



# VERMONT

## ELECTRICAL SAFETY RULES

# 2011

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*the Vermont Electricians' Licensing Board  
and the Vermont Department of Public Safety  
Division of Fire Safety*

*Effective June 1, 2011*

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## **I. PURPOSE OF THE RULES**

The purpose of these rules is to protect the people of the State of Vermont from the risk of fire or electrocution from unsafe electrical installation, by the adoption and enforcement of nationally recognized safety codes and by the licensure, education and training, of people doing electrical installation work. The State of Vermont's law regarding electricians and electrical installations (Chapter 15 of Title 26, Vermont Statutes Annotated) is attached to these rules as Appendix I. Further information about these rules and their application may be obtained from the Division of Fire Safety  
1311 U.S. Route 302, Suite 600  
Barre, VT 05641-2351  
Telephone: 802-479-7561  
Website: www.vtfiresafety.org

## **2. ADOPTION OF THE RULES**

a) These rules are adopted by the Commissioner of Public Safety and the Electricians' Licensing Board pursuant to 26 V.S.A. Chapter 15, to license people doing electrical work and to adopt and enforce nationally recognized safety codes.

b) Existing electrical installations that do not comply with the provisions of these rules shall be permitted to be continued in use unless the authority having jurisdiction determines that the lack of conformity with these rules presents an imminent danger. Where changes are required for correction of hazards, a reasonable amount of time shall be given for compliance, depending on the degree of the hazards.

c) These rules do not apply to:

- (1) The construction, installation, operation, repair or maintenance of electrical installations which are used by a public utility in rendering its authorized service, including communications, metering, generation, control, transformation, transmission or distribution of electric energy; nor to the installation, operation, repair and wiring associated with telecommunication services and

equipment used for the transmission of information by electricity regardless of the location of such electrical installations, equipment or facilities.

- (2) Electrical installations in ships, aircraft, pipeline systems, railway rolling stock, automotive equipment, or portable sound equipment.
- (3) The manufacture, testing or repair of electrical equipment in the plant of the manufacturer of the equipment.
- (4) The construction repairs or maintenance of buildings used exclusively for agricultural purposes on owner occupied farms.
- (5) Manufactured or mobile homes owned by the occupant and located on leased land or in a mobile home park. The rules do apply to the electrical service and feeder for such units.

## **3. ELECTRICAL LICENSING**

With limited exceptions, anyone performing electrical work in the State of Vermont, other than in a residential building containing two or fewer dwelling units or electrical work regulated under the National Electrical Code, article 800, Communications Circuits, is required to be licensed as an electrician. The exceptions to the licensing requirement are contained in 26 V.S.A. § 910, which is attached to these rules in Appendix I.

An elevator or lift mechanic licensed in accordance with 21 V.S.A. section 145 is permitted to install, alter or maintain electrical wiring required for an elevator or lift beginning after the main electrical disconnect for the elevator or lift. The main disconnect for the elevator or lift and building wiring and devices associated with an elevator or lift, such as electrical lights, receptacles and fire alarm devices are required to be installed by an electrician licensed under this section.

To become licensed to do electrical work in the State of Vermont an applicant must meet the requirements established by the following sections:

### 3.1 Master Electrician

(a) To be eligible for licensure as a master electrician, an applicant shall:

- (1) have been licensed as, and working as, a journeyman electrician under this chapter for at least two years; or
- (2) have had comparable experience and training, within or without this state, acceptable to the board; and
- (3) pass an examination to the satisfaction of the board.

(b) Upon successful completion of the examination and payment of the required fee, the applicant shall receive a master electrician's license in the form of a wallet-size card. This license shall be carried by the master electrician at all times while performing his or her trade and shall be displayed upon request. Upon the request by the licensee and upon payment of the required fee, the board shall issue a license certificate suitable for framing.

(c) A person licensed under this chapter as a master electrician is entitled to design, install, repair, maintain and replace electrical installations including work in the specialty fields designated in Section 3.3 of these rules, as his or her principal business or in the course of another business conducted by him or her, and may employ other persons licensed under this chapter or electrician's helpers to perform work in connection with electrical installations under his or her direction. In the case of an apprentice or helper, "under his or her direction" means either that the master is physically present on the work site and is immediately available to direct and supervise that apprentice or helper, or that a journeyman under the master's direction is immediately available to direct and supervise that apprentice or helper.

### 3.2 Journeyman Electrician

(a) To be eligible for licensure as a journeyman electrician an applicant shall:

- (1) provide verification by the Vermont apprenticeship council of completion of an apprenticeship in electrical wiring which included both instruction and practice in work processes; or
- (2) have had equivalent training and acceptable to the board; and
- (3) pass an examination to the satisfaction of the board.

(b) The board may approve an applicant who has completed the instruction portion of the apprenticeship program to take the examination prior to completion of the practice in work experience. Where an applicant has successfully completed the examination, but not the practice in work experience, a license shall not be issued until the practice in work experience portion of the apprenticeship program has been completed.

(c) Upon successful completion of the examination and payment of the required fee, the applicant shall receive a journeyman electrician's license in the form of a wallet-size card. This license shall be carried by the journeyman at all times while performing his or her trade and shall be displayed upon request. Upon request by the licensee and payment of the required fee, the board shall issue a license certificate suitable for framing.

(d) A person licensed under this chapter as a journeyman electrician is entitled to perform electrical installations under the direction of a master electrician or a type-s journeyman in connection with that specialty field, and may supervise an apprentice electrician or an electrician's helper employed by a master electrician under the master electrician's direction. In the case of an apprentice or helper, "supervise" means that the journeyman is physically present on the work site and is immediately available to direct and supervise that apprentice or helper.

### 3.3 Type-S Journeyman Electrician

(a) To be eligible for licensure as a Type-S Journeyman an applicant shall:

- (1) Complete an accredited training and experience program recognized by the board; or
- (2) have had training and experience, within or without this state, acceptable to the Board; and
- (3) pass an examination to the satisfaction of the board in one or more of the following fields:
  - (A1) Automatic gas or oil heating, including geo-thermal;
  - (B2) Outdoor advertising;
  - (C3) Refrigeration or air conditioning;
  - (D4) Appliance and motor repairs;
  - (E5) Well pumps;
  - (F6) Farm Equipment;
  - (G7) Any miscellaneous specified area of specialized competence. This class includes:
    - (G7)c Commercial fire alarm systems
    - (G7)g Gas pump installation, including electrical work involving a canopy over gas pumps, and bulk plant work
    - (G7)k Electrical lock installation including delayed egress and access control
    - (G7)l Lightning rod installation

(b) Upon successful completion of the examination and payment of the required fee for each field in which a license is to be issued, the applicant shall receive a license in the form of a wallet-size card which shall be carried at all times while performing his or her trade and shall be displayed upon request. Upon request of the licensee and upon payment of the required fee, the board shall issue a license certificate suitable for framing.

