



**Draft for Board Review
THE MANITOBA ELECTRICAL CODE**

14th EDITION

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Manitoba Regulation XX/2021

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SCHEDULE A

THE MANITOBA HYDRO ACT
(C.C.S.M. c. H190)

Manitoba Electrical Code

Regulation
Registered

Adoption of *Canadian Electrical Code, Part I, 24th edition*

1 Subject to section 3 and the amendments set out in the Schedule, the *Canadian Electrical Code, Part I, 25th edition, CSA Standard C22.1-18*, is incorporated by reference as part of this regulation and is adopted as the electrical code for Manitoba.

Interpretation

2 In this regulation, a reference to "the code" or "this code" (whether capitalized or not) is a reference to the *Canadian Electrical Code, Part I, 25th edition, CSA Standard C22.1-18*, as amended by the Schedule.

Application of code

3 This code governs the construction, installation, maintenance, repair, extension, alteration and use of electric wiring and related facilities using or intended to use power supplied by Manitoba Hydro, except within the City of Winnipeg and in mines and quarries as defined in *The Mines and Minerals Act*.

Referring to code

4 This code may be referred to as the *Manitoba Electrical Code, 14th Edition*.

Repeal

5 The *Manitoba Electrical Code, Manitoba Regulation 76/2018*, is repealed.

Coming into force

6 This regulation comes into force on August 1, 2021 or on the day it is registered under *The Statutes and Regulations Act*, whichever is later.

Amendments to Section 0 — Object, Scope, and Definitions

2 Section 0 is amended

(a) by replacing the definition "Approved" and "Inspection department" with the following:

Approved (as applied to electrical equipment)

(1) equipment that has been certified by a certification organization accredited by the Standards Council of Canada in accordance with the requirements of

(a) CSA Group Standards; or

(b) other standards that have been developed by a standards development organization accredited by the Standards Council of Canada, or other recognized documents, where CSA Group Standards do not exist or are not applicable, provided that such other standards or other recognized documents

(i) are correlated with provisions of the *CE Code, Part I*; and

(ii) do not create duplication with standards already listed in Appendix A;

(c) equipment that conforms to the requirements of the regulatory authority (see Appendix B);

(d) equipment that has been given special acceptance by Manitoba Hydro; or

(e) equipment that has been given special acceptance by the Minister of Labour and Immigration for Manitoba; or

Δ (f) is acceptable to the Chief Electrical Inspector.

Δ **Inspection department** means the Chief Electrical Inspector of Manitoba Hydro and any of their designates.

Δ (b) by adding the following definitions:

Chief electrical inspector — the person designated by Manitoba Hydro as the chief electrical inspector to enforce this code.

Inspection department means Manitoba Hydro

Manitoba Building Code — the regulation entitled "*Manitoba Building Code*", made under *The Buildings and Mobile Homes Act*.

Δ **Owner** means a person or the agent, servant or employee of a person who owns, manages or is in possession of land or a building to which this Code applies, or who is in receipt of the whole or a part of

any rents or profits therefrom, whether the rents and profits are received on the person's own account, or as agent or trustee for another person.

Δ **Special Acceptance** means the field evaluation of electrical equipment that does not bear the required approval mark or marks recognized by the Standards Council of Canada.

Δ **Intermodal shipping container** means a shipping container no longer used for shipping goods and which has been repurposed as a structure, building or addition as defined under the Manitoba Building Code.

Amendments to Section 2 — General Rules

Rule 2-004

3 Rule 2-004 (Permit) is replaced with the following:

2-004 Electrical permits and requirements respecting work under a permit

- (1) No electrical work with respect to installation, alteration, repair or extension of any electrical equipment shall commence until an electrical permit is issued by the inspection department.
- (2) Notwithstanding Subrule (1), a person licensed under *The Electricians' Licence Act* (Manitoba) is not required to have an electrical permit for the following electrical work:
 - (a) the replacement or repair of wiring devices with an electrical rating no greater than 30 amperes, 150 volts to ground and not associated with a location as described by section 18 or 20 of this Code;
 - (b) the replacement or repair of electrical equipment with an electrical rating no greater than 30 amperes, 150 volts to ground and associated with a dwelling unit;
 - (c) the installation of voice, data or video equipment within a dwelling unit; or
 - (d) electrical installations
 - (i) when the cost of labour and materials (excluding the cost of utilization equipment supplied by the circuitry) does not exceed two hundred dollars (\$200) as determined by the inspection department in accordance with the current schedule of electrical permit fees;
 - (ii) that are not associated with a hazardous location as described by sections 18 or 20 of this Code;
 - (iii) that are not part of a consumer's service; and
 - (iv) that do not involve the replacement or addition of distribution panels, fusible switches, motor controllers and similar equipment.
- (3) An electrical permit may be issued to
 - (a) a person licensed under *The Electricians' Licence Act* (Manitoba) to perform any work that is permitted by the person's licence;

