



ADMINISTRATIVE REPORT

Report Date: May 18, 2016
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VanRIMS No.: 08-2000-20
Meeting Date: June 14, 2016

TO: Vancouver City Council
FROM: Chief Building Official/City Electrician
SUBJECT: Electrical By-law Housekeeping Revision

RECOMMENDATION

- A. THAT Council adopt the changes to the electrical by-law presented in Appendix A.
- B. THAT Council approve the fees set out in the new fee schedule presented in Appendix A;

FURTHER THAT the Director of Legal Services be instructed to prepare the necessary by-law to amend the Electrical By-law in accordance with the above.

REPORT SUMMARY

On April 5, 2016, Council amended the Vancouver Electrical By-law to adopt CAN/CSA C22.1-15, the 23rd Edition of the Canadian Electrical Code pursuant to provincial Electrical Regulations (BC Reg. 100/2004). It is recommended by staff that Council further amend By-law 5563 the Electrical By-law to adopt general amendments to coordinate the requirements of the 2014 Vancouver Building By-law and Canadian Electrical Code to ensure the safety of the general public.

COUNCIL AUTHORITY/PREVIOUS DECISIONS

Under Section 314(1)(e) of the Vancouver Charter, Council may, subject to the Safety Standards Act and the regulations under that Act, provide for adopting, in whole or in part or with such modification as may be provided in the by-law, the rules and provisions of the Canadian Electrical Code promulgated by the Canadian Standards

Association with respect to electrical works, and constituting as regulations under the by-law the rules and provisions so adopted or modified.

On July 13, 1982 Council adopted the By-law No. 5563 the "Electrical By-law" a By-law to regulate electrical works in the city of Vancouver and its subsequent amendments.

CITY MANAGER'S/GENERAL MANAGER'S COMMENTS

The City Manager and Acting General Manager of Planning & Developmental Services recommends approval of Recommendations A and B.

REPORT

Background/Context

As previously identified, the City has the legal authority under Section 314(1)(e) of the Vancouver charter to adopt, in whole or in part, or with modification the Canadian Electrical Code so as to ensure the safety, health, and protection of persons and property.

As of April 5, 2016, Council has amended By-law 5563, the Vancouver Electrical By-law" to adopt CAN/CSA C22.1-15, the 23rd Edition of the Canadian Electrical Code and maintaining consistency with Provincial enactments related to Electrical safety (Ministerial Order M392 - deposited December 2, 2015).

The key recommendations in this report include:

- General housekeeping amendments to maintain consistency with the BC Electrical Safety Regulations & 2014 Vancouver Building Bylaw (#10908);
- Expansion of the requirements for annual site permits; and
- Electrical safety requirements for Secondary suites and lock-off units.

These recommendations are described under their respective headers below:

General Housekeeping Amendments

This proposal to amend the Electrical By-law contains general housekeeping amendments that are intended to correlate the Electrical By-law with both the ways and means, and definitions of the BC Electrical Safety Regulations and the 2014 Vancouver Building By-law #10908. With recent amendment of the 2015 Canadian Electrical Code, and implementation of the 2014 Building By-law, Staff consider it necessary to update the Electrical By-law to ensure that there is consistency in the by-laws. The changes also provide for changes to the administrative process that are consistent with the move to an electronic system of permit submission and review.

The proposed amendments to the Electrical By-law also include alterations to the current fee schedule that are intended to update the current fees to align with current industry practices. The proposed fee changes reflect the following changes: conversions of archaic units of measurement, expansion of annual

permits for uses other than commercial or industrial (with or without high voltage), and clarification of the application of existing fees.

Annual Site Permits

Per section 5.12 of the Electrical By-law, the City Electrician already possesses the authority necessary to issue Annual Site permits. These have been previously limited to premises used for industrial or commercial purpose. However, many facilities such as hospitals, schools, universities, or similar uses, could benefit from the issuance of a Site Permit as they have qualified electricians as employees or under long-term contract.