(c) A person licensed under this Chapter as a Type-S Journeyman Electrician is entitled to design, install, repair, maintain and replace electrical installations as an employee or an independent contractor only in connection with the

specialty field designated on the person's license, and may only install branch circuits from the existing electrical service. A Type-S Journeyman Electrician may employ other persons licensed under this chapter and may supervise an apprentice or an Electrician's helper. In the case of an apprentice or helper, "supervise" means that the Type-S journeyman is physically present on the work site and is immediately available to direct and supervise that apprentice or helper.

(d) No person, other than a licensed master electrician, shall engage in the business of installing lightning rods, fire alarms or fire detection equipment or systems for another unless that person holds an appropriate type-s journeyman electricians' license, issued by the Board under this section.

### 3.4 Application; Examinations and Fees

(a) Each applicant for a license shall submit to the board, on forms furnished by it, a written application containing such relevant information as the board may require, accompanied by the required examination fee. The examination fee shall be established by the board but shall be no greater than the cost associated with administering the examination. The examination fee may be paid directly to a testing agency under contract to provide examinations for the board.

*[Note: The current examination fee is \$65 for the standard test, or \$100 for the computer based test, paid directly to the testing agency.]*

(b) Examinations shall be conducted in writing and shall include a practical skills examination. The examination shall cover theoretical and practical aspects of electrical work, together with pertinent laws and rules. In addition, the master electrician's examination shall contain questions on all specialty fields designated for type-s journeyman electricians.

(c) The board, in determining the qualifications of an applicant for a license, may in its discretion give recognition, in the case of an application for a master's license, to the applicant's experience as a licensed journeyman in another state, or in the

case of an application for a journeyman's license, to an apprenticeship served in another state, or may otherwise give recognition to experience or prior qualifications.

(d) The approval to an applicant for a license to take the required examination is valid for three years from the date of the approval by the board.

(e) An applicant who fails the examination may, upon payment of the required fee to the testing agency, retake the examination. The board shall require that an applicant obtain a minimum of 8 hours of education on the National Electrical Code or National Fire Alarm Code before retaking the examination where the applicant has failed the examination on three attempts.

(f) A person to whom a master electrician's license or a journeyman electrician's license has been previously issued by another state, whose standards are equivalent to those of this state, if under the laws or regulations of the state issuing the license a similar privilege is granted to electricians licensed under the laws of this state, shall be issued a reciprocal license without examination on payment of the required fee.

*[Note: Current reciprocal agreements include the States of New Hampshire, and Maine.]*

(g) Electrical license fees are established by the Vermont Legislature. The current license fees are listed in Appendix I.

### **3.5 Renewal of License**

a) All licenses expire on the last day of a month designated by the board. A license shall be valid for three years. A notice of renewal and application for renewal is sent to each licensee prior to the expiration of the license. The signed application for renewal, the certification of continuing education and the appropriate fee must be returned prior to the date that the license expires. The board shall renew the license of a person holding a valid license issued under this chapter on receipt of an application for renewal, certification of continuing education, child support certification, tax certification, and the required fee, on or before the expiration date of his license.

b) All journeyman and master electricians shall, as a condition of license renewal, complete 15 hours of instruction, approved by the board, on the national electrical code during the preceding 36-month period. All holders of a type-S journeyman license shall, as a condition of renewal, complete eight hours of instruction, approved by the board, on the subject of the license holder's specialty during the preceding 36 months. A person who is licensed in more than two fields of specialized competence shall not be required to complete more than a total of 15 hours of instruction.

c) If a license is allowed to lapse it may be renewed within one year of its expiration date by the payment of \$25.00 in addition to the renewal fee. A licensed electrician whose license has lapsed shall not accomplish any unsupervised electrical installation work covered by these rules until the license has been renewed.

d) If a license is not renewed within one year of its expiration date the inactive licensee shall make application for a new license and shall follow the appropriate licensing procedure. The Board may waive the requirement for reexamination where there is an undue hardship or other unusual circumstance.

### **3.6 Revocation, suspension and refusal of renewal of license**

(a) The board, after notice to the licensee and opportunity for hearing, may revoke or suspend a license issued under this chapter, or refuse to renew the license of a person who has made application for renewal:

1. If the license was wrongfully or fraudulently obtained;
2. If the licensee has violated or failed to comply with any provision of 26 V.S.A. Chapter 15 or any provision of these rules;
3. If the licensee is found by the board to be unqualified to hold the license.

(b) The board, after notice and opportunity for hearing, may take alternative actions against a license holder which is less severe than revocation,

suspension or refusal to renew a license, including but not limited to formal reprimand, additional required education, conditions on electrical installation, etc. The Board may act:

1. If the license was wrongfully or fraudulently obtained;
2. If the licensee has violated or failed to comply with any provision of 26 V.S.A. Chapter 15 or any provision of these rules;
3. If the licensee is found by the board to be unqualified to hold the license.

(c) The Board will proceed with initiating a complaint against a licensee, investigation of the complaint, action and hearings as described in Section 9.

(d) A person may file a complaint with the Board by doing so in writing, setting forth a full statement of the facts concerning the alleged infraction of the electrician's licensing law or rules. In the event a complaint is filed with the Board, the Board's investigation shall not be limited to the matter set forth in the request for investigation but may extend to any act coming to the attention of the board which appears to violate the law or these rules.

#### **4. DUTIES OF THE LICENSEE**

(a) Any person who has obtained an electrical license under these rules shall:

- (1) Not install, repair or maintain electrical conductors and equipment in a manner which is likely to be unsafe to people and property.
- (2) Observe these rules regarding all electrical installation, repair or maintenance work, and supervision of unlicensed employees.
- (3) Not begin electrical work until a work notice for the work has been validated.
- (4) Notify the division of fire safety of a change of address.

(b) Any licensed electrician who has filed a work notice shall;

- (1) Keep records which outline who has accomplished the work covered under the work notice.
- (2) Provide at least 5 working days notice to the electrical inspector for any required inspection.
- (3) Provide access for the electrical inspector to all electrical work and records subject to inspection.

#### **5. ADOPTION OF NATIONALLY RECOGNIZED SAFETY STANDARDS**

(a) The Electricians' Licensing Board, for the purpose of making rules regarding the safeguarding of persons and property from hazards arising from the use of electricity adopts the following standards per the specific edition.

NFPA 70, National Electrical Code, (2011 edition)  
To meet the needs of Vermont, NFPA 70 is amended as follows:

*-amend - article 100, definitions:*

Structure. That which is built or constructed. A pole, pedestal or similar support used exclusively for a utility meter enclosures or combination meter overcurrent device enclosures shall not be considered to be a structure.

*-delete and replace as follows- article 110.3(A)(1):*

(1) Suitability for installation and use in conformity with the provisions of this code as evidenced by listing or labeling by a nationally recognized testing laboratory.

*-delete- article 110.24, Available Fault Current*

*-amend- article 210.8(A):*

Dwelling Units. All 125-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in 210.8(A)(1) through (9) shall have ground-fault circuit-interrupter protection for personnel.

*-add- article 210.8(A)(9):*

(9) Laundry room or area

*-amend- article 210.8(B):*

Other than Dwelling Units. All 125-volt, single-phase, 15- and 20- ampere receptacles installed in the locations

specified in 210.8(B)(1) through (9) shall have ground-fault circuit-interrupter protection for personnel.

