



LAWS, RULES, WIRING AND CONVEYANCE STANDARDS OF NORTH DAKOTA

EFFECTIVE: JULY 1, 2026



NORTH DAKOTA STATE ELECTRICAL BOARD

LAWS, RULES, WIRING AND CONVEYANCE STANDARDS OF NORTH DAKOTA

OFFICE LOCATION:

1929 N. Washington Street, Suite A-1
Bismarck, ND 58501

MAILING ADDRESS:

P.O. Box 7335
Bismarck, ND 58507-7335

Telephone: (701) 328-9522
E-Mail: electric@nd.gov

Website: www.ndseb.com

TABLE OF CONTENTS

STATE ELECTRICAL LAWS (Chapter 43-09)	Page
Definitions	5
State Electrical Board - Members - Terms of Office - Vacancies.....	7
Officers of Board - Compensation of Members	7
Powers and Duties of State Electrical Board- Biennial Report.....	7
Meetings of Board	7
Expenses of Board - How Paid	7
License Required – Examination – Board to Issue License.....	8
Conviction Not Bar to Licensure - Exceptions	8
Advertising Prohibited – Exceptions – Liability – Penalty	8
Types of Licenses.....	9
Qualifications.....	9
Examination - Requirements.....	10
License Fees	10
Apprentice Electrician Registration	10
Inspectors - License Required - Exception.....	10
Renewal of License – Denial, Suspension, or Revocation of Licenses.....	11
Education	12
When License Not Required	12
Journeyman Electrician's Permit.....	13
Apprentice	13
Report of Work Done by Licensee	13
Installations Made With Master Electrician, Class B Electrician or Power Limited Electrician – Requirement for Liability Insurance.....	13
Standard for Wiring, Apparatus and Equipment	14
Inspection of Installation – Condemnation	14
Criminal Penalty – Civil Proceedings	15
License to Nonresidents – Reciprocity	16
Exemption for Coal Mines.....	16
Powers and Duties of the Board – Regulation of Conveyances – Exceptions	16
Conveyance Permit Required.....	17
Conveyance Permit Revocation or Suspension.....	18
Conveyance Permit Expiration	18
Certificate of Operation – Penalty	19
Reporting of Accidents	19
Inspection and Testing of Conveyances – Removal from Service	19
Elevator Inspector and Contractor Registration.....	20

GENERAL ADMINISTRATION (24.1-01)	Page
History and Functions	21
Board Membership	21
Executive Director	21
Director of Inspections	22
Inspection Districts	22
Inquiries	22
DEFINITIONS, GENERAL STATEMENT OF POLICY AND INTERPRETATIVE RULES (24.1-02)	
Definitions	23
General Statement of Policy and Interpretative Rules	24
Administrative Powers and Duties	25
LICENSURE OF ELECTRICIANS (24.1-03)	
Applications, Examination, and Annual License Fees	26
Master Electrician	27
Journeyman Electrician	28
Class B Electrician	29
Power Limited Electrician	29
Provisional Military Spouse Licensure	30
Apprentice Electrician	30
Power Limited Apprentice Electrician	30
Supervision and Responsibilities	31
EDUCATION (24.1-04)	
Education Requirements for Licensure and Renewal	33
Class Approvals	33
Instructor Qualifications	34
Education Advisory Committee	35
ELECTRICAL WIRING CERTIFICATES (24.1-05)	
Electrical Certificates	37
Fees	39
Carnivals, Circuses, Fairs and Similar Events	41
ELECTRICAL WIRING STANDARDS (24.1-06)	
Requirements for Electrical Installations	43
Water Damaged Electrical Equipment	45
Markings of Means of Egress, Illumination of Means of Egress, and Emergency Lighting	45
Smoke Alarms, Heat Alarms, Fire Alarm Systems and Carbon Monoxide Alarm Requirements for Evacuation and Life Safety	46
(NEC 210) Branch Circuits	49

	Page
(NEC 215) Feeders	51
(NEC 230) Services	51
(NEC 240) Overcurrent Protection	52
(NEC 250) Grounding and Bonding	52
(NEC 300) Wiring Methods	54
(NEC 314) Boxes and Fittings	56
(NEC 422) Appliances	57
(NEC 500) Hazardous Locations	58
(NEC 550) Mobile Home Parks	58
 DEFINITIONS, GENERAL STATEMENT OF POLICY AND INTERPRETATIVE RULES (24.1-50)	
Definitions – Conveyance	60
General Statement of Policy and Interpretative Rules	61
Administrative Powers and Duties	62
 LICENSURE AND REGISTRATION OF ELEVATOR INSTALLERS (24.1-51)	
Application and Annual License and Registration Fees	64
Elevator Mechanic	65
Elevator Contractor	65
Elevator Apprentice	66
Supervision and Responsibilities	66
 CONVEYANCE CERTIFICATES (24.1-52)	
Registration of Conveyances	68
Elevator Permits	68
Certificate of Operation	70
Inspection and Testing of Conveyances	71
Fees	72
 APPENDIX	
Voltage Drop Formulas	74
Ohm's Law	76
Means of Egress Condensed Guide	77
Fire Alarm System Condensed Guide	87

CHAPTER 43-09

ELECTRICIANS

43-09-01. Definitions. In this chapter, unless the context or subject matter otherwise requires:

1. "Alteration" means any substantial change to a conveyance and any part, component, or subsystem of the conveyance, but does not include routine maintenance of a conveyance.
2. "Apprentice electrician" means an individual who is learning the trade under the personal supervision of a state-licensed electrician.
3. "Board" means the state electrical board.
4. "Class B electrician" means an individual who has the necessary qualifications, training, and technical knowledge to wire, install, and repair electrical apparatus and equipment in accordance with the standard rules and regulations governing such work, who has eighteen months' experience in farmstead or residential wiring, and passed an examination before the state electrical board based upon the national electrical code as it applies to farmstead or residential wiring.
5. "Conveyance" means an elevator, escalator, stairway chairlift, platform lift, stage lift, orchestra lift, hoist, dumbwaiter, moving walk, automated people mover, automated-type parking structure, wind turbine elevator, or other device used for moving individuals, materials, equipment, or other objects from one landing or location to another.
6. "Elevator contractor" means any person engaged in the business of constructing, installing, altering, replacing, decommissioning, dismantling, demolishing, removing from service, repairing, servicing, inspecting, or testing a conveyance.
7. "Elevator inspector" means an individual, approved by the board, to inspect and witness a test of a conveyance.
8. "Elevator mechanic" means an individual engaged in elevator contracting.

9. "Journeyman electrician" means an individual who has the necessary qualifications, training, and technical knowledge to wire, install, and repair electrical apparatus and equipment and power limited systems in accordance with the standard rules and regulations governing such work.
10. "Licensee" means an individual who holds a valid license issued by the board.
11. "Master electrician" means an individual who has the necessary qualifications, training, experience, and technical knowledge to plan, lay out, and supervise the installation and repair of electrical wiring apparatus, and equipment for electric light, heat, power, and power limited systems, in accordance with the standard rules and regulations governing such work.
12. "Nonelectrical system" means a system as defined by the articles contained in chapter 8 and other articles which contains class II or class III circuits and systems as defined by the national electrical code, as adopted by the board. Although the board may expand this definition, the board may not narrow this definition. The term does not include a circuit or system that is installed:
 - a. Within an area of special occupancies, as defined under articles 500 through 517 of the national electrical code.
 - b. For heat, light, or power.
 - c. For the control of heat, light, or power, unless the circuit or system employs digital communication.
13. "Power limited electrician" means an individual who has the necessary qualifications, training, experience, and technical knowledge to plan, layout, and supervise the installation and repair of a power limited system.
14. "Power limited system" means a system as defined by the articles contained in chapter 8 and other articles which contains class II or class III circuits and systems as defined by the national electrical code, as adopted by the board. Although the board may expand this definition, the term does not include a nonelectrical system.

43-09-02. State electrical board - Members - Terms of office - Vacancies. The state electrical board must consist of six members appointed by the governor for a term of five years. One member of the board shall represent the public and may not be directly associated with the electrical industry. The board must include a master electrician who is a contractor, a journeyman electrician, a consumer member of a rural electric cooperative, an elevator mechanic, and a person associated with an investor-owned utility. A member of the board shall qualify by taking the oath of office required of civil officers and shall hold office until that member's successor is appointed and qualified. The governor shall fill any vacancy by appointment for the unexpired term of office.

43-09-03. Qualifications of members of board. Repealed by S.L. 1949, ch. 287, § 11.

43-09-04. Officers of board - Compensation of members. The members of the board shall select from their members a president, a treasurer, and a secretary. Each appointive member of the board is entitled to receive such amount as may be set by the board, and in addition thereto, each member shall receive the necessary and actual expenses incurred by the member in the discharge of the member's duties. The mileage and travel expense allowed may not exceed the amount provided for in section 54-06-09.

43-09-05. Powers and duties of state electrical board - Biennial report. The board shall adopt a seal and may adopt reasonable rules to carry out this chapter. The board may submit a biennial report to the governor and the secretary of state in accordance with section 54-06-04. The board shall appoint qualified inspectors. Upon receipt of notice of completion of any electrical wiring or power limited system installation involving a value of five hundred dollars or more, the inspectors shall inspect the electrical or power limited system installation and approve or condemn that installation. The inspector shall make a report of the inspection on forms prescribed by the board.

43-09-06. Meetings of board. The board shall hold a meeting in January of each year in Bismarck and may hold such other meetings as are necessary to conduct examinations and perform the other duties coming before it. Special meetings must be held at the time and place determined by the president, and upon ten days' written notice given by the president to each member of the board.

43-09-07. Expenses of board - How paid. All reasonable and necessary expenses incurred in conducting the business of the board must be allowed and paid by the board.

43-09-08. Treasurer to hold moneys of board - Use - Disbursement.
Repealed by S.L. 1971, ch. 510, § 15.

43-09-09. License required - Examination - Board to issue license.

1. A person may not undertake or plan to undertake with another person to plan, lay out, supervise, install, make additions, make alterations, or make repairs, in the installation of wiring, apparatus, or equipment for electric light, heat, or power or for a power limited system, unless licensed by the board.
2. The board shall examine an applicant for licensure and if, upon a technical and practical examination, the applicant is found to possess the required knowledge and skill and to be versed in the laws of electricity, the applicant shall be issued a license in the class for which the applicant was examined. The license must be signed by the president and the secretary of the board and attested by the seal of the board.
3. Each licensee or permitholder shall report that individual's licensing or renewals to the electrical inspector, if there is one, in the city in which that individual operates.

43-09-09.1. Conviction not bar to licensure - Exceptions. Conviction of an offense does not disqualify a person from licensure under this chapter unless the board determines that the offense has a direct bearing upon a person's ability to serve the public as an electrician or that, following conviction of any offense, the person is not sufficiently rehabilitated under section 12.1-33-02.1.

43-09-09.2. Advertising prohibited - Exceptions - Liability - Penalty.

1. Except as provided in this section, if a license is required under section 43-09-09, a person may not advertise to contract for electrical services without being licensed as or being associated with a class B electrician, master electrician, or power limited electrician, unless that person intends to contract the electrical services with a licensed electrical contractor.
2. If a person associates with an electrician under subsection 1 and that association ends, that person is jointly and severally liable for any contracts entered under that association.

3. a. A person violating this section is guilty of a class B misdemeanor for a first conviction, but no fine in excess of one hundred dollars and no term of imprisonment may be imposed.
- b. A person violating this section is guilty of a class A misdemeanor for a second or subsequent conviction, but the penalties are as follows:
 - (1) For a second conviction, no fine in excess of one thousand dollars and no term of imprisonment may be imposed.
 - (2) For a third or subsequent conviction, a fine not to exceed one thousand dollars, or imprisonment not to exceed thirty days, or both, may be imposed.

43-09-10. Types of licenses. The classes of electricians who may be licensed under section 43-09-09 are:

1. Master electrician.
2. Journeyman electrician.
3. Class B electrician.
4. Power limited electrician.

43-09-11. Qualifications. An applicant for an electrician's license must have the following experience and training:

1. For licensure as a master electrician, an applicant must have completed one year's experience as a licensed journeyman electrician.
2. For licensure as a journeyman electrician, an applicant must have:
 - a. Completed eight thousand hours' experience in installing and repairing electrical wiring, apparatus, and equipment, which experience may not be obtained in less than three years.
 - b. Effective for an applicant who registered with the board as an apprentice after January 31, 2008, completed at least one of the following:

- (1) Successfully completed apprenticeship training approved by the board and completed eight thousand hours' experience in installing and repairing electrical wiring, apparatus, and equipment.
 - (2) Successfully completed an appropriate course of study, which may not be less than two years or the equivalent of two years, at a board-approved institution of higher education and completed eight thousand hours' experience in installing and repairing electrical wiring, apparatus, and equipment. The board may determine equivalent hours of education that may be applied as a credit against the eight thousand hours' experience requirement under this paragraph.
3. For licensure as a class B electrician, eighteen months' experience in farmstead or residential wiring.
 4. For licensure as a power limited electrician:
 - a. Hold a valid board-recognized tradesman certification; or
 - b. Possess the necessary work experience and training, as approved by the board.

43-09-12. Examination - Requirements. Each applicant for an electrician's license shall pay the examination fee and shall take an oath and submit written evidence that the applicant has had the required experience.

43-09-13. License fees. Examination and annual license fees required to be paid for an electrician's license must be set by the board.

43-09-13.1. Apprentice electrician registration. An apprentice electrician shall register with the state electrical board within the first six months of employment and shall pay an annual registration fee in an amount set by the board. An apprentice electrician may work on installations only under the personal supervision of a licensed electrician as provided in section 43-09-18.

43-09-13.2. Inspectors - License required - Exception. An individual employed by the state electrical board or a political subdivision to inspect electrical or power limited system installations must be licensed as a journeyman electrician or master electrician.

43-09-14. Master electrician and class B electrician - Undertaking – Fund. Repealed by S.L. 2018, ch. 292, §3.

