



*This information is provided for clarification purposes only and is not in substitution of any applicable City Bylaws or Provincial or Federal Codes or laws. In the case of any contradictions, legislative Codes, laws or Bylaws take precedence. You must satisfy yourself that any existing or proposed construction or other works complies with such Bylaws, Codes, applicable Acts, regulations, and decisions and orders of any person or body having jurisdiction over the Lands.*

## Energy Efficiency Requirements for Part 3 Buildings

**No.: BUILDING-48**  
**Date: 2021-06-11**

**This bulletin is to inform owners, designers, and contractors of the energy efficiency requirements for Part 3 Buildings under the BC Building Code.**

### Summary

- Part 10 of the BC Building Code (BCBC) provides three energy efficiency compliance pathways for Part 3 buildings: ASHRAE 90.1, the NECB, or the Energy Step Code.
- Applicants/Professionals are required to submit energy efficiency declaration forms with their building permit application to demonstrate conformation of their chosen energy efficiency pathway.

### Application Requirements

All permit applications for new Part 3 buildings must include the following at the time of building permit submission.

#### 1. Energy Efficiency Design Verification Report

The Design Verification Report is typically completed by the Coordinating Registered Professional (CRP). This report identifies the energy efficiency compliance pathway chosen for the project. Further, the report identifies the various Registered Professionals that will be responsible for designing to the selected regulation.

#### 2. Energy Intensity Report

The Energy Intensity Report is only required for projects seeking to comply with the BC Energy Step Code. The City of Richmond currently requires Energy Step Code compliance for new constructions of Group C, D, and E occupancies. Please refer to bulletin Building-40 for details.

In addition, depending on the compliance path pursued, **additional documentation may be required as outlined below** and should be submitted to [EnergyReports@richmond.ca](mailto:EnergyReports@richmond.ca) with the site address and report title in the email subject (e.g. "6911 No. 3 Road – Pre-construction Report").

#### ASHRAE Standard 90.1 (2016)

Prescriptive/Trade-Off Path (Sections 5 to 10):

1. A complete list of all the characteristics and specifications of the components and systems covered by the Standard (e.g. U-value, SHGC, visual transmittance of windows) such that compliance can be verified to the satisfaction of the Building Official. It is the responsibility of the CRP to collect this information from the responsible parties and consolidate them in a concise and complete form.

Energy Cost (Section 11) or Performance (Appendix G) Paths:

1. An energy modelling report as per the EGBC and AIBC Joint Professional Practice Guidelines for Whole Building Energy Modelling Services. All information specified in the applicable section of the Standard (Section 11.7 or Section G1.3), must be included in the report. Please submit the modelling report as an attachment to the Energy Efficiency Design Verification Report.
2. Energy modelling software must be in accordance with Section 2.3 of the BC Hydro New Construction Program's Energy Modelling Guideline (2019).

See over →

## NECB (2015)

### Prescriptive/Trade-Off Path:

1. A complete list of all the characteristics and specifications of the components and systems covered by the Standard (e.g. U-value, SHGC, visual transmittance of windows) such that compliance can be verified to the satisfaction of the Building Official. It is the responsibility of the CRP to collect this information from the responsible parties and consolidate them in a concise and complete form.

### Performance Path:

1. An energy modelling report as per the EGBC and AIBC Joint Professional Practice Guidelines for Whole Building Energy Modelling Services (2018), included as an attachment to the Energy Efficiency Design Verification Report.

## Energy Step Code

1. Part 3 Energy Design Report, completed by a Registered Professional.
2. Full energy modelling report signed and sealed by a Registered Professional for both the baseline and proposed buildings.

## Requirements at Final Inspection

Upon substantial completion of the project and prior to Final Inspection, the following must be submitted to the Building Inspector.

### 1. Energy Compliance Report

The Energy Compliance Report is typically completed by the CRP. The report confirms reviews have been conducted by the various Registered Professionals and provides assurance that the project has been substantially completed to comply with the selected energy regulation.

## References

City of Richmond, [Interior Finishing, Alterations Plan Review Application \(PL-25b\)](#)  
City of Richmond, [New/Additions Plan Review Application \(PL-25a\)](#)  
City of Richmond, [Building-40: Energy Step Code: Part 3 Buildings](#)  
City of Richmond, [Energy Efficiency Design Verification Report \(PL-55\)](#)  
City of Richmond, [Energy Intensity Report \(PL-49\)](#)  
City of Richmond, [Energy Compliance Report \(PL-44\)](#)

Should you have any questions, comments, or suggestions concerning this bulletin, please reference the Bulletin number and email [building@richmond.ca](mailto:building@richmond.ca) or call the Building Approvals General Inquiries line at 604-276-4118.

See attached →



*This form is to be completed by the Coordinating Registered Professional and submitted at the time of permit application for all buildings subject to the Part 10 Energy Efficiency Requirements in the BC Building Code.*

**ATTENTION: Building Official, Building Approvals Department**

**Re: Address:** \_\_\_\_\_

**Building Permit Application No.:** \_\_\_\_\_  
**(the "Project")**

I, \_\_\_\_\_, am the Coordinating Registered Professional for the above-mentioned project and have coordinated the design to substantially comply with Part 10 of the *2018 BC Building Code*, based on pursuing the Energy Regulation indicated Section A below.

