Agenda – Executive Policy Committee – May 18, 2022

Report – Standing Policy Committee on Property and Development, Heritage and Downtown Development – May 9, 2022

Item No. 1 Winnipeg Electrical By-law – Adoption of the 2021 Canadian Electrical Code

STANDING COMMITTEE RECOMMENDATION:

On May 9, 2022, the Standing Policy Committee on Property and Development, Heritage and Downtown Development concurred in the recommendation of the Winnipeg Public Service and submitted the following to Council:

1. That the Winnipeg Electrical By-law No. 86/2018 be repealed.

2. That the new Winnipeg Electrical By-law (draft attached as Appendix A) that adopts and modifies the 2021 Canadian Electrical Code, Part I, be approved and come into force and effect on July 1, 2022.

3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Agenda – Executive Policy Committee – May 18, 2022

Report – Standing Policy Committee on Property and Development, Heritage and Downtown Development – May 9, 2022

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On May 9, 2022, the Standing Policy Committee on Property and Development, Heritage and Downtown Development concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

ADMINISTRATIVE REPORT

Title: Winnipeg Electrical By-law – Adoption of the 2021 Canadian Electrical Code

Critical Path: Standing Policy Committee on Property and Development, Heritage and Downtown Development – Executive Policy Committee – Council

AUTHORIZATION

Author	Department Head	CFO	CAO
A. Crocker	M. Pittet (Acting)	N/A	M. Jack

EXECUTIVE SUMMARY

Every three (3) years, the Canadian Standards Association (CSA) publishes a new Canadian Electrical Code, Part I, a safety code for electrical installations in buildings, structures and premises, which the City of Winnipeg adopts via the Winnipeg Electrical By-law. The publication of the 2021 Canadian Electrical Code, Part I, in January 2021 incorporates changes in regulation reflected in the Canadian electrical industry.

The City has historically repealed the existing Winnipeg Electrical By-law and replaced it with a new electrical by-law to effectively adopt the new Canadian Electrical Code. The proposed Winnipeg Electrical By-law makes several administrative, enforcement and technical modifications to the 2021 Canadian Electrical Code. A target date for the adoption of this Edition with local modifications is July 1, 2022.

RECOMMENDATIONS

1. That the Winnipeg Electrical By-law No. 86/2018 be repealed.
2.
3. That the new Winnipeg Electrical By-law (draft attached as Appendix A) that adopts and modifies the 2021 Canadian Electrical Code, Part I, be approved and come into force and effect on July 1, 2022.

4. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

REASON FOR THE REPORT

Council approval is required to enact and repeal By-laws.

IMPLICATIONS OF THE RECOMMENDATIONS

The proposed new Winnipeg Electrical By-law is required to adopt the 2021 Canadian Electrical Code, Part I and will replace the existing Winnipeg Electrical By-law No. 86/2018. This is a cyclical process that occurs every three years.

There are no direct financial implications to the proposed changes.

HISTORY/DISCUSSION

On September 20, 2018, Council adopted Winnipeg Electrical By-law 86/2018, a By-law to authorize and regulate the electrical installations of building(s) or property. This By-law adopted the 2018 Canadian Electrical Code, Part I, 24th Edition, and amended the Code as required to define administrative and enforcement procedures, and made technical amendments for the City of Winnipeg.

The Canadian Electrical Code, Part I, is published by the Canadian Standards Association (CSA) with input from all provinces and territories. The Code sets out standards governing electrical installations for buildings, structures and premises throughout Canada. This Code is reviewed and updated at a national level with a standard publication cycle of every three years. Local authorities are free to adapt and modify this Code for local conditions as well as to accommodate their own procedures.

The publication of the 2021 Canadian Electrical Code, Part I, incorporates changes in regulation reflected in the Canadian electrical industry. The City has historically repealed the existing Winnipeg Electrical By-law and replaced it with a new electrical by-law. The attached proposed Winnipeg Electrical By-law makes several technical modifications to the 2021 Canadian Electrical Code. In keeping with past practice, most of these modifications will also be made by Manitoba Hydro when it adopts the new Code for use outside the City of Winnipeg.

Notable changes in the 2021 Canadian Electrical Code and proposed By-law are:

- Engineering will no longer be required for solar photovoltaic installations that are less than 10 kW for single detached dwellings (Administrative change, Rule 2-000).

- Circuits below grade in designated flood hazard zones will require ground fault protection (Rule 26-652).

- Sump pump receptacles will be required to be rated for submersion (Rule 26-712).

- Requirements for disconnect switches for MRL (machine room less) elevators will be better defined so that it will no longer be necessary for industry to submit and pay for Code Deviation Requests for each installation.

It is desirable for the proposed By-law, and the 2021 Canadian Electrical Code it adopts, to take effect on July 1, 2022 as this will allow the Public Service to communicate the new By-law requirements to industry stakeholders prior to implementation.

FINANCIAL IMPACT

Financial Impact Statement

Date: March 17, 2022

Project Name:

Winnipeg Electrical By-law – Adoption of the 2021 Canadian Electrical Code

COMMENTS:

There are no direct financial implications associated with this report.

Mike McGinn Mar. 17, 2022

Mike McGinn, CPA, CA
Manager of Finance

CONSULTATION

This Report has been prepared in consultation with:

- Legal Services (as to legal issues)

OURWINNIPEG POLICY ALIGNMENT

OurWinnipeg 01-2 Safety and Security
Direction 3: Promote safety in buildings.
Enabling Strategies: Ensure that construction projects meet the intent of standards set in national and local building codes, while recognizing advances in construction and development-related technologies.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

N/A

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

N/A

SUBMITTED BY

Department: Planning, Property and Development
Division: Development and Inspections
Prepared by: Shirley Jenken, Electrical Technical Support Officer
Date: March 22, 2022
File No: N/A

Attachments:

Appendix A – Draft Winnipeg Electrical By-law

Appendix A – Draft Winnipeg Electrical By-law

THE CITY OF WINNIPEG

THE WINNIPEG ELECTRICAL BY-LAW

NO. ??/2022

A By-law of THE CITY OF WINNIPEG
adopting and varying the 2021 Canadian Electrical Code.