43-09-15. Renewal of license - Denial, suspension, or revocation of licenses.

1. An electrician's license may be issued for a term of only one year, but may be renewed without examination upon the payment of the proper fee. If the licensee fails to renew the license for a period of three consecutive years or more, the licensee is required to appear for re-examination. The state electrical board may deny, suspend, revoke, or refuse to renew any license issued or applied for under this chapter for any of the following reasons:
 - a. Failure or refusal to maintain or adhere to the minimum standards set forth in the electrical code referred to in section 43-09-21.
 - b. Any cause for which the issuance of the license could have been refused had that information then existed and been known to the board.
 - c. Commitment of any act of gross negligence, incompetency, or misconduct in the practice of the profession regulated under this chapter.
 - d. Material misstatement, misrepresentation, or fraud in obtaining the license.
 - e. After due notice, failed or refused to correct, within the specified time, any installation not in compliance with this chapter.
 - f. Failure or refusal to make deposit or acquire public liability insurance as required by section 43-09-20.
 - g. Failure to pay or enter a written contract for repayment, under a payment schedule acceptable to the board, any financial obligation to the board.
 - h. Failure to furnish certification of completion of continuing education as required under section 43-09-15.1.

2. If an individual's license is denied, suspended, or revoked by the board, or that individual is refused a license by the board, that individual may appeal to the appropriate court.

43-09-15.1. Education. An applicant for renewal of an electrician's license pursuant to section 43-09-15 must have successfully completed at least eight hours each biennium, of education relating to the standards set forth in section 43-09-21 or as otherwise prescribed by the board. The board may not require more than sixteen hours of continuing education in each biennium. The board shall conduct education sessions each year at not fewer than six locations throughout the state. Attendance at such sessions, or attendance at other education sessions certified by the board as approved, fulfills the educational requirements of this section. The board may charge a fee for attendance at the education sessions at an amount to be determined by the board, but not to exceed ten dollars per attendee for each session. The board may expend funds to educate and encourage potential electricians into the trade.

43-09-16. When license not required. The following persons are not required to be licensed by and are not subject to regulation by the board under this chapter:

1. Employees of public utilities engaged in the manufacture and distribution of electrical energy while engaged in work directly pertaining to the manufacture and distribution of electrical energy. This exemption terminates at the first point of service attachment, except for the installing or testing of electric meters and measuring devices and the maintenance of electric meters and measuring devices.
2. Employees, independent contractors, or subcontractors of a company that is a telecommunication carrier as defined under section 57-34-01 or that is a satellite or cable systems provider, while acting in the scope of employment or the terms of the contract.
3. Employees, independent contractors, or subcontractors of dealers in household appliances, such as room air-conditioners, clothes dryers, dishwashers, freezers, garbage disposals, refrigerators, stoves, washing machines, water heaters, and similar appliances while installing and connecting such appliances to an existing electrical receptacle.

4. A representative of a manufacturing firm that is installing or modifying controls of wiring solely on industrial machinery that is for use by the firm itself, and performed by or under the direction of a registered professional engineer who issues a state-accepted evaluation, which is to be maintained with the equipment.
5. An individual who is installing a nonelectrical system.
6. An individual who is installing a power limited system that is installed within a residential dwelling or is installed with a factory connector or cord powered by an existing electrical receptacle.

43-09-17. Journeyman electrician's permit. The board, upon the recommendation of one master electrician and two journeyman electricians, may issue a permit for a journeyman electrician to engage in the journeyman electrician's trade until the next meeting of the board for the examination of applicants. Such permit is not renewable.

43-09-18. Apprentice. An individual may serve as an apprentice under a licensed master electrician or power limited electrician, but a master electrician or power limited electrician may not allow an apprentice to work on any installation without personal supervision of a licensed electrician.

43-09-19. Report of work done by licensee. Every person licensed under the provisions of this chapter and doing electrical work shall report the same to the secretary of the board upon blanks furnished by the board for that purpose.

43-09-20. Installations made with master electrician, class B electrician, or power limited electrician - Requirement for liability insurance.

1. A contract, agreement, or undertaking with another for the installation of electrical wiring or power limited wiring or the installation of electrical or power limited system parts of other apparatus may not be entered by anyone other than a master electrician or power limited electrician. A class B electrician may not enter a contract, undertaking, or agreement for the installation of electrical wiring, except for:
 - a. Farmstead electrical wiring; or

- b. Residential electrical wiring in one or two family dwellings located in a city with a population of two thousand five hundred or fewer.
2. If a licensee is acting as a contractor, that licensee shall submit to the board evidence of the existence of public liability insurance with a licensed insurance carrier, with policy limits of at least five hundred thousand dollars.

43-09-21. Standards for wiring, apparatus, and equipment. All electrical and power limited wiring, apparatus, or equipment must comply with the rules of the board made under authority of the laws of this state and in conformity with the approved methods of construction for safety to life and property. The regulations in the national electrical code and the national electrical safety code as approved by the American national standards institute are prima facie evidence of these approved methods. Although a city may make more stringent requirements by ordinance, application of the ordinance must be limited to individuals licensed by the board under this chapter. An electrical or power limited system installation may not be connected for use until proof has been furnished to the person supplying electrical energy that there is compliance with the applicable regulations. The manufacturer of a new manufactured building or modular unit shall make any changes required for the proof within fourteen days from the notice that the building or unit does not comply with the applicable regulations. This section does not apply to the movement of a new manufactured building or modular unit into or within this state before the process of being connected for use.

43-09-22. Inspection of installation - Condemnation.

1. The board has jurisdiction over and shall provide inspection for all electrical installations. The board has jurisdiction over and shall provide inspection for all power limited system installations. If there is a disagreement between an electrician and an inspector over interpretation or over a correction for violation issued by any inspector, the executive director of the board shall review the identified disagreement and render a final decision, which either party may appeal to the board.
2. The executive director of the board, as authorized by the board may condemn installations hazardous to life and property or may order specific corrections to be made. The executive director may order disconnection of service after notice to the owner of the property. The order is subject to the owner's right of appeal to the board. A condemned installation may not be reconnected for service until

proof has been furnished that the installation has been brought up to the required standards.

3. The board may charge a master electrician, class B electrician, or power limited electrician responsible for the installation a fee for inspections.
4. A city may make provisions for inspection of all electrical and power limited systems installed within the corporate limits of the city. A city shall register the name of the inspector with the board within ten days of appointment. A city may not require inspection of an installation that is outside the jurisdiction of the board.

43-09-23. Criminal penalty - Civil proceedings. A person that violates any of the provisions of this chapter is guilty of a class B misdemeanor. In addition to criminal proceedings, the board may commence administrative or civil court proceedings as follows:

1. The board may issue a cease and desist order against a person allegedly making or offering to make installations in violation of section 43-09-09 or 43-09-09.2 based upon information provided to the board by its inspectors or other persons, by investigation reports, affidavits, complaints of witnesses, or oral testimony given to the board at a regular or special board meeting. Violation of the cease and desist order may be considered by the court in issuing a temporary or permanent restraining order and in ordering the payment of costs and attorney's fees in proceedings authorized under this section.
2. The board may apply to the district court in the county in which the violations have occurred for a temporary or permanent injunction under chapter 32-06, enjoining persons from performing, advertising, or contracting for making electrical installations without a valid license issued by the board in violation of section 43-09-09 or 43-09-09.2. The court may not require a written undertaking, security, or bond as a basis for issuing any temporary or permanent restraining order under this section unless the court specifically orders and states the basis for requiring the security. Upon a determination that a violation of section 43-09-09 or 43-09-09.2 has occurred, the court may assess against the defendants the actual costs incurred and reasonable attorney's fees necessary for the investigation and court proceedings against the unlicensed person.

3. After an administrative hearing has been conducted by the board under chapter 28-32, an appeal from an order of the board or from the assessment of costs and attorney's fees may be taken to the district court under chapter 28-32.

43-09-24. Special emergency. Repealed by omission from this code.

43-09-25. License to nonresidents - Reciprocity. To the extent that other states which provide for the licensing of electricians provide for similar action, the state electrical board may grant licenses of the same grade or class to electricians licensed by other states, upon payment by the applicant of the required fee, after being furnished with proof that the qualifications of the applicant are equal to the qualifications of holders of similar licenses in North Dakota.

43-09-26. Exemption for coal mines. The jurisdiction of the board and other requirements of this chapter do not apply to installations, wiring, apparatus, or equipment that are part of a coal mine permitted by the public service commission and are subject to the jurisdiction of the federal mine safety and health administration.

43-09-27. Powers and duties of the board - Regulation of conveyances - Exceptions.

1. The board shall adopt rules to regulate the inspection and testing of conveyances and to implement applicable standards published by the American society of mechanical engineers. The board shall publish testing and inspection forms based on the rules and standards adopted by the board.
2. The board shall establish procedures for monitoring compliance with this chapter and receiving and investigating complaints.
3. The board may grant an exception or variance from the requirements of board rules if the exception or variance will not jeopardize the public safety and welfare.
4. The board shall hold hearings and hear appeals on disciplinary matters under sections 43-09-28 through 43-09-34.
5. The board shall establish fee schedules for permits, certificates, inspections, and tests. The fees must reflect the actual costs and expenses to conduct the duties of the board.

6. The rules adopted by the board may not apply to an elevator located in a single-family private residence, a facility used for the purpose of energy generation, an industrial conveyance the primary purpose of which is not the movement of individuals, or a conveyance used in an agricultural facility.

43-09-28. Conveyance permit required.

1.
 - a. Within six months from July 1, 2025, the owner of a conveyance shall register the conveyance with the board.
 - b. The owner of a new elevator or other conveyance must register the conveyance with the board within thirty days after the conveyance has been inspected and approved.
 - c. When registering a conveyance, the owner shall provide to the board the type of the conveyance, the rated load, the number of landings and speed of the conveyance, the name of the manufacturer of the conveyance, the location of the conveyance, the purpose for which the conveyance is used, and any additional information the board may require.
 - d. When a conveyance subject to this chapter is decommissioned or otherwise taken out of service, the owner responsible for the equipment shall notify the board within six months to request the conveyance be removed from the registration list.
2. Before an installation or alteration may be commenced on a conveyance, an elevator contractor shall apply to the board for a permit.
3. An application for a permit must include:
 - a. A copy of the specifications for the conveyance and must be accurately scaled and include fully dimensional plans showing the location of the installation in relation to the plans and elevation of the building.
 - b. An illustration of each detail of construction and design, including electrical drawings.
 - c. The location of the machinery space, machine room, control space, or control room and the equipment to be installed, relocated, or altered.

- d. All structural supporting members of the conveyance, including foundations.
 - e. A description of the materials to be employed and all loads to be supported or conveyed.
 - f. A copy of the written maintenance control program for the conveyance.
4. The elevator contractor shall post the permit at the site of the conveyance while work is in progress. The elevator contractor obtaining the permit shall be responsible for the complete scope of work covered by the permit and ensure any alteration is performed only by a licensed elevator mechanic and performed in accordance the requirements of this chapter and any rules adopted by the board.

43-09-29. Conveyance permit revocation or suspension. The board may revoke or suspend a permit upon a finding:

- 1. Of a false statement, omission, or misrepresentation of material fact in the permit application or the plans or specifications on which the permit was based.
- 2. The work detailed under the permit has not been performed in accordance with the application, plans, specifications, or conditions of the permit.
- 3. The elevator contractor failed or refused to comply with a stop work order from the board.
- 4. The board determines revocation is necessary to ensure the proper enforcement of this chapter or to protect public or worker safety.

43-09-30. Conveyance permit expiration.

- 1. A permit is deemed expired if:
 - a. The work authorized by the permit is not commenced within six months after the date on which the permit is issued or within a shorter period as specified on the permit; or
 - b. After the work has commenced, the work is suspended or abandoned for sixty days or a shorter time specified on the permit.

2. The board may allow an extension under subsection 1.

43-09-31. Certificate of operation - Penalty.

1. Upon installation of a conveyance, an elevator contractor responsible for the work shall certify compliance with this chapter, rules of the board, and any applicable industry code or standard.
2. Before a conveyance is placed in operation, the owner of the conveyance shall obtain a certificate of operation from the board. The board may impose a penalty of not less than fifty dollars for the failure to obtain a certificate of operation.
3. A certificate of operation is valid for one year and must be renewed annually. The owner of the conveyance shall pay the required fee before the board may issue a certificate of operation and renewal of a certificate.
4. The owner of the conveyance shall clearly display the certificate on or in each conveyance or in the machine room.

43-09-32. Reporting of accidents. If an incident occurs involving an elevator or other conveyance which results in death or bodily injury to any person which requires hospitalization or other treatment by a medical professional, the owner of the conveyance shall submit to the board a report, on a form prescribed by the board, within forty-eight hours. The report must include the date, time, and place of accident.

43-09-33. Inspection and testing of conveyances - Removal from service.

1. The owner of a conveyance shall ensure each conveyance is inspected and tested as required by the board.
2. All work required for inspections and tests of conveyances must be performed by an elevator mechanic and must be witnessed by an elevator inspector.
3. Upon completion of an inspection, the elevator inspector shall provide the owner of the conveyance and the board a written inspection report verifying code compliance or describing any code violations found. If a conveyance fails an inspection, the owner of the conveyance shall remove the conveyance from service until the violations are remedied to the satisfaction of the board.

4. The board shall develop a schedule for required testing and inspection of elevators and conveyances in the state.

43-09-34. Elevator inspector and contractor registration.

1. An individual may not inspect any conveyance unless the individual is registered with the board. An individual may apply for registration by completing an application form provided by the board, submitting the application fee, and submitting documentation demonstrating the applicant meets the requirements established by the board by rule.
2. A person may not perform, contract to perform, or advertise to perform alteration or maintenance of conveyances unless that person is registered as an elevator contractor with the board. A registered elevator contractor shall employ at least one elevator mechanic.
3. The board shall create and maintain a list of all registered elevator contractors operating in North Dakota.