*-add- article 210.8(B)(9):*

(9) Unfinished basements as defined in 210.8(A)(5).

*-delete and replace as follows - article 230.70 (A)(1)*

(1) Location. The service disconnecting means shall be installed at a readily accessible location either outside of a building or structure, or inside a building or structure nearest the point of entrance of the service conductors, not to exceed 10 feet of conductor length from the point of entrance.

*-add- Informational Note – article 230.70(A)(1): See amendment to article 250.24(A)(5) in regards to additional information regarding service disconnecting means.*

*-amend- article 250.24(A)(5):*

(5) Load Side Grounding Connections. A grounding conductor shall not be connected to normally non-current carrying metal parts of equipment, to equipment grounding conductor(s), or be reconnected to ground on the load side of the service disconnecting means except as otherwise permitted in this article. An overcurrent device that is not within sight of, and not within 30' of the building or structure served, shall not be considered to be the service disconnecting means.

*-delete and replace as follows article 310.15(B)(3)(c)*

*Informational Note:* Informational Note: One source for the average ambient temperature in various locations is the ASHRAE Handbook – Fundamentals. The ASHRAE Handbook – Fundamentals indicates the average ambient temperature for Vermont is 85 degrees F.

*-delete and replace as follows – article 334.10(2) and (3), renumber 334.10(4) as 334.10(3)*

(2) In any multifamily dwellings or other building or structure not exceeding 3 floors above grade except as prohibited in section 334.12. For the purpose of this article, the first floor of a building shall be that floor that has 50 percent or more above finished grade. One additional level that is the first level and not designed for human habitation and used only for vehicle parking, storage, or similar use shall be permitted.

*-delete article 334.12(A)(2)*

*- delete and replace as follows - article 400.8(4) exception:*

Exception: Flexible cord and cable shall be permitted to have one connection to the building surface for a suitable tension take-up device. Length of the cord or cable from the supply termination to the take-up device shall be limited to 8 ft.

*- add article 518.3 (D)(D) Illumination of Means of Egress.* Lighting circuits and illumination of means of egress shall be provided in accordance with Section 7-8 of the Life Safety Code (NFPA 101) as adopted under the Vermont Fire & Building Safety Code. [Note: see Appendix III for a copy of this section as adopted.]

*-delete- article 520.5(C ), Wiring Methods for Theaters and similar locations*

NFPA 73, Residential Electrical Safety Code ( 2011 edition), to meet the needs of Vermont NFPA 73 is amended as follows:

*-delete and replace as follows - Section 5.1*

Section 5.1 Ground Fault Circuit Interrupter. Ground Fault Circuit Interrupters shall be installed in accordance with NFPA 70 Section 210.8(A) and operate properly.

NFPA 780, Lightning Protection Code ( 2011 edition)

ANSI C2, National Electrical Safety Code (2007 edition)

(b) If there are conflicting sections between an adopted code and a referenced code or standard, the adopted code shall apply. If there are conflicting sections between a general requirement and a specific requirement, the specific requirement shall apply. [Note: see Appendix IV for information on how to obtain standards and reference documents.]

## 6. REFERENCE DOCUMENTS

(a) The following documents, while not part of the electrical safety rules, have been adopted by the State of Vermont as part of the Vermont Fire & Building Safety Code. Electricians should be aware of these documents and consult them as needed.



NFPA 1, Fire Prevention Code, as adopted under the Vermont Fire & Building Safety Code.

NFPA 20, Standard for the Installation of Centrifugal Fire Pumps, as adopted under the Vermont Fire & Building Safety Code.

NFPA 30, Flammable and Combustible Liquids Code, as adopted under the Vermont Fire & Building Safety Code.

NFPA 30A, Automotive and Marine Service Station Code, as adopted under the Vermont Fire & Building Safety Code.

NFPA 32 Standard for Dry Cleaning Plants, as adopted under the Vermont Fire & Building Safety Code.

NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials, as adopted under the Vermont Fire & Building Safety Code.

NFPA 34, Standard for Dipping and Coating Process Using Flammable or Combustible Liquids, as adopted under the Vermont Fire & Building Safety Code.

NFPA 45, Standard on Fire Protection of Laboratories Using Chemicals, as adopted under the Vermont Fire & Building Safety Code.

NFPA 50 A, Standard for Gaseous Hydrogen Systems at consumer sites as adopted under the Vermont Fire & Building Safety Code.

NFPA 50B, Standard for Liquefied Hydrogen Systems at consumer sites as adopted under the Vermont Fire & Building Safety Code.

NFPA 54, National Fuel Gas Code, as adopted under the Vermont Fire & Building Safety Code.

NFPA 58, Standard for the Storage and Handling of Liquefied Petroleum Gases, as adopted under the Vermont Fire & Building Safety Code.

NFPA 59, Standard for the Storage and Handling of Liquefied Petroleum Gases at Utility Gas Plants as adopted under the Vermont Fire & Building Safety Code.

NFPA 72, National Fire Alarm Code, as adopted under the Vermont Fire & Building Safety Code.

NFPA 90A, Air Conditioning and Ventilating System as adopted under the Vermont Fire & Building Safety Code.

NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, as adopted under the Vermont Fire & Building Safety Code.

NFPA 99, Standard for Health Care Facilities, as adopted under the Vermont Fire & Building Safety Code.

NFPA 101, Life Safety Code as adopted under the Vermont Fire & Building Safety Code.

NFPA 110, Standard for Emergency and Standby Power Systems, as adopted under the Vermont Fire & Building Safety Code.

NFPA 232, Standard for the Protection of Records, as adopted under the Vermont Fire & Building Safety Code.

NFPA 720 Standard for the Installation of Carbon Monoxide (CO) Warning Equipment in Dwelling Units.

(b) If there are differences between the requirements adopted under Section 5 and the requirements in this section, the requirements in Section 5 shall apply.

## **7. WORK NOTICE, FEES, INSPECTION, ENERGIZING, INSTALLATIONS, CERTIFICATE OF COMPLETION**

### **7.1 Work Notice**

(a) Electrical work in a complex structure shall not commence until a work notice accompanied by the required fee is submitted to the department by a Master or Type-S Journeyman Electrician and the work notice is validated by the department. Where electrical work is proposed in a complex structure used for residential purposes, containing no more

than two dwelling units, the work notice may be submitted by any person. Demolition work of energized electrical wiring or equipment is considered electrical work and requires a work notice. The validated work notice is the electrical permit for the electrical work to be done.

(b) The electrical inspector may accept an annual electrical work notice where electrical installation work is ongoing at an existing building. An electrical work notice filed under this section shall include the name and location of the building, the licensed electrician responsible for the work and payment of the base fee. The acceptance of an annual electrical work notice does not modify the requirements for licensure or direct supervision as established under these rules.

(c) Installation or replacement of equipment such as lamps and electric utilization equipment approved for connection to suitable permanently installed receptacles, replacement of fuses, and other minor maintenance and repair work, such as replacing worn cords and tightening connections on a wiring device, do not require a work notice.

