

# TOWN OF COCHRANE

## Building Safety Codes

101 RancheHouse Rd.  
Cochrane, AB T4C 2K8  
Phone: 403-851-2572 Fax: 403-932-2935  
Email: [safety.codes@cochrane.ca](mailto:safety.codes@cochrane.ca)



Fields marked with an \* are required

### Homeowner Secondary Suite Application

#### OWNER INFORMATION

|   |   |
|---|---|
| Owner Name*   | Phone*                                      |
| Mailing Address*  | Email*                                      |
| City & Postal Code*   | Additional Information if required: Sq.Ft * |
| Project Address*  |   |
| *Existing <i>Concealed Work</i> If "Yes" see the <a href="#">concealed work process</a>   | Estimated Construction Value*               |
| Check which permits you wish to obtain:   | Development Permit Number:*                 |
| <p><u>Building Permit (Permit fee \$0.50/sqft)</u> – Framing new walls, for bedroom, bathroom, office space and relevant HVAC work.</p> <p><u>Electrical Permit (Permit fee \$94.50)</u> – Install new wiring, switches, plugs and lighting. Will the electrical materials cost more than \$2500?      OR less than \$2500?</p> <p><u>Plumbing Permit (Permit fee \$94.50)</u> - Installing fixtures to existing plumbing rough-in AND/OR Installing new drain lines for additional fixtures. How many fixtures in the basement? More than 5      OR Less than 5</p> <p><i>Concealed Work</i> - Any work (electrical, plumbing,HVAC) that was installed without permits and is now covered by drywall</p> |   |

**APPLICANT DECLARATION** I certify that I am the owner/agent submitting this application and construction will be completed in accordance with the Alberta Safety Codes Act and Regulations and will commence within **90 days**. I understand homeowner permits are to be completed within **365 days**.

I have read and understand the applicant declaration \*

**Applicant Name(Print)**

**Application Date(mm,dd,yyyy)**

Please see our website for additional information regarding Secondary Suites.

The personal information collected through the permit application will be used to process your application. The information relates directly to and is necessary for the operation of the program or activity applied for and may be input into an automated system to generate content or make decisions, recommendations, or predictions. This information is collected and used under the authority of Section 4(c) of the Protection of Privacy Act and managed in accordance with the Act. For questions about the collection of personal information, please contact [ATI@cochrane.ca](mailto:ATI@cochrane.ca).

**The Alberta Safety Codes Act requires that a permit be obtained prior to beginning construction. Failure to obtain permits may result in the applicant being charged a double fee.**

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## Fire Safety Plan

THIS PLAN MUST BE POSTED ONSITE AND OCCUPANTS/EMPLOYEES ARE EXPECTED TO BE TRAINED IN HOW TO FOLLOW ITS PROVISIONS

Address:

Description of Project: **Secondary Suite**

Contact Personnel:

Phone #:

### Specific Considerations:

- Fire extinguisher(s) will be available at all times during the progress of the construction
- Access to fire hydrants and buildings for fire apparatus must be maintained

**Emergency Response Numbers: FIRE/POLICE/AMBULANCE: 9-1-1**

### General Considerations:

- A WARNING SYSTEM will be in place to warn of potential threats, and facilitate evacuation (yelling, ringing of a bell or horn, etc.)
- EVACUATE via the nearest exit if you are warned of a fire
- PROCEED to the main entrance (outside) and report to the Fire Department
- FIGHT the fire ONLY if it is small and you are NOT ALONE

### Hazards Control:

- At the end of each day combustible refuse will be cleared from the site area and disposed of in bins or stored in neat piles. Unused construction material will be kept neat and orderly.
- No open-flame devices will be used inside buildings unless a dedicated watch is in place
- Liquid Propane Tanks or flammable liquids containers are not allowed within buildings

This Fire Safety Plan is designed in conformance with and is a requirement of Division B, Section 2.8.2 of the National Fire Code, and on signature, becomes an agreement between the building owner/contractor and the Town of Cochrane Fire department.

I have read and understand the above

Building Owner/Contractor Name:

Date:

# Electrical Load Calculation

## Residential Electrical Load Calculation Canadian Electrical Code (CEC) Rule 8-200(2)

| Project Information  |  |   |                |                                       |  |
|--|--|---|----------------|---------------------------------------|--|
| Primary Dwelling Address:  |  | Secondary Dwelling Address (if applicable): |                | Primary Dwelling<br>(larger dwelling) | Secondary Dwelling<br>(if applicable - smaller dwelling) |
| Area of Dwelling units   |  |   | m <sup>2</sup> |                                       | m <sup>2</sup>   |
| 1  | Add basic load of 5000W for first 90m <sup>2</sup> of total living area for each suite (90m <sup>2</sup> = 969 sq. ft)   |   | W              |                                       | W  |
| 2  | Add 1000W for each additional 90m <sup>2</sup> + any portion in excess of 90m <sup>2</sup> of living area for that suite |   | W              |                                       | W  |
| <i>*Notes: - Air Conditioning loads are entered in line 10<br/>- All electric space heating loads are entered in line 11</i>   |  |   |                |                                       |  |
| 3  | Electric range - 6000W (+ 40% of any amount by which the NAMEPLATE rating range exceeds 12 kW)                           |   | W              |                                       | W  |
| <i>*Note: If separate wall oven and cooktop, or gas range installed. Apply Note 2 in line 6</i>  |  |   |                |                                       |  |
| 4  | Electric Water heaters at 100% of the NAMEPLATE rating (identify each one in a separate line)                            |   | W              |                                       | W  |
|  | Fully Electric On-Demand Water Heater  |   | W              |                                       | W  |
|  | Hot tubs, pool heater  |   | W              |                                       | W  |
|  | Steam shower heater  |   | W              |                                       | W  |
|  | Jet tub heater   |   | W              |                                       | W  |
|  | Sauna  |   | W              |                                       | W  |
|  | Other:   |   | W              |                                       | W  |
| 5  | Electric vehicle supply equipment  |   | W              |                                       |  |
| <i>*Note: taken at 100% of the charge rate setting</i>   |  |   |                |                                       |  |
| 6  | Other Loads with a NAMEPLATE rating in excess of 1500 W - these loads are applied at:                                    |   |                |                                       |  |
|  | Dryer  |   | W              |                                       | W  |
|  | Hot tub pool pumps total   |   | W              |                                       | W  |
|  | Wall oven - if no electric range or a gas range installed  |   | W              |                                       | W  |
|  | Electric Cooktop - if no electric range or a gas range installed   |   | W              |                                       | W  |
|  | Domestic Hot Water Tank  |   | W              |                                       | W  |
|  | Other:   |   | W              |                                       | W  |
|  | Other:   |   | W              |                                       | W  |
|  | Other:   |   | W              |                                       | W  |
| <i>*Note 1: - 25% of nameplate rating if there is an electric range in that suite<br/>*Note 2: - 100% of the combined load up to 6000 W plus 25% of the combined load that exceeds 6000 W if no range has been provided for (gas range or wall oven and cooktop combination)<br/>- Identify each load in a separate line</i> |  |   |                |                                       |  |
| 7  | <b>TOTAL CALCULATED LOAD PER SUITE IN WATTS (Lines 1 to 6)</b>   |   | W              |                                       | W  |
| <b>CALCULATED LOAD APPLIED TO THE SERVICE</b>  |  |   |                |                                       |  |
| 8  | Larger dwelling unit @ 100%  |   |                |                                       | W  |
| 9  | Smaller Dwelling (if applicable) - @ 65%   |   |                |                                       | W  |
| 10   | All air conditioning loads @ 100% - no matter which suite they are installed   |   |                |                                       | W  |
| 11   | All electric heating loads @ 100% - no matter which suite they are installed   |   |                |                                       | W  |
|  |  |   |                |                                       | W  |
|  |  |   |                |                                       | W  |
| 12   | Sum of all Electric Heating Loads  |   |                |                                       | W  |
| 13   | Electrical heat interlocked with A/C   |   |                |                                       | Y/N  |
|  | Greater of A/C or Electric loads - ONLY when A/C and electrical heat are interlocked                                     |   |                |                                       | W  |
|  | Sum of all A/C and Electric heating loads - ONLY when A/C and electrical heat are NOT interlocked                        |   |                |                                       | W  |
| <i>*Notes - Identify each heating load in a separate line (includes electric fireplaces and garage heaters)<br/>- If air conditioning and electric heat are NOT interlocked, Both A/C and heat values must be used</i>   |  |   |                |                                       |  |
| 14   | <b>TOTAL CALCULATED LOAD IN WATTS</b>  |   |                |                                       | W  |
| 15   | Divide line 14 by 240 for MAIN SERVICE AMPACITY REQUIRED   |   |                |                                       | A  |
| 16   | What is the existing installed service size installed at this building?  |   |                |                                       | A  |
| <b>I have verified that the information contained within this document is correct</b>  |  |   |                |                                       |  |
| Master Electrician Name:   |  |   |                | Signature                             |  |
| Master Electrician Number:   |  |   |                |                                       |  |
| Date:  |  |   |                |                                       |  |
| Phone No.  |  | Email:                                      |                |                                       |  |

\*When a secondary suite is added to an existing property a service demand calculation must be completed and submitted as part of the permit application

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## Homeowner Secondary Suite

### Submission requirements:

1. Completed permit application form (Building, Electrical and Plumbing) and Fire Safety Plan.
2. If the owner is not planning to live in the home, the Electrical and Plumbing Permits must be obtained by a licensed contractor.
3. Floor plan/layout indicating area of development, use of each room, showing all dimensions, and window/door locations.
4. Completed electrical load calculation (to be filled out by a licensed electrician)
5. Copy of the Approved Development Permit.