NOTE FROM SENATE BILL 2336:

SECTION 11. APPLICATION. The requirements of this Act must be phased in as follows:

1. After August 1, 2026, each newly installed or altered conveyance must pass an acceptance test witnessed by an elevator inspector.
2. After August 1, 2026, each traction elevator must pass an acceptance test witnessed by an elevator inspector.
3. After August 1, 2027, each hydraulic elevator, escalator, and moving walk must pass an annual acceptance test witnessed by an elevator inspector.
4. After August 1, 2028, the board shall implement a schedule to meet the five-year full load safety testing requirement.
5. After August 1, 2032, each conveyance must pass a five-year full load safety test witnessed by an elevator inspector.

**ARTICLE 24.1-01
GENERAL ADMINISTRATION**

Chapter
24.1-01-01 Organization of Board

**CHAPTER 24.1-01-01
ORGANIZATION OF BOARD**

Section	
24.1-01-01-01	History and Functions
24.1-01-01-02	Board Membership
24.1-01-01-03	Executive Director
24.1-01-01-04	Director of Inspections
24.1-01-01-05	Inspection Districts
24.1-01-01-06	Inquiries

24.1-01-01-01. History and functions.

In 1917 legislation was approved which created a state board of electricians. In 1949 the name of the board was changed to the state electrical board. The board is charged with the responsibility to examine applicants and issue licenses to those having the necessary qualifications and knowledge in the laws of electricity and electrical codes. The board has jurisdiction over all electrical installations. The executive director may condemn installations hazardous to life and property and order electric service to be discontinued.

24.1-01-01-02. Board membership.

The board consists of six members appointed by the governor for terms of five years. To provide equal representation on the board, one member is selected from the master electricians, one from the journeymen electricians, one from the investor-owned utilities, one a consumer member of a rural electric cooperative, one an elevator mechanic, and one a member representing the public who may not be associated directly with the electrical industry.

24.1-01-01-03. Executive director.

The executive director has full responsibility for directing and supervising the operation of the department under the direction of the board.

24.1-01-01-04. Director of inspections.

The director of inspections supervises electrical inspectors to carry out an effective inspection program. The director is responsible for reviewing plans and specifications that are submitted on various projects.

24.1-01-01-05. Inspection districts.

The state is divided into districts. Each inspector is assigned to a district. A map showing the districts is available on the board's website at www.ndseb.com and by this reference is incorporated in these rules.

24.1-01-01-06. Inquiries.

All inquiries and communication relating to licensing, electrical wiring, and inspections must be directed to:

North Dakota State Electrical Board
P. O. Box 7335
Bismarck, ND 58507-7335
Phone (701) 328-9522
E-mail: electric@nd.gov

Inquiries or proposals for amendments to the rules and wiring standards must be directed to the executive director.

**ARTICLE 24.1-02
DEFINITIONS, GENERAL STATEMENT OF POLICY AND
INTERPRETATIVE RULES**

Chapter
24.1-02-01 General Provisions

**CHAPTER 24.1-02-01
GENERAL PROVISIONS**

Section	
24.1-02-01-01	Definitions - Electrical
24.1-02-01-02	General Statement of Policy and Interpretative Rules
24.1-02-01-03	Administrative Powers and Duties

24.1-02-01-01. Definitions - Electrical.

The terms used throughout this title have the same meaning as in the National Electrical Code except:

1. "Correction order", also marked as FS, indicates a correction is necessary before installation will be considered approved by the board. It means a notice, written by an electrical inspector to the person responsible for the electrical installation, stating violations and noncompliance of rules and regulations as listed shall be corrected within a designated time.
2. "E-cert" is an electronic version of a wiring certificate.
3. "Kitchen" means an area where food is prepared that includes a sink and one or more permanent cooking appliances.
4. "Service" means the conductors and equipment for delivering electric energy from the serving source to the wiring system of the premises served.
5. "Service point" means the point of demarcation between the serving utility and the premises wiring. The service point is the point on the wiring system where the serving utility ends, and the premises wiring begins. The serving utility generally specifies the location of the service point.
6. "Wiring certificate" means a document consisting of one or more copies that certifies electrical wiring and equipment was installed on premises and was done in strict compliance with all the provisions

of North Dakota Century Code chapter 43-09 and all the requirements of the board.

24.1-02-01-02. General statement of policy and interpretative rules.

1. Purpose and scope. The purpose of these standards is the practical safeguarding of persons and of buildings and building contents from electrical hazards arising from the use or control of electricity for light, heat, power, and control thereof, fire detection systems, and power limited systems. It covers the electrical and power limited installations and associated equipment necessary for its safe operation.
2. These standards, based on the National Electrical Code, are the result of years of experience and research to meet the demand for uniform standards to govern electrical and power limited systems wiring in North Dakota, and provide basic rules for intelligent and uniform installation and inspection.
3. All requirements contained herein must be given careful consideration to ensure greatest permanence, convenience, and safety. These standards do not constitute a design specification for any particular installation, or an instruction manual for untrained individuals. Skill and experience are necessary factors for a safe and adequate wiring installation. Whenever these requirements differ or are in conflict with the requirements of the NFPA 70 2026 edition, National Electrical Code (first version, printed in 2025) and NFPA 101 2024 edition Life Safety Code®, and applicable articles in locally adopted codes or North Dakota State Building Code pertaining to fire detection, fire alarms, fire communications, and smoke detectors, the more restrictive requirements are the minimum.
4. Severability. If any section, sentence or clause, or provision of this chapter or the applicability thereof to any person or circumstances is held invalid, the remainder of this chapter and the application of such provision to other persons or circumstances are not affected thereby.

24.1-02-01-03. Administrative powers and duties.

1. The executive director, under the direction of the board, shall administer laws, rules, and wiring standards of this state, the electrical requirements of the NFPA 70 2026 edition, National Electrical Code (first version, printed in 2025) and NFPA 72, 101, 110 2024 edition Life Safety Code®, and applicable articles in locally adopted codes or North Dakota State Building Code pertaining to fire detection, fire alarms, fire communications, and smoke detectors. Whenever any action is taken by the executive director to enforce the provisions of any sections contained in these electrical regulations, the NFPA 70 2026 edition, National Electrical Code (first version, printed in 2025) and NFPA 101 2024 edition Life Safety Code®, such acts must be done in the name of and on behalf of the state.
2. The electrical regulations of these standards, the NFPA 70 2026 edition, National Electrical Code (first version, printed in 2025) and NFPA 101 2024 edition Life Safety Code®, may be modified or waived by special permission in particular cases when such modification or waiver is specifically permitted or in particular cases when an advancement in the technology of electricity makes such modification or waiver advisable in the best interest of the people of North Dakota. Such "special permission", in all cases, must be obtained from the executive director in writing before the commencement of the work.
3. Whenever the board is authorized or mandated by law to inspect an electrical installation, the inspector may enter upon land for the purpose of conducting the inspection. Except in emergency circumstances, the inspector shall request permission from the property owner or agent before entering a dwelling, other building, or other place so enclosed as manifestly to exclude intruders. If the landowner refuses to give permission, the board may request the district court of the district containing the property for an order authorizing the inspector to enter the property to conduct the inspection. Emergency circumstances include situations presenting imminent danger to health, safety, or property.

**ARTICLE 24.1-03
LICENSURE OF ELECTRICIANS**

Chapter
24.1-03-01 Licensing Requirements

**CHAPTER 24.1-03-01
LICENSING REQUIREMENTS**

Section	
24.1-03-01-01	Application, Examination and Annual License Fees
24.1-03-01-02	Master Electrician
24.1-03-01-03	Journeyman Electrician
24.1-03-01-04	Class B Electrician
24.1-03-01-05	Power Limited Electrician
24.1-03-01-06	Provisional Military Spouse Licensure
24.1-03-01-07	Apprentice Electrician
24.1-03-01-08	Power Limited Apprentice Electrician
24.1-03-01-09	Supervision and Responsibilities

24.1-03-01-01. Application, examination, and annual license fees.

1. Upon receiving an application packet for an electrician's license from an applicant, the board shall process and review the applicant's employment verification of electrical construction experience as outlined under this section. Upon final approval of the application by the board, the applicant shall be sent an invitation to take the examination. The invitation shall outline the available testing dates. Upon receiving the invitation, the applicant shall contact the board and inform the board as to the date chosen to take the examination. Examination fees shall be paid separately to the examination testing center provider, if required.
2. An applicant shall have the necessary qualifications, training, and technical knowledge to wire, install, and repair electrical apparatus and equipment in accordance with the standard rules and regulations of the National Electrical Code.
3. The board issues an identification card to currently licensed and registered electricians. This identification card, along with a government-issued picture identification card, shall be in the possession of the electrician when doing electrical work. If the identification card is misplaced or destroyed, a replacement charge to cover board costs shall be imposed.

4. The application fees are as follows:

a.	Master license	\$50.00
b.	Journeyman license	\$25.00
c.	Class B license	\$40.00
d.	Apprentice registration	\$10.00
e.	Power limited license	\$50.00
f.	Power limited apprentice registration	\$10.00

5. The license and registration or annual renewal fees are as follows:

a.	Master license	\$50.00	Expires April 30 th
b.	Journeyman license	\$25.00	Expires March 31 st
c.	Class B license	\$40.00	Expires April 30 th
d.	Apprentice registration	\$10.00	Expires January 31 st
e.	Power limited license	\$50.00	Expires April 30 th
f.	Power limited apprentice registration	\$10.00	Expires January 31 st

Expired licenses and registrations shall require a reinstatement fee equal to the annual fee.

24.1-03-01-02. Master electrician.

A master electrician shall have at least two thousand hours of experience working as a licensed journeyman electrician under the supervision of a contracting master electrician or master of record. There are three categories of master electricians, which are as follows:

1. A contracting master is an individual responsible to adhere to all laws and rules of the North Dakota wiring standards and has shown proof of liability insurance.
2. A master of record is an individual responsible to adhere to all laws and rules of the North Dakota wiring standards for the partnership, company, corporation, limited liability company, or association and has shown proof of liability insurance that the master of record is

covered by the organization. The master of record is not allowed to work on other property other than property owned or leased by the organization.

3. A noncontracting master is an individual responsible to adhere to all laws and rules of the North Dakota wiring standards and has the same responsibility as a journeyman electrician. Electrical work shall be done under the supervision of a contracting master or master of record.

24.1-03-01-03. Journeyman electrician.

A journeyman electrician shall have completed eight thousand hours experience, which experience may not be obtained in less than three years, registered as an apprentice electrician (of which up to three thousand hours may apply under the qualifications of a class B electrician) under the supervision of a contracting master or master of record licensed electrician in an area where electrical construction work is done in a jurisdiction with similar licensing and inspection rules to the state of North Dakota, and successfully completed apprentice electrician training. Two thousand hours credit may be granted for a graduate of a two-year or more electrical school accepted by the board. Practical experience consists of a minimum of four thousand hours and a maximum of eight thousand hours credit may be granted for wiring and installing electrical wiring, apparatus, and equipment. Practical electrical experience gained through a contracting master electrician also consists of an apprentice completing a board-approved training program. Credit allowed in other areas may include any combination of the following:

1. A maximum of one thousand hours credit for repairing electrical wiring, apparatus, and equipment and light, heat and power.
2. A maximum of one thousand hours credit for wiring fire alarm technology circuits or systems;
3. A maximum of two thousand hours credit for wiring process control circuits or power limited systems; and
4. A maximum of two thousand hours credit of electrical construction experience gained in the armed forces of the United States which the board has determined is equivalent to work performed under the supervision of a North Dakota licensed electrical contractor.

24.1-03-01-04. Class B electrician.

A class B electrician shall have completed three thousand hours experience in farmstead or residential wiring, in one-family or two-family dwellings, under the supervision of a master or class B electrician. Commercial wiring experience will not be credited for experience toward a class B license. One thousand hours credit will be granted for a graduate of a two-year electrical school approved by the board.

24.1-03-01-05. Power limited electrician.

A power limited electrician shall have completed six thousand hours experience, which experience may not be obtained in less than two and one-half years, registered as a power limited apprentice electrician under the supervision of a contracting master, master of record, contracting power limited, or a power limited electrician of record. Experience must be obtained where power limited electrical construction work is done in a jurisdiction with similar licensing and inspection rules to the state of North Dakota. The board also may approve licenses based on power limited education or a board-approved tradesman certification. Classification types of a power limited electrician must be defined by the board. There are three categories of power limited electricians, which are as follows:

1. A contracting power limited electrician is an individual responsible to adhere to all laws and rules of the North Dakota wiring standards and has shown proof of liability insurance.
2. A power limited electrician of record is an individual responsible to adhere to all laws and rules of the North Dakota wiring standards for the partnership, company, corporation, limited liability company, or association and has shown proof of liability insurance that the power limited electrician of record is covered by the organization. The power limited electrician of record is not allowed to work on other property other than property owned or leased by the organization.
3. A noncontracting power limited electrician is an individual responsible to adhere to all laws and rules of the North Dakota wiring standards. Power limited electrical work must be done under the supervision of a contracting master, master of record or a contracting power limited electrician or a power limited electrician of record.

24.1-03-01-06. Provisional military spouse licensure.

See North Dakota Century Code section 43-51-11.1

24.1-03-01-07. Apprentice electrician.

There are two categories of apprentice electrician training:

1. Apprentice electricians who have successfully completed at least two years of electrical school approved by the board.
2. Apprentice electricians who have successfully completed five hundred seventy-six hours of training classes or a professional electrician program recognized by the board. An applicant who has prior experience outside of the state of North Dakota may take a placement examination to verify the practical experience obtained in order to apply credit toward the verification of hours. If the applicant fails the placement examination, the applicant is ineligible to retake the examination. An appeal may be submitted in writing to the board within thirty days.