(d) Electrical work regulated under the National electrical Code, Article 800, Communications Circuits, does not require a work notice.

(e) A validated work notice shall expire if the work authorized under the validated work notice is not commenced, or is suspended or abandoned, for a time period of 12 months.

(f) The fee for a work notice, other than the base fee, may be refunded upon written request, when the electrical work is abandoned or discontinued, prorated on the electrical work, services, reviews and inspections conducted prior to such abandonment or discontinued electrical work.

## **7.2 Work Notice Fees**

Electrical work notice fees are established by the Vermont Legislature. The current work notice fees are listed in Appendix I.

All fees are required to be paid to the Commissioner or designated representative prior to the validation of a work notice.

## **7.3 Inspection**

(a) An electrical installation in any part of a complex structure shall not be covered unless it is inspected by an electrical inspector. The provisions of this subsection may be specifically waived by an electrical inspector in writing. Upon completion of a new electrical installation, the applicant shall request a final inspection by an electrical inspector. Within five working days of receipt of the application, the commissioner, or inspector, shall conduct an inspection, establish a reasonable date for inspection or issue a waiver of inspection.

(b) The electrical inspector may also waive the presence of the licensee who filed the work notice for rough and final inspections.

(c) A certificate of completion shall be issued if the electrical inspector determines after inspection that the installation is in compliance with the standards and requirements adopted by the board and that all required fees for the electrical installation have been paid.

(d) No part of a complex structure, in which part a new electrical installation has been made, shall be sold or conveyed for use or occupancy without first securing a certificate of completion for the new electrical installation.

(e) Violation of these rules shall be prima facie evidence of negligence in any civil action for damage or injury, which is the result of the violation.

## **7.4 Energizing Installations**

(a) A new electrical installation in or on a complex structure or an electrical installation used for the testing or construction of a complex structure shall not be connected or caused to be connected, to a source of electrical energy unless prior to such connection, either a temporary or a permanent

energizing permit is issued for that installation by the electrical inspector.

(b) This section shall not be construed to limit or interfere with a contractor's right to receive payment for electrical work for which a certificate of completion has been granted.

## **8. POWERS OF ENFORCEMENT**

The Commissioner of Public Safety or Designated Representative may:

(a) Refuse to validate a work notice if the license holder has other on-going electrical work for which a work notice has not been filed, or if the Department is owed fees or penalties.

(b) Assess an administrative penalty of not more than \$1,000 for each violation of these rules. The "Rules for Administrative Citations and Penalties" adopted by the Vermont Department of Public Safety, Division of Fire Safety establishes the procedure for issuing administrative citations, assessing penalties and appealing citations pursuant to 26 V.S.A. § 897 and are included in Appendix II.

(c) Assign the responsibility for inspection and enforcement of all or part of these rules to municipalities as established in 26 V.S.A. 898 and included in Appendix I.

(d) Assign the responsibility for inspections and enforcement of all or part of these rules to a private corporation, partnership or sole proprietorship for electrical work on their own premises as established in 26 V.S.A. 899 and included in Appendix I.

## **9. LICENSING DISCIPLINARY PROCEDURE**

### **9.1 Initiating a complaint against a licensee**

(l) Form of complaint: filing. A person may register a complaint against an electrician licensed by the electricians' licensing board by filing a written complaint with the Department of Public

Safety, Division of Fire Safety, 1311 U.S. Route 302, Suite 600

Barre, VT 05641-2351. The written complaint must set forth, at a minimum, the nature, date and place of the alleged violations. The board may also initiate a license review procedure on its own motion by filing a complaint with the department.

(2) Verification: Upon receipt of a complaint, the department will verify the Vermont license number of the person against whom the complaint is lodged. If the person is unlicensed and the complaint alleges criminal conduct, the department will refer the complaint to the office of the attorney general. If the person is a licensee of the board, the department will docket the complaint and open an investigation file under the name and license number of the person.

(3) Investigating Panel: An investigating panel consisting of an investigator designated by the department and ~~an~~ assistant attorney general will be formed upon the docketing of a complaint. The Assistant Attorney General assigned to the case will head the panel and supervise the investigation of the complaint.

### **9.2 Initiating the investigation**

(1) Notice to the Assistant Attorney General and to the investigator: Upon docketing the complaint, the department will send a copy of all materials contained in the newly opened file, including a copy of the complaint, to the Assistant Attorney General and to the investigator.

(2) Notice to the Licensee: The department will send written notice of the initiation of an investigation to the licensee against whom the complaint has been filed. The notice shall include a copy of the complaint and a copy of the statute and these rules. The notice will inform the licensee that inquiries or materials regarding the investigation should be addressed to the investigating panel at the address of the department.

(3) Notice to the Board: The department will send written notice to the board indicating that an investigation has been instituted regarding a licensing complaint.

(4) The inspector assigned to investigate the complaint shall inspect the work which is the subject of the complaint and interview the complainant. The inspector may also meet and interview the licensee at the direction of the Assistant Attorney General assigned to the matter.

### **9.3 Recommended action**

(1) At the conclusion of the investigation the Assistant Attorney General assigned to the matter shall make a recommendation as to whether formal proceedings should commence against the licensee.

(2) If formal disciplinary proceedings are recommended, the Assistant Attorney General shall submit a complaint describing the alleged violations, and the rules or statutes violated, with the recommendation.

(3) If the licensee is willing to admit to the charges the Assistant Attorney General may develop a stipulated settlement for approval of the Board.

(4) If no disciplinary action is recommended the case will be closed and the complainant and the licensee will be notified that no further action will be taken at this time. The matter may be reopened if new evidence is presented.

### **9.4 Formal hearing by the board**

(1) Notice and Place of Hearing: Upon the filing of a notice of charges by the investigating panel, the board will commence the hearing process by serving the notice of charges and a notice of the hearing upon the licensee. Notice will be served personally or by certified mail, return receipt requested. Copies will be sent to the members of the investigating panel and the complainant. The hearing will be scheduled at least 20 days after service.

(2) Failure to Appear: If the licensee fails to appear after proper notice has been given, the board shall hold the hearing and make a decision on the charges.

(3) A quorum of the board shall be a majority of its members.

(4) Conduct of Hearing; Receipt of Evidence; Argument: The board may admit any evidence it deems of a type commonly relied upon by reasonably prudent persons in the conduct of their affairs. All persons shall testify under oath or affirmation. The licensee or his/her attorney may examine or cross-examine witnesses, inspect documents, and explain or rebut any evidence presented to the board. The assistant attorney general, investigator, and licensee may present oral and written argument in addition to evidence, which also shall be made part of the record.

Where a licensee is not represented by counsel the board shall advise the licensee and aid in the examining and cross examining of witnesses as effectively as possible compatible with the impartial discharge of its duties as a body of impartial review.

(5) Authority of the Chair: The chair shall administer oaths to witnesses, rule on questions of evidence and upon the service of subpoenas and other notices, and do whatever is necessary and proper to conduct the hearing in a judicious, fair and expeditious manner.

