identification when requested by the inspector.

(4) The department issues master electrician and electrician certificates of competency in the following areas of electrical work:

- (a) General journey level **(01)**;
- (b) Specialties:
 - (i) Residential **(02)**;
 - (ii) Pump and irrigation **(03)**;
 - (iii) Domestic pump **(03A)**;
 - (iv) Signs **(04)**;
 - (v) Limited energy system **(06)**;
 - (vi) HVAC/refrigeration **(06A)**;
 - (vii) HVAC/refrigeration - Restricted **(06B)**;
 - (viii) Nonresidential maintenance **(07)**;
 - (ix) Nonresidential lighting maintenance and lighting retrofit **(07A)**;
 - (x) Residential maintenance **(07B)**;
 - (xi) Restricted nonresidential maintenance **(07C)**;
 - (xii) Appliance repair **(07D)**;
 - (xiii) Equipment repair **(07E)**; and
 - (xiv) Door, gate, and similar systems **(10)**.

Original certificates of competency.

(5) The department will issue an original certificate of competency to master, journey level, or specialty electricians who meet the eligibility requirements listed in:

- (a) RCW 19.28.191 (1)(a) or (b) and chapter 19.28 RCW; and
 - (i) Submit an application for an original master electrician certificate including: Date of birth, mailing address and Social Security number; and
 - (ii) Pay all appropriate fees, as listed in WAC 296-46B-909;
- (b) RCW 19.28.191 (1)(d) and (e);
 - (i) Submit an original master electrician certification examination application including: Date of birth, mailing address and Social Security number; and
 - (ii) Pay all appropriate fees, as listed in WAC 296-46B-909; or
- (c) RCW 19.28.191 (1)(f) through (g);

(i) Submit an original electrician certification examination application including: Date of birth, mailing address and Social Security number; and

(ii) Pay all appropriate fees, as listed in WAC 296-46B-909.

(6) An individual's original electrician certificate of competency will expire on their birth date at least two years, and not more than three years, from the date of original issue.

Renewal - Master electrician, journey level, and specialty electrician certificates of competency.

(7) An individual must apply for renewal of their electrician certificate of competency on or before the expiration date of the certificate. The individual may not apply for renewal more than ninety days prior to the expiration date. Renewed certificates are valid for three years.

(8) An individual may renew their certificate of competency within ninety days after the expiration date without reexamination if the individual pays the late renewal fee listed in WAC 296-46B-909.

(9) All applications for renewal received more than ninety days after the expiration date of the certificate of competency require that the electrician pass the appropriate competency examination before being recertified.

(10) All applicants for certificate of competency renewal must:

(a) Submit a complete renewal application;

(b) Pay all appropriate fees; and

(c) Complete the continuing education requirements described in WAC 296-46B-970. Continuing education classes are only valid when all the requirements of WAC 296-46B-970 are completed.

Continuing education for pump and irrigation **(03)** and domestic pump **(03A)** electricians may be comprised of fifty percent electrical and fifty percent plumbing instruction.

(11) An individual who has not completed the required hours of continuing education can renew a certificate of competency if the individual applies for renewal before the certificate of competency expires and pays the appropriate renewal fee. However, the certificate of competency will be placed in an inactive status. The inactive certificate of competency will be returned to current status upon validation, by the department, of the required continuing education. If the certificate renewal date occurs during the inactive period, the certificate must be renewed on or before the renewal date to allow the return to current status.

(12) An individual may renew a suspended certificate of competency by submitting a complete renewal application including obtaining and submitting the continuing education required for renewal. However, the certificate will remain in a suspended status for the duration of the suspension period. Before the suspended certificate of competency can be activated, the holder must pass the appropriate electrician or master electrician competency examination in accordance with RCW 19.28.211(2).

(13) An individual may not renew a revoked certificate of competency.

Exemptions - Lineworker.

(14) When performing the work described and allowed in WAC 296-46B-925 (18)(a) or (b)(i), when employed by the serving utility or its contractor or subcontractor(s), a lineworker is exempt from the requirements of chapter 19.28 RCW.