An apprentice electrician who has not successfully completed training as stated in subsection 1 or 2 is required to be registered with the board but is not eligible to take the journeyman or class B license examination. If the individual receives a license from another state based on the verification that the majority of practical experience was obtained in the state of North Dakota the individual is not eligible for examination for licensure or a reciprocal license.

24.1-03-01-08. Power limited apprentice electrician.

A power limited apprentice electrician shall meet the following requirements to be eligible for examination:

1. A power limited apprentice must be registered with the board under the same classification as the power limited electrician under whom the apprentice will be working and have completed six thousand hours of work experience under the direct supervision of a power limited electrician; or
2. A power limited apprentice must possess a valid board recognized tradesman certification. An applicant who has prior experience outside of the state of North Dakota may take a placement examination to verify the practical experience obtained in order to

apply credit toward the verification of hours. If the applicant fails the placement examination, the applicant is ineligible to retake the examination. An appeal may be submitted in writing to the board within thirty days.

A power limited apprentice electrician who has not complied as stated in subsection 1 or 2 is not eligible to take the power limited electrician license examination. If the individual receives a license from another state based on the verification that the majority of practical experience was obtained in the state of North Dakota, the individual is not eligible for examination for licensure or a reciprocal license.

24.1-03-01-09. Supervision and responsibilities.

1. A licensed electrician shall supervise not more than three apprentices. An individual over sixteen years of age may work as an apprentice under a licensed master, class B or power limited electrician, but the master, class B or power limited electrician may not allow an apprentice to work on any installation without direct constant supervision by a North Dakota licensed electrician working with the apprentice at the worksite.
2. When an apprentice is found to be doing electrical or power limited work not under the direct supervision of a licensed electrician, an investigative fee may be charged to cover the costs incurred by the board. Costs are to be calculated at a rate of fifty dollars per hour and mileage rates currently allowed by North Dakota Century Code section 54-06-09 per mile of travel.
3. Contractors shall maintain records of all individuals who are or will be performing electrical or power limited work for that contractor and shall permit the electrical board to examine and copy all such records as required by this section. It is the responsibility of the master, class B, or power limited electrician to ensure all individuals who are or will be performing electrical or power limited work for that contractor either be licensed electricians or registered apprentices with the board. Credit may not be given for hours spent working under a power limited electrician to any applicant for a master, journeyman, or class B electrician license.
4. Any master, class B, or power limited electrician who fails or refuses to comply with this section or who fails or refuses to comply or demonstrate compliance with this section at the request of the board

or its representative shall subject that individual's license to nonrenewal, suspension, or revocation by the board.

5. A master, class B, or power limited electrician may exercise that person's privileges as a licensed master, class B, or power limited electrician for no more than one shop or business and shall comply with provisions as required for contracting with the secretary of state's office as stated in North Dakota Century Code chapter 43-07. A master, class B, or power limited electrician must be actively engaged in the supervision of every project certified under that electrician's license. A master, class B, or power limited electrician shall notify the board office immediately upon changing their status for the business they represent.
6. Maintenance personnel regularly employed by the owner or property manager may maintain or make minor repairs to existing electrical wiring devices and appliances but are precluded from extending or changing the characteristics of existing circuits, feeders, or other electrical apparatus.

Chapter
24.1-04-01 Education Requirements

Section	
24.1-04-01-01	Education Requirements for Licensure and Renewal
24.1-04-01-02.....	Class Approvals
24.1-04-01-03.....	Instructor Qualifications
24.1-04-01-04.....	Education Advisory Committee

No master, journeyman, power limited, or class B electrician license will be renewed unless proof of eight continuing education hours have been submitted, of which a minimum of fifty percent of the hours shall be based on the NFPA 70 2026 edition, National Electrical Code (first version, printed in 2025). The remaining credits shall be subjects related to the electrical industry. Approval of the education curriculum is required by the board.

1. Classes, apprenticeship programs, and instructors shall have prior approval by the board and requests for approval shall be made no later than thirty days prior to class instruction. Board approval of continuing education classes and instructors accepted expires when the board adopts an updated edition of the National Electrical Code. Approved apprenticeship programs shall be reviewed at intervals set by the board.
2. Application for approval of educational classes and instructors shall be on a form provided by the board. A complete description (detailed curriculum outlining the subject matter along with the time and sequence of each item) and copies of all materials provided to the attendants shall be submitted. All educational classes shall meet minimum education requirements set by the board.
3. Education programs held in other states may be considered for credit if the program meets the requirements of the board.

4. The board shall be notified in writing no later than fifteen days prior to the date, time, and location of the class. A representative of the board shall be entitled to attend without charge and have the authority to audit or review education classes.
5. The board may withdraw approval of any educational classes not in compliance with this section.
6. The provider of the class shall forward an attendance list to the board on a form supplied by the board within fifteen days following the class. A certificate of completion shall also be provided to each attendee. Each certificate of completion and attendance list shall include the name of the provider, the name of the instructor, the class identification number, the date and location of the class, and the number of code and non-code hours of instruction for education units. For all classes, include the attendee's name, license or registration number, and last four digits of the electrician's social security number. It is the responsibility of the attendee to have a copy of this certificate of completion. The certificates shall be sent to the board only if requested by the board. The provider shall be responsible to keep accurate attendance by periodically checking attendees during the class. For providers that conduct continuing education classes in North Dakota, the attendance record shall be submitted to the board as required.
7. Continuing education credits can be deposited with the board for a period up to two license renewal periods. Continuing education credits will not be given for attending the same continuing education class more than once in a code cycle (example: same sponsor, same title, and same class approval number).

24.1-04-01-03. Instructor qualifications.

Instructors shall submit their qualifications to the board before the class. Classes may not be approved unless the instructor has one or more of the following qualifications:

1. A master electrician with at least one year's experience in electrical inspection.
2. A journeyman or master electrician who is certified as an instructor through a vocational education department.

3. An individual with a valid teaching accreditation from a trade or technical school, college, or university teaching an electrical curriculum.
4. A registered or licensed electrical engineer with at least four years' experience in design of premise electrical wiring systems.
5. A representative from the national fire prevention association, testing laboratories, international association of electrical inspectors, and other product manufacturer representatives with five years' practical experience in the subject taught.
6. Instructor of an apprenticeship training program.

24.1-04-01-04. Education advisory committee.

1. The board shall form an education advisory committee to review educational classes and programs required by the board.
2. The committee shall develop minimum requirements in the area of study for the electrical education of individuals registered and licensed by the board.
3. The committee shall review the approved classes and programs every five years or as necessary and submit a report to the board for final approval.
4. The executive director shall preside over the committee meetings.
5. The committee shall meet as deemed necessary, but no less than once per year.
6. Committee members may be reimbursed expenses of mileage and travel as per North Dakota Century Code sections 44-08-04 and 54-06-09.
7. The education advisory committee members may consist of individuals selected from the following categories:
 - a. The executive director of the board.
 - b. The training administrator of the board.

- c. A representative from a North Dakota college-approved electrical degree program.
- d. A representative from a North Dakota college-approved off-campus electrical correspondence or online program.
- e. A North Dakota registered professional electrical engineer.
- f. A North Dakota master electrician who is certified as an instructor through a vocational education department.
- g. A North Dakota journeyman electrician who is certified as an instructor through a vocational education department.
- h. A North Dakota power limited electrician who is certified as an instructor through a vocational education department.
- i. An individual having experience with an apprenticeship training program.

Chapter
24.1-05-01 Certificates and Inspections

Section	
24.1-05-01-01	Electrical Certificates
24.1-05-01-02	Fees
24.1-05-01-03	Carnivals, Circuses, Fairs and Similar Events

1. All electrical installations, including power limited system installations defined by the National Electrical Code Special Occupancies, articles 500 through 517, with a value of five hundred dollars or more, shall have an electrical wiring certificate submitted by the master, class B or power limited electrician supervising the installation on a form prescribed by the board. A project with multiple address locations requires an electrical wiring certificate for each location.
2. Before work commences on any electrical installation when a new service is installed, an existing service is altered or repaired, a building is moved, when a mobile home service or feeder is installed, or when the cost of the repair work or additional installation exceeds five hundred dollars, the master, class B, or power limited electrician supervising such installation shall submit an electrical wiring certificate and distribute as follows:
 - a. A startup copy of the certificate must be submitted to the board and a copy to the power company before work is commenced and before an electrical installation may be energized.
 - b. Within fifteen days of completion, use, or occupancy, whichever is first, the final paperwork must be submitted to the board, along with the proper fee. The wiring certificate must be completed with the location and a proper description of work completed.

- c. A copy must be retained by the master, class B, or power limited electrician.
 - d. A copy must be left in or on the panel or given to the owner.
- 3. Certificates with job cost of twenty thousand dollars or less are valid twelve months from the original filing date. A new wiring certificate must be filed on all unfinished work.
- 4. E-certs are available upon request and submission of an application from any master, class B or power limited electrician holding a proper current license from the board. The master, class B, or power limited electrician is responsible for all certificates issued to and by that person. A charge of twenty-five dollars to cover board costs must be assessed on each lost electrical paper wiring certificate issued to any master, class B, or power limited electrician, unless returned to the board.
- 5. Whenever an electrical installation made by or under the supervision of a master, class B, or power limited electrician is commenced or in use without submitting an electrical wiring certificate, as directed in subsection 2, the certificate may be considered late and the normal inspection fee, as required under this section, is increased in the amount of fifty dollars. In addition when time and travel are expended by employees of the board to obtain a late certificate, an investigative fee may be charged to cover the costs incurred. Costs must be calculated at a rate of fifty dollars per hour and mileage rates currently allowed by North Dakota Century Code section 54-06-09 per mile of travel.
- 6. Property owners who are self-wiring or doing their own electrical work shall comply with the following before any electrical work commences:
 - a. Submit an application to the board.
 - b. Must own and occupy the residential property or farmstead where the electrical work will be done.
 - c. Review plans or drawings depicting wiring to be done with the local electrical inspector.

- d. Inspection fees must be calculated as stated in this section with a minimum of fifty dollars.
- e. Certification and inspection are required as stated in this section.

24.1-05-01-02. Fees.

1. The electrical and power limited systems inspection fee must be based on the total amount of the contract or total cost to the owner, including extras. This includes power limited systems in National Electrical Code chapter 5 special occupancies, articles 500 through 517.

The following items need not be included in the cost:

- a. Appliances, including dishwashers, heat pumps, air-conditioners, disposals, and similar equipment.
 - b. Heating, ventilating, and air-conditioning (HVAC) units.
 - c. Electric motors, PLC, generators; and
 - d. Industrial machines.
2. The contractor is responsible to collect the proper inspection fee on each installation. When the owner furnishes the material and the contractor furnishes the labor, the owner shall provide the contractor with the total amount expended for materials used in connection with the installation, and the contractor shall then calculate and collect the necessary inspection fee from the owner. Whenever materials are donated or removed from an existing installation and placed at another location or labor is donated to an installation, the contractor shall estimate the cost of these materials and labor and include the amount in the job cost for the purpose of calculating the proper inspection fee. The contractor shall maintain all job-related records for a minimum of four years and shall permit the board to examine and copy all such records as requested.
 3. It is grounds for discipline of a master, class B, or power limited electrician's license if it is discovered that they charged or collected from the customer an electrical inspection fee greater than the fee actually in effect.

4. Effective October 1, 2020, inspection fees shall be as follows:

Job Cost:	Inspection Fee:
Up to \$500.00	\$50.00 (minimum fee)
\$500.00 to \$20,000.00	\$50.00 for the first \$500.00 plus 1.25% on balance up to \$20,000.00
Over \$20,000.00	\$293.75 for the first \$20,000.00 plus 1/10 of 1% on balance over \$20,000.00

Effective July 1, 2024, inspection fees shall be as follows:

Job Cost:	Inspection Fee:
Up to \$500.00	\$50.00 (minimum fee)
\$500.00 to \$20,000.00	\$50.00 for the first \$500.00 plus 2% on balance up to \$20,000.00
Over \$20,000.00	\$440.00 for the first \$20,000.00 plus 1/10 of 1% on balance over \$20,000.00

5. Companies having supervision of electrically driven irrigation machine or out-of-state structures or skids installed in North Dakota shall submit an application to the board. The application must be completed, signed by owner or manager, and forwarded to the board with the inspection fee. The inspection fee must be as follows:
- Electrically driven irrigation machines - \$50.00
 - Out-of-state structures or skids – Based on inspection fee schedule.
6. Whenever a correction order is written and corrections are not completed within the allotted time, there must be an administration charge of fifty dollars, which must be paid to the board by the master, class B, or power limited electrician.

7. All reinspections must be paid for by the contractors at a minimum charge of one hundred dollars. In addition, an investigative fee may be charged to cover the costs incurred to be calculated at a rate of fifty dollars per hour and mileage rates currently allowed by North Dakota Century Code section 54-06-09 per mile of travel.
8. For inspections not covered in this section or special services, the fee must be fifty dollars per hour, including travel time, plus mileage rates currently allowed by North Dakota Century Code section 54-06-09 per mile traveled.

24.1-05-01-03. Carnivals, circuses, fairs and similar events.

1. All carnivals, circuses, fairs, and similar events shall comply with article 525, NFPA 70 2026 edition, National Electrical Code (first version, printed in 2025).
2. All installations shall be approved by the electrical inspector before usage.
3. Each carnival, circus, fair, or similar event operating or intending to operate in North Dakota shall notify the North Dakota State Electrical Board, P.O. Box 7335, Bismarck, North Dakota 58507-7335, each year of its itinerary and make application for the initial inspection thirty days before the first engagement in the state. Failure to notify the board may result in expenses incurred for excess time and travel to inspect these installations.
4. The fee shall be paid to the inspector at the first engagement or inspection as follows:
 - a. \$15.00 each ride or concession;
 - b. \$15.00 reinspection fee on each unit, if required; and
 - c. \$50.00 each transformer or generator truck.
5. Each ride or concession wired properly will be issued a certification of compliance, serving for an entire season, subject to subsequent inspections.