### Key building code requirements:

- Each bedroom or combination bedroom window shall provide an unobstructed opening of not less than 0.35m<sup>2</sup> (3.8 ft<sup>2</sup> OR 547 in<sup>2</sup>) with no dimension of the opening less than 380mm (15"). The required opening shall be maintained in an emergency without the need for additional support (awning type windows that must be latched or propped open do not comply). If the bedroom window opens into a window well, a clearance of 760mm (30") must be maintained in front of the window.
- Smoke alarm must be installed in each bedroom, and in a location between the remainder of the basement and the bedroom. If the bedroom is served by a hallway the alarm is to be located in the hallway. Carbon monoxide (CO) alarms can be installed in each bedroom or outside each bedroom within 5m (16.4') of each bedroom door, measured following corridors and doorways. Additional smoke alarms may be required.
- Handrails/Guardrails shall be installed at all stairs with 3 or more riser and must be continually graspable along their entire length with no obstruction on or above them to break a handhold expect at newel posts.
- The furnace room/mechanical room door must be at least 810mm (32") wide.
- The suite must have its own ventilation system and independent thermostatic control. (Separate furnace OR Baseboard heaters c/w HRV (Heat Recovery Ventilator))
- A smoke tight barrier must be achieved using min 12.7mm (½") drywall throughout (No exposed wood, includes the mechanical room).
- Where noise may be transmitted through ceilings and walls, they shall be filled with:
  - 150mm (6") insulation, installed resilient channel on one side spaced 400mm (16") or 600mm (24") on centre.
  - and have 12.7mm (½") drywall on ceilings and both sides of walls OR a wall assembly with an STC of 43 OR ASTC of 40.
- Any door that penetrates the required smoke tight barrier must be solid core 45mm (1¾") thick and must be self-closing.
- Kitchen exhaust fan must be vented directly outside.
- Refer to the NBC (AB Edition) 2019 for [more information](#)

See homeowner electrical wiring guide on the next page

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## Secondary Suite Electrical Requirements:

**Please note that existing developed basements do not meet the National Building Code or the Canadian Electrical Code requirements for secondary suites.**

**Panel boards:** *If you want an individual electrical meter for the main and upper floor and a separate meter for the basement secondary suite, each unit would require a separate panel with common area access. Regardless, there shall be no interconnected wiring from the main and upper floors and the basement secondary suite. The only exception to this rule is for the 120-volt interconnection of the smoke/carbon monoxide detectors.*

**Below are the code rules taken from the Canadian Electrical Code 2021, 25 Edition.**

### **26-602 Panelboards in dwelling units** (see Appendix B)

- 1) A panelboard shall be installed in every dwelling unit except for
  - a) dwelling units in hotels and motels; and
  - b) dwelling units that have been created by subdivision of a single dwelling and are not individually metered for electrical power consumption.
- 2) Every panelboard installed in accordance with Subrule 1) shall have a single supply protected by overcurrent devices, and this supply shall be capable of being disconnected without disconnecting the supply to any other dwelling unit.

### **26-706 Tamper-resistant receptacles (Tamper Resistant plug-in's)**

- 1) All receptacles of CSA configuration 5-15R and 5-20R installed in the following locations shall be **tamper-resistant receptacles** and shall be so marked:  
tamper-resistant receptacles and shall be so marked:
  - a) child-care facilities;
  - b) guest rooms and suites of hotels and motels;
  - c) preschools and elementary education facilities; or
  - d) dwelling units.**
- 1) Notwithstanding Subrule 1), receptacles dedicated for stationary appliances such that the receptacle is rendered inaccessible and receptacles located above 2 m from the floor or finished grade shall not be required to be tamper resistant.