THE CITY OF WINNIPEG, in Council assembled, enacts as follows:

Title

1 This By-law shall be referred to as the **Winnipeg Electrical By-law**.

Definitions

2 In this By-law:

"Code" means the *2021 Canadian Electrical Code, Part I, Twenty-fifth Edition, C22.1-21, Safety Standard for Electrical Installations* adopted by this By-law or a subsequent and similar Code adopted by this By-law.

"Designated employee" means the Manager of Development and Inspections of the Planning, Property and Development Department of the City of Winnipeg and any employee of the City to whom he or she has delegated authority to administer or enforce all or part of this By-law.

Adoption of Canadian Electrical Code

3(1) Except as varied by this By-law, the *2021 Canadian Electrical Code, Part I, Twenty-fifth Edition, C22.1-21, Safety Standard for Electrical Installations* published by the Canadian Standards Association is hereby adopted as part of this By-law, and a violation or contravention of the Code is a violation or contravention of this By-law.

3(2) Where in this By-law reference is made to a Rule or Section number, the reference shall be understood to mean that rule or section in the Code.

3(3) In the event of any conflict, explicit or implied, between the provisions set out in the Code and the provisions set out in this By-law, the provisions set out in this By-law shall prevail.

Application

4 No person shall install electrical wiring or electrical apparatus and no person shall use electrical current except as provided in this By-law.

DRAFT

Authority

5(1) Designated employees are authorized to conduct inspections and take steps to administer and enforce this By-law or remedy a contravention of this By-law in accordance with *The City of Winnipeg Charter* and, for those purposes, have the powers of a "designated employee" under *The City of Winnipeg Charter*.

5(2) Without restricting the generality of subsection (1), designated employees are hereby given the authority in an emergency associated with construction governed by this By-law or the Code to take whatever actions and measures are necessary to meet the emergency and to eliminate or reduce its effects.

5(3) The details of any construction which are not specifically dealt within this By-law shall be performed to the satisfaction of a designated employee, which authority shall be reasonably exercised by the designated employee.

5(4) Designated employees are hereby authorized to determine whether equipment, techniques, conditions, circumstances and all other matters meet the standards and requirements of this By-law or are otherwise acceptable and, where in this By-law 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.

5(5) In exercising their discretion to determine the acceptability or satisfactory nature of equipment, techniques, conditions, circumstances and all other matters under this By-law and whether or not they are "proper", "adequate", "sufficient", "ample", "suitable", "substantial", "secure", "necessary", "dangerous" and the like, designated employees shall act reasonably and with the objective of ensuring and promoting the safe and efficient use of electricity.

Authority to conduct certain Electrical Inspections

6 Electrical inspections of one and two family dwellings, row housing and related structures and equipment may be carried out by inspectors who are employed by the City of Winnipeg and who

(a) hold an electrician's journeyperson Licence; or

(b) have successfully completed an inspection training program provided by

(i) the City of Winnipeg;
(ii) an educational institution approved by the Manager of Development and Inspections; or
(iii) a building code development, training and certification organization with a course content approved for the purpose of this section by the Manager of Development and Inspections.

Variations to the Code

7 The Code is varied by the provisions of Schedule "A" to this By-law, which is hereby incorporated into and forms part of this by-law.

DRAFT

Repeal of By-law No. 86/2018

8 The Winnipeg Electrical By-Law No. 86/2018 is hereby repealed.

Coming into effect

9 This By-law comes into effect on July 1, 2022 and applies to all permit applications made on or after that date.

DONE AND PASSED in Council assembled, this ___ day of _____, 2022.

_____
Mayor

_____
City Clerk

Approved as to content:

_____
Director of Planning, Property & Development

Legally reviewed and certified as to form:

_____
for Director of Legal Services
and City Solicitor

DRAFT

SCHEDULE "A" TO WINNIPEG ELECTRICAL BY-LAW NO. ??/2022

The 2021 Canadian Electrical Code, Part I, Twenty-fifth Edition, C22.1-21, Safety Standard for Electrical Installations, published by the Canadian Standards Association is hereby varied as follows:

Variations to Section 0 of the Code
OBJECT, SCOPE AND DEFINITIONS

Definitions

Section 0 is varied by:

(a) deleting the following definitions:

Acceptable
Approved
Electrical Contractor
Inspection Department

(b) adding the following definitions in alphabetical order:

Acceptable *means acceptable to a designated employee.*

Accredited Field Evaluation Agency *means an agency that has been accredited by the Standards Council of Canada, in accordance with specific criteria, procedures and requirements, to operate on a continuing basis as a special inspection body for electrical equipment.*

Δ ***Approved****, when used with reference to any electrical equipment means:*

a) that the equipment has been certified by an accredited certification organization as
i) meeting CSA Group Standards; or,
ii) where CSA Group Standards do not exist or are not applicable, other recognized standards; or
b) that the equipment:
i) has been approved by Inspections and Technical Services Manitoba or an accredited field evaluation agency after examining the equipment or a sample and finding that it conforms to the applicable standards for the equipment and presents no undue hazard to persons or property; and
ii) is acceptable to the designated employee.;

City *means the City of Winnipeg.*

Construction *means the installation of electrical equipment in or about any building or premises and includes all electrical equipment installed.*

Designated employee *means the Manager of Development and Inspections of the Planning, Property and Development Department of the City of Winnipeg and any employee of the City to whom he or she has delegated authority to administer or enforce all or part of this Code.*

Electrical contractor *means an individual to whom an Electrical Contractor's Licence has been issued.*

Δ ***Engineering Licensee*** *(or Eng. L.) means an individual who has been registered as specified scope of practice licensee and is entitled to practice professional engineering in the Province of Manitoba in accordance with the provisions of The Engineering and Geoscientific Professions Act and the specified scope granted*

Examining Committee *means the committee established by Subrule 2-006 6).*

Inspection Department *means the Electrical Section of the Commercial Inspections Branch and the Housing Inspections Branch of the Development and Inspections Division of the Planning, Property and Development Department of the City of Winnipeg, or its successor.*