6. Minor code violations will be issued a correction order with instructions to correct each violation before the next engagement. A reinspection will be required.
7. The electrical inspector is empowered to write a correction order for immediate compliance should the inspector find a condition dangerous to life and property.

**ARTICLE 24.1-06
ELECTRICAL WIRING STANDARDS**

Chapter	
24.1-06-01	General Requirements
24.1-06-02	Wiring and Protection
24.1-06-03	Wiring Methods and Materials
24.1-06-04	Appliances
24.1-06-05	Special Occupancies
24.1-06-06	Special Equipment

**CHAPTER 24.1-06-01
GENERAL REQUIREMENTS**

Section	
24.1-06-01-10.....	Requirements for Electrical Installations
24.1-06-01-20	Water Damaged Electrical Equipment
24.1-06-01-30.....	Markings of Means of Egress, Illumination of Means of Egress, and Emergency Lighting
24.1-06-01-40.....	Smoke Alarms, Heat Alarms, Fire Alarm Systems, and Carbon Monoxide Alarm Requirements for Evacuation and Life Safety

24.1-06-01-10. Requirements for electrical installations.

Electrical installations shall be planned to provide adequate capacity for the load.

1. Wiring systems shall have conductors of sufficient capacity to furnish each outlet without excessive line loss or voltage drop. The voltage drop shall not exceed five percent at the farthest outlet of power, heating and lighting loads, or combinations of such loads. (See appendix for example.)
2. All wiring materials and equipment shall be listed by nationally recognized testing laboratories to safeguard life and property. It is the duty of the electrical installer to secure permission from the executive director to use materials, devices, and methods of installation not specifically covered by these standards. Equipment not approved under a testing laboratory category shall be evaluated by a registered professional engineer and recorded on evaluation forms accepted by the board.

Exception: Manufacturing firms that install industrial machinery for use by the firm itself and employ professional engineers may evaluate the industrial machinery according to NFPA 79 or UL 508 Standards. This evaluation shall be maintained with the equipment at all times and a copy submitted to the board.

3. When wiring public school buildings, approval shall be received from the department of public instruction and the board.
4. Overhead conductors shall not cross over water wells or known sites where water wells may be drilled. A minimum distance of twenty feet [6.10 meters] in all directions shall be maintained for overhead conductors.
5. In the wiring of nursing homes and hospitals, reference shall be made to the state department of health for special requirements pertaining to operating rooms, delivery rooms, and emergency lighting.
6. Aluminum or copper-clad aluminum conductors in sizes smaller than no. 6 must be used only for class II and class III circuits.
7. All new construction shall follow the energy-efficient related requirements for design and construction of buildings in accordance with the locally adopted codes or the State Building Code.
8. In any room of an existing building where the sheetrock or wall covering has been removed from all walls, the electrical wiring requirements must comply with the 2026 edition, National Electrical Code (first version, printed in 2025).
9. If the occupancy of an existing building or part of an existing building is changed, the electrical wiring and equipment of the building or portion thereof that contains the proposed occupancy must comply with the 2026 edition, National Electrical Code (first version, printed in 2025).

24.1-06-01-20. Water damaged electrical equipment.

Water damaged electrical equipment wiring and equipment exposed to water damage must comply with the following:

1. All breaker panel boards, breakers, fuses, disconnect switches, controllers, receptacles, switches, light fixtures, and electric heaters that have been submerged or exposed to water damage must be replaced or all electrical equipment, switchgear, motor control centers, boilers and boiler controls, electric motors, transformers, and other similar equipment, such as appliances, water heaters, dishwashers, ovens, and ranges that have been submerged must be reconditioned by the original manufacturer or by its approved representative or replaced.
2. Electrical wiring may require replacement depending on the type of wire or cable and what application it was listed for.
3. Splices and terminations must be checked to ensure compliance with article 110.14 2026 edition, National Electrical Code (first version, printed in 2025).
4. Energized electrical panels that have been submerged must be de-energized to prevent loss of life and property.

Other recommendations can be found in "Guidelines for Handling Water Damaged Electrical Equipment" published by the national electrical manufacturers association (NEMA).

24.1-06-01-30. Markings of means of egress, illumination of means of egress, and emergency lighting.

The purpose of this section is to provide marking of means of egress, illumination of means of egress, and emergency lighting of means of egress. Installations must comply with the requirements of NFPA 101® (7.10.6 and 7.10.7), Life Safety Code®, 2024 edition or more stringent locally adopted codes. A condensed guide is included in the appendix for convenience, for complete and official information refer to the applicable standard.

24.1-06-01-40. Smoke alarms, heat alarms, fire alarm systems and carbon monoxide alarm requirements for evacuation and life safety.

Alarm systems stated in this section must be installed in accordance with the locally adopted codes or the State Building Code and state fire code under the supervision of a master or class B electrician. In new construction, all alarm systems must receive their primary power from the building wiring and when primary power is interrupted, shall receive power from a battery. Wiring must be permanent and without a disconnecting switch other than those required for overcurrent protection.

1. Dwelling units, congregate residences, and hotel or lodging house guest rooms that are used for sleeping purposes shall be provided with smoke alarms. Alarms must be installed in accordance with the approved manufacturer's instructions.
 - a. When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices must be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. Smoke alarms must be installed in the following locations:
 - (1) In each sleeping room.
 - (2) Outside each separate sleeping area in the immediate vicinity of the sleeping rooms.
 - (3) On each additional story of the dwelling, including basements and habitable attics but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
 - (4) In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by twenty-four inches [60.96 centimeters] or more, smoke alarms shall be installed in the hallway and in the adjacent room.

- b. Heat alarms. For new construction, an approved heat alarm must be installed in the attached single tenant garage of a residence and interconnected with the smoke alarms within the residence.
 - c. Household fire alarm systems installed in accordance with NFPA 72 that include smoke alarms, or a combination of smoke detectors and audible notification device installed as required by this section for smoke alarms, must be permitted. The household fire alarm system must provide the same level of smoke detection and alarm as required by this section for smoke alarms. Where a household fire warning system is installed using a combination of smoke detector and audible notification device, it must become a permanent fixture of the occupancy and owned by the homeowner. The system must be monitored by an approved supervising station and be maintained in accordance with NFPA 72 upper level.
- 2. Apartment houses, hotels, and congregate residences must be provided with a manual and automatic fire alarm system in accordance with the requirements of locally adopted codes or the State Building Code and state fire codes. For two-family dwellings, a notification device connected to a smoke alarm system in the other dwelling unit must be provided in each dwelling unit.
 - 3. An approved carbon monoxide alarm must be installed in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages in the following locations:
 - (a) Outside each sleeping area in the immediate vicinity of the bedrooms.
 - (b) On every habitable level.
 - (c) In each bedroom or its attached bathroom within which a fuel-fired appliance is located.

If more than one carbon monoxide alarm must be installed within an individual dwelling unit, the alarm devices must be interconnected to activate all alarms in the individual dwelling unit if one alarm is activated.

4. Rooms and areas within dwelling units, basements and attached garages in which an energy storage system is installed must be protected by smoke alarms. The smoke alarm must receive power from the premise wiring and be interconnected to any existing smoke alarm system. A heat detector listed and interconnected must be installed if a smoke alarm cannot be based on its listing.

A condensed guide is included in the appendix, and for further information consult the locally adopted codes or the State Building Code and state fire codes.

**CHAPTER 24.1-06-02
WIRING AND PROTECTION**

Section

24.1-06-02-10.....	(NEC 210) Branch Circuits
24.1-06-02-15.....	(NEC 215) Feeders
24.1-06-02-30.....	(NEC 230) Services
24.1-06-02-40.....	(NEC 240) Overcurrent Protection
24.1-06-02-50.....	(NEC 250) Grounding and Bonding

24.1-06-02-10. (NEC 210) Branch circuits.

Branch circuits must comply with article 210, 2026 edition, National Electrical Code (first version, printed in 2025).

1. The total connected load must be divided as evenly as practicable, between the two ungrounded conductors of a three-wire system and three conductors of a four-wire wye system.
2. In a dwelling unit, a separate circuit with disconnect must be provided for the purpose of operating or controlling electrical equipment for primary source heating units. Wiring requirements for fixed electrical space heating equipment is provided under article 424, 2026 edition, National Electrical Code (first version, printed in 2025).
3. A minimum of six 20-amp small appliance branch circuits must be installed for counter receptacles in kitchens that are used to serve public gatherings at schools, churches, lodges, and similar buildings. Any island counter in these locations must have at least one receptacle.
4. In dwelling occupancies. A minimum of three 20-amp small appliance branch circuits must be installed to supply receptacle outlets in kitchen, pantry, dining room, and breakfast room. These circuits may not supply other outlets and shall have conductors not smaller than no. 12. Two of these circuits must supply receptacle outlets on or near work counter area and so arranged that adjacent receptacles are not on the same circuit.
5. In dwelling occupancies, one 20-amp bathroom circuit for receptacles may not feed more than two bathrooms.

6. In a dwelling unit, fifteen and twenty ampere receptacles supplying sewer pumps and sump pumps do not need arc fault circuit protection, but must be ground-fault protected or a single receptacle on an individual branch circuit.
7. Fifteen and twenty ampere receptacles supplying power for garage door openers located in attached or detached garages associated with dwelling units must be ground-fault protected or a single receptacle installed. The single receptacle must be labeled for intended use and that it is non-GFCI protected.
8. Portable cleaning equipment receptacle outlets must be installed in corridors and located so that no point in the corridor along the floor line, measured horizontally, is more than twenty-five feet [7.62 meters] from an outlet.
9. Exception: 2026 edition, National Electrical Code (first version, printed in 2025), article 210.11(C)(4): Requirements may not include buildings two hundred fifty square feet [23.23 square meters] or smaller.
10. Exception: 2026 edition, National Electrical Code (first version, printed in 2025), article 210.12(B): AFCI protection is not required for the following:
 - a. Refrigeration appliances if a single receptacle on an individual branch circuit is installed and labeled "Refrigeration Equipment Only"; and
 - b. Furnaces used for main heating source.
11. Exception: 2026 edition, National Electrical Code (first version, printed in 2025), article 210.8(A): GFCI protection is not required for refrigeration appliances in dwelling units, unless refrigeration is located within six feet [182.88 centimeters] of sink or in garage, if a single receptacle on an individual branch circuit is installed and labeled "Refrigeration Equipment Only."
12. Exception: 2026 edition, National Electrical Code (first version, printed in 2025), article 210.52(C)(3) and 210.52(C)(4), countertop, island and peninsular countertops and work surfaces; receptacle outlets shall be permitted to be located not more than twelve inches [30.48 centimeters] below the countertop or work surface.

Receptacles installed below a countertop or work surface shall not be located where the countertop or work surface extends more than six inches [15.24 centimeters] beyond its support base.

24.1-06-02-15. (NEC 215) Feeders.

Surge protection for feeders is not required in the following occupancies:

1. Dwelling units.
2. Dormitory units.
3. Guest rooms and guest suites of hotels and motels.
4. Areas of nursing homes and limited care facilities exclusively used as patient care sleeping rooms.

24.1-06-02-30. (NEC 230) Services.

Electrical services must comply with article 230, 2026 edition, National Electrical Code (first version, printed in 2025).

1. Perpendicular mast used for support of a service may not be less than two-inch [5.08-centimeter] galvanized rigid steel conduit or intermediate metal conduit, fitted with storm collar flashing.
2. Outside switch location. Equipment for an outside switch location may not be mounted lower than two feet [.6061 meter] above grade level unless listed for such purpose.
3. All services in single-family dwellings must be located in a single accessible location.

Exception: Special permission must be granted by the electrical inspector for a second service location to be added where there is no available space for the service equipment. The second service location must be installed in accordance with article 230.2, 2026 edition, National Electrical Code (first version, printed in 2025).

4. Rating of service switch. Any new or old single-family dwelling where the main house panel or service is altered or repaired, the dwelling is moved, or where the dwelling is rewired, a minimum one hundred ampere service-rated panel must be installed. Replacement of service mast or meter enclosure is an alteration of the service.

Service and feeder calculation for electric heating loads must be sized to one hundred twenty-five percent of the full load rating.

5. For the purpose of separating services within one building, each portion of a building separated by one or more fire walls must be considered a separate building as defined by locally adopted codes or the State Building Code and state fire codes.

24.1-06-02-40. (NEC 240) Overcurrent protection.

Overcurrent protection must comply with article 240, 2026 edition, National Electrical Code (first version, printed in 2025).

1. Exterior overcurrent devices must be located at a height of no less than two feet [.61 meter] above grade level to the bottom of the enclosure.

Exception: If raising the switch would exceed the height requirements of NEC 240.24(A).

2. Switchboards and panel boards may not be located in bathrooms, clothes closets, stairways, or crawl spaces, except in a bathroom within which only a sink and toilet or similar plumbing fixture is installed. Switchboards and panel boards may not be installed within six feet [1.83 meters] of the edge of these plumbing fixtures.

24.1-06-02-50. (NEC 250) Grounding and bonding.

Grounding and bonding must conform to article 250, 2026 edition, National Electrical Code (first version, printed in 2025).

1. At motor connections, a bonding jumper sized in accordance with table 250.122, 2026 edition, National Electrical Code (first version, printed in 2025), must be provided around all flexible conduit. The bonding jumper is not required if a separate grounding conductor is included.
2. Grounding of metal outdoor lighting standards.

- a. Definition of lighting standard is a pole exceeding twelve feet [3.66 meters] in height measured from the bottom of the base or from the intended grade level of poles.
 - b. The metal lighting standard must be connected to a one-half inch [12.70 millimeter] by ten-foot [3.05 meter] copperweld ground rod, or twenty feet [6.10 meters] of one or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods (rebar) of not less than one-half inch [1.27 centimeters] in diameter, by the means of a bonding jumper. The ten-foot [3.05 meter] ground rod must be driven in the center of the metal standard base and project slightly above the base. Both ground rod and equipment grounding conductor must be connected to the metal standards. The bonding jumper must be in accordance with 2026 edition, National Electrical Code (first version, printed in 2025), and in no case smaller than no. 8 copper or no. 6 aluminum.
3. The grounding electrode conductor must be connected to the grounded service conductor in the enclosure for the service disconnect.