- (b) an allied trades person licensed by the Province of Manitoba to perform any electrical work that is permitted by the person's licence;
 - (c) a qualified person as defined in the *Canada Occupational Safety and Health Regulations* under the *Canada Labour Code* for the purposes of work on premises regulated by those regulations; or
 - (d) an owner of residential premises if
 - (i) the applicant occupies or will occupy the premises as a dwelling;
 - (ii) the premises, if it is a building, stands alone or is separated from any other occupancy or other part of the building by a fire wall or fire separation;
 - (iii) the work to be performed is not in a hazardous location as defined in this Code;
 - (iv) the work to be performed does not include generators or renewable energy systems as defined in this Code;
 - (v) the work to be performed does not include swimming pools or hot tubs;
 - (vi) the work to be performed does not include a consumer's service; and
 - (vii) the electrical rating of the installation in or on any land, building or premises does not exceed 150 volts to ground, single phase and 200 amperes.
- (4) An annual electrical permit may be issued for electrical work of a routine nature in connection with the maintenance or operation of a building or plant that is required to be performed at frequent intervals if the owner or occupant of the building or plant employs their own electricians for that purpose and agrees to
- (a) keep a record of the work that is performed;
 - (b) produce this record to the inspection department upon request;
 - (c) pay to the inspection department the fees that the inspection department charges for an annual permit; and
 - (d) pay in full any outstanding fees due to a change in status of the building or plant before the permit is renewed.
- (5) An application for an electrical permit must be made to the inspection department giving the location and ownership of the premises in, on or about which electrical work is to be done, the purpose of the work, details of the installation as required by Rule 2-014 and any other particulars required by the inspection department.
- (6) If an application is approved by the inspection department an electrical permit will be issued.
- (7) The inspection department may refuse to issue an electrical permit if
- (a) electrical work done previously by the applicant has not been completed to the satisfaction of the inspection department; or
 - (b) there are outstanding fees on previous work done by the applicant.

Δ (8) The inspection department may cancel any electrical permit if:

- a) in the opinion of the inspection department, the privileges granted by that permit are being misused;
- b) any condition under which the permit was issued is not being observed;
- c) the permit was issued in error; or
- d) the permit was issued based on incorrect information.

Δ (9) The Inspection Department of Manitoba Hydro:

- (a) is authorized to conduct inspections and take steps to administer and enforce this Code or remedy a contravention of this Code in accordance with The Manitoba Hydro Act;
- (b) is empowered to evaluate the details of any electrical installations which are not specifically dealt within this Code and these installations shall be performed to the satisfaction of the inspection department, which authority shall be reasonably exercised;

(c) is hereby authorized to determine whether equipment, techniques, conditions, circumstances and all other matters meet the standards and requirements of this Code or are otherwise acceptable and, where in this Code such terms as “proper”, “adequate”, “sufficient”, “ample”, “suitable”, “substantial”, “secure”, “necessary”, “dangerous” and the like or derivatives thereof, are used, they mean “proper”, “adequate”, “sufficient”, “ample”, “suitable”, “substantial”, “secure”, “necessary”, “dangerous” to the satisfaction or in the reasonable opinion of the designated employee, and such terms as “where practicable”, “where required”, “as far as possible” have a like significance;

(d) shall exercise their discretion to determine the acceptability or satisfactory nature of equipment, techniques, conditions, circumstances and all other matters under this Code and whether they are “proper”, “adequate”, “sufficient”, “ample”, “suitable”, “substantial”, “secure”, “necessary”, “dangerous” and the like, and designated employees shall act reasonably and with the objective of ensuring and promoting the safe and efficient use of electricity.

Δ (10) A permittee:

- (a) must notify the inspection department as soon as the electrical work authorized by the electrical permit is completed or when an inspection is required; and
- (b) is jointly and severally responsible with the owner for any electrical installations undertaken.