Licence *means an electrical contractor licence as provided for in this Code.*

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 By-law 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.*

Person *includes an individual, corporation, partnership, firm or entity.*

Professional Engineer *means a professional engineer who is a member of Engineers Geoscientists Manitoba and who is entitled to practice in the Province of Manitoba.*

Single Detached Dwelling *means a building designed for residential occupancy and containing no more than one dwelling unit and no other occupancy. Includes modular and ready-to-move homes, but does not include mobile homes.*

Structure *means anything constructed or erected with a fixed location on or in the ground or attached to something having a fixed location on the ground and includes but is not limited to buildings, walls, fences, signs, billboards, poster panels, light standards, and swimming pools.*

Variations to Section 2 of the Code
GENERAL RULES

Administrative

Section 2 is varied by deleting Rules 2-000 to 2-032 and substituting the following:

ADMINISTRATIVE

2-000 Duty of owner regarding design and inspection

Δ *1) Unless the designated employee concludes it is not necessary in order to ensure that it complies with this Code and the Manitoba Building Code, the owner must ensure that a Professional*

Engineer or Engineering Licensee entitled to practice in the Province of Manitoba and skilled in the application of this Code to the design and construction of the structure represented in the plans, drawings and related documents has signed and sealed plans, drawings, specifications and a certificate submitted as part of an application for a building permit or an electrical permit, and has reviewed the electrical installation and provided certification required by the designated employee that the installation has been installed in accordance with this Code and the applicable by-laws, for any of the following types of electrical installations.

a) installations where Sections 18, 20, 24 or 36 of the Code are applicable;
b) buildings referred to in Sentence 1.3.3.2.(1) of the Manitoba Building Code;
c) buildings where the electrical service requirements exceed 750 KVA;
d) fire alarm systems for buildings noted in Item b);
e) fire pumps;
f) generators 50 kW or larger and those supplying life safety systems;
g) lightning protection systems for high buildings as defined in the Manitoba Building Code;
h) power factor correction of electrical installations, other than individual motor applications;
Δ *i) solar photovoltaic installations in all applications except for installations less than 10 kW for single detached dwellings;*
j) any other type of installation where the designated employee requires it under Subrule 2-002 1).

2) The owner must immediately advise the designated employee if the Professional Engineer who has signed and sealed drawings, specifications and the certificate submitted as part of an application for a Building Permit will not review and certify the construction or installation of the electrical installations referred to in the drawings, specifications and certificate.

3) The owner must ensure that the construction or installation of the electrical installations does not deviate from the requirements of the conditions of the permit, including the plans, drawings and other documents accepted as part of a building permit, without first obtaining from the designated employee permission to do so, except for minor changes which conform to this Code. Where, in the reasonable opinion of the designated employee, deviations from the conditions of the permit are substantial and require an additional review of the plans, drawings or other documents, he or she shall treat the proposed deviations as a new application and the process associated with a new application, including the payment of fees, must then be followed.

4) When completed construction or installation of electrical installations is not in compliance with this Code or an applicable by-law, the owner must, at his or her expense, rectify the non-compliance within a reasonable period of time.

2-002 Engineer's responsibility

Δ *1) Where, in the reasonable opinion of a designated employee, the character of the proposed construction requires technical knowledge for the preparation of drawings and specifications, as provided in Subrule 2-000 1) j), the drawings and specifications shall be prepared, signed and sealed by a Professional Engineer and the construction reviewed by a Professional Engineer or Engineering Licensee or a suitably qualified person reporting to the Professional Engineer or Engineering Licensee.*

Δ *2) Where Subrule 2-000 1) applies, a designated employee shall not issue a Building Permit or, where a Building Permit is not required, an Electrical Permit, until the responsible Professional Engineer or Engineering Licensee has submitted plans, drawings and specifications for the construction or installation of the electrical installations and a certificate required by the designated employee under Subrule 2-032 5) concerning the compliance of the plans and drawings with this Code and applicable by-laws containing the following statement*:

I hereby certify that I have complied with all applicable legislation and professional codes in affixing my seal to the plans, drawings and related documents which are being submitted as part of this application for a permit under the Winnipeg Building By-law or the Winnipeg Electrical By-law.

By affixing my seal, I am representing that:

- **I am fully aware of the provisions of the Manitoba Building Code and the Winnipeg Electrical By-law that are applicable to these plans and drawings;**
- **I have applied a professional standard of care to ensure compliance of these plans and drawings with the applicable provisions of the Manitoba Building Code and the Winnipeg Electrical By-law.**

Δ *3) The responsible Professional Engineer or Engineering Licensee shall submit a certificate required by the designated employee under Subrule 2-032 5) concerning the compliance of the construction or installation of the electrical installations with this Code and all applicable referenced standards associated with the installation prior to issuance of an interim or final Building Occupancy Permit or, where a Building Occupancy Permit is not required, upon completion of the construction.*

Δ *4) The plans, specifications and certificates referred to in this Rule shall not be accepted by the designated employee unless they have been signed and sealed by a Professional Engineer or Engineering Licensee.*

5) No person may sign and seal all the documents referred to in this Rule unless he or she is a member in good standing with Engineers and Geoscientists Manitoba and is skilled in the application of this Code to the construction or installation of the electrical installations referred to in the documents.

2-004 Electrical permit

1) Subject to Subrule 2), no person shall commence electrical construction or permit commencement of electrical construction until an electrical permit for the construction has been issued by the designated employee and no person may engage in construction, connection, reconnection, alteration, repair or extension of any electrical installation prior to an electrical permit being issued by the designated employee for that construction.