(15) When performing the work described and allowed in WAC 296-46B-925 (18)(b)(ii) or (c), when employed by the serving utility or its licensed electrical contractor or subcontractor(s), a lineworker must meet the requirements of RCW 19.28.261 (5)(b) or be an appropriately certified electrician. See the definition of a lineworker in WAC 296-46B-100.

Exemptions - Plumbers.

(16) Coincidental electrical/plumbing work. See RCW 19.28.091(8) for the plumber exemption. For the purposes of RCW 19.28.091(8), the like-in-kind replacement includes the appliance or any component part of the appliance such as, but not limited to, the thermostat in a water heater.

Exemptions - Submersible well pump installers.

(17) When performing the work described and allowed in WAC 296-46B-925(28), regular employees of well drillers or pump installers registered under chapter 18.27 RCW are exempt from the electrician certification requirements of chapter 19.28 RCW.

Reciprocal agreements between Washington and other states.

~~((17))~~ (18) The department may negotiate reciprocal agreements with states that have equivalent requirements for certification of journey level or specialty electricians. These agreements allow electricians from those reciprocal states to become certified in the state of Washington without examination and allow Washington certified electricians to become certified in the other states without taking competency examinations. An individual may only apply for reciprocity from another state(s) one time in Washington.

~~((18))~~ (19) An individual will be issued a reciprocal electrician certificate of competency if all the following conditions are met:

(a) The department has a valid reciprocal agreement with the other state in the journey level or specialty category requested;

(b) The individual makes a complete application for a reciprocal certificate on the form provided by the department. A complete application includes:

(i) Application for reciprocal certificate of competency;

(ii) Evidence that the individual meets the eligibility requirements listed in RCW 19.28.191, by presenting a current, valid journey-person or specialty electrician certificate or certified letter from the issuing state attesting to possession of such certificate by the applicant:

(A) Evidence from an apprenticeship training director that any journey level category applicant has successfully completed an apprenticeship program that is equivalent to an apprenticeship program approved under chapter 49.04 RCW approved by the department for the electrical construction trade in which the applicant worked in the electrical construction trade for a minimum of eight thousand hours; or

(B) Evidence that any journey level category applicant has worked in the electrical construction trade for a minimum of sixteen thousand hours.

(iii) All appropriate fees as listed in WAC 296-46B-909.

(c) The individual obtained the reciprocal state's certificate of competency as a journey level or specialty electrician by examination and the individual held the reciprocal state's certificate for a period of at least one year.

~~((19))~~ (20) An individual is not eligible for a reciprocal electrician certificate of competency if the individual:

(a) Has failed to renew a similar Washington electrician certificate of competency as required in RCW 19.28.211; or

(b) Has a similar Washington electrician certificate of competency in suspended, revoked, or inactive status under this chapter; or

(c) Owes money as a result of an outstanding final judgment(s) to the department; or

(d) Has ever taken and failed a Washington exam for the certificate being applied for; or

(e) Was a resident of the state of Washington at the time the examination was taken in the other state.

AMENDATORY SECTION (Amending WSR 17-12-021, filed 5/30/17, effective 7/1/17)

WAC 296-46B-970 Continuing education and classroom education requirements. (1) DEFINITIONS - For purposes of this section.

"Applicant" means the entity submitting an application for review.

"Application" means a submittal made by an applicant seeking instructor or class approval.

"Calendar day" means each day of the week, including weekends and holidays.

"Class" means continuing education or basic trainee class.

"Currently adopted code," for this section means the code adopted in WAC 296-46B-010(1) or any more recently published National Electric Code.

"Date of notification" means the date of a request for additional information from the department or the approval/denial letter sent to the applicant by the department.

"Electrical theory" means basic principles of electricity such as: Magnetism, ohm's law, and circuit properties such as voltage, current, power, resistance, inductance, capacitance, reactance, impedance, etc., in series, parallel, and combination AC and DC circuits.