**CHAPTER 24.1-06-03
WIRING METHODS AND MATERIALS**

Section

24.1-06-03-01.....	(NEC 300) Wiring Methods
24.1-06-03-14.....	(NEC 314) Boxes and Fittings

24.1-06-03-01. (NEC 300) Wiring methods.

1. Agricultural buildings. This section covers all buildings housing livestock, poultry, and other areas of similar or like nature. All electrical panel boards, wiring devices, and equipment must be installed in accordance with the provisions of article 547, 2026 edition, National Electrical Code (first version, printed in 2025).

A site-isolating device must be permitted to be installed at the distribution point where two or more agricultural building structures are supplied from the distribution point.

2. Electric metallic tubing may not be used in concrete below grade, in concrete slab or masonry in direct contact with earth. A vapor barrier, if used, has no effect on the requirements of the section. Electric metallic tubing may not be embedded in earth or fill.
3. Aluminum conduit may not be installed in contact with earth or embedded in concrete.
4. The installation of rigid nonmetallic conduit shall comply with the provision of article 352, 2026 edition, National Electrical Code (first version, printed in 2025). Expansion fittings for rigid nonmetallic conduit shall be provided to compensate for thermal expansion and contraction in accordance with section 352.44, 2026 edition, National Electrical Code (first version, printed in 2025). When installed outdoors and above grade, one hundred forty degrees Fahrenheit [60 degrees Celsius] is considered the minimum change in degrees.
5. Fertilizer rooms, meatpacking plants, salt processing plants, and similar locations are judged to be occupancies where severe corrosive conditions are likely to be present. It is recommended that nonmetallic conduit with nonmetallic boxes and fittings be used as the wiring method for such occupancies. Ferrous and nonferrous metal raceways must be used providing the raceway, boxes, and fittings are properly protected against corrosion.

6. Metal raceways or metal clad cable (type MC) rated for the environment must be installed in the following occupancies:
 - a. Hospitals;
 - b. Nursing homes;
 - c. Related patient care areas; and
 - d. Places of assembly.

Metal raceways or metal clad cable (type MC) must be used in fixed wiring methods including fire alarms along with metal boxes or nonmetallic raceways encased in not less than two inches of concrete.

Exception 1: As provided in article 640, 2026 edition, National Electrical Code (first version, printed in 2025), sound reproduction and similar equipment; in article 800, 2026 edition, National Electrical Code (first version, printed in 2025), communication circuits; and in article 725, 2026 edition, National Electrical Code (first version, printed in 2025), for class 2 and class 3 remote control and signaling circuits.

Exception 2: Listed two-hour fire-rated cables as permitted in article 695, and article 760, 2026 edition, National Electrical Code (first version, printed in 2025).

Adjacent areas separated by an approved fire barrier may be wired in any approved wiring method in chapter 3 of the 2026 edition, National Electrical Code (first version, printed in 2025). For the purpose of this section, a fire barrier is defined as a continuous assembly, vertical or horizontal, in accordance with locally adopted codes or the State Building Code.

24.1-06-03-14. (NEC 314) Boxes and fittings.

1. Not more than one extension ring may be used on outlet boxes unless special permission has been obtained from the electrical inspector having jurisdiction.
2. Boxes or conduit bodies must be installed at each opening, splice, or connection, except as provided in article 604, 2026 edition, National Electrical Code (first version, printed in 2025).

CHAPTER 24.1-06-04
EQUIPMENT FOR GENERAL USE

Section

24.1-06-04-22 (NEC 422) Appliances

24.1-06-04-22. (NEC 422) Appliances.

Exception: If manufacturer instructions allow the use of not more than six feet of flexible appliance cord, it shall be permitted on permanently installed one hundred twenty-volt twenty amp or less fuel-fired furnaces in residential dwellings. The receptacle for this appliance shall be GFCI protected, or a single receptacle, with a lockable in-use cover, and the cord shall meet all requirements of NEC 422.16.

**CHAPTER 24.1-06-05
SPECIAL OCCUPANCIES**

Section

24.1-06-05-01	(NEC 500) Hazardous Locations
24.1-06-05-50	(NEC 550) Mobile Home Parks

24.1-06-05-01. (NEC 500) Hazardous locations.

1. Classification of hazardous locations is required to be completed by owner, representative, or engineer that has the qualifications and shall provide documentation as required by the provisions of article 500.4, 2026 edition, National Electrical Code (first version, printed in 2025), including the reference standards as listed in article 500.4, 2026 edition, National Electrical Code (first version, printed in 2025).
2. For classifications of oilfield installations refer to API RP 500, Classification of Locations for Electrical Installations at Petroleum Facilities, fourth edition, June 8, 2023.
3. Surge arrestors must be provided for all services in grain elevators.
4. Hot bearing or other similar detection systems must be installed in accordance with articles 500-516, 2026 edition, National Electrical Code (first version, printed in 2025).

24.1-06-05-50. (NEC 550) Mobile home parks.

Service equipment may be installed on manufactured homes as required in article 550.51 if the following requirements are met:

1. The mobile home is located on property owned by the homeowner and not in mobile home park.
2. The mobile home is secured to a permanent foundation that complies with locally adopted codes or the State Building Code.

CHAPTER 24.1-06-06
SPECIAL EQUIPMENT

Section
24.1-06-06-25..... (NEC 625) Electric Vehicle Charging
System

Repealed effective July 1, 2026.

**ARTICLE 24.1-50 CONVEYANCE
DEFINITIONS, GENERAL STATEMENT OF POLICY AND
INTEPRETATIVE RULES**

Chapter
24.1-50-01 General Provisions

**CHAPTER 24.1-50-01
GENERAL PROVISIONS**

Section
24.1-50-01-01.....Definitions - Conveyance
24.1-50-01-02.....General Statement of Policy and Interpretive
 Rules
24.1-50-01-03.....Administrative Powers and Duties

24.1-50-01-01. Definitions - Conveyance.

As used throughout this title:

1. "Alteration" means any change to equipment, elevators or other conveyances, including its parts, components, or subsystems thereof, other than maintenance, repair or replacement in accordance with ASME A17.1-2019/CSA B44, including the altering, rebuilding, upgrading or modernizing of elevators or other conveyances.
2. "ASME" means the American society of mechanical engineers.
3. "Board" means the North Dakota state electrical board established under this chapter.
4. "Conveyance" means any elevator, escalator, stairway chairlift, platform lift, stage lift, orchestra lift, hoist, dumbwaiter, moving walk, automated people mover, automated-type parking structure, wind turbine elevators, or other device used for moving people, materials, equipment, or other objects from one landing or location to another. Such devices include those covered by ASME A17.1-2019/CSA B44; ASME A18.1; ASME B20.1; Automated People Mover Standards; NFPA 88A; ANSI/ASSE 10.4; and ANSI/ASSE 10.5. The meaning of the terms for elevators, escalators and other conveyance devices referenced includes the definitions provided in the referenced code sections, as applicable.

5. "Conveyance operation certificate" means a document consisting of one or more copies that certifies conveyance equipment was installed on premises or annually inspected by an elevator contractor and was done in strict compliance with all the provisions of North Dakota Century Code chapter 43-09 and all the requirements of the board.
6. "Correction order", also marked as FS, indicates a correction is necessary before installation may be considered approved by the board. It means a notice written by an inspector to the person responsible for the installation or annual inspection, stating violations and noncompliance of rules and regulations as listed shall be corrected within a designated time.

24.1-50-01-02. General statement of policy and interpretative rules.

1. Purpose and scope. The purpose of these standards is the practical safeguarding of persons, buildings and building contents from hazards arising from the use or control of conveyance equipment. It covers the mechanical and electrical installations and associated equipment necessary for safe operation of conveyance equipment. The inspection of elevators and other conveyances subject to this chapter, must comply with the requirements of this chapter and applicable industry codes and standards as incorporated herein.
2. These standards, based on the ASME codes, are the result of years of experience and research to meet the demand for uniform standards to govern conveyance equipment in North Dakota, and provide basic rules for intelligent and uniform installation and inspection. Elevators and other conveyances subject to this chapter are further defined and regulated by applicable industry codes and standards including:
 - a. ASME A17.1-2019/CSA B44:19 Safety Code for Elevators and Escalators.
 - b. ANSI/ASSP A10.4-2016 Safety Requirements for Personnel Hoists and Employee Elevators on Construction and Demolition Sites.
 - c. ANSI/ASSP A10.5-2020 Safety Requirements for Material Hoists.
 - d. ASME A18.1-2023 Safety Standard for Platform Lifts and Stairway Chairlifts.

e. ASME B20.1-2024 Safety Standard for Conveyors and Related Equipment.

f. ASCE/ANSI 21-21-2021 Automated People Mover Standards.

The specific versions of industry codes and standards that apply to this chapter must be determined by the board and incorporated into administrative code.

3. All requirements contained herein must be given careful consideration to ensure greatest permanence, convenience, and safety. These standards do not constitute a design specification for any particular installation, or an instruction manual for untrained individuals. Skill and experience are necessary factors for a safe and adequate wiring installation. Whenever these requirements differ or are in conflict with the requirements of the board-adopted ASME edition and applicable articles in locally adopted codes or State Building Code pertaining to conveyance equipment, the more restrictive requirements are the minimum.
4. Severability. If any section, sentence or clause, or provision of this chapter or its applicability to any person or circumstances is held invalid, the remainder of this chapter and the application of such provision to other persons or circumstances are not affected by it.

24.1-50-01-03. Administrative powers and duties.

1. The executive director, under the direction of the board, shall administer conveyance laws, rules, and standards of this state adopted by the board. The conveyance requirements of the ASME codes, and applicable articles in locally adopted codes or State Building Code pertaining to conveyance equipment. Whenever any action is taken by the executive director to enforce the provisions of any sections contained in these regulations, the act must be done in the name of and on behalf of the state.
2. The board-adopted conveyance regulations may be modified or waived by special permission in particular cases when such modification or waiver is specifically permitted or in particular cases when an advancement in the technology makes such modification or waiver advisable in the best interest of the people of North Dakota. Such "special permission", in all cases, must be obtained from the executive director in writing before the commencement of the work.

3. Whenever the board is authorized or mandated by law to inspect a conveyance installation, the inspector may enter upon land for the purpose of conducting the inspection. Except in emergency circumstances, the inspector shall request permission from the property owner or agent before entering a dwelling, other building, or other place so enclosed as manifestly to exclude intruders. If the landowner refuses to give permission, the board may request the district court of the district containing the property for an order authorizing the inspector to enter the property to conduct the inspection. Emergency circumstances include situations presenting imminent danger to health, safety, or property.
4. The board shall establish fee schedules for permits, certificates, inspections, and tests required under this chapter. The fees must reflect the actual costs and expenses to operate this department and to conduct the duties as described in this chapter.
5. The board shall create testing and inspection forms that must be based on current and existing national and state elevator industry safety regulations.

ARTICLE 24.1-51
LICENSURE AND REGISTRATION OF ELEVATOR INSTALLERS

Chapter
24.1-51-01 Licensing/Registration Requirements

CHAPTER 24.1-51-01
LICENSING AND REGISTRATION REQUIREMENTS

Section	
24.1-51-01-01	Application and Annual License and Registration Fees
24.1-51-01-02	Elevator Mechanic
24.1-51-01-03	Elevator Contractor
24.1-51-01-04	Elevator Apprentice
24.1-51-01-05	Supervision and Responsibilities

24.1-51-01-01. Application and annual license and registration fees.

1. Upon receiving an application packet for an elevator's license from a contractor or an individual applicant, the board shall process and review the application for applicant's employment verification of conveyance construction experience or other licensure as outlined under this section. Upon final approval of the completed application by the board, the applicant must be notified of an approval or denial of licensure. Upon receiving the notification of approval, the applicant shall contact the board and inform the board of receipt and the license and registration fees must be paid separately.
2. An applicant shall have the necessary qualifications, training, and technical knowledge to install, inspect, and repair conveyance apparatus and equipment in accordance with the standard rules and regulations of the ASME Code.
3. The board issues an identification card to currently licensed and registered conveyance personnel. This identification card, along with a government-issued picture identification card, shall be in the possession of the mechanic when doing conveyance work. If the identification card is misplaced or destroyed, a replacement charge to cover board costs must be imposed.

4. The application fees are as follows:
 - a. Elevator inspector (mechanic) \$ 50.00
 - b. Elevator contractor \$250.00
5. The license and registration or annual renewal fees are as follows:
 - a. Elevator inspector (mechanic) \$ 50.00 Expires March 31st
 - b. Elevator contractor \$250.00 Expires April 30th

Expired licenses and registrations require a reinstatement fee equal to the annual fee.

24.1-51-01-02. Elevator mechanic.

An elevator inspector (mechanic) is an individual having at least eight thousand hours of experience working as a licensed elevator mechanic under the supervision of an elevator contractor or similar contractor of record and other qualifications as required by the board. An elevator mechanic is an individual responsible to adhere to all the adopted laws and rules of the North Dakota conveyance standards. Conveyance work must be done under the supervision of an elevator contractor or elevator contractor of record.

24.1-51-01-03. Elevator contractor.

1. An elevator contractor is an individual responsible to adhere to all laws and rules of the North Dakota conveyance standards and has shown proof of liability insurance and provide proof of five years of practical elevator installations and other qualifications as required by the board; or
2. An elevator contractor of record is an individual responsible to adhere to all laws and rules of the North Dakota conveyance standards for the partnership, company, corporation, limited liability company, or association and has shown proof of liability insurance that the elevator contractor of record is covered by the organization and provide proof of five years of practical elevator installations and other qualifications as required by the board. The elevator contractor of record is not allowed to work on other property other than property owned or leased by the organization.