2) Notwithstanding Subrule 1), no electrical permit is required for

a) electrical construction within the category that is authorized to be done by the holder of a Provincial Voice Data Video Licence and the electrical construction takes place in

a single detached dwelling; or

b) the installation of replacement luminaires, general-use switches, motors, ballasts and receptacles by the owner of a single detached dwelling or the holder of a valid, current Journeyperson Electrician's Licence under the Electricians' Licence Act, if the luminaire, general-use switch, motor, ballast or receptacle is:

i) installed in an owner-occupied single detached dwelling;
ii) installed in a branch circuit having a rating not exceeding 20A and 130V;
iii) interchangeable with the equipment being replaced in function, electrical rating, size and weight without having to change any part of the branch circuit;
iv) installed in the same location as the equipment being replaced;
v) not connected to aluminum wiring;
vi) approved in accordance with Rule 2-024;
vii) not electrical equipment forming part of an electrical installation to which Section 68 of this Code applies;
viii) not recessed luminaires to which Rules 30-900 to 30-912 apply; and
ix) connected to a branch circuit where a grounding means exists.

Δ 3) A designated employee shall issue an electrical permit only to an individual

a) who holds an Electrical Contractor's Licence authorizing that individual to carry on his or her occupation, trade or business in the City of Winnipeg;
b) who holds a valid, current and applicable Journeyperson Electrician's Licence under the Electricians' Licence Act authorizing that individual to do construction on a single detached dwelling owned and occupied by that individual as his or her principal residence or which will be occupied by that individual upon completion as his or her principle residence;
c) subject to Subrule 5), authorizing that individual to do construction on a single detached dwelling owned and occupied by that individual as his or her principal residence where the construction authorized is not electrical work for any of the following:

i) work greater than 200 Amps;
ii) renewable energy systems (e.g.: solar photovoltaic systems or wind systems);
iii) generators;
iv) electric vehicle charging stations; or
v) indoor plant growth facilities, or.

d) subject to Subrule 5), authorizing that individual to do construction on a single detached dwelling owned by that individual which will be occupied by that individual upon completion as his or her principal residence where the construction authorized is not electrical work for any of the following:

i) work greater than 200 Amps;
ii) renewable energy systems (e.g.: solar photovoltaic systems or wind systems);
iii) generators;
iv) electric vehicle charging stations; or
v) indoor plant growth facilities.

4) The designated employee may reject the application if the applicant for a permit

a) *fails within a reasonable period of time to provide information required to process the application or fails to respond to communication from the City, or*
b) *otherwise appears to have abandoned the application, or*
c) *if required by the designated employee under Subrule 5), fails to pass a test or demonstrate his or her competence to do the work for which a permit is sought.*

The designated employee may give the applicant notice of a decision to reject an application by sending the notice to the applicant at the address provided by the applicant in the permit application.

5) *Before issuing a permit under Subrule 3) c) or d), the designated employee may, if he or she considers it appropriate for reasons of safety and Code compliance, require that the owner occupant of a single detached dwelling pass a test or otherwise provide evidence of his or her competency to do the work for which a permit is sought.*

6) *A permit automatically expires and is thereafter null and void if the construction or other work authorized by the permit*

a) *subject to Subrule 7), is not initiated within 6 months after the permit is issued;*
b) *subject to Subrule 7), is not completed within*
   i) *three years after the date the permit is issued; or*
   ii) *a greater length of time as determined to be reasonable by the designated employee in the case of extraordinarily large construction projects; and*
c) *fails to comply with the conditions imposed on the permit or a provision of the Code.*

7) *Upon application by the owner, a designated employee may grant an extension to the dates by which construction or other work must be initiated and completed. The extension may extend the time period for initiation and completion by no more than the time period set out in Subrule 6) for the initiation or completion, as the case may be, of the construction or other work authorized by the permit. In order to qualify for the extension, the owner must*

a) *submit, and undertake to implement, a work plan which sets reasonable and measurable targets for stages of construction or other work to be completed; and*
b) *provide a deposit in an amount equal to the cost of the permit which must be refunded, without interest, if the construction or other work is completed within the extended time period.*

8) *A designated employee may revoke a permit by giving notice to the owner at the address provided by the owner in the permit application if*

a) *the construction or other work authorized by the permit is not proceeding reasonably to completion after being initiated; or*
b) *the owner does not meet the targets set out in the work plan referred to in Item 7) a) for stages of construction or other work to be completed.*

9) *Where a designated employee has revoked a permit under Subrule 8) and the same owner applies for a new permit in respect of substantially the same construction project, the designated employee may require that the owner provide a deposit in an amount equal to the cost of the*

permit before issuing the permit. The deposit must be refunded, without interest, if the owner complies with Subrule 6) in respect of the construction or other work for which the permit is issued.

10) A permit is void and all rights under the permit are terminated if the negotiable instrument used for payment of the permit fee is returned for any reason.

11) All construction being carried out under an electrical permit issued prior to the effective date of this By-law shall:

a) be completed in accordance with the By-law requirements applicable at the time of permit application and any special conditions described on the electrical permit and approved plans; and
b) proceed at a satisfactory rate in the reasonable opinion of a designated employee.

12) If the requirements set out in Item 6)(c) are not met, a designated employee may cancel the electrical permit, in which case,

a) a new electrical permit shall be obtained before construction may be continued; and
b) all construction undertaken under the authority of the new permit shall comply with the provisions of this Bylaw.

Δ *13) Permits may not be transferred, sold, or assigned.*

Δ *14) Annual electrical permit*

a) Notwithstanding Subrules 6) a) and b), 7), 8), 9), and 11), a designated employee may issue an Annual Electrical Permit to an individual holding an Electrical Contractor's Licence "A" or "B" and the Permit must specify the particular site or sites to which it applies.

b) Notwithstanding Subrule 1), construction, connection, re-connection, alteration, repair or extension of an electrical installation may take place under the supervision and responsibility of the holder of an Annual Electrical Permit without the necessity of a permit being issued for the specific construction, connection, re-connection, alteration, repair or extension of an electrical installation.

c) The designated employee may issue an Annual Electrical Permit subject to reasonable terms or conditions.

d) An Annual Electrical Permit expires on the thirty-first day of December of the year for which it was issued.

e) The designated employee may suspend, withdraw or refuse to re-issue an Annual Electrical Permit where

i) the permit holder has failed to comply with the applicable codes and by-laws or the terms and conditions of the Annual Electrical Permit;

ii) the permit holder has failed to remit the permit fees applicable to the construction, connection, re-connection, alteration, repair or extension of an electrical installation that has taken place under the authority of the Annual Electrical Permit within the time set out in the Planning, Development and Building Fees By-law;

iii) a log book setting out specifics of the work undertaken on each project has not been maintained or is not available for inspection.