"Examination" is any examination required by this section. Each examination must be unique and must provide randomized questions, except for classroom training. Each examination question bank must be at least two times larger than the number of questions in any individual examination. Examinations must not direct or point the individual to a correct answer or reference. Individuals must be responsible to determine the correct answer without the assistance of the sponsor. No more than twenty percent of an examination's questions may have a true/false answer. Competency is demonstrated by scoring at least seventy-five percent on the examination.

"Individual" means a master electrician, administrator or electrician seeking credit for continuing education or a trainee seeking credit for basic trainee class for renewal or certification.

"Instructor" means an individual who is authorized to instruct an approved continuing education or basic trainee class.

"Working day" means Monday through Friday, excluding state of Washington holidays.

(2) GENERAL.

(a) The department and the electrical board have the right to monitor all approved classes without notice and at no charge.

If the department or electrical board determines that the class or instructor does not meet or exceed the minimum requirements for approval, course length, or instructor qualifications, the department may revoke the class and/or instructor approval and/or reduce the number of credited hours for the class.

(b) Department-offered classes and the instructors used for department classes are automatically approved.

(c) Instructors who meet the minimum requirements using subsection (5)(d)(iv) of this section may only instruct classes sponsored by the manufacturer(s) who verified the instructors' qualifications.

(d) An individual will not be given credit for the same approved continuing education class taken more than once. A course sponsor may not submit an individual's name on a roster(s) for multiple classes (i.e., multiple class numbers) when the classes are given simultaneously (e.g., code update, industry related, and/or basic trainee class that have similar class content given during the same class session). Credit will not be granted for a class that is not approved per this section.

(e) Electrical administrators, master electricians, and electricians:

(i) To be eligible for renewal of an administrator certificate, master electrician or electrician certificate of competency, the individual must have completed at least eight hours of approved continuing education for each year of the prior certification period. The individual is not required to take the classes in separate years.

(A) At least eight hours of the total required continuing education must be on the changes in the currently adopted code.

(B) Four hours of the required continuing education must be on the currently adopted chapter 19.28 RCW and/or its related WAC.

(ii) An individual changing an electrical administrator and an electrician certificate of competency into a master electrician's certificate of competency as allowed in RCW 19.28.191 (1)(a) or (b) must have completed at least eight hours of approved continuing education for each year of the electrician's prior certificate period. The individual is not required to take the classes in separate years.

(A) At least eight hours of the total required continuing education must be on the changes in the currently adopted code.

(B) Four hours of the required continuing education must be on the currently adopted chapter 19.28 RCW and/or its related WAC.

(iii) Any portion of a year of a prior administrator or electrician certificate period is equal to one year for the purposes of the required continuing education.

(iv) An individual who has both an electrician certificate and an administrator certification may use the same class to fulfill the requirements for continuing education.

(f) Training certificates: To be eligible for renewal of a training certificate, the individual must have completed:

(i) At least forty-eight hours of approved basic trainee classes. The individual cannot use a basic trainee class as credit for the continuing education requirements for renewing an electrician or administrator certificate(s) when the class is also used to satisfy the training certificate renewal requirements; or

(ii) Equivalent electrical training classes taken as a part of an approved:

- Apprenticeship program under chapter 49.04 RCW; or

- Electrical training program under RCW 19.28.191 (1)(h).

Equivalent classes must be submitted to and approved by the chief electrical inspector thirty calendar days prior to offering the class.

(g) A continuing or basic trainee class attended or completed by an individual before the class's effective date cannot be used to meet the certificate renewal/certification requirements.

(3) CLASS AND INSTRUCTOR - GENERAL APPROVAL PROCESS.

(a) The department will review the application for completeness and conformance with the requirements in this section.

(b) The department will deny approval of applications that do not meet the minimum requirements.

(c) All applications will be considered to be new applications (i.e., Classes and instructors may not be renewed. All applications must include all information necessary to show conformance with the minimum requirements).

