

# Plan Checking & Building Inspections for Step Code Compliance



# Learning Outcomes



- **Building Official Roles and Responsibilities**
  - **Reviewing & Approving Building Permit Applications**
  - **Reviewing and Approving on Site Compliance**



# Applicable Code Sections



*SFD* w/ or w/o a *Secondary Suite*,  
*Row-houses*, Buildings containing  
 only dwelling units with common  
 spaces ≤ 20% of building's total floor  
 area, and *Duplexes*

**9.36. (ESC) /  
 9.37. ZCSC**

***Part 3 Occupancies:***

C-Occupancies, D-Occupancies,  
 E-Occupancies, A-Occupancies,  
 and B-Occupancies

**Refer to Part 10 for  
 ESC / NECB and ZCSC**



***C – Occupancy:***  
 Residential  
 (apartments,  
 hotels,  
 dormitories)



***D – Occupancy:***  
 Personal service  
 (offices)



***E – Occupancy:***  
 Mercantile (stores,  
 displaying or selling  
 retail goods)

**Refer to Part 10 for ESC and  
 ZCSC target metrics**

***F3– Occupancy:*** Low-  
 hazard Industrial (storage  
 garages, workshops)

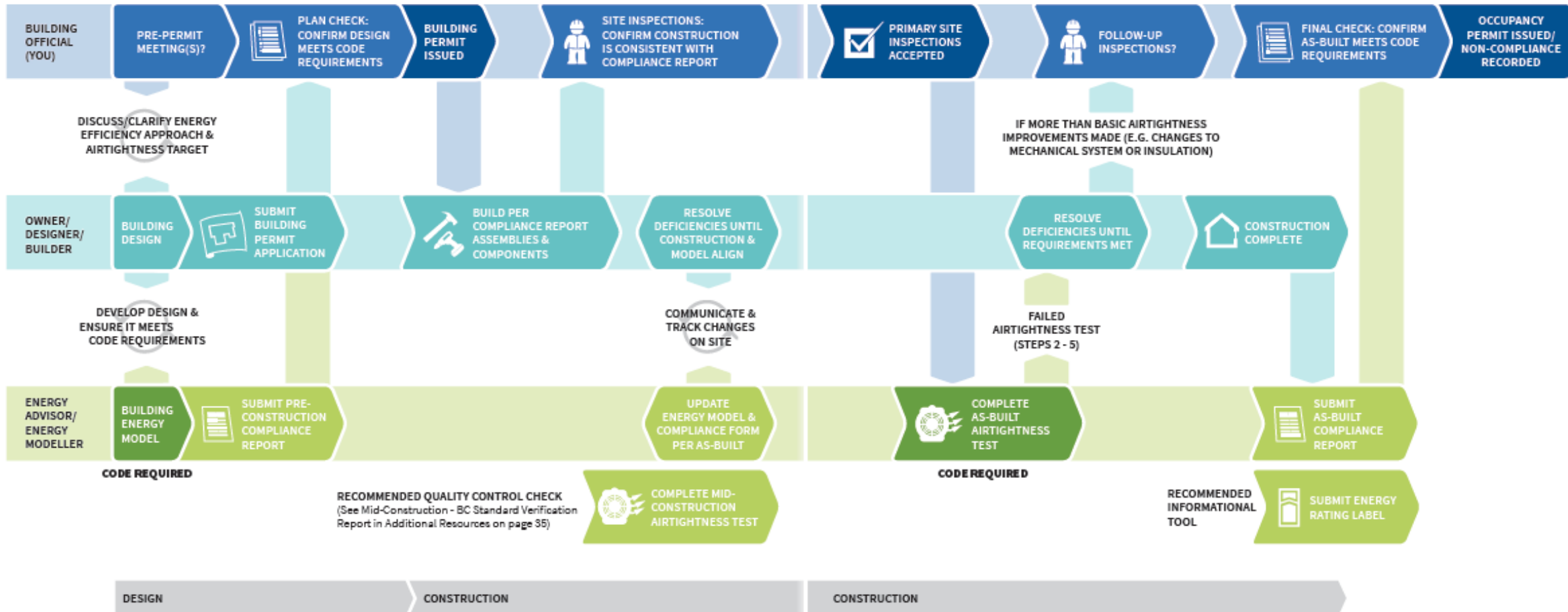
***F2 – Occupancy:***  
 Medium-hazard Industrial  
 (service stations, aircraft  
 hangar)