### **26-658 Arc-fault protection of branch circuits for dwelling units** (see Appendix B) (Combination Arc-Fault Protection or AFCI protection)

Arc-fault protection of branch circuits for dwelling units shall meet the following requirements:

- 1) Each branch circuit supplying 125 V receptacles rated 20 A or less shall be provided with arc-fault protection by a combination-type arc-fault circuit interrupter, except for branch circuits supplying
  - a) receptacles installed in accordance with
    - i) Rule 26-720 f), provided that no other receptacles are connected to these circuits; or
    - ii) Rule 26-722 d) i), iii), iv), and v); and
  - b) a single receptacle for a sump pump where
    - i) the receptacle is labelled in a conspicuous, legible, and permanent manner identifying it as a sump pump receptacle; and
    - ii) the branch circuit does not supply any other receptacles.
- 2) Notwithstanding Subrule 1), the entire branch circuit need not be provided with arc-fault protection where
  - a) an outlet branch-circuit-type arc-fault circuit interrupter is installed at the first outlet on the branch circuit; and
  - b) the wiring method for the portion of the branch circuit between the branch circuit

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overcurrent device and the first outlet consists of metal raceway, armoured cable, or non-metallic conduit or tubing.

3) Where one or more 125 V receptacles rated 20 A or less are added to an existing branch circuit that is not provided with arc-fault protection as required by this Rule, the entire branch circuit need not be provided with arc-fault protection where an outlet branch-circuit-type

**NOTE: Generally speaking, most of the receptacles located in your secondary suite will need to be protected Arc-Fault protected. The lighting circuits do not require to be Arc-Fault protected.**

***You have options.... Depending on the age of your electrical panel, there may not be combination arc-fault breakers available for the panel. You can add a sub-panel with new combination arc-fault breaker's, or you can add "Dead-Front"/ (flat face) outlet branch circuit arc-fault devices next the existing panel and then feed the existing circuits from these outlet branch circuit arc-fault flat face devices. Rule 26-658 #2(a)(b) above allows this if you use armoured cable (BX) from the existing panel to the new flat face devices.***

### **Secondary Suite Kitchen Requirements:**

In dwelling units there shall be installed in each kitchen

26-722

- i) one receptacle for each refrigerator;
- ii) where a gas supply piping or a gas connection outlet has been provided for a free-standing gas range, one receptacle behind the intended gas range location not more than 130 mm from the floor and as near midpoint as is practicable, measured along the floor line of the wall space intended for the gas range;
- iii) a sufficient number of receptacles (5-15R split or 5-20R) along the wall at counter work surfaces (excluding sinks, built-in equipment, and isolated work surfaces less than 300 mm long at the wall line) so that no point along the wall line is more than 900 mm from a receptacle measured horizontally along the wall line;
- iv) at least one receptacle (5-15R split or 5-20R) installed at each permanently fixed island counter space with a continuous long dimension of 600 mm or greater and a short dimension of 300 mm or greater;
- v) at least one receptacle (5-15R split or 5-20R) installed at each peninsular counter space with a continuous long dimension of 600 mm or greater and a short dimension of 300 mm or greater.

### **26-704 Protection of receptacles by a ground fault circuit interrupter of the Class A type**

(see Appendix B)

1) Receptacles having CSA configuration 5-15R or 5-20R installed within 1.5 m of sinks (wash basins complete with a drainpipe), bathtubs, or shower stalls shall be protected by a ground fault circuit interrupter of the Class A type, except where the receptacle is

- a) intended for a stationary appliance designated for the location; and
- b) located behind the stationary appliance such that it is inaccessible for use with generalpurpose portable appliances.

2) All receptacles having CSA configuration 5-15R or 5-20R, installed outdoors and within 2.5 m of finished grade.

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***(Kitchen counter receptacles location within 5 feet of the kitchen sink require GFCI protection, the exception would be a receptacle located behind a fridge or a specific location in which a microwave sits off the counter on a shelf. Receptacles located in bathrooms or washrooms must also be GFCI protected).***

**32-200 Installation of smoke alarms and carbon monoxide alarms in dwelling units** (see Appendices **B** and **G**)

1) The following requirements shall apply to the installation of permanently connected smoke alarms and carbon monoxide alarms in dwelling units:

- a) smoke alarms and carbon monoxide alarms shall be supplied from a lighting circuit, or from a circuit that supplies a mix of lighting and receptacles;
- b) smoke alarms, carbon monoxide alarms, or a device that is a combination of a smoke alarm and a carbon monoxide alarm shall not be installed where the circuit is protected by a ground fault circuit interrupter or an arc-fault circuit interrupter;
- c) there shall be no disconnecting means between the smoke alarm or the carbon monoxide alarm and the overcurrent device for the branch circuit; and
- d) the wiring method for smoke alarms and carbon monoxide alarms, including any interconnection of units and their associated equipment, shall be in accordance with Section **12**.

2) Notwithstanding Subrule 1) b), where a smoke alarm, carbon monoxide alarm, or a device that is a combination of a smoke alarm and a carbon monoxide alarm has an integral battery as a secondary supply source, such an alarm or device shall be permitted to be connected.

**Shane Hoogenboom**

**Senior Electrical Safety Codes Officer**

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