(d) Application process:

(i) The applicant must submit a complete application to the department at least thirty calendar days prior to offering or instructing a class.

(ii) The department will only consider material included with the application when reviewing an application.

(iii) All applications must include:

(A) Applicant's name, address, contact name, email address, and telephone number;

(B) All required fees.

(e) Review process:

(i) When the application is received:

(A) The department must review the application for completeness within seven working days after receipt.

(B) If the application is incomplete, the department must, within two working days, notify the applicant of the status of the review and what additional information is required.

- The applicant must provide any additional information requested by the department within five working days after the date of notification.

- The department will deny the application if the additional required information is not received within the five working days after the date of notification for additional information.

(C) The department must complete the review and approval/denial process within fifteen working days upon receipt of a complete application or additional requested information and within two working days notify the applicant of the approval/denial in writing or electronically.

(ii) A notification of denial must include:

(A) Applicant's name and telephone number;

(B) Date of denial;

(C) Sponsor's name and class title if applicable;

(D) Instructor's name if applicable; and

(E) The reason for denial.

(iii) A notification of approval:

(A) For classes must include:

- Applicant's name and telephone number;

- Sponsor's name and telephone number;

- Sponsor number;

- Class title;

- Class number;

- Number of hours approved for the class. The department may reduce the hours requested in the application if the review shows that the requested number of hours is excessive;
- Effective date for this class;
- Expiration date of class;
- Category for which the class is approved (i.e., code update, RCW/WAC update, industry related, basic trainee class, or pumping industry);
- Type of class (i.e., classroom, correspondence, internet); and
- Whether the class is open to the public.

(B) For instructors, must include:

- Applicant's name and telephone number;
- Instructor's name and telephone number;
- Effective date for the approval; and
- Expiration date of the approval.

(iv) The applicant may request a review, by the electrical board, of the department's denial or modification of the application. The applicant must submit a written request for review to the Secretary of the Electrical Board - Chief Electrical Inspector - Within twenty days of notification of the denial/modification. The request must include a review fee of one hundred nine dollars and fifty cents. The review fee is nonrefundable.

(4) CLASS APPROVAL PROCESS.

(a) Class applications must include:

(i) Sponsor's name, address, contact name, email address, telephone number, and sponsor's number (if a class was previously approved);

(ii) Class title;

(iii) Number of education hours requested for the class;

(iv) Category of class for which approval is sought (e.g., code update, RCW/WAC update, industry related, basic trainee class, or pumping industry);

(v) Statement that all requirements of this section will be complied with;

(vi) Statement of whether the class is open to the public;

(vii) Class syllabus (e.g., presentation method(s), description of the training, specific NEC/RCW/WAC articles taught, theory subjects, time allowed for various subject matter components, examination question samples, etc.) describing how the class meets the minimum requirements, described below, for the type of class being offered;

(viii) The applicant must show that the sponsor regularly employs at least one staff member who meets the requirements for instructors in this section;

(ix) List of resources (e.g., texts, references, etc.).

(b) Class approval will be valid for three years except:

(i) If the class is "code update" and a new NEC is adopted by the department within the class approval period, the class approval will be considered automatically revoked; or

(ii) If the class is modified after the application is approved, the class approval will be considered automatically revoked (i.e., change in syllabus, hours, examination, etc.).

(c) Minimum requirements:

(i) Class length:

(A) The minimum allowed length of a class is two hours; however, the minimum length for a basic trainee class is four hours that may be delivered in multiple classroom components of not less than two hours each.

(B) Class length must be based on two-hour increments (e.g., 2, 4, 6, 8, etc.)

(C) Class length must be based on the following:

- Classroom instruction will be based on the total hours the individual is in the classroom. A continuing education class may be divided into multiple components so long as each component is not less than two hours in length and all components are completed within a one-month period. A basic trainee class may be divided into multiple components so long as each component is not less than two hours in length and all components are completed within a ~~((two))~~ six-month period.