(6) Disqualification of a Board Member: A member of the board shall voluntarily disqualify himself or herself and withdraw from any hearing in which the member cannot act in a fair and impartial manner, or where the member has an interest in the proceedings. Any party to a hearing may request disqualification of a board member by filing an affidavit stating with particularity the grounds for disqualification. If the board member does not disqualify himself or herself in response to the motion, the chair of the board shall decide the issue of disqualification. A hearing shall be held if requested by the moving party or if deemed necessary by the chair. All materials pertinent to a matter of disqualification shall be made part of the record.

If a board member is disqualified, thereby negating the quorum, the chair shall appoint a hearing officer to decide the matter in the same manner as if the board were presiding.

(7) Judgment of the Board: The board will issue a decision within a reasonable time following the conclusion of the hearing. The decision must be in writing and be signed by the members of the board. The decision shall set forth findings of fact, conclusions of fact and law, and the judgment. If a decision of the board is not unanimous, the decision of the majority will control. The minority may file a dissenting opinion.

The Board promptly shall mail or deliver a copy of its decision to the licensee, the investigating panel and, if appropriate, to the complainant. An order attached to the judgment will go into effect after the end of the 30-day appeal period, if no appeal is filed.

(8) Appeal From a Decision of the Board: A licensee aggrieved by a judgment of the board may appeal that judgment to the Supreme Court. The board may grant, or the court may order, a stay of the board's order upon application of the licensee.

(9) Transcripts: A contested case hearing shall be recorded but not transcribed unless a transcript is requested by an interested person. Transcripts will be available for cost. The board will provide an estimate of transcription cost before filling an order for transcript.

## **10. SEVERABILITY CLAUSE AND EFFECTIVE DATE**

(a) In the event any part or provision of these rules is held to be illegal, this shall not have the effect of making void or illegal any of the other parts or provisions of these rules.

(b) These rules shall take effect June 1, 2011 and shall be known as The Vermont Electrical Safety Rules. To achieve an orderly transition for compliance with these rules:

(1) NFPA 70: 406.4 (D) (4) shall take effect January 1, 2014.

(c ) Electrical installation work in the process of construction at the time of adoption of these rules, or where a work notice has been validated and work is commenced within 30 days of the

adoption of these rules, may be completed in accordance with the 2008 Vermont Electrical Safety Rules.

## **APPENDIX I**

### ***Title 26: Chapter 15: ELECTRICIANS AND ELECTRICAL INSTALLATIONS***

#### **§ 881. Definitions**

As used in this chapter, unless the context clearly requires otherwise:

(1) "Board" means the electricians' licensing board created under this chapter.

(2) "Commissioner" means the commissioner of public safety.

(3) "Complex structure" shall have the same meaning as the term "public building" as defined in subdivision 2900(8) of Title 20.

(4) "Electrical inspector" means a state electrical inspector employed pursuant to section 915 of this title.

(5) "Electrical installation" means wires, fixtures or apparatus installed in a complex structure or at the construction site of such structure for the transmission and use of commercially supplied or privately generated electrical energy.

(6) "Electrician's helper" means a person assisting in the construction, installation or repair of an electrical installation under the direct supervision of a master or journeyman electrician who is present at the work site.

(7) "Legislative body" means the board of selectmen of a town, the board of aldermen or city council of a city, or the board of trustees of an incorporated village.

(8) "Municipal inspector" means an electrical inspector authorized to conduct municipal inspections pursuant to section 898 of this title.

(9) "Registered apprentice" means an apprentice registered with the apprenticeship division of the state department of labor for electrical training.

(10) "Work notice" means the notice required to be filed under this chapter by an electrician prior to commencement of electrical work.

#### **§ 882. Exceptions**

This chapter does not apply to:

(1) The construction, installation, operation, repair or maintenance of electrical installations which are used by a public utility in rendering its authorized service; nor to the installation, operation, repair and wiring associated with telecommunication services and equipment used for the transmission of information by electricity regardless of the location of such electrical installations, equipment or facilities.

(2) Electrical installations in ships, pipeline systems, railway rolling stock, automotive equipment, or portable sound equipment.

(3) The manufacture, testing or repair of electrical equipment in the plant of the manufacturer of the equipment.

(4) The construction, repairs or maintenance of buildings used exclusively for agricultural purposes on owner-occupied farms.

### **§ 891. Rules adopted by board**

The electricians' licensing board created under section 901 of this title may adopt, amend, revise and repeal rules providing reasonable standards and requirements applicable to any electrical installation as defined in section 881 of this title, except as provided in sections 882 and 892 of this title. The board, if it finds it practicable to do so, may adopt the provisions of a nationally recognized electrical code under authority of this section.

### **§ 892. Work in progress**

Rules adopted under section 891 of this title are not applicable to the construction, repair or replacement of any electrical installation if the work is commenced within 30 days following their adoption, or to electrical installations in any structure standing or in the process of construction at the time of their adoption.

### **§ 893. Commencement of work; fees; work notice; inspection of work; certificate of completion**

(a) Electrical work in a complex structure shall not commence until a work notice accompanied by the required fee is submitted to the department and the work notice is validated by the department. There shall be a base fee of \$40.00 for each work notice, except for electrical work done in one and two family residential dwellings. In addition to the base fee, the following fees shall be charged:

(1) Services

(A) Temporary-\$30.00.

(B) Permanent-1 phase and 3 phase through 400 amp-\$35.00.

(C) Permanent-401 to 800 amp-\$50.00.

(D) Permanent-801 amp and larger-\$100.00.

(2) Transformers

(A) 1 to 25 KVA-\$10.00 each.

(B) 26 to 75 KVA-\$15.00 each.

(C) 76 to 200 KVA-\$25.00 each.

(D) Over 200 KVA-\$35.00 each.

(3) Motors and Generators

(A) Up to 5 hp, KW, KVA-\$10.00 each.

(B) 5 to 25 hp, KW, KVA-\$10.00 each.

(C) 25 to 100 hp, KW, KVA-\$15.00 each.

(D) Over 100 hp, KW, KVA-\$25.00 each.

(4) Other electrical work

(A) Each panel and feeder after the main disconnect-\$35.00.

(B) Outlets for receptacles, switches, fixtures, electric baseboard (per 50 units or portion thereof)-\$20.00.

(C) Yard lights signs-\$5.00 each.

(D) Fuel oil, kerosene, LP, natural gas, and gasoline pumps-\$15.00 each.

(E) Boilers, furnaces and other stationary appliances-\$10.00 each.

(F) Elevators-\$75.00 each.

(G) Platform lifts-\$40.00 each.

(H) Fire alarm initiating, signaling, and associated devices (per 50 units or portions thereof)-\$30.00.

(I) Fire alarm main panel and annunciator panels-\$50.00 each.

(J) Fire pumps-\$50.00.

(5) Reinspection fee. For each reinspection for code violations, there will be a fee of \$125.00.