(11) At the request of the permittee, or in other circumstances determined by the chief electrical inspector, the inspection department may inspect the electrical installation pursuant to the electrical permit. If the installation conforms to this Code and the appropriate fees have been paid in full in accordance with the current schedule of electrical permit fees, the inspection department will, on request, issue a certificate of approval.

Δ (12) The chief electrical inspector may establish terms and conditions for the establishment of a selective inspection program by Manitoba Hydro, of work performed by electricians and electrical contractors for the purposes of this Code, based on criteria including but not limited to safety and compliance with this Code. The inspection department may elect to forgo inspections if the permittee or an electrician employed by the permittee has been evaluated by Manitoba Hydro and deemed qualified to receive selective inspections as determined by the inspection department. An electrician must

- (a) notify the inspection department when an electrical installation has been completed; and
- (b) supply the inspection department with a signed declaration that the electrical installation complies with this Code.

The inspection department reserves the right to audit and inspect installations by licensed electricians evaluated under a selective inspection program established by Manitoba Hydro for compliance with this Code.

- (13) The inspection department may direct the alteration or repair of an existing electrical installation that does not conform with the requirements of this Code.
- (14) If an application for an electrical permit is refused or a permittee does not agree with an electrical inspection report, defect notice or interpretation of Code rules issued on any particular installation, an appeal may be made in writing to the office of the chief electrical inspector. The appeal must specify what is being appealed, the reasons for the appeal and the decision requested.
- Δ (15) All electrical equipment is subject to inspection by an inspector and all unapproved electrical equipment is subject to disconnection and removal.
- (16) The inspection department may do any or all of the following:
 - (a) prohibit the use of an installation until it is inspected, tested and approved;
 - (b) direct the permittee to carry out and produce results of tests on equipment as considered necessary to ensure that the installation is properly installed.
- (17) An electrical permit expires 90 days after the date it is issued unless the installation authorized by the electrical permit is commenced or the inspection department, in its discretion, grants an extension.
- (18) An electrical permit expires 12 calendar months after the date it is issued unless the installation authorized by the electrical permit is not completed and the inspection department, in its discretion, grants an extension.
- (19) The issuance of an electrical permit does not obligate the owner of the premises to have the work done by the permittee.

Rule 2-006

6 Rule 2-006 (Application for inspection) is struck out.

Rule 2-008

7 Rule 2-008 (Fees) is replaced with the following:

2-008 Fees

- (1) The amount of any fee payable for electrical permits or inspection of electrical installations are as specified by the inspection department in the schedule of electrical permit fees.
- (2) The inspection department has the right at any time to make adjustments in the electrical permit fee payable as a result of additions or deletions to the work specified in the electrical permit or to correct errors in the calculation of fees made at the time the electrical permit was issued.

- (3) The inspection department will refund any fee paid for an unused electrical permit if application is made within one year of the date of the issuance of the electrical permit, but reserves the right to deduct an amount equal to any costs and expenses that it incurs in connection with the permit and refund and will in any case deduct an amount equal to the current minimum fee.

Rule 2-010

8 Rule 2-010 (Posting of permit) is struck out.

Rule 2-014

9 Rule 2-014 (Plans and specifications) is replaced with the following:

2-014 Plans and specifications

- (1) Plans and specifications are required for
- (a) electrical installations when
 - (i) the ampacity of the service entrance equipment exceeds 200 amperes single phase or the supply service is multi-phase; or
 - (ii) the installation operates at voltages in excess of 750 volts;
 - (b) installations covered by Section 18, 20, 22, 24, 36 or 64 of this Code; and
 - (c) other installations as the inspection department may require.
- (2) Plans and specifications required by Subrule (1) must be submitted to the inspection department for acceptance before an electrical permit may be issued.
- Δ (3) Plans and specifications labelled “Issued for Construction” must be prepared and signed by, and bear the seal of, a professional engineer registered to practice in Manitoba and fully qualified in the application of this Code
- (a) for an installation covered by Section 18, 20, 22, 24, or 36 of this Code, unless the inspection department considers it unnecessary that the plans and specifications be prepared, signed or sealed by an engineer; or
 - (b) if the inspection department considers them necessary for any other installation.
- (4) The responsible professional engineer must submit a letter to the inspection department stating his or her responsibility for the review of construction for the installation to ensure conformity with the approved plans and specifications. Note: Subrule (1) still applies.
- Δ (5) On completion of an installation under Subrule (4), the responsible professional engineer must submit a letter worded to The Engineers and Geophysicists of Manitoba practice guidelines to the inspection department.
- Δ (6) Where metering facilities are required for an installation, plans and a list of loads, as required by Manitoba Hydro's metering information, shall be submitted and accepted before the revenue metering will be ordered by the inspection department.