**Refer to Part 10  
 OR NECB**

# What are Building Officials looking at / for?



## Typical ESC Compliance/Permitting Process (Part 9)





# Permit Application Review



## D: BUILDING CHARACTERISTICS SUMMARY

	Details (Assembly / System Type / Fuel Type / Etc.)	Average Effective RSI	
		USI	SHGC
Roof / Ceilings	Eng Roof Trusses @ 24" o/c R-50 insulation	8.90	
Above Grade Walls	2x6" wood studs @24" o/c R-22 Batts, 2" exterior Rockwool	5.36	
Rim Joists / Floor Headers and Lintels	Rim Joist: R-24 Spray Foam + 2" Rockwool	5.34	
Floors Over Unheated Space	11 7/8 TJI floor joists 16" o/c R-28	4.96	
Walls Below Grade	ICF, 8" concrete	3.73	
Slabs	None		
Windows and glazed doors	Windows: Double glazed windows, low-e argon fill Doors: Double glazed windows, low-e argon fill	Performance Values	
		USI	SHGC
		1.48	0.30
		1.48	0.30
Doors	Fibreglass polystyrene Core	RSI	0.85
Air Barrier System & Location	Exterior: Building house wrap Interior: 6mm Poly vapor barrier	ACH	2.50
		NLA	1.08
		NLR	0.80
Space Heating/ Cooling	Principal Air source heat pump Supplementary Gas furnace	HSPF	7.00
		SEER	14.00
		AFUE	0.96
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			





# Permit Application Review





# Permit Application Review

Checklist Last Updated: 2024-01-30

Page 3

Report Last Updated: 6/19



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



Page 2

Report Last Updated: 2023-05-25

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		NLR	0.80
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		SEER	14.00
		AFUE	0.96
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			

## 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)	Reference House Rated Energy Target (GJ/year)
0	HVAC
	DHW Heating
	<b>SUM</b>
	0

value used in the energy model calculations for the Proposed house is:  2.50

ulation was performed in compliance with Subsection 9.36.5. of Division B:

## ENERGY STEP CODE COMPLIANCE

Proposed House Rated Energy Consumption (GJ/year):  21 Reference House Rated Energy Target (GJ/year):  32

Proposed House Metrics	Unit	Proposed Step Requirement	Proposed Calculations	
			Proposed House Result	Proposed House Pass or Fail
Use Intensity (MEUI)	kWh/(m <sup>2</sup> ·year)	108 (max)	61	Pass
Load Intensity (LEUI)	kWh/(m <sup>2</sup> ·year)	10 (min)	35	Pass
Thermal Transmittance (TEDI)	kWh/(m <sup>2</sup> ·year)	45 (max)	36	Pass
Air Change Rate	ACH @ 50 Pa	2.5 (max)	2.50	Pass
Water Consumption Rate	L/s/m <sup>2</sup>	1.2 (max)	1.05	Pass
		0.89 (max)	0.78	
Step Code Requirements Met:			Yes	