- Distance learning continuing education classes (i.e., correspondence and internet continuing education classes) will be based on clock hours necessary to complete the class if it was presented in a classroom setting.

(ii) Class content:

(A) Industry-related classes must be based on:

- Codes or rules included in the currently adopted National Electrical Code (see definition of currently adopted), the electrical law/rule;

- Electrical theory based on ~~((currently published documents that are))~~ original copyrighted material that is readily available for retail purchase; and/or

- Materials and methods that pertain to electrical construction, building management systems, electrical maintenance, or workplace electrical safety such as *NFPA 70E - ~~((Handbook))~~ Standard for Electrical Safety in the Workplace*. First aid type classes must be approved and will be limited to four hours of credit towards the individual's total continuing education requirement.

(B) Code update classes must be based on the currently adopted (see definition) National Electrical Code and must specify the code articles to be addressed in the class presentation.

(C) RCW/WAC update classes must be based on the latest adopted versions of chapter 19.28 RCW and/or chapter 296-46B WAC.

(D) All basic trainee classes must be classroom instruction only and based upon basic electrical theory based on original copyrighted material that is readily available for retail purchase, currently adopted (see definition for currently adopted) National Electrical Code, and/or use of the electrical laws or rules. Correspondence and internet classes are not allowed. All basic trainee classes must include an appropriate written competency examination(s) to ensure the participant has mastered the basic concepts of the class. The examination must consist of at least five questions per two hours of class credit.

(E) For all pumping industry classes, curriculum must include fifty percent electrical and fifty percent plumbing instruction.

(F) The sponsor of any distance learning class (e.g., correspondence/internet continuing education) must provide the following additional information with the application:

- How the sponsor will provide an orientation session with the instructor or an affiliated representative of the sponsor.

- The application must include a complete description of any hardware, software, or other technology to be used by the provider and needed by the student to effectively engage in the delivery and completion of the class material.

- In the case of internet based continuing education classes, describe how the class software addresses automatic shutdown after a period of inactivity.

- How will the sponsor provide security to ensure that the student who receives credit for the class is the student who enrolled in and completed the class. The approved sponsor and the student must certify that the student has completed the class and the required number of clock hours.

- The application must describe the process and the acceptable methods of how students can contact approved instructors to answer questions regarding the class.

- The application must describe the consistent and regular interactive events appropriate to the delivery method. The interactive elements must be designed to promote student involvement in the learning process and must directly support the student's achievement of the class learning objectives.

- The application must demonstrate that the class includes the same or reasonably similar information content as a course that would otherwise qualify for the requisite number of clock hours of classroom-based instruction.

- The application must demonstrate how the sponsor determined the number of clock hours requested.

- The application must demonstrate how mastery of the material is evaluated (e.g., describing how the material is divided into major learning units and describing how these learning units are divided into modules of instruction, describing how the student's progress toward completion of the mastery requirement will be measured, and describing how the class will provide a mechanism of individual remediation to correct any deficiencies in each module of instruction).

(5) INSTRUCTOR APPROVAL PROCESS:

- (a) Except first-aid training, all instructors must be approved per this section.

- (b) The instructor application will include:

- (i) Instructor's name, address, telephone number, email address;

- (ii) Copies of credentials or other information showing conformance with the instruction minimum qualifications.

- (c) Instructor approval will be valid for three years except:

- (i) If the instructor's credentials are invalidated (e.g., suspension or revocation by the issuing entity) for any reason, approval will be automatically revoked.

- (ii) When the instructor approval expires or is revoked, a new application must be submitted to regain approved instructor status.