2-006 Electrical contractor licences

1) Except for a homeowner who has obtained a permit under Items b), c) or d) of Subrule 2-004 3), and subject to Subrule 2-004 3) c) or d), no person may place, install, maintain, repair or replace any electrical equipment in the City of Winnipeg unless the person is operating under the authority of an Electrical Contractor Licence issued under this By-law.

2) An Electrical Contractor Licence may only be issued to an individual; in order for a corporation, partnership, governmental department or some other legal entity to operate as an Electrical Contractor, an employee or officer of the entity shall obtain an Electrical Contractor Licence on behalf of the entity.

3) An individual applying for a licence, whether on his or her own behalf or on behalf of a legal entity, shall satisfy the licensing requirements and pay the established licensing and examination fees before being issued a licence.

4) The holder of a licence, or an agent authorized in writing to do so on behalf of the licence holder, is eligible to obtain permits to perform electrical construction within the scope of the licence as follows:

- *a) The holder of an Electrical Contractor Licence "A" or his/her agent may obtain permits for any electrical construction governed by City of Winnipeg By-laws and The Electricians' Licence Act; and*
- *b) The holder of an Electrical Contractor Licence "B" or his/her agent may obtain permits to install and maintain electrical installations in premises owned, leased or managed by the corporation, firm, company or government department on behalf of whom the Licence is held as permitted by City of Winnipeg By-laws and The Electricians' Licence Act; and*
- *c) The holder of an Electrical Contractor Licence "C" or his/her agent may obtain permits for limited electrical construction as authorized by this By-law and the Limited Specialized Trade Electrician's Licence issued under The Electricians' Licence Act.*

5) In order to obtain a licence, an individual shall meet the following requirements:

- *a) to qualify for an Electrical Contractor Licence "A" the applicant shall:*
  - *i) hold a valid, current Journeyperson Electrician's Licence as required by The Electricians' Licence Act; and*
  - *ii) have passed an examination set out by the Examining Committee.*
- *b) to qualify for an Electrical Contractor Licence "B", the applicant shall:*
  - *i) hold a valid, current Journeyperson Electrician's Licence as required by The Electricians' Licence Act; and*
  - *ii) have passed an examination set out by the Examining Committee.*
- *c) to qualify for an Electrical Contractor Licence "C", the applicant shall:*
  - *i) hold a limited specialized trade electrician's Licence, issued under The Electricians' Licence Act; and*
  - *ii) have passed an examination set out by the Examining Committee.*

6) An Examining Committee, consisting of the designated employee and any other person whom

the designated employee may appoint, is hereby established with responsibility to:

a) prescribe the subjects on which candidates for the Electrical Contractor Licence shall be examined;

b) prepare, organize and conduct or supervise the examination of the candidates; and

c) report on the results of the examinations to the designated employee.

7) Where an applicant fails to pass an examination set out by the Examining Committee on two successive occasions, he or she must complete a training course acceptable to the designated employee before being eligible to apply again for a licence.

8) Every licence holder is responsible for construction carried out under the authority of a permit issued to him or her and, where an individual holds a licence on behalf of a corporation, partnership, governmental department or some other legal entity, the licence holder is responsible and may be prosecuted under this By-law for the activities of all individuals operating under that licence, even if the licence holder is no longer employed or retained by the corporation, partnership, governmental department or other legal entity.

9) *Where it appears that a licence holder may have violated any provisions of this By-law or that construction carried out under the authority of a licence holder fails to meet the standards and requirements set out in this Code, the designated employee may hold a hearing to investigate the matter and may revoke or suspend any licence as a result of the hearing.*

10) Notwithstanding Subrule 9), the designated employee may immediately suspend a licence for a period of up to 30 days where it appears that the licence holder has violated this Bylaw in a way that endangers the life or health of an individual or endangers property, but the designated employee must reinstate the licence after 30 days unless a hearing to investigate the matter provides justification to further suspend or to revoke the licence.

11) Licences may not be transferred, sold or assigned.

12) A licence may be issued for single or multiple years and terminates on the date indicated on the licence.

13) Electrical contractor licences, terms and fees, including administrative fees for licences that are renewed after their expiry date, are as published in the City of Winnipeg annual Fees and Charges schedule.

14) Where an individual is unlicenced for more than 6 months, he or she must re-qualify for a licence under Subrule 5).

Δ ***2-008 Electrical permit and inspection fees***

The electrical permit and inspection fees are as published in the City of Winnipeg annual Fees and Charges schedule (https://winnipeg.ca/ppd/fees/pdf/Planning-Development-and-Building-Fees-and-Charges.pdf).

2-010 Special requirements

Requirements and standards in this Code that apply to particular types of installations are in addition to general requirements and standards in this Code and, in the event of a conflict between them, the requirements and standards that apply to particular types of installations shall prevail.

2-012 Inspection and availability of work for inspection

1) An electrical contractor is responsible for notifying the applicable Inspections Branch when construction is ready for inspection and shall do so at such time or times as will permit inspection being made before any construction or portion thereof is concealed.

2) No person may render electrical construction inaccessible by lathing, boarding, or other building construction until it has been inspected and approved by a designated employee.

2-014 Plans and specifications

1) Until the designated employee has reviewed and accepted plans and specifications for the construction and an electrical permit has been issued, no person may begin construction on

a) wiring installations of public buildings, industrial establishments, factories, and other buildings in which public safety is involved; or
b) large light and power installations and the installation of apparatus such as generators, transformers, switchboards, large storage batteries, etc.; or
c) other installations specified by the designated employee

2) The owner is responsible for submitting the plans and specifications referred to in Subrule 1) in the form required by the designated employee.

2-016 Connection

1) No electrical installation, extension, alteration, or addition shall be connected or reconnected to any service or other source of electrical energy by a supply authority, electrical contractor, or other person, until the designated employee has issued an electrical permit and given authorization to make such connection or reconnection.