**Section A: Project Details**

Energy Standard:  ASHRAE 90.1-2016 (Please complete Section B)  
 NECB-2015 (Please complete Section C)  
 Energy Step Code (Please complete Section D)  
 Other (Please specify and complete Section B, C, or D based on base regulation)  
 Specific Energy Regulation Pursued: \_\_\_\_\_

**Section B: ASHRAE 90.1 2016**

Section	Compliance Pathway (please check)	Name of Responsible Registered Professional of Record
5 – Building Envelope	<input type="checkbox"/> Mandatory + Prescriptive <input type="checkbox"/> Mandatory + Trade-off <input type="checkbox"/> Mandatory + ECB	
6 – HVAC	<input type="checkbox"/> Simplified Approach <input type="checkbox"/> Mandatory + Prescriptive <input type="checkbox"/> Mandatory + ECB	
7 – Service Water Heating	<input type="checkbox"/> Mandatory + Prescriptive <input type="checkbox"/> Mandatory + ECB	
8 – Power	<input type="checkbox"/> Mandatory	
9 – Lighting	<input type="checkbox"/> Mandatory + Building Area <input type="checkbox"/> Mandatory + Space by Space <input type="checkbox"/> Mandatory + ECB	
10 – Other Equipment	<input type="checkbox"/> Mandatory	
<b>OR</b>		
11 – ECB Method	<input type="checkbox"/> Energy Cost Budget	
<b>OR</b>		
Appendix G – Performance Rating Model		

**Section C: National Energy Code of Canada for Buildings (NECB) 2015**

Part	Compliance Pathway (please check)	Name of Responsible Registered Professional of Record
3 – Building Envelope	<input type="checkbox"/> Prescriptive <input type="checkbox"/> Prescriptive + Simple Trade-off <input type="checkbox"/> Prescriptive + Detailed Trade-off	
4 – Lighting	<input type="checkbox"/> Prescriptive <input type="checkbox"/> Prescriptive + Trade-off	
5 – HVAC	<input type="checkbox"/> Prescriptive <input type="checkbox"/> Trade-off	
6 – Service Water Heating Systems	<input type="checkbox"/> Prescriptive <input type="checkbox"/> Trade-off	
7 – Electrical Power Systems and Motors		
<b>OR</b>		
8 – Building Energy Performance Compliance Path		

**Section D: Energy Step Code**

Energy Step Pursued: \_\_\_\_\_  Low Carbon Building Energy System (refer to bulletin Building-40).

Degree – Days Below 18°C: \_\_\_\_\_

Compliance Pathway (please check)	Equipment and Systems – Maximum Total Energy Use Intensity (kWh/m <sup>2</sup> .year)	Building Envelope – Maximum Thermal Energy Demand Intensity (kWh/m <sup>2</sup> .year)	Name of Responsible Registered Professional of Record
Table 10.2.3.3. <input type="checkbox"/> A <input type="checkbox"/> F <input type="checkbox"/> B <input type="checkbox"/> G <input type="checkbox"/> C <input type="checkbox"/> H <input type="checkbox"/> D <input type="checkbox"/> I <input type="checkbox"/> E <input type="checkbox"/> J			
Sentence 10.2.3.3.(3) Passive House			
<input type="checkbox"/> Energy Intensity Report attached as per Division C, Subsection 2.2.9.2.			

All the applicable supporting documents are included as attachments.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Company Name: \_\_\_\_\_

Date Signed: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

(affix professional seal)



[www.richmond.ca](http://www.richmond.ca)

*This form is to be completed if an application is seeking to comply with Subsection 10.2.3. – Energy Step Code. This form is to be completed by the Coordinating Registered Professional and submitted at the time of permit application.*

**Project Address:** \_\_\_\_\_

**Building Permit Application No.** \_\_\_\_\_

### As per Division C, Subsection 2.2.9.2

Energy Step Pursued: \_\_\_\_\_

Submission Requirement	Design Value (kWh/m <sup>2</sup> /yr)
Total Energy Use Intensity	
Energy Use Intensity – Space Heating	
Energy Use Intensity – Space Cooling	
Energy Use Intensity – Service Water Heating	
Energy Use Intensity – Lighting	
Energy Use Intensity – Other Plug Loads	
Thermal Energy Demand Intensity	
Air Leakage Rate:	
Modelled*:	
Tested:	

*\* Note: Applications demonstrating compliance with Step 1 of the Energy Step Code are not required to provide modelled air leakage rates.*

The undersigned has coordinated the design of the above-mentioned project to substantially comply with the requirements of item(s) indicated above in support for the project’s overall compliance with Subsection 10.2.3 of the 2018 BC Building Code.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Company Name: \_\_\_\_\_

Date Signed: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

(affix professional seal)



*This form is to be completed by the Coordinating Registered Professional or Registered Professional of Record and submitted prior to final inspection for all building permits subject to the Part 10 Energy Efficiency Requirements in the BC Building Code.*

**Project Address:** \_\_\_\_\_

**Building Permit Application No.** \_\_\_\_\_

Energy Regulation Pursued (*please check*):

ASHRAE 90.1-2016

NECB-2015

Energy Step Code

The undersigned has reviewed the above-mentioned project to verify that the project has been substantially completed according to the intended design of the project, which was designed to meet the requirements of the above-mentioned Energy Regulation, as detailed in the *BC Building Code* and the City of Richmond *Building Regulation Bylaw*.

Our reviews have now been completed in a satisfactory manner. Therefore, we give our assurance that the above-noted project should, based on our knowledge and practices, meet the minimum requirements of the indicated Energy Regulation pursued, as intended for this project.

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Company Name: \_\_\_\_\_

Date Signed: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

(affix professional seal)