- (d) Minimum requirements:

The application must show that the instructor meets one of the following:

- (i) Has a valid Washington administrator, master electrician, or electrician's certificate and has appropriate knowledge of and experience working as an electrical/electronic trainer; or

- (ii) Is currently an instructor in a two-year program in the electrical construction trade licensed by the Washington work force training and education coordinating board. The instructor's normal duties must include providing electrical/electronic education; or

- (iii) Is a high school vocational teacher, community college, college, qualified instructor with a state of Washington approved electrical apprenticeship program, or university instructor. The instructor's normal duties must include providing electrical/electronic education; or

(iv) Works for and is approved by a manufacturer of electrical products to teach electrical continuing education; or
(v) Is an electrical engineer registered under chapter 18.43 RCW;
or

(vi) Subject matter experts approved by the chief electrical inspector who can demonstrate appropriate knowledge of, and experience in the electrical construction trade and working as an electrical/electronic trainer.

(6) FORMS:

(a) The department will develop an appropriate form(s) for the applicant's use when submitting for instructor or class approval;

(b) Applicants must use the department's form when submitting an application for review.

(7) CLASS ATTENDANCE:

(a) The department is not responsible for providing verification of an individual's continuing education or basic trainee classroom training history with the class sponsor;

(b) Electrical approved classes offered in Washington:

(i) The sponsor must provide the department with an accurate on-line course attendance/completion roster for each class given. Class attendance will only be verified based on the online attendance/completion roster provided by the sponsor.

(A) Within seven days of a student completing the class, the course sponsor must provide the attendance/completion roster in an internet format provided by the department.

(B) The attendance/completion roster must show each individual's name, Washington certificate number, class number, and date of completion.

(ii) Individuals will not be granted credit for a class unless the sponsor's online attendance/completion roster shows the individual successfully completed the class.

(c) For classes approved under chapter 18.106 RCW for the pumping industry, a class number will be created for electrical continuing education. Sponsors for these classes must verify attendance for the electrical credit using the format described in subsection (b) of this section.

(8) Noncompliance with this section by a course sponsor or instructor.

(a) Before a course sponsor or instructor is revoked or suspended for noncompliance with this section, the course sponsor or instructor will be given written notice of the department's intention to suspend or revoke. The notification will describe the allegations and provide the necessary procedures to request a hearing before the electrical board as described in RCW 19.28.341.

(b) The department may also file a civil penalty action under chapter 19.28 RCW for fraudulent, inaccurate, or material misrepresentation activity.

AMENDATORY SECTION (Amending WSR 17-12-021, filed 5/30/17, effective 7/1/17)

WAC 296-46B-971 Training schools. (1) The department must evaluate and approve training school programs in the electrical trade as regulated by chapter 19.28 RCW for equivalency to hours of supervised

work experience. Approved training programs must be from a Washington state public community or technical college, or a not-for-profit nationally accredited technical or trade school licensed by the work force training and education coordinating board under chapter 28C.10 RCW.

(2) The minimum total hours for an electrical technical training program must be determined per RCW 19.28.191.

(3) Training school programs must be approved before their graduates may request credit for equivalent work experience hours toward journey level or specialty electrician certification. Until December 31, 2003, existing electrical training programs, in effect after January 1, 2000, may apply for retroactive approval of their program to determine the number of hours that will be credited for the program graduates. After December 31, 2003, all training programs must be approved by the department prior to beginning instruction.

(4) Training schools must submit the curriculum of each journey level or specific specialty electrical training program to the department for approval. The curriculum must include a detailed description of each course that is included in the total training hours required by RCW 19.28.191. The curriculum must be reviewed by the department whenever significant changes in program content or course length are implemented or at an interval not to exceed three years. After department review, the program may be renewed. In evaluating the relevance of the curriculum, the department will consider the following criteria:

(a) Scope of work for the appropriate electrician certification.

(b) Understanding whole systems related to and integrated with electrical equipment installation, maintenance, troubleshooting, and appliance repair (e.g., refrigeration, pumps, hydraulics, thermodynamics, compressed air, and similar systems).

(c) Courses not directly related to electrical technical instruction or specific scope of work, but required to complete the specific training program (i.e., mathematics, technical writing, business, safety, first aid, ergonomics, etc.), must not exceed ten percent of the total student/instructor contact time of the program.