2) Subrule 1) does not apply to Manitoba Hydro when it reconnects electrical power to a location where the service has been cut off for non-payment of bills or a change of occupant, provided there have been no alterations or additions to the installation subsequent to the last authorization.

2-020 Re-inspection

The designated employee may re-inspect any installation if and when he or she reasonably considers such action to be necessary.

Δ ***2-022 Renovation of existing installations***

The inspection department may require such changes as may be necessary to be made to existing installations where, through hard usage, wear and tear, or as a result of alterations or extensions, dangerous conditions have developed.

2-024 Use of approved equipment

1) Electrical equipment used in electrical installations shall be approved, and shall be of a kind or type and rating approved for the specific purpose for which it is to be employed.

2) No person may connect unapproved electrical equipment.

2-026 Withdrawal of approval (See Appendix B)

The designated employee may withdraw approval of electrical equipment at any time if

a) the equipment is of lesser quality than the sample on which approval was based;
b) the conditions of use indicate that the equipment is not suitable; or
c) the terms of the approval agreement are not being carried out.

2-028 Damage and interference with electrical equipment

1) No person shall damage any electrical installation or a component of an electrical installation.

2) Unless prior permission has been obtained from the designated employee, no person shall cut, break or interfere with any lock or seal that has been placed on any electrical equipment by or at the direction of the designated employee.

3) No person shall interfere with any electrical installation or component of an electrical installation except when, in the course of alterations or repairs to non-electrical equipment or structures, it is necessary to disconnect or move components of an electrical installation, it which case it is the responsibility of the person carrying out the alterations or repairs to ensure that the electrical installation is restored to a safe operating condition as soon as the progress of the alterations or repairs will permit.

4) Electrical equipment that has been exposed to ingress of water shall be subjected to evaluation to ascertain whether or not the equipment may be placed back into service.

2-030 Deviations or postponements

1) The designated employee may grant special permission to deviate from or postpone compliance with the requirements and standards of this Code where the deviation or postponement will not, in the reasonable opinion of the designated employee, jeopardize the safety of people or property and will permit substantial compliance with the objects of the requirement or standard, but such permission applies solely to the specific installation and circumstances for which it is granted.

2) Requests for special permission or deviation must be submitted to the designated employee via a "Request for code deviation" form.

2-032 Role of the designated employee

1) The designated employee is responsible for the administration and enforcement of this Code and for these purposes he or she and all individuals to whom he or she has delegated authority to administer or enforce all or part of this Code have all the powers of a "designated employee" under The City of Winnipeg Charter.

2) An order from a designated employee requiring that construction be stopped on a project shall set out the conditions under which the construction may be resumed.

3) The designated employee shall accept as satisfactory any construction or condition that lawfully existed prior to the effective date of this By-law, so long as the construction or condition does not constitute an unsafe condition.

4) The designated employee is authorized to determine the type and form of plans, drawings and other documents that are required under Rule 2-000 to be submitted as part of an application for an electrical permit.

5) Without restricting the generality of Subrule 4), but subject to Subrule 2-002 2), the designated employee is authorized to establish the text of a certificate signed and sealed by a Professional Engineer that the owner must submit as part of an application for a building permit, an electrical permit, an interim building occupancy permit or a building occupancy permit.

6) For the purposes of complying with the City's obligation to inspect and approve plans relating to construction prior to a building permit being issued, the designated employee may rely on a certificate or representation of a Professional Engineer as to the compliance of plans and drawings or other documents, or of construction, with this By-law and the Winnipeg Building By-law.

7) In relying on a certificate or representation of a Professional Engineer pursuant to Subrule 6), the designated employee may establish circumstances in which no examination or review whatsoever of certain aspects or parts, or of the entirety, of the plans or drawings or other documents signed and sealed by a Professional Engineer, or of construction reviewed by a Professional Engineer, will be conducted by the City of Winnipeg before a building permit, an electrical permit or an interim or final building occupancy permit is issued.

8) As part of the authority granted by Subrule 6), the designated employee is authorized to determine:

a) subject to this Rule, the form and content of the certification or representation to be provided, including a signed statement using specific text approved by the designated employee, or sealed plans and drawings;
b) the amount of professional liability insurance, if any, that must be carried by a Professional Engineer who provides certifications or representations;
c) the criteria, if any, for determining when the City of Winnipeg will not rely solely or at all on the required certificates or representations submitted by specific individual

Professional Engineers; and

d) the form of an audit or other programs, if any, to encourage compliance of submitted plans and specifications with this Code and applicable by-laws.

9) Subject to Subrule 10), the designated employee may institute a program in which building permits and occupancy permits authorizing the construction or installation of electrical installations or of interim or final occupancy of buildings to which Rule 2-000 does not apply are issued by the City with minimal examination or review by the City of plans, drawings or specifications for compliance with this By-law and with minimal or no inspection of construction or installation of electrical facilities.

10) The program referred to in Subrule 9) must include an audit function which subjects the unexamined plans or specifications as well as the construction of the building to random, systematic or targeted review.

11) As part of the authority granted by this Rule, the designated employee is authorized to establish the circumstances in which the program authorized in Subrule 9) will apply and to determine the form of the audit function established as part of the program.

12) Notwithstanding that permits have been issued under this rule on the basis of plans, specification or certifications signed and sealed by a Professional Engineer, where a designated employee determines, through an audit or otherwise, that plans, specifications or certifications, or actual construction based upon those plans and specifications fail to comply with this By-law or the Building By-law, the designated employee may order the Professional Engineer or the owner, or both, to rectify the point of non-compliance within a reasonable time. A Professional Engineer or owner who fails to comply with an order issued under this provision commits an offence.

13) The designated employee may refuse to issue an electrical permit or permits:

a) whenever information submitted is inadequate to determine compliance with the provision of this By-law;
b) whenever incorrect information is submitted;
c) to any person who has failed to pay any fee or payment due and owing to the City of Winnipeg under this By-law or the City of Winnipeg Fees and Charges Schedule;
d) if a violation of another By-law, standard, act or regulation could result from the electrical construction permitted by it; or
e) if, in the case of an addition, alteration, repair or extension to any wiring system, in, on or through any building or place, the existing wiring is not in accordance with the provisions of this By-law.