Site permits allow qualified field safety representatives to take on responsibility for electrical safety of routine maintenance work and improvements that do not increase the total service kVA rating by more than 5%. This is advantageous to both the City and the applicant as this eliminates the need for repeat applications for routine permits for work of little consequence. This is expected to save both time and money for the applicant, and will allow the City to better prioritize the use of its staff and resources.

Currently, BC Safety Authority is responsible for provincial electrical safety and regularly issues site permits to qualified field safety representatives, and does so for sites other than industrial or commercial use. Consequently, City Staff do not feel that this change will have the potential for significant negative impact as those organizations that could benefit from the annual permit will have suitably qualified staff on retainer and will appreciate the flexibility that the annual permit provides.

Secondary suites and lock-off units

The proposed By-law amendment includes minor changes to improve electrical safety within secondary suites and lock-off units that are reflective of the safety requirements already in place within the 2014 Building By-law. These also include general requirements to improve electrical safety within units that could reasonably be expected, or are proposed to undergo renovations to accommodate Secondary suites or lock-off suites. This has already been implemented as a soft policy during trades permit reviews and is also consistent with the life safety requirements of the recently adopted 2015 Canadian Electrical Code under the Provincial Safety Act.

Strategic Analysis

Council has previously adopted CAN/CSA 22.1-15, the 23rd edition of the Canadian Electrical Code through the Electrical By-law as adopted by the *Safety Authority Act*, for the protection of the general public and consistency with existing legislation.

Given that the above changes are primarily clarification to existing policy and already provincially accepted practice, Staff does not expect that these changes will disrupt or cause hardship for the electrical industry or building managers.

Implications/Related Issues/Risk (if applicable)

Financial

There are no financial implications.

The proposed changes are anticipated to reduce administrative overhead, and proposed annual permits will reduce overall processing times and reduce the need for processing routine permits associated with maintenance and minor improvements not affecting public safety.

Legal

The City has the legal authority under Section 314(1)(e) of the Vancouver charter to adopt the Canadian Electrical Code, in whole or in part or with such modification as may be provided in the by-law, and is subject to the Safety Standards Act and the regulations under that Act.

Consequently, Staff recommend that the Electrical By-law be amended in order to avoid conflict with Provincial legislation and the Building By-law, and ensure the safety of the public through uniform enforcement of electrical regulations throughout the province.

CONCLUSION

Staff recommend that Council adopt the changes to the electrical by-law presented in Appendix A.

* * * * *

BY-LAW NO. _____

**A By-law to amend the Electrical By-law No. 5563
regarding miscellaneous amendments**

THE COUNCIL OF THE CITY OF VANCOUVER, in regular council meeting, enacts as follows:

1. This By-law amends the indicated provisions of Electrical By-law No. 5563.
2. In section 1.3, Council:
 - (a) strikes out the definitions of “approved electrical contractor”, “field safety representative”, and “secondary suite”; and
 - (b) adds the following definitions in alphabetical order:
 - “ “approved electrical contractor” means a person who holds a licence under the Licence By-law as a trade contractor authorized to carry out electrical work and a licence as a licensed contractor in respect of electrical equipment, under the Safety Standards Act.”
 - “ “field safety representative” means a person who holds a certificate of qualification as a field safety representative issued under Division 2 of the Electrical Safety Regulation to the Safety Standards Act.”
 - “ “Lock-off unit” means a smaller dwelling unit within a larger principal dwelling unit, which must have separate external access and shared internal access, and which can be locked off from the larger dwelling unit, but does not include a secondary suite.”
 - “ “One-family dwelling with secondary suite” means a building containing only two dwelling units of which the secondary suite is smaller than the principal residence.”
 - “ “secondary suite” means secondary suite as defined in the Building By-law.”
 - “ “Two-family dwelling with secondary suites” means a building containing two self-contained dwelling units where each self-contained dwelling unit contains one secondary suite.”
3. In section 5.13, Council strikes out “connected load” and substitutes “service KVA rating”.
4. Council strikes out Sections 5.14 and 5.15 and substitutes:
 - “5.14 The owner of a building where the existing service KVA rating exceeds 500 must apply for and obtain an annual permit, and must provide the following information with the permit application:

- (a) the information required by section 5.4;
- (b) the supply or service KVA rating;
- (c) the name and the class of certificate of qualifications, of the field safety representative who will perform or supervise the electrical works under the permit; and
- (d) the name and address of any electrical contractor who will perform electrical works under the permit.