Rule 2-025

10 The following is added to the Code after Rule 2-024 (Use of approved equipment):

2-025 Special acceptance inspection

A special acceptance inspection may be made of electrical equipment that is not approved by or does not bear the approval mark of an accredited certification organization. In general, this applies to electrical equipment

- (a) of other than a regular line of manufacture;
- (b) manufactured or produced singly or in small quantities; or
- (c) built to a customer's order.

Rule 2-030

11 Rule 2-030 (Deviation or Postponement) is replaced with the following:

2-030 Deviation or postponement

Notwithstanding Sub rule 2-004(9), the inspection department may by special permission approve an installation that does not conform to the standards established by this Code when, in the inspection department's opinion, the installation provides a standard of safety equivalent to the standard provided by this Code. The request for special permission must specify the aspects of the installation that do not conform to the Code and the equivalent electrical requirements and must be submitted prior to proceeding with the work.

Amendments to Section 4 — Conductors

Rule 4-004(27)

12 The following is added to the Code after Subrule (25) of Rule 4-004 (Ampacity of wires and cables):

- (26) If other derating factors are applied to reduce the conductor ampacity, the conductor size shall be the greater of that so determined or that determined by Rule 8-104 (5) or (6).

Rule 4-006(2)

13 Subrule (2) of Rule 4-006 (Temperature limitations) is replaced with the following:

- (2) For the purpose of Subrule (1) and except as provided for by other Rules of this Code, when the maximum conductor termination temperature for equipment is not marked, the maximum conductor termination temperature is deemed to be 75°C.

Rule 4-022 (2)

14 Subrule (2) of Rule 4-022 (Installation of identified conductor) is struck out.

Rule 4-030 (3)

15 Subrule (3) of rule 4-030 (Use of identified conductors) is struck out.

Amendments to Section 6 — Services and Service Equipment

Rule 6-212(3)

16 Subrule (3) of Rule 6-212 (Wiring space in enclosures) is struck out.

Rule 6-400

17 Rule 6-400 (Metering equipment) is amended by renumbering it as Rule 6-400(1) and adding the following as Subrule (2):

- (2) For determining the type of metering equipment required by the supply authority, reference shall be made to supply authority metering standards, which shall be amendatory or additional to Rules 6-402 to 6-412.

Amendments to Section 8 — Circuit Loading and Demand Factors

Rule 8-102(1)

18 Subrule (1) of Rule 8-102 (Voltage drop) is replaced with the following:

Rule 8-102 (Voltage drop) (see Appendices A and B)

- (1) The voltage drop in an installation shall be based on the connected load of the branch circuit if known. Otherwise, the voltage drop shall be based on 80% of the rating of the overload or overcurrent device protecting the branch circuit or feeder and shall not exceed
 - (a) 3% in a feeder or branch circuit; and
 - (b) 5% from the supply side of the consumer's service (or equivalent) to the point of utilization.

Rules 8-106(5) and (9)

19 Subrules (5) and (9) of Rule 8-106 (Use of demand factors) are struck out.

Rule 8-106(12)

20 The following is added to the Code after Subrule (11) of Rule 8-106 (Use of demand factors):

- (12) The size of service conductors computed in accordance with this Section shall be the minimum used except that, if the next smaller standard size in common use has an ampacity not more than 5% less than this minimum, the smaller size conductor shall be permitted.

Amendments to Section 10 — Grounding and bonding

Rule 10- 102(2)(a)

21 Subrule (2)(a) of Rule 10-102 (Grounding electrodes) is replaced with the following:

- (a) in the case of a rod grounding electrode, consist of two rod electrodes
 - (i) copper clad;

- (ii) not less than 15.8 mm in diameter;
- (iii) spaced not less than 3 m apart;
- (iv) driven to the full length of the rod; and
- (v) interconnected with a grounding conductor sized as prescribed for grounding conductors;

Rule 10-116 (1) and (5)

22 Sub rules (1) and (5) of Rule 10-116 (Installation of grounding conductors) are replaced with the following:

- (1) The grounding conductor for a system shall be without joint or splice throughout its length, except in the case of busbars, thermit-welded joints, compression connectors applied with a compression tool compatible with the particular connector.
- (5) A grounding conductor installed in the same raceway with other conductors of the system to which it is connected shall be insulated, except that an uninsulated grounding conductor shall be permitted where the length of the raceway
 - (a) does not exceed 15 m between pull points; and
 - (b) does not contain more than the equivalent of two 90° bends between pull points.

