BC STEP CODE COMPLIANCE CHECKLIST - PERFORMANCE PATHS FOR PART 9 BUILDINGS

A: PROJECT INFORMATION

Building Permit #:	
Builder:	Xquimalt Developments Ltd.
Project Address:	850 Colville
Municipality / District:	Esquimalt
Postal Code:	V9A4P1
PID or Legal Description:	

As Built

Building Type

Single Detached

# of Dwelling Units: 1

B: CODE COMPLIANCE SUMMARY

BC Building Code Performance Compliance Path:

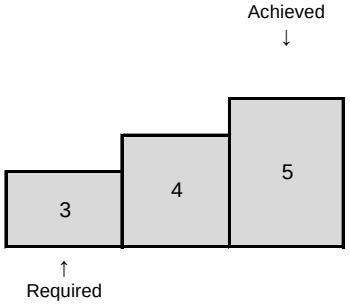
9.36.6. BC Energy Step Code ERS

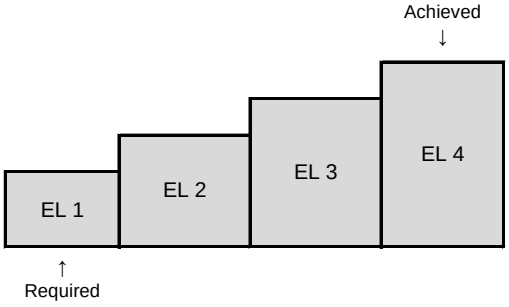
Energy Step Code

Step Required	Step Achieved
3	**5**

Zero Carbon Step Code

Level Required	Level Achieved
EL 1 - Measure Only	**EL 4 - Zero Carbon**





Based on info provided by the builder & drawings prepared by: Xquimalt Developments

Site Visit Date 2023-09-20

C: COMPLETED BY

Full Name (Print):	Brandon Molitwenik	Date (YYYY-MM-DD):	2023-09-28
Company Name:	Bernhardt Contracting	Service Organisation	CHBA BC
Phone:	250-857-2432	Energy Advisor ID #	51H2
Address:	1535 Oak Crest Dr Victoria BC V8P 1K7	CODECO placed in Field 8 of H2K	x
Email:	brandon@bernhardtcontracting.com		

N File # 51A2

D: BUILDING CHARACTERISTICS SUMMARY

	Details (Assembly / System Type / Fuel Type / Etc.)	Average Effective RSI
Roof / Ceilings	Vaults: 2x4 @ 24" OC, R14 Batt W/ 6" Polyiso Exterior Flat Ceiling: CWJ @ 19" OC, R44 batt, 0-2" Polyiso Slope	7.27 7.51
Above Grade Walls	2x6 @ 16" OC, R22 Batt, 2" Ext. Rockwool, Rainscreen	5.05
Rim Joists / Floor Headers and Lintels	R22 Batt. 2" Rockwool Exterior, Rainscreen	5.17
Floors Over Unheated Space	N/A	
Walls Below Grade	8" ICF Wall R22	3.82
Slabs	4" Concrete, 3" EPS II underslab	2.10

		Performance Values	
		USI	**SHGC**
Windows and glazed doors	Triple Glaze, Vinyl Frame, Argon Filled	1.25	0.40
Doors	Steel Polystyrene Core	**RSI**	0.98
Air Barrier System & Location	Ceilings: Peel and stick WRB Walls: Interior Sealed Poly OR Peel and stick WRB	**ACH** **NLA** **NLR**	0.67 0.29 0.23
Space Heating/ Cooling	Principal Air Source Heatpump Supplementary	**HSPF** **SEER**	9.50 19.00
Domestic Hot Water	Electric Conserver Tank	**%Eff**	95.00
Ventilation	HRV	**% EFF** 75.00	**L/s** 28.00
Other			
Fossil Fuels	The building including all units has NO fossil fuel use or infrastructure		

E: 9.36.5. ENERGY PERFORMANCE COMPLIANCE

Complete this section if using the Energy Performance Compliance Path in Subsection 9.36.5.

Proposed House Energy Consumption (GJ/year)	
HVAC	
DHW Heating	
SUM	**0**

Reference House Rated Energy Target (GJ/year)	
HVAC	
DHW Heating	
SUM	**0**

The airtightness value used in the energy model calculations for the Proposed house is:

Or Tested At: 0.67

The above calculation was performed in compliance with Subsection 9.36.5. of Division B:

F: 9.36.6. ENERGY STEP CODE COMPLIANCE

As Built House Rated Energy Consumption (GJ/year): 18

Reference House Rated Energy Target (GJ/year): 42

Proposed House Metrics	Unit	As Built Step Requirements		As-built Calculations: As-built House Result	As-built Calculations: As-built House Pass or Fail
Step Code Level	Step 3, 4 or 5	5			
Mechanical Energy Use Intensity (MEUI)	kWh/(m²·year)	40	*(max)*	31	Pass
% Improvement	%	70	*(min)*	56	
Thermal Energy Demand (TEDI)	kWh/(m²·year)	19	*(max)*	12	Pass
% Heat Loss Reduction	%	40	*(min)*	38	
Airtightness in Air Changes per Hour at 50 Pa differential	ACH @ 50 Pa	1	*(max)*	0.7	Pass
Normalized Leakage Area (NLA_{10})	10 Pa (cm²/m²)	0.48	*(max)*	0.3	
Normalized Leakage Rate (NLR_{50})	L/s/m²	0.35	*(max)*	0.2	
				Step Code Requirements Met:	Yes

Software Used: Hot 2000 Version: 11.11

Heated Floor Area (m^2) 165.30 Climate Data (Location): ESQUIMALT HARBOUR

Building Volume (m^3) 506.60 Degree Days Below 18°C (HDD): 2900

FWDR: 16.8% % Of Space Cooled More than 50%

G: ZERO CARBON STEP CODE

Proposed House Metrics		Unit	Proposed Level Requirement		Proposed Calculations: Proposed House Result	Proposed Calculations: Proposed House Pass or Fail
Zero Carbon Step Code Level		EL-1 - EL-4	EL 4 - Zero Carbon			
Total GHG		kg CO_{2e}/ year	265	*(max)*	134	Pass
CO_{2e} per floor area with max	Per Floor area	kg CO_{2e}/m²/year	#N/A	*(max)*	0.8	Pass
	Max	kg CO_{2e}	#N/A	*(max)*	134	
Perscriptive		Heating	#N/A		Zero Carb	Pass
		Hot Water	#N/A		Zero Carb	
		All building systems,equipment and appliances	#N/A		Zero Carb	
				Target Reached		Yes