(b) The commissioner may establish inspection priorities for electrical inspections. Priorities shall be based on the relative risks to persons and property, the type and size of the complex

structure and the type and number of electrical installations to be installed. Electrical installations regulated by the board shall be inspected by the commissioner or an electrical inspector in accordance with the procedures and priorities established by the commissioner.

(c) An electrical installation in any part of a complex structure shall not be covered unless it is inspected by an electrical inspector. The provisions of this subsection may be specifically waived by an electrical inspector in writing. Upon completion of a new electrical installation, the applicant shall request a final inspection by an electrical inspector in writing. Within five working days of receipt of the application, the commissioner, or inspector, shall conduct an inspection, establish a reasonable date for inspection or issue a waiver of inspection.

(d) A certificate of completion shall be issued if the commissioner or electrical inspector determines after inspection that the installation is in compliance with the standards and requirements adopted by the board.

(e) No part of a complex structure, in which part a new electrical installation has been made, shall be sold or conveyed for use or occupancy without first securing a certificate of completion for the new electrical installation.

(f) The commissioner or an inspector designated by the commissioner shall have authority to enter any premises in which an electrical installation subject to the rules of the board is being or has been installed, replaced or repaired for the purpose of making such inspection as is necessary to carry out his responsibilities under this subchapter. If the owner or occupant of the premises refuses to permit entry by the commissioner, or an electrical inspector, any superior court, on application of the commissioner, shall have jurisdiction to issue an order enforcing such right of entry.

#### **§ 894. Energizing installations**

(a) A new electrical installation in or on a complex structure or an electrical installation used for the testing or construction of a complex structure shall not be connected or caused to be connected, to a source of electrical energy unless prior to such connection, either a temporary or a permanent energizing permit is issued for that installation by the commissioner or an electrical inspector.

(b) This section shall not be construed to limit or interfere with a contractor's right to receive payment for electrical work for which a certificate of completion has been granted.

#### **§ 895. Issuance of order by commissioner**

If the commissioner finds a violation of the rules adopted under section 891 of this title or that the structure is not in substantial compliance with the safety requirements of the department for that structure, the commissioner may issue an order directing the owner of the premises in which the

violation is found, or the owner's agent and the person doing the work, to correct or remove the violation, withdraw validation of the work notice or order the owner, any public utility or any private party furnishing electricity to such installation to not connect or disconnect electrical energy from all or any portion of the electrical system until the cited violation is removed or corrected. The commissioner may order any one or a combination of these options in order to effect compliance.

#### **§ 896. Request for reconsideration; appeals**

A person aggrieved by a refusal to grant a certificate of completion under section 893 of this title or by an order under section 895 of this title may request that the commissioner reconsider such refusal or order. A request for reconsideration shall be made in writing and shall be filed with the commissioner within 15 days after receipt of written notice of such refusal or order. The commissioner shall review the refusal or order within 30 days of the date the request for reconsideration is received. The commissioner shall issue an order amending, modifying or affirming the prior refusal or order as circumstances require within 30 days of the date of the review. A person aggrieved by the commissioner's decision under this section may appeal to the superior court which shall hear the matter de novo.

#### **§ 897. Administrative penalties; enforcement; liability**

(a) The commissioner may, after notice and an opportunity for a hearing, assess an administrative penalty of not more than \$1,000.00 for each violation against a person who violates any rule adopted under this subchapter, or any order lawfully issued under this subchapter. Penalties assessed under this section shall be based on the severity of the violation according to rules adopted by the commissioner.

(b) The superior court for the county in which occurs a violation of any rule adopted or any order lawfully issued under this subchapter, on application by the commissioner shall have jurisdiction to issue an order enjoining or restraining such violation. However, an election by the commissioner to proceed under this subsection shall not limit or restrict the commissioner's authority to assess an administrative penalty under subsection (a) of this section.

(c) Violation of any rule adopted under this subchapter shall be prima facie evidence of negligence in any civil action for damage or injury which is the result of the violation.

#### **§ 898. Municipal inspection**

(a) A legislative body may establish inspection procedures and appoint trained and qualified municipal inspectors to conduct electrical inspections. If the commissioner determines that the inspection procedures and the training and qualifications of the municipal inspectors are sufficient, the commissioner may assign the department's responsibility for conducting inspections of electrical installations regulated by

the board within that municipality to the municipality. An assignment of responsibility under this section shall not affect the authority of the commissioner under this subchapter. If the commissioner assigns responsibility for municipal inspections under this section, the commissioner may exempt all electrical installations within the municipality from inspection by the state under section 893 of this title. The legislative body may establish reasonable fees for inspections for the purpose of defraying the cost of the same. Such fees will be in lieu of fees established under subsection 893(a) of this title.

(b) Work notices, certificates of completion and energizing permits shall be issued by municipal inspectors in the same manner and subject to the same conditions that they are issued by the state electrical inspectors under sections 893 and 894 of this title shall apply to municipal inspections under this section.

(c) A municipal inspector shall have authority to enter any premises in which an electrical installation subject to rules adopted under section 891 of this title is being installed, replaced or repaired for the purpose of making such inspection as is necessary to carry out his or her responsibilities under this subchapter.

(d)(1) If, after inspection of the electrical installation, a violation of the rules of the board is found, a municipal inspector may:

(A) issue an order directing the electrician of record or the owner of the premises in which the violation is found, to correct or remove the violation;

(B) withdraw validation of the work notice; or

(C) order the owner, any public utility or any private party furnishing electricity to such installation to disconnect electrical energy from all or any portion of the electrical system until the violation is removed or corrected.

(2) A municipal inspector may order any one or combination of these options set forth in subdivision (1) of this subsection, as necessary to effect compliance with the board's rules.

(e) Acceptance of an assignment of responsibility under this section shall not preclude a municipality from conducting its own electrical inspection program.

(f) A person aggrieved by a refusal of a municipal inspector to issue a certificate of completion or by any other action of a municipal inspector or the municipality relating to this section may appeal to the commissioner by filing a written application for a hearing with the commissioner within 15 calendar days after written notice of such refusal or action. A person filing an application in accordance with this subsection, shall be entitled to notice and an opportunity for a hearing before the commissioner within 45 calendar days. Within 30 calendar days after the hearing, the commissioner

shall issue an order amending, modifying or affirming the action by the municipal inspector or municipality.

(g) The results of all inspections conducted by municipal inspectors under this section shall be reported monthly to the commissioner. Reports shall include the date of inspections, locations of the work inspected, the name and license number of the contractor performing the work, violations found, orders issued and the date of any completion certificates or energizing permits issued.

(h) Municipal inspectors shall participate in training provided by the department of public safety. The department shall also provide continuing consultation, review, and assistance as may be necessary to municipal inspectors.

(i) The commissioner may revoke an assignment of responsibility to a municipality granted under this section if the commissioner determines that the training or qualifications of the municipal inspectors or the inspection procedures adopted by the legislative body are insufficient.

#### **§ 899. Private inspections**

(a) Upon a determination that the resources of the state and the municipality are insufficient to provide the approval or inspection services required by this chapter, the commissioner may assign responsibility for inspecting electrical installations on its own premises to a private corporation, partnership or sole proprietorship that has an ongoing need for services. Applications to conduct private inspections under this section shall be in the manner prescribed by the commissioner.