Rule 10-210

23 Rule 10-210 (Grounding connections for solidly grounded ac systems supplied by the supply authority) is replaced with the following:

- (1) The grounded conductor of a solidly grounded ac system supplied by the supply authority shall
 - (a) be connected to a grounding conductor at each consumer's service with the connection being made on the supply side of the service disconnecting means in the service box;
 - (b) have a minimum size as specified
 - i) for a bonding conductor; and
 - ii) for a neutral conductor when the grounded conductor also serves as a neutral;
 - (c) be connected to the equipment bonding terminal by a system bonding jumper; and
 - (d) have no other connection to the non-current carrying conductive parts of electrical equipment on the load side of the grounding connection.
- (2) Where two or more buildings or structures are supplied from a single consumer's service
 - (a) the grounded circuit conductor at each of the buildings or structures shall be connected to a grounding electrode and be connected to the equipment bonding terminal by a system bonding jumper; or
 - (b) the non-current-carrying conductive parts of the electrical equipment in or on the building or structure shall be bonded to ground by a bonding conductor run with the feeder or branch circuit conductors.

- (3) Where the system is grounded at any point, the grounded conductor shall be run to each individual service.

Rule 10-212 (2)

24 Subrule (2) of Rule 10-212 (Grounding connections for solidly grounded separately derived ac systems) is struck out.

Δ Rule 10-508

25 Rule 10-508 (Insulation of bonding conductors) is added:

Where bonding conductors are run separately, in raceways, or underground they shall be insulated.

Δ Rule 10-612

26 The following is added to Rule 10-612 (Installation of bonding conductor) after-sub-rule (7):

- (8) The bonding jumper, in the case of receptacles having grounding terminals isolated from the mounting strap required for special equipment, shall be permitted to be extended directly back to the distribution panel.
- (9) Electronic equipment rated to operate at a supply voltage not exceeding 150 volts-to-ground and that requires a separate bonding conductor shall be permitted to be bonded to ground by an insulated conductor extending directly back to the distribution panel, provided that
- (a) the separate bonding conductor is enclosed in the same raceway or cable containing the circuit conductors throughout the length of that cable or raceway;
 - (b) the separate bonding conductor is sized not less than as given in Rule 10-616 for each leg of the run; and
 - (c) the bonding requirements of Rules 10-600 are met.

Amendments to Section 12 — Wiring Methods

Δ Rule 12-010

27 Subrule 12-010(5) is struck out and replaced with the following:

(5) In a single dwelling, wiring methods specified in this section shall be permitted to run in or through furnace cold air return ducts formed by boxing in between joists.

Δ Rule 12-022

28 Rule 12-022 (Cables or raceways installed in roof decking systems) is struck out and replaced with the following:

“Where wiring is concealed within the roof decking system, a warning label shall be affixed at all permanently installed roof access points, where provided, and in conspicuous locations in the roof area where the wiring is installed.”

Δ Rule 12-402

29 Rule 12-402 (Uses of flexible cord) is amended by revising subrule 12-402(2)a)ii to read: "detachably connected according to the applicable Canadian Safety Standards in Appendix A".

Δ Rule 12-406

30 Rule 12-406 (Uses of portable power cable) is amended by revising Rule 12-406(2)a)ii to read "detachably connected according to the applicable Canadian Safety Standards in Appendix A".

Δ Rule 12-500

31 Rule 12-500 (Non-metallic sheathed cable) is amended by striking out "Types NMD-90 and NMWU"

Δ Rule 12-514

32 Rule 12-514 (Protection of cables in non-concealed locations) is amended by striking out:

In subrule (1)a " or the lower faces of rafters" and "and the rafters";

In subrule (1)c " the open faces of wall studs"; and

adding after subrule (4):

subrule (5) "Notwithstanding subrules (1) to (4), this shall not apply to fished in cable installations".