(5) ~~Within thirty days after ((beginning a program, the program sponsor must supply the department with a roster of individuals enrolled in the program. The roster must show each student's name, date of enrollment, Washington training or electrician certificate number, and the training program number. Within thirty days after each graduation cycle, approved training school programs must provide the department with a roster of individuals that have successfully completed the program. The roster must show each student's name, date of completion, Washington training or electrician certificate number, and the training program title))~~ one or more students successfully completes an accredited training school program, the program must provide the department with a completion roster in an electronic table format. Each roster must include all of the following:

(a) Name of the accredited training school;

(b) Name of the accredited training school program as referred to in the department's letter of accreditation;

(c) Submitter information:

(i) Name;

(ii) Title;

(iii) Email address; and

(iv) Telephone number.

(d) Student information:

- (i) Full name;
- (ii) Date of first instruction;
- (iii) Date of completion; and
- (iv) Washington electrical training certificate number.

(6) All school training activities involving electrical work or appliance repair done outside of in-school lab facilities must be done under a valid Washington electrical contractor's license. All students performing such work must have a valid training certificate and work under a supervising journey level or specialty electrician in a ratio, per RCW 19.28.161, in compliance with RCW 19.28.161.

(7) Individuals in a two-year electrical construction trade training program for journey level electrician must obtain the additional two years of work experience required in new industrial or commercial installation prior to the beginning, or after the completion, of the technical school program.

All student electrical training hours obtained when working for contractors or other employers in intern programs arranged by the school must be evaluated as part of the training program hours. Additional work experience credit gained in an intern program is not allowed.

This does not prohibit trainees in a training program for specialty electricians from having concurrent employment and obtaining additional specialty work experience while attending school. All such concurrent work must be documented in an affidavit of experience per WAC 296-46B-942(8).

The following supervision requirements must be met when working as an intern or student:

(a) Intern when working for contractors or other employers as a:

(i) General electrician, there must be not more than one noncertified individual for every certified master journey level electrician or journey level electrician.

(ii) Specialty electrician, there must be not more than two noncertified individuals for every certified master specialty electrician working in that electrician's specialty, specialty electrician working in that electrician's specialty, master journey level electrician, or journey level electrician.

(b) Student when working for a public community or technical college, or not-for-profit nationally accredited trade or technical school licensed by the work force training and education coordinating board under chapter 28C.10 RCW as a journey level or specialty electrician in the training program, the ratio requirements are one certified master specialty electrician working in that electrician's specialty, specialty electrician working in that electrician's specialty, master journey level electrician, or journey level electrician working as a specialty electrician to no more than four students enrolled in and working as part of an electrical construction program. All such work will be considered to be an integral part of the training program and work experience credit will not be allowed except as a part of the program.

When the ratio of certified electricians to noncertified individuals on a job site is one certified electrician to three or four noncertified individuals, the certified electrician must:

(i) Directly supervise and instruct the noncertified individuals and the certified electrician may not directly make or engage in an electrical installation; and

(ii) Be on the same job site as the noncertified individual for a minimum of one hundred percent of each working day.

The public community or technical colleges, or not-for-profit nationally accredited trade or technical schools must be an appropriately licensed electrical contractor when performing work outside the classroom.

(8) The department will use the criteria in this section to evaluate the hours of credit that may be allowed for United States armed forces experience and training in the electrical construction, electrical maintenance, and appliance repair trades. See WAC 296-46B-945.

AMENDATORY SECTION (Amending WSR 19-15-117, filed 7/23/19, effective 8/23/19)

WAC 296-46B-990 Failure to comply with the electrical contractor licensing, administrator certification, or electrician certification laws.

General.

(1) If the compliance officer or electrical inspector/auditor determines that an individual, employer, or employee has violated chapter 19.28 RCW or this chapter, the department will issue a citation that describes the violation.

Suspension or revocation - Of an electrical contractor's license, administrator's certificate, master electrician's certificate of competency, electrician's certificate of competency, or training certificate.