24.1-51-01-04. Elevator apprentice.

An elevator apprentice is an individual who works directly under the supervision of a licensed elevator mechanic or elevator contractor. An applicant who has prior experience outside of the state of North Dakota may verify the practical experience obtained in order to apply credit toward the verification of hours towards a North Dakota elevator mechanic's license

24.1-51-01-05. Supervision and responsibilities.

1. A licensed elevator contractor shall supervise the individuals installing conveyance equipment which may work as an apprentice under a licensed elevator mechanic may not allow an apprentice to work on any installation without direct constant supervision by a North Dakota licensed elevator mechanic or elevator contractor working directly with the apprentice at the worksite.
2. If an apprentice is found to be doing conveyance equipment work not under the direct supervision of a licensed elevator mechanic or elevator contractor, an investigative fee may be charged to cover the costs incurred by the board. Costs must to be calculated at a rate of fifty dollars per hour and mileage rates currently allowed by North Dakota Century Code section 54-06-09 per mile of travel.
3. Elevator contractors shall maintain records of all individuals who are or will be performing conveyance work for the contractor and shall permit the electrical board to examine and copy all such records as required by this section. It is the responsibility of the elevator contractor to ensure all individuals who are or will be performing conveyance work are licensed or registered apprentices with the board.
4. Any elevator contractor who fails or refuses to comply with this section or who fails or refuses to comply or demonstrates compliance with this section at the request of the board or its representative shall subject that individual's license to nonrenewal, suspension, or revocation by the board.

5. An elevator contractor may exercise its privileges as a licensed contractor for no more than one shop or business and shall comply with provisions as required for contracting with the secretary of state's office as stated in North Dakota Century Code chapter 43-07. An elevator contractor must be actively engaged in the supervision of every project certified under that contractor's license. An elevator contractor shall notify the board office immediately upon changing their status for the business they represent.

**ARTICLE 24.1-52
CONVEYANCE CERTIFICATES**

Chapter
24.1-52-01 Certificates and Inspections

**CHAPTER 24.1-52-01
CERTIFICATES AND INSPECTIONS**

Section	
24.1-52-01-01	Registration of Conveyances
24.1-52-01-02	Elevator Permits
24.1-52-01-03	Certificates of Operation
24.1-52-01-04	Inspection and Testing of Conveyance
24.1-52-01-05	Fees

24.1-52-01-01. Registration of conveyances.

1. Registration of existing conveyance. On or before January 1, 2026, the owner of every existing elevator or other conveyance subject to this chapter shall register with the board each such conveyance, unless it is a new conveyance.
2. Registration of new conveyances. The owner of a new elevator or other conveyance shall register with the board within thirty days of passing acceptance testing and inspection.
3. Registration information. When registering a conveyance, the owner shall give the type, rated load, number of landings and speed, name of manufacturer, its location, the purpose for which it is used and such additional information as the board may require.
4. Deregistration of conveyances. When a conveyance subject to this chapter is decommissioned or otherwise taken out of service, the owner responsible for the equipment shall notify the board within six months to request the conveyance be removed from the state's registration list.

24.1-52-01-02 Elevator Permits.

1. A permit, issued in accordance with the requirements of this section, is required for any work involving constructing, installing, altering,

replacing, dismantling, demolishing, or removing from service elevators or other conveyances covered by this chapter.

2.
 - a. Permits required under this section must be obtained before the work is commenced and must be issued to an elevator contractor licensed pursuant to this chapter.
 - b. The elevator contractor obtaining the permit is responsible for the complete scope of work covered by the permit until the board has issued the operating permit. A copy of such a permit must be kept at the site at all times while the work is in progress.
 - c. Any permit issued specifically must require that any work subject to the permit must be performed only by persons licensed under this chapter and must be performed in accordance with all requirements of this chapter, including applicable industry codes and standards incorporated herein.
 - d. On each application for a permit, the board may require copies of specifications and accurately scaled and fully dimensioned plans showing the location of the installation in relation to the plans and elevation of the building; the location of the machinery space, machine room, control space, or control room and the equipment to be installed, relocated or altered; and all structural supporting members, including foundations, and all materials to be employed and all loads to be supported or conveyed. The plans and specifications must be complete sufficiently to illustrate all details of construction and design, including electrical drawings. In addition, each submittal must include a copy of the written maintenance control program as required by ASME A17.1/CSA B44.
 - e. The applicable fees must accompany each permit application.
3. Permits may be revoked or suspended for the following reasons:
 - a. Making a false statement, omission or misrepresentation as to a material fact in the application, plans or specifications on which the permit was based.
 - b. If the work detailed under the permit is not being performed in accordance with the provisions of the application, plans or specifications, or with the code or conditions of the permit.

- c. If the elevator contractor to whom the permit was issued fails or refuses to comply with a stop work order from the board.
 - d. If the board determines revocation is necessary to ensure the proper enforcement of this chapter or to protect public or worker safety, the board may order the elevator contractor or elevator inspector to disable the conveyance equipment from operation.
- 4. A permit is deemed expired in the event that:
 - a. The work authorized by such permit is not commenced within six months after the date on which the permit is issued or within a shorter period as specified on the permit.
 - b. The work is suspended or abandoned for a period of sixty days, or such shorter period of time as the board may specify at the time the permit is issued, after the work has been started. For good cause, the board may allow an extension of the foregoing period at its discretion.

24.1-52-01-03. Certificate of Operation.

- 1. Contractor compliance certification. Subsequent to installation, the elevator contractor responsible for the work shall certify compliance with the applicable sections of this chapter and applicable industry codes and standards, as adopted by the board.
- 2. Equipment certificate of operation. Prior to any conveyance covered under this chapter being used, the owner of the elevator or other conveyance shall obtain a certificate of operation from the board.
- 3. Duration of certificate. Certificates of operation must be valid for one year and renewed annually. A fee, as determined by the board, must be paid for initial and subsequent certificates of operation.
- 4. Display of certificate. Certificates of operation must be clearly displayed on or in each conveyance or in the machine room for the benefit of code enforcement staff.
- 5. In the event that an incident occurs involving an elevator or other conveyance subject to this chapter that results in death or bodily injury to any person requiring hospitalization or other treatment by a physician, the building owner or operator shall submit a report to the

board within forty-eight hours which includes the date, time and place of the incident on a form prescribed by the board.

24.1-52-01-04. Inspection and testing of conveyances.

1. It is the responsibility of the owner of all elevators and other conveyances to ensure that all equipment subject to this chapter conforms to the following inspection and testing requirements:
 - a. New or altered conveyances shall be inspected and tested in accordance with ASME A17.1/CSA B-44 section 8.10.
 - b. Existing conveyances shall be inspected and tested in accordance with ASME A17.1/CSA B-44 section 8.11.
2. Inspections and tests of conveyances required under this section must be conducted to ensure the conveyances are operated and maintained in accordance with applicable code requirements for such conveyances as adopted or determined by the Board.
3. It is the responsibility of the owner of all conveyances to ensure that the inspections and tests required pursuant to this section are performed in compliance with the applicable code requirements for such conveyances as adopted or determined by the Board.
4. All work required for inspections and the associated tests of elevators and other conveyances shall be performed by an elevator mechanic or contractor and shall be reviewed on forms prescribed by the board or witnessed by a board inspector if required by the code to ensure compliance with applicable code requirements for such conveyances as adopted or determined by the board.
5. If any tests on elevators or other conveyances are performed pursuant to this section such tests are required to be reviewed by an elevator inspector in accordance with this section or applicable industry codes or standards incorporated herein. This means that the inspector shall verify the tests or witness such tests to ensure they are administered and verify test results.
6. Subsequent to inspection, the elevator mechanic or contractor shall supply the board with a written inspection report verifying code compliance or describing any code violations found.

7. Inspection schedule: The requirements of this chapter must be phased in as follows:
 - a. After August 1, 2026, each newly installed or altered conveyance must pass an acceptance test approved by an elevator inspector.
 - b. After August 1, 2026, each traction elevator must pass an annual acceptance test approved by an elevator inspector.
 - c. After August 1, 2027, each hydraulic elevator, escalator, and moving walk must pass an annual acceptance test approved by an elevator inspector.
 - d. After August 1, 2028, the board shall implement a schedule to meet the five-year full load safety testing requirement.
 - e. After August 1, 2032, each conveyance must pass a five-year full load safety test approved by an elevator inspector.

24.1-52-01-05. Fees.

1. The conveyance inspection fee must be based on the total amount of the contract or total cost to the owner, including extras.
2. The elevator contractor is responsible to collect the proper inspection fee on each installation, repair, update or annual inspection of conveyance equipment. If the owner furnishes the material and the contractor furnishes the labor, the owner shall provide the contractor with the total amount expended for materials used in connection with the installation, and the contractor shall then calculate and collect the necessary inspection fee from the owner. Whenever materials are donated or removed from an existing installation and placed at another location or labor is donated to an installation, the contractor shall estimate the cost of these materials and labor and include the amount in the job cost for the purpose of calculating the proper inspection fee. The contractor shall maintain all job-related records for a minimum of four years and shall permit the board to examine and copy all such records as requested.
3. It is grounds for discipline of an elevator contractor's license if it is discovered that they charged or collected from the customer an inspection fee greater than the fee actually in effect.

4. Permit Fees:

Job Cost:	Inspection Fee:
Up to \$1,000.00	\$150.00 (minimum fee)
\$1,000.00 to \$5,000.00	\$150.00 for the first \$1,000.00 plus 2.5% on balance up to \$5,000.00
Over \$5,000.00	\$250.00 for the first \$5,000.00 plus 1.25% on balance over \$5,000.00

5. Certificate of operation fees must be determined by the board.
6. Whenever a correction order is written and corrections are not completed within the allotted time, there must be an administration charge of fifty dollars, which must be paid to the board by the elevator contractor.
7. All reinspections must be paid for by the contractors at a minimum charge of one hundred dollars. In addition, an investigative fee may be charged to cover the costs incurred to be calculated at a rate of fifty dollars per hour and mileage rates currently allowed by North Dakota Century Code section 54-06-09 per mile of travel.
8. For inspections not covered in this section or special services, the fee is fifty dollars per hour, including travel time, plus mileage rates currently allowed by North Dakota Century Code section 54-06-09 per mile traveled.

APPENDIX

Short Cut
At 75° C
Voltage Drop Formulas 167° F

$$\text{Voltage drop} = \frac{K \times L \times I}{CMA}$$

$$CMA = \frac{K \times L \times I}{\% \text{ drop} \times \text{voltage}}$$

$$\text{Length} = \frac{CMA \times \text{Voltage drop}}{K \times I}$$

$$\text{Area of circle} = \pi r^2$$

L = length in feet, one way

I = load in amps

E = volts

CMA = circular-mil area

K-factor = 25.8 multiplying factor for copper, 42.4 multiplying factor for aluminum at 75°C.

For three-phase circuits, use formula, then multiply the results by .86

Percent drop permissible voltage drop times voltage of circuit as follows:

5% of 120	120 x .05 = 6 volts
5% of 208	208 x .05 = 10.4 volts
5% of 240	240 x .05 = 12 volts

Examples with copper wire:

240 volts, 1,000 foot distance, 10 ampere load, 5% volt drop maximum

$$CMA = \frac{25.8 \times 1000 \times 10}{.05 \times 240}$$

$$= 21,500 \text{ CMA minimum} = \#6 \text{ cu minimum}$$

Same values as above but use #8 copper wire instead

$$\text{Voltage drop} = \frac{25.8 \times 1000 \times 10}{16510}$$

$$= 15.6 \text{ volts}/240 = 6.5\% \text{ volt drop}$$

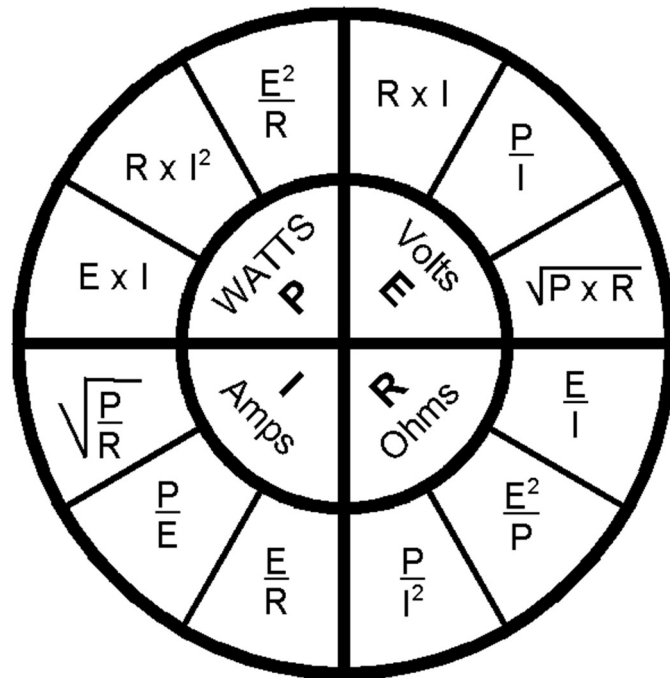
120 volts, 8 ampere load, 100 foot distance, 3% volt drop maximum

$$CMA = \frac{25.8 \times 100 \times 8}{.03 \times 120}$$

$$= 5733 \text{ CMA minimum} = \#12 \text{ cu minimum}$$

Refer to Chapter 9 Table 8 of NEC for conductor properties

OHM'S LAW



Means of Egress Condensed Guide

1. Marking of means of egress. All required exits and access to exits shall be marked by readily visible signs. For externally illuminated signs, letters shall be not less than six inches [150 millimeters] high. Internally illuminated signs shall be listed per ANSI 924 which assures proper letter size. Chevron-shaped arrows are required to indicate direction to exits. Every sign shall be suitably illuminated. For externally illuminated signs see subsection 7.10.6, Life Safety Code®, NFPA 101, 2024 edition and for internally illuminated signs see subsection 7.10.7.
2. Illumination of means of egress. Illumination of means of egress shall provide continuous, dependable, illumination of not less than one foot-candle at floor level for all areas such as corridors, stairways, and exit doorway, providing a lighted path of travel to the outside of the building and public way during all times that the means of egress is available for use. For new stairs, the required minimum illumination level is ten foot-candle during conditions of stair use. Illumination shall be from a source of reasonable assured reliability and may be supplied from normal lighting circuits or special circuits with switching controlled by authorized personnel. Illumination required for exit marking shall also serve for illumination of means of egress and shall be so arranged that failure of a single unit, such as burning out of a single bulb will not leave any area in darkness.
3. Emergency lighting. Emergency lighting systems shall be so arranged to provide the required illumination automatically in event of any interruption or failure of the normal power supply. An acceptable alternate source of power may be a generator, stored energy system, or battery or battery system. In occupancies where emergency lighting is required, the circuits supplying exit marking and illumination of means of egress shall be supplied by the emergency system. Other areas of the facilities only requiring exit marking and illumination of means of egress may be supplied by the normal source.
4. Classification of occupancy based on chapter 6, Life Safety Code®, NFPA 101, 2024 edition.