Rule 12-904(2)

33 Subrule (2) of Rule 12-904 (Conductors in raceways) is amended by striking out "Except for cable tray, no" and substituting "No".

Rule 12-2200(7)

34 Subrule (7) of Rule 12-2200 (Method of installation) is struck out.

Rule 12-2208

35 Rule 12-2208 (Provisions for bonding) is replaced with the following:

12-2208 Provisions for bonding

Metal cable trays shall be adequately bonded at intervals not exceeding 15 m and the size of bonding conductors shall be based on the size of the largest ungrounded conductor or equivalent for multiple conductors carried by the cable tray in accordance with Rule 10-616.

Amendment to Section 14 — Protection and Control

Δ Rule 14-100 (2)

36 Subrule (2) of Rule 14-100 (Overcurrent Protection of conductors) is struck out.

Δ Rule 14-104 (1)

37 Subrule (1)(a) of Rule 14-104 (Rating of Overcurrent devices) is deleted and Table 13 is struck out. Subrules (1)(b) and (c) are renumbered accordingly.

Rule 14-402

38 Rule 14-402 (Disconnecting means required for fused circuits) is replaced with the following:

14-402 Disconnecting means required for fused circuits (see Appendix B)

Circuits protected by fuses shall be equipped with disconnecting means, integral with or adjacent to the fuseholders, by which all live parts for mounting fuses can be readily and safely made dead. However, such disconnecting means may be omitted in the following cases:

- (a) instrument and control circuits on switchboards when the voltage does not exceed 250 V;
- (b) primary circuits of voltage transformers having a primary voltage of 750 V or less on switchboards; or
- (c) a circuit having only one ungrounded conductor when a plug fuse is used.

Δ Rule 14-606

39 Subrule (2) of Rule 14-606 is struck out and replaced with the following:

Where the voltage does not exceed 1000 volts, the overcurrent protection required by subrule (1) shall be permitted to be in the primary of the transformer supplying panelboards or splitters, provided that the panelboard or splitter rating in amperes is not less than the overcurrent rating in amperes multiplied by the ratio of the primary to the secondary voltage.

Δ Rule 14-612

40 Rule 14-612 (Transfer Equipment for Standby Power Systems) is struck out and replaced with the following:

- 1) Transfer equipment for standby power systems shall prevent the inadvertent interconnection of normal and standby sources of supply in any operation of the transfer equipment.
- 2) An enclosed inlet may be supplied with the transfer switch for the connection of a portable generator.
- 3) An enclosed inlet installed remotely of the transfer switch for the connection of a portable generator must have an overcurrent installed adjacent to the enclosed inlet.

Δ Rule 14-614

41 Rule 14-614 (Current supply from more than one system) is added to the Code after 14-612

Where an installation, or part of an installation, is to be supplied with current from two or more different systems, the switching equipment controlling the various supplies shall be constructed or arranged so that it will be impossible to accidentally switch on power from one source before power from another has been cut off.

Amendments to Section 22--- Locations in which corrosive liquids, vapours, or excessive moisture are likely to be present

Δ Rule 22-806

42 Subrule (1) of Rule 22-806 (Electrical equipment, luminaires and receptacles) is amended by striking out” Except for specialty type equipment and..”; and

Subrule 3 of Rule 22-806 is amended by striking out item b)

Δ Rule 22-808

43 Subrule (4) of Rule 22-808 (Wiring methods) is amended to read “All metallic raceways...”

Amendments to Section 26 — Installation of Electrical Equipment

Rule 26-012(4)(c)

44 Subrule (4)(c) of Rule 26-014 (Dielectric liquid-filled equipment — Outdoors) is replaced with the following:

- (c) if installed at ground level, be located on a concrete or fibreglass pad draining away from structures or be in a curbed area filled with coarse crushed stone; and

Rule 26-250 (4)

45 Subrule (4) of Rule 26-250 (Overcurrent protection for power and distribution transformer circuits rated over 750 V) is replaced with the following:

- (4) A transformer having an overcurrent device on the secondary side rated or set at not more than the values in Table 50 or a transformer equipped with coordinated thermal overload protection by the manufacturer shall be permitted to:
 - (a) omit the primary branch circuit overcurrent device, provided that the primary feeder overcurrent device is rated or set at not more than the values in Table 50; or
 - (b) increase the primary branch circuit overcurrent device to not more than the values in Table 50.