(b) The commissioner may grant an application under this section if he or she determines that the applicant has the ability to carry out inspections. The commission shall consider at least the following factors:

(1) the size of the facility;

(2) self-insurance or other indication of incentive and motivation for safety;

(3) whether the applicant's training program for inspectors and inspection procedures are at least equivalent to the state's program and procedures.

(c) A person authorized to perform private inspections under this section shall:

(1) participate in state-sponsored training programs;

(2) file monthly reports with the commissioner containing the number and type of inspections, electrical installations, violations for that month and the license numbers of the electrical contractors performing work;



(3) permit electrical inspectors to perform random inspections of the applicant's facility;

(4) pay the department an annual flat fee. The amount of the fee shall be negotiated by the department and the applicant and shall take into consideration the cost to the applicant of conducting private inspections. The fee shall not exceed the fee established under section 893 of this title.

(d) The commissioner may revoke an approval to conduct private inspections whenever the commissioner determines that the training program is insufficient or that the business has failed to comply with the provisions of subdivisions (c)(1)-(3) of this section.

### **§ 901. Electricians' licensing board**

(a) A board for the licensing of electricians is created, to be known as the "electricians' licensing board."

(b) The board consists of the commissioner of public safety or a member of that department designated by the commissioner and four persons appointed by the governor with the advice and consent of the senate. The four appointed members shall serve for terms of three years, beginning July 1 in the year of appointment, and they shall include one licensed master electrician, one licensed journeyman electrician, one person associated with the public electrical utility industry who is knowledgeable in technical as well as operational issues of the electrical utility industry, and one person associated with the fire insurance industry. No more than two appointed members' terms shall expire in the same year.

(c) The governor shall appoint one of the members of the board to serve as its chairman.

### **§ 902. Master electricians**

(a) To be eligible for licensure as a master electrician, an applicant shall:

(1) have been licensed as a journeyman electrician under this chapter for at least two years; or

(2) have had comparable experience and training, within or without this state, acceptable to the board; and

(3) pass an examination to the satisfaction of the board.

(b) Upon successful completion of the examination and payment of the required fee, the applicant shall receive a master electrician's license in the form of a wallet-size card. This license shall be carried by the master electrician at all times while performing his or her trade and shall be displayed upon request. Upon the request by the licensee and upon payment of the required fee, the board shall issue a license certificate suitable for framing.

(c) A person licensed under this chapter as a master electrician is entitled to design, install, repair, maintain and replace electrical installations including lightning rods, fire alarms and fire detection systems as his principal business or in the course of another business conducted by him, and may employ other persons licensed under this chapter or electrician's helpers to perform work in connection with electrical installations under his direction.

### **§ 903. Journeyman electricians**

(a) To be eligible for licensure as a journeyman electrician an applicant shall:

(1) provide verification by the Vermont apprenticeship council of completion of an apprenticeship in electrical wiring which included both instruction and practice in work processes; or

(2) have had equivalent training and experience, within or without this state, acceptable to the board; and

(3) pass an examination to the satisfaction of the board.

(b) Upon successful completion of the examination and payment of the required fee, the applicant shall receive a journeyman electrician's license in the form of a wallet-size card. This license shall be carried by the journeyman at all times while performing his or her trade and shall be displayed upon request. Upon request by the licensee and payment of the required fee, the board shall issue a license certificate suitable for framing.

(c) A person licensed under this chapter as a journeyman electrician is entitled to perform electrical installations under the direction of a master electrician, and may supervise an apprentice electrician or an electrician's helper employed by a master electrician under the master electrician's direction.

### **§ 904. Type-S journeyman electrician**

(a) To be eligible for licensure as a type-S journeyman an applicant shall:

(1) complete an accredited training and experience program recognized by the board; or

(2) have had training and experience, within or without this state, acceptable to the board; and

(3) pass an examination to the satisfaction of the board in one or more of the following fields:

(A) Automatic gas or oil heating;

(B) Outdoor advertising;

- (C) Refrigeration or air conditioning;
  - (D) Appliance and motor repairs;
  - (E) Well pumps;
  - (F) Farm equipment;
  - (G) Any miscellaneous specified area of specialized competence.
- (b) Upon successful completion of the examination and payment of the required fee for each field in which a license is to be issued, the applicant shall receive a license in the form of a wallet-size card which shall be carried at all times while performing his or her trade and shall be displayed upon request. Upon request of the licensee and upon payment of the required fee, the board shall issue a license certificate suitable for framing.

**§ 905. Application; examinations and fees**

(a) Each applicant for a license shall submit to the board, on forms furnished by it, a written application containing such relevant information as the board may require, accompanied by the required examination fee. The examination fee shall be established by the board but shall be no greater than the cost associated with administering the examination. Notwithstanding 32 V.S.A. § 502(a), if the examination is conducted by an outside testing service, the required examination fee may be paid directly to the testing service.

(b) Examinations shall be conducted in writing and shall include a practical skills examination. The examination shall cover theoretical and practical aspects of electrical work, together with pertinent laws and rules. In addition, the master electrician's examination shall contain questions on the installation of lightning rods, fire alarms and fire detection systems.

(c) An applicant who fails the examination may, upon payment of the required fee, retake the examination.

(d) Three-year electrical license fees shall be:

For a masters license (initial and renewal) \$150.00;

For a journeyman's license (initial and renewal) \$115.00;

For a type-S journeyman's license (initial and renewal) per field \$115.00;

The fee for a certificate for framing shall be: \$ 10.00.

(e) If a license is allowed to lapse, it may be renewed within one year of its expiration date by the payment of \$25.00 in addition to the renewal fee.

(f) The fee for replacement of a lost or damaged license shall be: \$20.00.

**§ 906. Examinations not required**

Licenses shall be issued without examination on payment of the required fee. A master's or journeyman's license, as the case may be, shall be issued to a person to whom a master electrician's license or a journeyman electrician's license has been previously issued by another state, whose standards are equivalent to those of this state, if under the laws or regulations of the state issuing the license a similar privilege is granted to electricians licensed under the laws of this state.

**§ 907. Recognition of experience in or out of state**

The board, in determining the qualifications of an applicant for a license, may in its discretion give recognition, in the case of an application for a master's license, to the applicant's experience as a licensed journeyman in another state, or in the case of an application for a journeyman's license, to an apprenticeship served in another state, or may otherwise give recognition to experience or prior qualifications.

**§ 908. Expiration and renewal of licenses; continuing education**

(a) All licenses expire on the last day of a month designated by the board. A license shall be valid for three years. The board shall renew the license of a person holding a valid license issued under this chapter on receipt of an application for renewal and the required fee on or before the expiration date of his license, except as provided in section 892 of this title.

(b) All journeyman and master electricians shall, as a condition of license renewal, complete 15 hours of instruction, approved by the board, on the national electrical code during the preceding 36-month period. All holders of a type-S journeyman license shall, as a condition of renewal, complete eight hours of instruction, approved by the board, on the subject of the license holder's specialty during the preceding 36 months, except that holders of multiple type-S licenses shall not be required to complete more than 15 hours of instruction during the preceding 36 months.