Note: Check with local building official to determine occupancy and occupant load.

Assembly. Assembly occupancies include all buildings or portions of buildings used for gathering together fifty or more persons for such purposes as deliberation, worship, entertainment, eating, drinking, amusement, or awaiting transportation. Assembly occupancies also include special amusement buildings regardless of occupant load.

Assembly occupancies (fifty persons and over) might include the following:

Armories	Libraries
Assembly halls	Mortuary chapels
Auditoriums	Motion picture theaters
Bowling lanes	Museums
Clubrooms	Passenger stations and terminals of air, surface, underground, and marine public transportation facilities
Colleges and university classrooms	Places of religious worship
Poolrooms	
Conference rooms	Recreation piers
Courtrooms	Restaurants
Dance halls	Skating rinks
Drinking establishments	Theaters
Exhibition halls	Gymnasiums

Occupancy of any room or space for assembly purposes by fewer than fifty persons in a building or other occupancy and incidental to such other occupancy shall be classified as part of the other occupancy and shall be subject to the provisions applicable thereto.

Educational. Educational occupancies include all buildings or portions of buildings used for educational purposes through the twelfth grade by six or more persons for four or more hours per day or more than twelve hours per week.

Educational occupancies include the following:

Academies	Schools
Kindergartens	

Other occupancies associated with educational institutions shall be in accordance with the appropriate part of Life Safety Code®, NFPA 101, 2024 edition.

In cases when instruction is incidental to some other occupancy, the section of Life Safety Code®, NFPA 101, 2024 edition, governing such other occupancy applies. For example:

- College and university classrooms under fifty persons - business occupancy
- College and university classrooms fifty persons and over – assembly
- Instructional building under fifty persons - business occupancy
- Instructional building fifty persons and over – assembly
- Laboratories, instructional - business occupancy
- Laboratories, noninstructional - industrial

Day care. Day care occupancies include all buildings or portions of buildings in which four or more clients receive care, maintenance, and supervision, by other than their relatives or legal guardians, for less than twenty-four hours per day.

Day care occupancies include the following:

- Child day care occupancies
- Adult day care occupancies, except where part of a health care occupancy
- Nursery schools
- Day care homes
- Kindergarten classes that are incidental to a child day care occupancy

In areas when public schools offer only half-day kindergarten programs, many child day care occupancies offer state-approved kindergarten classes for children who require full day care. As these classes are normally incidental to the day care occupancy, the requirements of the day care occupancy should be followed.

Health care. Health care occupancies are those used for purposes such as medical or other treatment or care of persons suffering from physical or mental illness, disease, or infirmity and for the care of infants, convalescents, or infirm aged persons. Health care occupancies provide sleeping facilities for four or more occupants and are occupied by persons who are mostly incapable of self-preservation because of age, physical or mental disability, or because of security measures not under the occupants' control.

Health care occupancies include the following:

Hospitals
Nursing homes
Limited care facilities

Ambulatory health care. Ambulatory health care occupancies are those used to provide services or treatment simultaneously to four or more patients on an outpatient basis. The patients are considered incapable of self-preservation due to the treatment rendered, the use of anesthesia, or the injury for which they are receiving emergency or urgent care.

Detention and correctional. Detention and correctional occupancies are used to house individuals under varied degrees of restraint or security and are occupied by persons who are mostly incapable of self-preservation because of security measures not under the occupants' control.

Detention and correctional occupancies include the following:

Adult and juvenile substance abuse centers
Adult and juvenile work camps
Adult community residential centers
Adult correctional institutions
Adult local detention facilities
Juvenile community residential centers
Juvenile detention facilities
Juvenile training schools

Residential. Residential occupancies are those occupancies in which sleeping accommodations are provided for normal residential purposes and include all buildings designed to provide sleeping accommodations.

Exception. Those classified under health care or detention and correctional occupancies.

Residential occupancies are treated separately in Life Safety Code®, NFPA 101, 2024 edition, in the following groups:

One-family and two-family dwelling unit
Lodging or rooming house
Hotels and Dormitories
Apartment building

Mercantile occupancy. An occupancy used for the display and sale of merchandise.

Mercantile occupancies include the following:

Auction rooms	Restaurants with fewer than fifty persons
Department stores	Shopping centers
Drugstores	Supermarkets

Office, storage, and service facilities incidental to the sale of merchandise and located in the same building should be considered part of the mercantile occupancy.

Business. Business occupancies are those used for the transaction of business other than those covered under mercantile.

Business occupancies include the following:

Air traffic control towers (ATCTs)	Doctors' offices
City halls	Townhalls
College and university instructional buildings, classrooms under fifty persons, and instructional laboratories	General offices
Courthouses	Outpatient clinics, ambulatory
	Dentists' offices

Doctors' and dentists' offices are included unless of such character as to be classified as ambulatory health care occupancies.

Industrial. Industrial occupancies include factories making products of all kinds and properties devoted to operations such as processing, assembling, mixing, packaging, finishing or decorating, and repairing.

Industrial occupancies include the following:

Dry cleaning plants	Power plants
Factories of all kinds	Pumping stations
Food processing plants	Refineries
Gas plants	Sawmills
Hangars (for servicing or maintenance)	Telephone exchanges
Laundries	

In evaluating the appropriate classification of laboratories, the authority having jurisdiction should determine each case individually based on the extent and nature of the associated hazards. Some laboratories may be classified as occupancies other than industrial, for example, a physical therapy laboratory

or a computer laboratory.

Storage. Storage occupancies include all buildings or structures utilized primarily for the storage or sheltering of goods, merchandise, products, vehicles, or animals.

Storage occupancies include the following:

Barns	Hangars (for storage only)
Bulk oil storage	Parking structures
Cold storage	Warehouses
Freight terminals	Truck and marine terminals
Grain elevators	

Storage occupancies are characterized by the presence of relatively small numbers of persons in proportion to the area. Any new use that increases the number of occupants to a figure comparable with other classes of occupancy changes the classification of the building to that of the new use.

Multiple occupancies. A building or structure in which two or more classes of occupancy exists shall be classified as a multiple occupancy. Multiple occupancies shall be protected either as mixed occupancies or as separated occupancies, in accordance with subsection 6.1.14.3 or 6.1.14.4, respectively, of Life Safety Code®, NFPA 101, 2024 edition. Where exit access from an occupancy traverses another occupancy, the multiple occupancy shall be protected as a mixed occupancy. In implementing the mixed occupancies form of protection, the building shall comply with the most restrictive requirements of the occupancies involved, unless separate safeguards are approved.

5. Occupant load factor table.

Use	Square Feet per Person
Assembly use – less concentrated use	15 net*
Areas of concentrated use without fixed seating	7 net*
Waiting space	3 net*
Bleachers, pews, and similar bench-type seating	Note 1
Fixed seating	Note 2
Kitchens	100 gross**
Libraries	
In stack areas	100 gross**
In reading rooms	50 net*
Swimming pools	
Water surface	50 gross**
Pool decks	30 gross**

Exercise rooms with equipment	50 gross
Exercise rooms without equipment	15 gross
Lighting and access catwalks, galleries, and gridirons	100 net
Casinos and similar gaming areas	11 gross
Skating rinks	50 gross
Stages	15 net*
Educational use	
Classroom area	20 net*
Shops, laboratories, and similar vocational areas	50 net*
Day care use	
Maximum number of persons intended to occupy that floor, but not less than	35 net*
Health care use	
Sleeping departments	120 gross**
Inpatient departments	240 gross**
Ambulatory health care	150 gross**
Detention and correctional use	
Maximum number of persons intended to occupy that floor, but not less than	120 gross**
Residential use	
Hotels, motels, dormitories, apartment buildings:	
Maximum probable population, but not less than	200 gross**
Residential board and care use	Note 3
Mercantile use (including malls)	
Street level and below (sales)	30 gross**
Sales area on two or more street floors	40 gross
Upper floor (sales)	60 gross**
Storage, receiving, or shipping (not open to the general public)	300 gross**
Assembly areas	See "Assembly"
Business use (other than below)	150 gross**
Concentrated business use	50 gross**
Air traffic control tower observation levels	40 gross**
Collaboration rooms/spaces $\leq 450 \text{ ft}^2$ (41.8 m^2) in area	30 gross
Collaboration rooms/spaces $> 450 \text{ ft}^2$ (41.8 m^2) in area	15 gross
Other purposes	Note 4
Industrial use	
General and high hazard industrial	100 gross**
Special purpose industrial	N/A

Storage use	
In storage occupancies	N/A
In mercantile occupancies	300 gross**
In other than storage and mercantile occupancies	500 gross**

* Net floor area is the area within the building or walls that bound the occupancy or incidental use area with deductions for hallways, stairs, closets, shafts, thickness of interior walls, columns, and other features.

** Gross floor area is the floor area within the inside perimeter of the outside walls of the building under consideration with no deduction for hallways, stairs, closets, thickness of interior walls, columns, or other features.

Notes to occupant load table.

Note 1. Bleachers, pews, and similar bench-type seating: one person per eighteen linear inches.

Note 2. Fixed seating. The occupant load of an area having fixed seats shall be determined by the number of fixed seats installed. Required aisle space serving the fixed seats shall not be used to increase the occupant load.

Note 3. Refer to chapters 32 and 33 of Life Safety Code®, NFPA 101, 2024 edition.

Note 4. Occupant load factors associated with the use.

6. Building classification table.

x - indicates required
o - indicates not required

Occupancy	Marking of Means Egress	Illumination of Means Egress	Emergency Lighting
Assembly	x	x	x
Educational	x	x	x
Day care	x	x	x
Interior stairs and corridors	x	x	x
Assembly use spaces	x	x	x
Flexible and open plan buildings	x	x	x
Interior or limited access portions of buildings	x	x	x

Shops and laboratories	x	x	x
Family day care homes (more than three but fewer than seven persons)	o	x	o
Group day care homes (seven to twelve persons)	o	x	o
Health care occupancies (Note 1) (for complete details see article 517 of NEC and NFPA standard 99)	x	x	x
Detention and correctional	x	x	x
Residential			
Hotels and dormitories	x	x	x Note 2
Apartment buildings			
Twelve or less apartments and less than four stories in height	x	x	o Note 3
More than twelve apartments or greater than three stories in height	x	x	x Note 3
Residential board and care			
More than sixteen residents	x	x	x Note 2
Mercantile			
Class A – Over thirty thousand square feet [2787.09 square meters] or greater than three stories	x	x	x
Class B – Three thousand square feet to thirty thousand square feet [278.71 square meters to 2787.09 square meters] or three thousand square feet [278.71 square meters] or less and two or three stories	x	x	x
Class C – Under three thousand square feet [278.71 square meters] and one story	x Note 5	x	o
Malls	x	x	x
Business	x	x	o
Three or more stories in height	x	x	x
Fifty or more persons above or below level of exit discharge	x	x	x
Three hundred or more persons	x	x	x
All limited access and underground	x	x	x
Industrial	x	x Note 6	x Note 6 & 7
Storage	x	x Note 8	x Note 8 & 9

Special structures (refer to chapter 11, Life Safety Code®, NFPA 101, 2024 edition).

Mixed occupancies (Note 5).

NOTES:

Note 1. Exception: Power supply for exit and emergency lighting shall conform to NFPA 110.

Note 2. Exception: Where each guest room, guest suite or resident sleeping room has an exit direct to the outside of the building at street or ground level emergency lighting is not required.

Note 3. Exception: Buildings with only one exit need not be provided with exit signs.

Note 4. Exception: Where the same means of egress serve multiple use or combined occupancies, exit lighting, exit signs, and emergency lighting shall be provided for the occupancy with the most stringent lighting requirements. The occupant load of each type of occupancy shall be added to arrive at the total occupant load.

Note 5. Exception: Where an exit is immediately apparent from all portions of the sales area, the exit marking is not required.

Note 6. Exception: Special purpose industrial occupancies without routine human habitation.

Note 7. Exception: Structures occupied only during daylight hours, with skylights or windows arranged to provide the required level of illumination on all portions of the means of egress during these hours.

Note 8. Exception: Storage occupancies do not require emergency lighting when not normally occupied.

Note 9. Exception: In structures occupied only during daylight hours, with skylights or windows arranged to provide the required level of illumination of all portions of the means of egress during these hours, emergency lighting is not required.

Fire Alarm System Condensed Guide

All signaling devices for all occupancies shall meet Americans with Disabilities Act (ADA) requirements (check ADA requirements).

Smoke alarms in hotels, motels, and apartments are not to be tied to the central alarm system (alarm in room or apartment only).

Central alarm trouble indicator shall be located where it will be heard.

Systems with two or more zones shall have an annunciator panel located at an entrance approved by the local fire department.

Cities shall have additional or more stringent requirements.

Be aware the table is the minimum and the owner or designer shall ask for more.