Rule 26-254 (2)

46 Subrule (2) of Rule 26-254 (Overcurrent protection for dry-type transformer circuits rated 750 V or less) is replaced with the following:

- (2) Notwithstanding Subrule (1), a transformer having an overcurrent device on the secondary side set at not more than 125% of the rated secondary current of the transformer, shall be permitted to:
 - (a) omit the primary branch circuit overcurrent device, provided that the primary feeder overcurrent device is set at not more than 300% of the rated primary current of the transformer; or
 - (b) increase the primary branch circuit overcurrent device to a value of not more than 300% of the rated primary current of the transformer.

Rule 26-654(g)

47 Rule 26-654 (Branch circuits for dwelling units) is amended by striking out "and" at the end of paragraph (e), adding "and" at the end of paragraph (f) and adding the following after paragraph (f):

- (g) Δ at least one branch circuit shall be provided solely for the receptacles provided for the driveway as required by Rule 26-726(d).

Rule 26-700 (9)

48 The following is added to the Code after Subrule (8) of Rule 26-700 (General):

- (8) When a sump is required by the *Manitoba Building Code* for the control of water from a subsurface drainage (weeping tile) system
- (a) a single receptacle shall be installed for the connection of the sump pump; and
 - (b) the receptacle for the sump pump shall be supplied from a branch circuit that supplies no other outlets or equipment.

Δ Rule 26-704 (2)

49 Sub rule (2) of Rule 26-704 (Protection of receptacles by a ground fault circuit interrupter of the Class A type) is replaced with the following:

“(2) Except for vehicle heater receptacles subject to Rule 8-400, all receptacles having CSA configuration 5-15R or 5-20R, installed outdoors and within 2.5 m of finished grade, shall be protected with a ground fault circuit interrupter of the Class A type.”

Rule 26-708

50 Subrules (2) and (3) of Rule 26-708 (Receptacles exposed to the weather) is replaced with the following:

Rule 26-708 Receptacles exposed to the weather

- (2) Receptacles of CSA configurations 5-15R, 5-20R, 5-20RA, 6-15R, 6-20R and 6-20RA shall be provided with cover plates suitable for wet locations and marked “Extra Duty”.
- (3) Notwithstanding Subrule 2), wet location cover plates not marked “Extra Duty” shall be permitted for receptacles
 - a) installed facing downward at an angle of 45° or less from the horizontal; or
 - b) located at least 1 m above finished grade or floor level in a damp location.

Δ Rule 26-720

51 Rule 26-720 (Receptacles for residential occupancies) is amended by striking out item a) ii “Controlled outlet”

Rule 26-726(d)

52 Rule 26-726 (Receptacles for single dwellings) is amended by striking out "and" at the end of paragraph (b), adding "and" at the end of paragraph (c) and adding the following after paragraph (c):

- Δ (d) at least one duplex receptacle shall be provided for the driveway

Amendment to Section 28 — Motors and Generators

△ Rule 28-204

53 Subrule 28-204(4) is revised by striking out “and Table 13”.

Rule 28-602

54 Subrule (5) of Rule 28-602 (Types and ratings of disconnecting means) is struck out.

Amendment to Section 30 — Installation of Lighting Equipment

△ Rules 30-500 to 30-510 (Luminaires in buildings of residential occupancy) are added as follows:

55

30-500 Lighting equipment at entrances (see Appendix G)

An exterior luminaire controlled by a wall switch located within the building shall be provided at every entrance to buildings of residential occupancy.

30-502 Luminaires in dwelling units (see Appendix G)

1) Except as provided in Subrule 2), a luminaire controlled by a wall switch shall be provided in kitchens, bedrooms, living rooms, utility rooms, laundry rooms, dining rooms, bathrooms, water closet rooms, vestibules, and hallways in dwelling units.

2) Where a receptacle controlled by a wall switch is provided in bedrooms or living rooms, such rooms shall not be required to conform to the requirements in Subrule 1).

30-504 Stairways (see Appendix G)

1) Every stairway shall be lighted.

2) Except as provided for in Subrule 3), three-way wall switches located at the head and foot of every stairway shall be provided to control at least one luminaire for stairways with four or more risers in dwelling units.

3) The stairway lighting for basements that do not contain finished space nor lead to an outside entrance or built-in garage, and that serve not more than one dwelling unit, shall be permitted to be controlled by a single switch located at the head of the stairs.