Version Used:  Hot 2000 Version:  11.11

Area (m<sup>2</sup>):  96.80 Climate Data (Location):  NELSON

Volume (m<sup>3</sup>):  288.90 Degree Days Below 18°C (HDD):  3482

Area (m<sup>2</sup>):  240.10 % Of Space Cooled:  More than 50%

FWDR:  17.7%

## ENERGY STEP CODE

Proposed House Metrics	Unit	Proposed Level Requirement	Proposed Calculations	
			Proposed House Result	Proposed House Pass or Fail
Code Level	EL-1 - EL-4	EL 1 - Measure Only	625	Pass
Floor area	kg CO <sub>2e</sub> /year	NA (max)	6	Pass
Peak	kg CO <sub>2e</sub>	NA (max)	625	Pass
	Heating	NA	Carbon	
	Hot Water	NA	Carbon	Pass
All building systems, equipment and appliances			Zero Carb	
Target Reached:			Yes	

## A: PROJECT INFORMATION

Building Permit #:

Builder:

Project Address:

Municipality / District:

Postal Code:

PID or Legal Description:

Building Type:  As Built

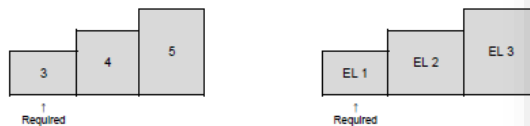
Select One

# of Dwelling Units:

## B: CODE COMPLIANCE SUMMARY

BC Building Code Performance Compliance Path:  
9.36.6. BC Energy Step Code ERS

Energy Step Code Step Required	Zero Carbon Step Code Level Required
3	EL 1 - Measure Only
Step Achieved	Level Achieved
Data not yet entered	Data not yet entered



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

## C: COMPLETED BY

Full Name (Print):  Date (YYYY-MM-DD):

Company Name:  Service Organisation:

Phone:  Energy Advisor ID #:

Address:  CODECO placed in F:

Email:

N File #

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As Built Checklist

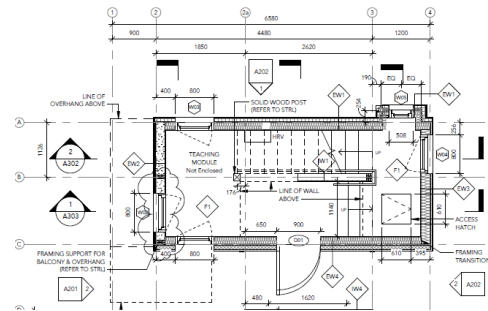
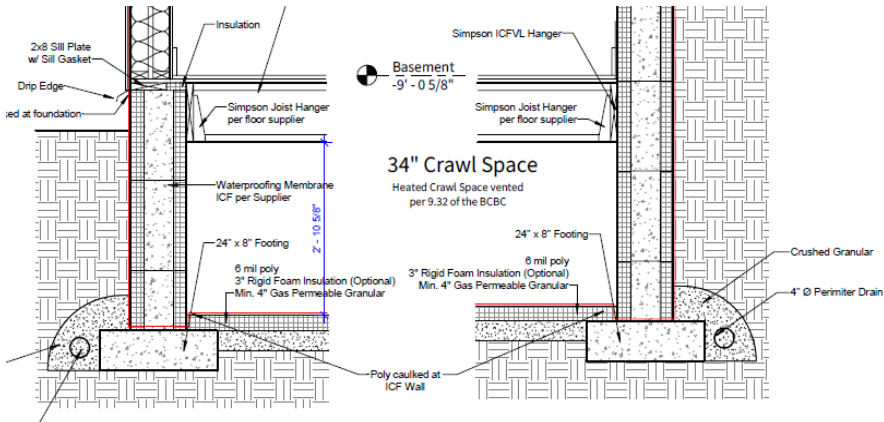
# Permit Application Review

## D: BUILDING CHARACTERISTICS SUMMARY

Review drawings and specifications align with Pre-Construction Report including at a minimum the following:

- effective R-values
- window specifications
- air barrier strategy
- equipment efficiencies

Encourage Designers to include **RED LINE** details in drawing packages to illustrate the continuity of the air barrier at critical junctions and assemblies.