(2) The department may revoke or suspend, for such time as it determines appropriate, an electrical contractor's license, administrator's certificate, master electrician's certificate of competency, electrician's certificate of competency, or training certificate if:

(a) The license, certificate, or permit was obtained through error or fraud;

(b) The license, certificate, or permit holder is judged to be incompetent to work in the electrical construction trade as an electrical contractor, administrator, master electrician, journey level electrician, specialty electrician, electrical technician, or electrical trainee;

(c) For serious noncompliance as described below. See RCW 19.28.241 and 19.28.341 for other grounds and procedures.

(d) The license or certificate holder incompletely or inaccurately reported continuing or basic trainee class education units on an application for renewal; or

(e) The certificate holder falsely, incompletely, or inaccurately reported previous work experience.

The department will deny an application for any license/certificate during the period of revocation or suspension of the same or another license/certificate under chapter 19.28 RCW.

(3) For the purposes of this section, serious noncompliance includes, but is not limited to, any of the following:

(a) Causing or failing to correct a serious violation. A serious violation is a violation of chapter 19.28 RCW or chapter 296-46B WAC that creates a hazard of fire or a danger to life safety. A serious violation is also a violation that presents imminent danger to the public. Imminent danger to the public is present when installations of wire and equipment that convey or utilize electric current have been

installed in such a condition that a fire-hazard or a life-safety hazard is present. Imminent danger to the public is also present when unqualified, uncertified, or fraudulently certified electricians or administrators; or unlicensed or fraudulently licensed contractors are continuously or repeatedly performing or supervising the performance of electrical work covered under chapter 19.28 RCW. For the purposes of this section, a certified electrician is considered qualified, provided the electrician is working within his or her certification;

(b) The license or certificate was obtained, used, or allowed to be used through error or fraud;

(c) Submitting a fraudulent document to the department;

(d) Willful, intentional, or continuous noncompliance with the provisions of chapter 19.28 RCW or this chapter. For the purposes of this section, continuous noncompliance will be defined as three or more citations demonstrating a disregard of the electrical law, rules, or regulations within a period of three years, or where it can be otherwise demonstrated that the contractor, master electrician, electrician, or administrator has continuously failed to comply with the applicable electrical standards;

(e) Failure to make any books or records, or certified copies thereof, available to the department for an audit to verify the hours of experience submitted by an electrical trainee;

(f) Making a false statement or material misrepresentation on an application, statement of hours, or signed statement required by the department;

(g) The certificate holder falsely or inaccurately reported continuing or basic trainee class education units on an application for renewal;

(h) Installing a shortened rod/pipe grounding electrode, improper splicing of conductors in conduits/raceways or concealed within walls, or installing a fake equipment grounding conductor;

(i) Refusing to present a government issued photo identification when requested by an electrical inspector while working as an electrician or trainee as required by WAC 296-46B-940(3);

(j) Cheating on an electrical certification examination.

For any act of serious noncompliance, the person, firm, partnership, corporation, or other entity may be referred to the county prosecutor for criminal prosecution under chapter 9A.72 RCW. The department may also file a civil action under chapter 19.28 RCW.

(4) Before a license or certificate is revoked or suspended, the certificate holder will be given written notice of the department's intention to suspend or revoke. Notification will be sent by registered mail to the certificate holder's last known address. The notification will list the allegations against the certificate holder, and provide the certificate holder with the procedures necessary to request a hearing before the electrical board as described in WAC 296-46B-995.

Confiscation - Of an electrical contractor's license, administrator certificate, electrician certificate of competency, or training certificate.

(5) The department may confiscate a license or certificate that is counterfeit, revoked, expired, suspended, or altered. The individual may be referred to the county prosecutor for criminal prosecution under chapter 9A.72 RCW. The department may also file a civil action under chapter 19.28 RCW.

REPEALER

The following section of the Washington Administrative Code is repealed:

WAC 296-46B-553 Special occupancies—Floating buildings.