(4) Notwithstanding Subrule (3) and Appendix G, provisions for 3-way switches must be installed for stairway lighting to basements.

30-506 Basements (see Appendix G)

1) A luminaire shall be provided for each 30 m² or fraction thereof of floor area in unfinished basements.

2) The luminaire required in Subrule 1) that is located nearest the stairs shall be controlled by a wall switch located at the head of the stairs.

30-508 Storage rooms (see Appendix G)

A luminaire shall be provided in storage rooms.

30-510 Garages and carports (see Appendix G)

- 1) A luminaire shall be provided for an attached, built-in, or detached garage or carport.
- 2) Except as provided in Subrule 3), luminaires required in Subrule 1) shall be controlled by a wall switch near the doorway.
- 3) Where the luminaire required in Subrule 1) is ceiling-mounted above an area not normally occupied by a parked car or is wall-mounted, a luminaire with a built-in switch accessible to an adult of average height shall be permitted to be used.
- 4) Where a carport is lighted by a luminaire at the entrance to a dwelling unit, additional carport lighting shall not be required.

Amendment to Section 36 — High-voltage Installations

Rule 36-302(1)(a)

56 Subrule (1)(a) of Rule 36-302 (Station ground electrode) is replaced with the following:

- (a) consist of a minimum of four driven copper-clad ground rods not less than 3 m long and 17.09 mm in diameter spaced at least the rod length apart and, where practicable, located adjacent to the equipment to be grounded;

Amendment to Section 38 --- Elevators, dumbwaiters, material lifts, escalators, moving walks, lifts for persons with physical disabilities, and similar equipment

Δ Rule 38-051

57 Rule 38-051 is amended by adding the following after subrule (5):

- (6) Notwithstanding subrule (5), for “machine room less” elevators the disconnecting means shall be:
 - a) permitted to be located in an electrical room;
 - b) capable of being locked in the open position; and
 - c) equipped with permanent signage at the elevator being served, indicating the location of the disconnecting means.

Subrules (6) to (13) shall be renumbered accordingly as (7) to (14).

Amendment to Section 46 — Emergency Power Supply, Unit Equipment, Exit Signs, and Life Safety Systems

Rule 46-108(3)

58 Subrule (3) of Rule 46-108 (Wiring method) is replaced with the following:

- (3) Conductors installed in buildings of combustible construction in accordance with Section 12 of this Code may be:
 - (a) non-metallic-sheathed cable; or
 - (b) installed in totally enclosed non-metallic raceway.

Δ Rule 62-126

59 Rule 62-126 (Field repair, modification, or assembly of series trace heater sets) is struck out.

Δ Rule 62-316

60 Subrule (15) of Rule 62-316 (Impedance heating) is struck out.

Δ Rule 62-318

61 Rule 62-318 (Hazardous location trace heating) is struck out.

Amendments to Section 64 — Renewable Energy Systems

Rule 64-060 (2)(g)

62 Subrule (2)(g) of Rule 64-060 (Disconnecting means) is replaced with the following:

- (g) be located
 - (i) within sight of the equipment or lockable in the open position; and
 - (ii) within 9 m of the equipment or be integral to the equipment.

Rule 64-110

63 Rule 64-110 (Unbalanced interconnections) is replaced with the following:

64-110 Unbalanced interconnections (see Appendix B)

- (1) Single-phase inverters for renewable energy systems and ac modules in interactive renewable energy systems shall not be connected to three-phase systems.
- (2) Three-phase inverters and three-phase ac modules in interactive systems shall comply with the requirements of Rules 84-008 and 84-018.

Amendment to Section 76 — Temporary Wiring

Rule 76-006

64 Paragraph (d) of Rule 76-006 (Service entrance equipment) is amended by replacing with the following:

- (d) be installed in one of the following ways:
 - (i) for services not exceeding 200 A, on a pole, or on a solid wood post that measures at least 89 mm x 150 mm nominal and is adequately braced;
 - (ii) for services exceeding 200 A, on a substantial pole structure; or

(iii) for services supplied from underground distribution, on an adequately braced post.

Tables

Δ Table 13 is struck out.

65

Amendment to Appendix A

Appendix A

66 Appendix A (Safety Standards for Electrical Equipment, *Canadian Electrical Code, Part II*) is amended in Note (4) by striking out "may be used" and substituting "shall be used".