14) The designated employee may cancel any electrical permit if:

a) in the opinion of the designated employee, 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;
d) the permit was issued on the basis of incorrect information; or
e) in the reasonable opinion of the designated employee, the electrical construction is not proceeding at a satisfactory rate.

2-034 Duties of the owner

1) Every owner shall make or have made at his own expense such tests or inspections as are necessary to demonstrate to the designated employee that the equipment or action proposed complies with this By-law.

2) When required by the designated employee, every owner shall uncover and replace at his own expense any construction that has been covered contrary to Rule 2-012.

3) The owner of a building must ensure that the electrical installations in the building are in compliance with the Electrical Code that was in effect at the time that the electrical installations were constructed or installed. This requirement applies whether or not the owner owned the building at the time that the electrical installations were constructed or installed.

4) The owner shall maintain the electrical installations associated with the property in a safe condition.

5) When the electrical installations on a property are in an unsafe condition, the owner shall immediately take all necessary action to put the building electrical installations in a safe condition.

6) The owner shall maintain in good working order all safeguards or devices that are required to be installed in the building pursuant to the Winnipeg Building By-law or this Code.

7) Every owner shall ensure that no unsafe condition exists or will exist because of the work being undertaken and not completed, should occupancy exist or occur prior to the completion of any work being undertaking that requires a permit.

8) When a "stop work" order is issued by a designated employee, the owner shall ensure that the person or persons to whom it is directed stops construction immediately, except for the installation or erection of covers or guards so as to be able to maintain the site in a safe condition.

9) When required by the designated employee, every owner shall provide a letter to certify compliance with the requirements of this By-law and of any permits required.

10) An owner shall ensure that electrical installations on his or her premises are not overloaded, defective or being misused.

11) An owner shall remove or cause to be removed from the premises

a) unsafe electrical appliances or wiring;
b) dead or unused electrical wires or equipment that are or may become a hazard.

12) An owner shall comply with orders made by a designated employee.

2-036 Duties of the permit holder

1) Every permit holder shall ensure that all construction safety requirements of this By-law are complied with.

2) *Every permit holder shall ensure that all construction is carried out in accordance with this By-law and all provisions as described on the permit and accepted drawings.*

3) *Every permit holder shall give notice to a designated employee:*
   a) when construction is ready to be inspected prior to covering; and
   b) when construction has been completed so that a final inspection can be made.

4) *Every permit holder is jointly and severally responsible with the owner for any construction actually undertaken.*

5) *When required by the designated employee, the permit holder shall provide a statutory declaration that the electrical installation was constructed in accordance with the accepted plans, specifications and requirements of the Winnipeg Electrical By-law and the Winnipeg Building By-law.*

6) *When a "stop work" order is issued by a designated employee, a permit holder shall ensure that the construction ceases immediately, except for the installation or erection of covers or guards so as to be able to maintain the site in a safe condition.*

7) *A permit holder shall comply with orders made by a designated employee.*

2-038 Service of orders and other documents

Orders to remedy a contravention of this By-law or a decision made by the designated employee that is subject to an appeal shall be served in accordance with The City of Winnipeg Charter and, where an address for sending an order or decision is required; one of the following shall be used:

a) if the person to be served is the owner of real property, the address maintained by the tax collector for the purpose of issuing the tax notice for that property; and
b) if the person to be served is the occupant of real property, the street address for that property; and
c) if the document to be served relates to a permit, licence or other document for which the person to be served has applied, the address provided by the person in the application.

2-040 Appeals

An appeal from an order to remedy a contravention of this By-law or a decision made by the designated employee that is subject to appeal may be made to the Standing Policy Committee on Property and Development, Heritage and Downtown Development in accordance with The City of Winnipeg Charter.

Variations to Section 4 of the Code
Conductors

Δ **4-004 Ampacity of wires and cables**

Section 4 of the Code is varied by adding Subrule 4-004 26) as follows:

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).

4-006 Temperature limitations
Section 4 of the Code is varied by adding “75 °C” to the end of Subrule 4-006 2) and deleting Items 4-006 2) a) and b).

Variations to Section 6 of the Code Services and service equipment

Control and protective equipment

6-212 Wiring space in enclosures
Section 6 of the Code is varied by deleting Subrule 6-212 3).

Metering equipment

6-400 Metering equipment
Section 6 of the Code is varied by renumbering the present Rule 6-400 as Subrule 6-400 1) and by adding the following Subrule immediately after it:

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, inclusive.

Variations to Section 10 of the Code Grounding and bonding

Grounding

Grounding - General

10-102 Grounding electrodes
Section 10 of the Code is varied by re-numbering Items 10-102 2) a) i), ii) and iii) as Items iii), iv) and v), respectively, and adding Items i) and ii) as follows:

i) copper-clad;
ii) not less than 15.8 mm in diameter;

10-116 Installation of grounding conductors
Section 10 of the Code is varied by deleting Subrules 10-116 1) and 5) and substituting 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 quarter bends between pull points.

Δ **10-118 Grounding conductor connection to grounding electrodes**

Section 10 of the Code is varied by adding the following after Subrule 10-118 2):

3) Where the grounding electrode is a metal water-piping system to which a common grounding conductor or the grounding conductor of a system is attached, the point of attachment shall be on the street side of the water meter.

10-210 Grounding connections for solidly grounded ac systems supplied by the supply authority

Section 10 of the Code is varied by deleting Rule 10-210 and substituting 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.

10-212 Grounding connections for solidly grounded separately derived ac systems

Section 10 of the Code is varied by deleting Subrule 10-212 2).

Bonding

Equipment bonding

Δ ***10-612 Installation of bonding conductors***

Section 10 of the Code is varied by adding the following Subrules after Subrule 10-612 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 extended 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.

Variations to Section 12 of the Code
Wiring methods

Δ **12-022 Cables or raceways installed in roof decking systems**

Section 12 of the Code is varied by deleting Rule 12-022 and substituting 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.