5.15 An annual permit issued pursuant to section 5.14 authorizes an owner:

- (a) to maintain all existing operating electrical equipment in safe and proper working order in conformance with Rule 2-300 of the Canadian Electrical Code, Part I; and
- (b) to carry out electrical work related to minor alterations, repairs or additions to an installation of a value not exceeding \$5000.00."

5. Council strikes out section 6.7 and substitutes:

"6.7 Subject to section 6.12, within 2 working days after receipt of the notice referred to in section 6.6, the City Electrician must inspect the equipment and must notify the holder of the permit that the installation of electrical equipment:

- (a) has been approved; or
- (b) has not been approved and in such case, must order that the equipment be condemned or that changes be made to comply with this By-law."

6. In Section 6.9 (a), Council strikes out "posted a card of approval;" and substitutes "approved the installation;".

7. Council repeals Section 7.3.5, and substitutes the following:

"7.3.5. SECONDARY SUITES AND LOCK-OFF UNITS

The provisions of this By-law apply to the construction of a smaller dwelling unit in a new or existing principle dwelling unit, except that:

- (a) if there is a combination panelboard that supplies circuits to the principle dwelling unit and the smaller dwelling unit and a single meter that measures electrical power consumption, the main combination panelboard must be located in a common area in the building that is accessible from both dwelling units;

- (b) notwithstanding subsection (a), a combination panelboard must be installed in a lock-off unit within a residential suite in a new apartment building;
- (c) the minimum ampacity of service or feeder conductors supplying the total load of a principal dwelling unit and any smaller dwelling unit within the principle dwelling unit must be based on the demand load calculated on the total living area plus all electrical loads of the principal dwelling unit and any smaller dwelling unit within the principle dwelling unit as if there is only one dwelling unit;
- (d) in addition to the demand calculated for each electric range located in the principal dwelling unit, for each electric range with a rating of 12 kW or less located in a smaller dwelling unit within the principle dwelling unit, a further 6kW demand must be added, plus 40% of the amount by which the rating exceeds 12 kW;
- (e) smoke alarms conforming to CAN/ULC-S531 must:
 - (i) have a manually operated silencing device and a backup battery,
 - (ii) be interconnected throughout the principal dwelling unit and any smaller dwelling unit within the principle dwelling unit, and
 - (iii) be connected to a branch circuit that supplies smoke alarms located in the principal dwelling unit, if the smoke alarms are located in a smaller dwelling unit within the principle dwelling unit;
- (f) receptacles having CSA configuration 5-15R or 5-20R installed within 1.5 m of sinks, bathtubs, or shower stalls of any smaller dwelling unit within a principle dwelling unit must be of the Class A ground fault circuit interrupter type; and
- (g) where a portion of an existing one-family or two-family dwelling is altered to include a smaller dwelling unit within the principle dwelling unit, the smaller dwelling unit must have:
 - (i) a minimum of two kitchen counter duplex receptacles supplied by two appliance circuits,
 - (ii) kitchen counter duplex receptacles either individually wired on separate branch circuits or collectively wired on a multi-wire branch circuit,
 - (iii) a minimum of two duplex receptacles located on different walls in each bedroom,

- (iv) a minimum of three duplex receptacles located on different walls in the living room area, and
- (v) additional receptacles as necessary to preclude the use of extension cords;

except that:

- (vi) general circuit branch wiring may be interconnected between a smaller dwelling unit and the principle dwelling unit; and
- (vii) only one electrical panelboard, located in either the principle dwelling unit or a smaller dwelling unit within the principle dwelling unit, is permitted."