**§ 909. Revocation, suspension and refusing of renewal of license**

The board, after notice to the licensee and opportunity for hearing, may revoke or suspend a license issued under this chapter, or refuse to renew the license of a person who has made application for renewal:

(1) If the license was wrongfully or fraudulently obtained;

(2) If the licensee has violated or failed to comply with any provision of this chapter, or any rule, regulation or requirement adopted under this chapter;

(3) If the licensee is found by the board to be unqualified to hold the license.

#### **§ 910. License not required**

A license shall not be required for the following types of work:

(1) Any electrical work, including construction, installation, operation, maintenance and repair of electrical installations in, on or about equipment or premises, which are owned or leased by the operator of any industrial or manufacturing plant, if the work is done under the supervision of an electrical engineer or master electrician in the employ of the operator;

(2) Installation in laboratories of exposed electrical wiring for experimental purposes only;

(3) Any electrical work by an owner or his or her regular employees in the owner's freestanding single unit residence, in outbuildings accessory to such freestanding single unit residence or any structure on owner-occupied farms;

(4) Electrical installations performed as a part of a training project of a vocational school or other educational institution. However, the installation shall be inspected if the building in which the installation is made, is to be used as a "complex structure";

(5) Electrical work performed by an electrician's helper under the direct supervision of a person who holds an appropriate license issued under this chapter;

(6) Any electrical work in a building used for dwelling or residential purposes which contains no more than two dwelling units.

(7) Installation of solar electric modules and racking on complex structures to the point of connection to field-fabricated wiring and erection of net metered wind turbines.

#### **§ 911. Penalty**

Any person who installs, replaces or repairs any electrical installation except as provided in sections 882 and 910 of this title, without first obtaining an appropriate license under this subchapter, or employs a person to make any electrical installation for which he is not properly licensed under this chapter, or procures any license wrongfully or by fraud, shall be fined not more than \$500.00 for each offense.

#### **§ 913. License fees and licenses**

All licenses shall be issued by the chairman of the board.

#### **§ 914. Members of board; per diem and expenses**

Each appointed member of the board is entitled to a per diem and expenses as provided in 32 V.S.A. § 1010.

#### **§ 915. Employment of inspectors; appropriation**

The department of public safety is authorized to employ inspectors as necessary for carrying out the responsibilities of the commissioner under section 893 of this title.

### **APPENDIX II - SECTION 7.8 ILLUMINATION OF MEANS OF EGRESS (NFPA 101; LIFE SAFETY CODE, 2006 EDITION)**

7.8 Illumination of Means of Egress.

7.8.1 General.

7.8.1.1\* Illumination of means of egress shall be provided in accordance with Section 7.8 for every building and structure where required in Chapter 11 through Chapter 42. For the purposes of this requirement, exit access shall include only designated stairs, aisles, corridors, ramps, escalators, and passageways leading to an exit. For the purposes of this requirement, exit discharge shall include only designated stairs, aisles, corridors, ramps, escalators, walkways, and exit passageways leading to a public way.

7.8.1.2 Illumination of means of egress shall be continuous during the time that the conditions of occupancy require that the means of egress be available for use, unless otherwise provided in 7.8.1.2.2.

7.8.1.2.1 Artificial lighting shall be employed at such locations and for such periods of time as are necessary to maintain the illumination to the minimum criteria values herein specified.

7.8.1.2.2 Automatic, motion sensor-type lighting switches shall be permitted within the means of egress, provided that the switch controllers are equipped for fail-safe operation, the illumination timers are set for a minimum 15-minute duration, and the motion sensor is activated by any occupant movement in the area served by the lighting units.

7.8.1.3\* The floors and other walking surfaces within an exit and within the portions of the exit access and

exit discharge designated in 7.8.1.1 shall be illuminated as follows:

- (1) During conditions of stair use, the minimum illumination for new stairs shall be at least 108 lux (10 ft-candle), measured at the walking surfaces.
- (2) The minimum illumination for floors and walking surfaces, other than new stairs, shall be to values of at least 10.8 lux (1 ft-candle), measured at the floor.
- (3) In assembly occupancies, the illumination of the floors of exit access shall be at least 2.2 lux (0.2 ft-candle) during periods of performances or projections involving directed light.
- (4)\* The minimum illumination requirements shall not apply where operations or processes require low lighting levels.

7.8.1.4\* Required illumination shall be arranged so that the failure of any single lighting unit does not result

in an illumination level of less than 2.2 lux (0.2 ft-candle) in any designated area.

7.8.1.5 The equipment or units installed to meet the requirements of Section 7.10 also shall be permitted to serve the function of illumination of means of egress, provided that all requirements of Section 7.8 for such illumination are met.

#### 7.8.2 Sources of Illumination.

7.8.2.1\* Illumination of means of egress shall be from a source considered reliable by the authority having jurisdiction.

7.8.2.2 Battery-operated electric lights and other types of portable lamps or lanterns shall not be used for primary illumination of means of egress. Battery-operated electric lights shall be permitted to be used as an emergency source to the extent permitted under Section 7.9.

### APPENDIX III- HOW TO OBTAIN STANDARDS AND REFERENCE DOCUMENTS

American Society for Testing and Materials  
100 Barr Harbor Drive  
West Conshohocken PA 19428-2959  
(610) 832-9585  
www.astm.org/

Underwriters Laboratories Inc.  
333 Pfingsten Road  
Northbrook IL 60062  
(847) 272-8800  
www.ul.com

National Fire Protection Association  
1 Batterymarch Park  
Quincy Mass 02269-9101  
(800) 344-3555  
www.nfpa.org/

IEEE Operations Center  
445 Hoes Lane,  
Piscataway, N.J.08854-4141  
Phone: (732) 981-0060

### APPENDIX IV – HOW TO CONTACT THE DIVISION OF FIRE SAFETY

**The Division of Fire Safety has four regional offices:**

<b>Barre:</b>	<b>Rutland:</b>	<b>Springfield:</b>	<b>Williston:</b>
1311 U.S. Route 302 Suite 500 Barre, VT 05641	56 Howe St. Building A, Suite 200 Rutland, VT 05701	100 Mineral St. Suite 307 Springfield, VT 05156	372 Hurricane Lane Suite 102 Williston, VT 05495
Main Phone: (802) 479-4434 Toll Free: (888) 870-7888 Fax: (802) 479-4446	Main Phone: (802) 786-5867 Toll Free: (888) 370-4834 Fax: (802) 768-5872	Main Phone: (802) 585-8883 Toll Free: (866) 404-8883 Fax: (802) 885-8885	Main Phone: (802) 879-2300 Toll Free: (800) 366-8325 Fax: (802) 879-2312

#### **The Division of Fire Safety Main Office is:**

1311 U.S. Route 302 - Suite 600 Barre, VT 05641  
Main Phone: (802) 479-4761 Toll Free: (800) 640-2106 Fax: (802) 479-4762  
www.vtfiresafety.org