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Windows and glazed doors	Windows: Double glazed windows, low-e argon fill	1.48	0.30
	Doors: Double glazed windows, low-e argon fill	1.48	0.30
Doors	Fibreglass polystyrene Core	RSI	0.85
Air Barrier System & Location	Exterior: Building house wrap	ACH	2.50
	Interior: 6mm Poly vapor barrier	NLA	1.08
		NLR	0.80
Space Heating/ Cooling	Principal	HSPF	7.00
	Air source heat pump	SEER	14.00
	Supplementary	AFUE	0.96
Domestic Hot Water		% EFF	L/s
	Heat Recovery Ventilator	65%@OC	49.00
Ventilation			
Other			
Fossil Fuels			

The Pre-construction Form complies with most recent version. You can find the most up to date version of compliance forms at [www.stepcode.ca](http://www.stepcode.ca)

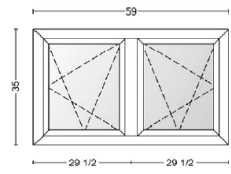
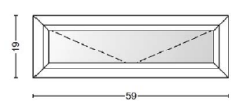
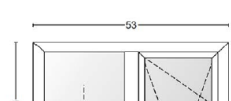


# Permit Application Review

WINDOW SCHEDULE										
Location	Level	Number	Type	Width (mm)	Height (mm)	Rough Width (mm)	Rough Height (mm)	Sill Height (mm)	Operation	Comments
Teaching Module	LEVEL 1	W01	A	800	1200	825	1225	700	Tilt & Turn	
Teaching Module	LEVEL 1	W02	A	800	1200	825	1225	700	Tilt & Turn	
Teaching Module	LEVEL 1	W03	A	800	1200	825	1225	700	Tilt & Turn	
Teaching Module	LEVEL 1	W04	A	800	1200	825	1225	900	Tilt & Turn	
Teaching Module	LEVEL 1	W05	B	500	1200	525	1225	900	Fixed	
Teaching Module	LEVEL 2	W06	A	800	1200	825	1225	700	Tilt & Turn	
Teaching Module	LEVEL 2	W07	A	800	1200	825	1225	700	Tilt & Turn	
Teaching Module	LEVEL 2	W08	A	800	1200	825	1225	700	Tilt & Turn	
Teaching Module	LEVEL 2	W09	A	800	1200	825	1225	700	Tilt & Turn	
Teaching Module	LEVEL 2	W10	C	400	1000				Skylight	

Vestibule 01	LEVEL 1	W11	D	0	0	840	1245	700	Rough Opening	For Existing Cascade Window
Vestibule 01	LEVEL 1	W12	D	0	0	840	1245	700	Rough Opening	For Existing Cascade Window
Vestibule 01	LEVEL 1	W13	D	0	0	840	1245	700	Rough Opening	For Existing Cascade Window

Vestibule 02	LEVEL 1									
Vestibule 02	LEVEL 1									
Vestibule 02	LEVEL 1									
Vestibule 02	LEVEL 2									
Vestibule 03	LEVEL 1									
Vestibule 03	LEVEL 1									
Vestibule 03	LEVEL 1									