Exposed wiring on exteriors of buildings and between buildings on the same premises

12-300 Exterior exposed wiring Rules

Section 12 of the Code is varied by renumbering the existing Rule 12-300 as Subrule 12-3001) and by adding the following Subrule immediately after it:

2) Exposed overhead wiring on the exteriors of buildings and between buildings or structures on the same premises shall not be permitted, except by special permission or deviation from the designated employee.

Δ **12-500 Non-metallic sheathed cable Rules**

Section 12 of the Code is varied by deleting “Types NMD-90 and NMWU” from Rule 12-500.

Δ **12-514 Protection of cables in non-concealed locations**

Section 12 of the Code is varied by deleting Item 12-514 1) a) and substituting the below Item, and by adding Subrule 5) after Subrule 4):

1) a) the upper faces of ceiling joists in attic or roof spaces, where the vertical distance between the joists exceeds 1 m;

5) Notwithstanding Subrules 1) to 4), this shall not apply to fished in cable installations.

Raceways – General

12-904 Conductors in raceways
Section 12 of the Code is varied by deleting "Except for cable tray," in Subrule 12-904 2).

Cable trays

12-2200 Method of installation
Section 12 of the Code is varied by deleting Subrule 12-2200 7).

12-2208 Provisions for bonding
Section 12 of the Code is varied by deleting Rule 12-2208 and substituting the following:

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

Variations to Section 14 of the Code
Protection and control

Protection and control for miscellaneous apparatus

Δ **14-606 Panelboard overcurrent protection**
Section 14 of the Code is varied by deleting Subrule 14-606 2) and substituting the following:

2) 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 **14-612 Transfer equipment for standby power systems**
Section 14 of the Code is varied by renumbering the present Rule 14-612 as Subrule 14-612 1) and by adding the following Subrules immediately after it:

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 **14-614 Current supply from more than one system**
Section 14 of the Code is varied by adding the following after Rule 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.

Variations to Section 26 of the Code
Installation of electrical equipment

General

Δ **26-012 4) c) Dielectric liquid-filled equipment — Outdoors**
Section 26 of the Code is varied by deleting Item 26-012 4) c) and substituting 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

Branch circuits

Δ **26-656 Branch circuits for dwelling units**
Section 26 of the Code is varied by adding "and" at the end of Item 26-656 h) and adding the following Item:

i) at least one branch circuit shall be provided solely for the receptacles provided for each driveway, parking pad and other similar locations where there is provision for vehicle parking in accordance with 26-724 d).

Receptacles

26-700 General
Section 26 of the Code is varied by adding the following Subrule to Rule 26-700:

9) Where a sump pump is required by the Winnipeg Building By-law 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.

26-704 Protection of receptacles by a ground fault circuit interrupter of the Class A type
Section 26 of the Code is varied by deleting Subrule 26-704 2) and substituting 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.

26-708 Receptacles exposed to the weather
Section 26 of the Code is varied by deleting Subrules 26-708, 2) and 3), substituting the following.

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.

Receptacles for residential occupancies

Δ **26-724 Receptacles for single dwellings**
Section 26 of the Code is varied by adding the following after Item c) of Rule 26-724***:***

d) at least one receptacle shall be provided for each driveway, parking pad, and other similar locations where there is provision for vehicle parking.

Variations to Section 28 of the Code
Motors and generators

Disconnecting Means

28-602 Types and ratings of disconnecting means
Section 28 of the Code is varied by deleting Subrule 28-602 5).

Variations to Section 30 of the Code
Installation of lighting equipment

Δ Section 30 of the Code is varied by adding Subsection 30-500 as follows:

Luminaires in Buildings of Residential Occupancy

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, 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 shall 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.

Variations to Section 36 of the Code
High-voltage installations

Grounding and bonding

36-302 Station ground electrode
Section 36 of the Code is varied by deleting Item 36-302 1) a) and substituting the following:

1) 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;

Variations to Section 38 of the Code
Elevators, dumbwaiters, material lifts, escalators, moving walks, lifts for persons with physical disabilities, and similar equipment

Δ **38-051 Disconnecting Means**

Section 38 of the Code is varied by deleting Subrule 5) and substituting the following:

5) a) *The disconnecting means shall be located where it is visible on entry to the machinery area and readily accessible to authorized persons.*
   b) *Notwithstanding item a), for "machine room less" elevators the disconnecting means shall be*
      i) *permitted to be located in an electrical room;*
      ii) *capable of being locked in the open position; and*
      iii) *equipped with permanent signage at the elevator being served, indicating the location of the disconnecting means.*

Variations to Section 46 of the Code
Emergency power supply, unit equipment, exit signs, and life safety systems

General

46-108 Wiring method

Δ Section 46 of the Code is varied by deleting Subrule 46-108 3) and substituting 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*

Section 46 of the Code is varied by adding the following as Subrule 46-108 6):

6) *For the purpose of Subrule 46-108 5), "life safety system" includes the essential electrical systems noted in Clause 6.1 of CSA Z32,* standard for Electrical safety and essential electrical systems in health care facilities.

Variations to Section 60 of the Code
Electrical communication systems

Outside Conductors

60-500 Overhead Conductors on Poles

Section 60 of the Code is varied by renumbering Rule 60-500 as Subrule 60-500 1) and adding the following Subrule immediately after it:

2) *Exposed overhead wiring on the exteriors of buildings and between buildings or structures on the same premises shall not be permitted, except by special permission from the designated employee.*

Variations to Section 62 of the Code
Fixed electric heating systems

General

Δ **62-126 Field repair, modification, or assembly of series trace heater sets**
Section 62 of the Code is varied by deleting Rule 62-126.

Variations to Section 64 of the Code
Renewable energy systems

Solar Photovoltaic Systems

64-060 Disconnecting means
Section 64 of the Code is varied by deleting Item 64-060 2) g) and substituting the following:

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

Section 64 of the Code is varied by deleting Rule 64-110 and substituting the following:

64-110 Unbalanced interconnections

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.

Variations to Section 76 of the Code
Temporary wiring

76-006 Service entrance equipment
Section 76 of the Code is varied by deleting Item 76-006 d) and substituting 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 an underground distribution, on an adequately braced post.