- 8. Council strikes out the Schedule of Fees attached to the Electrical By-law, and substitutes the Schedule of Fees attached as Schedule A to this By-law.
- 9. A decision by a court that any part of this By-law is illegal, void, or unenforceable severs that part from this By-law, and is not to affect the balance of this By-law.
- 10. This By-law is to come into force and take effect on _____, 2016.

ENACTED by Council this _____ day of _____, 2016

Mayor

City Clerk

SCHEDULE A

1. The following fees, based on the cost of work, including materials and labour, as estimated by the contractor or owner and established to the satisfaction of the City Electrician, shall be payable to the City and shall accompany every application for a permit for electrical work:

When the estimated cost does not exceed \$250.....	\$62.00
When the estimated cost exceeds \$250 but does not exceed \$500	\$84.00
When the estimated cost exceeds \$500 but does not exceed \$700	\$109.00
When the estimated cost exceeds \$700 but does not exceed \$1,000.....	\$142.00
When the estimated cost exceeds \$1,000 but does not exceed \$10,000.....	\$142.00
plus for every \$1,000 of the estimated cost, or part thereof, over \$1,000	\$47.00
When the estimated cost exceeds \$10,000 but does not exceed \$50,000 ...	\$649.00
plus for every \$1,000 of the estimated costs, or part thereof, over \$10,000	\$25.50
When the estimated cost exceeds \$50,000 but does not exceed \$100,000	\$1,830.00
plus for every \$1,000 of the estimated costs, or part thereof, over \$50,000	\$15.50
When the estimated cost exceeds \$100,000 but does not exceed \$500,000	\$2,720.00
plus for every \$1,000 of the estimated costs, or part thereof, over \$100,000	\$10.75
When the estimated cost exceeds \$500,000 but does not exceed \$1,000,000	\$7,630.00
plus for every \$1,000 of the estimated cost, or part thereof, over \$500,000	\$8.35
When the estimated cost exceeds \$1,000,000.	\$12,560.00
plus for every \$1,000 of the estimated cost, or part thereof, over \$1,000,000	\$3.45

2. The temporary power permit shall be valid for one year and the fee shall be:

(a) for single and two-family dwellings.....	\$336.00
(b) for all other uses where the temporary power is supplied from a power source not exceeding 750 V	\$356.00
(c) for all other uses where the temporary power is supplied from a voltage power exceeding 750 V.....	\$977.00

3. The City Electrician may issue an annual permit where one person, firm or corporation has more than one site, the fee for an annual permit for any one building or site shall be as follows:

Total service rating up to and including the first 500 kVA	\$342.00
For each 10 kVA or part thereof exceeding the first 500 kVA	\$6.80
Subject to a maximum fee of.	\$4,320.00

4. Fees for an Electrical Permit for the Entertainment and Film industry

(a) For an annual permit for filming in a single location	\$510.00
(b) For an annual permit for filming in multiple locations	\$977.00
(c) For a Temporary permit for filming in single or multiple locations	
for up to 14 days	\$166.00
for 15 to 30 days	\$332.00
for 31 to 60 days	\$498.00
for 61 to 90 days	\$830.00

5. The fee for staff time spent inspecting of electrical work or reviewing resubmitted or amended plans to determine compliance with this By-law, if a permit holder deviates from approved plans, for each hour or part thereof 166.00

6. The fee for an inspection of electrical work where errors or omissions were found at a previous inspection shall be \$166.00

7. The fee for inspection and plan review outside normal working hours and at a minimum inspection and review time of four (4) hours, including traveling time, shall be for each hour or part thereof..... \$238.00

8. Fees for an Electrical Permit for installations related to tents or similar structures

(a) Where each installation that is supplied from a portable single-phase generator rated at not more than 5kW	\$84.00
(b) Where each installation that is supplied from a portable generator rated at more than 5 kW or from any other temporary or permanent power source not exceeding 750 V	
for up to 14 days	\$166.00
for 15 to 30 days	\$332.00
for 31 to 60 days	\$498.00
for 61 to 90 days	\$830.00
(c) Where each installation is supplied from a High Voltage power source	\$997.00