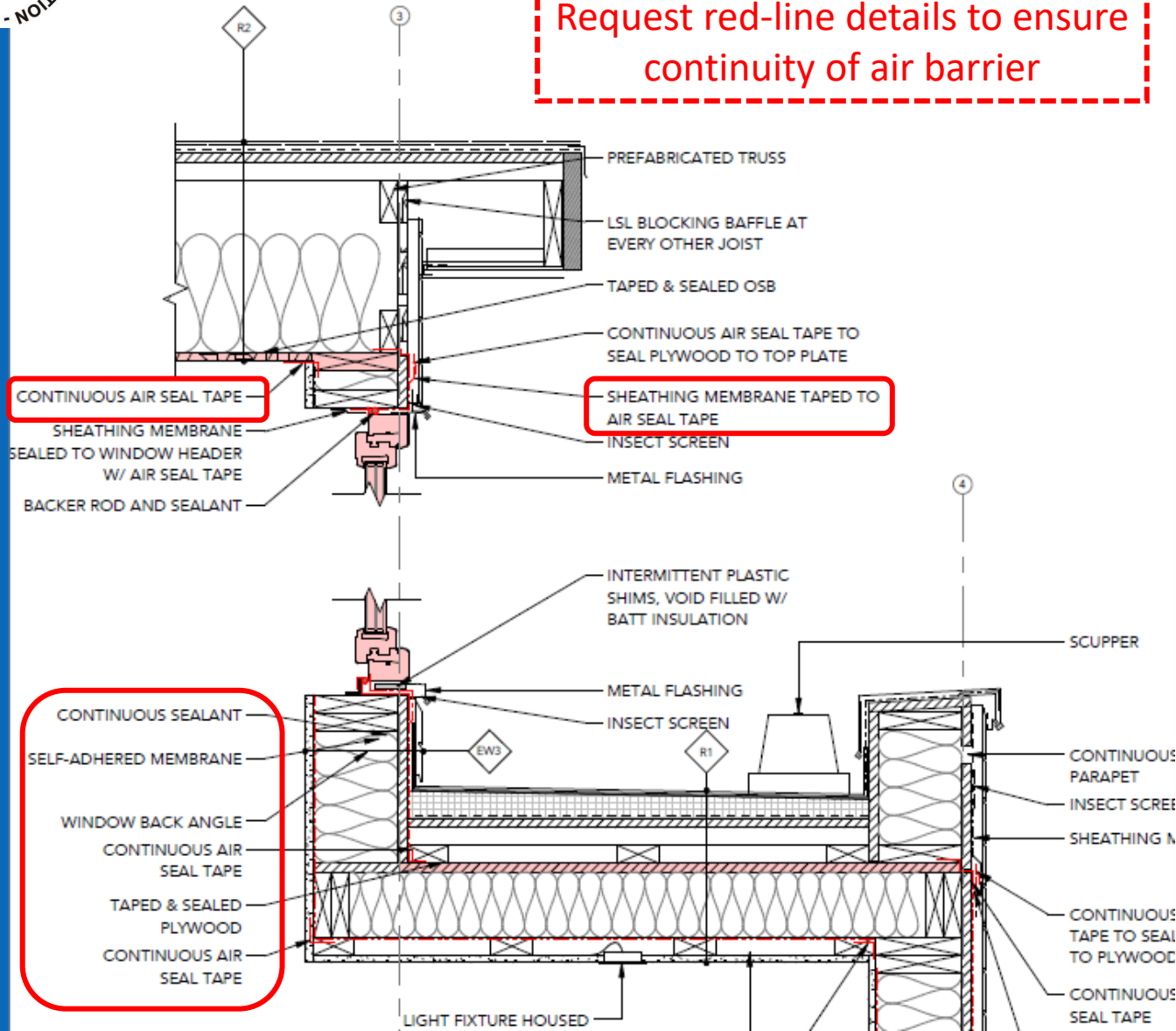
Item	Qty	Description	unit price	Total
2	1	<p><b>Thermo+ 4700 Series - Window</b>                      Outer dimension: W: 59 x H: 35 inch                      Type: Roto Frank Hardware                      Division Dimension                      Color: Ext: White / Int: White                      4mm E270 Ann/ 5/8"ARG/4mm Clr Ann/ 5/8" ARG/4mm E270 Ann                      Field 1: Left Hinge Tilt &amp; Turn Window                      Field 2: Right Hinge Tilt &amp; Turn Window                      Technical Options: Hinge Color: "White", No exterior extension , Weight: "40.81 "kg, 1, J , N, Area: "14.34 "sqft. , Y, Ext: "White" / Int: "White"                      NT RL HNDL 43MM SILVER , Qty:1                      NT RL HNDL 43MM SILVER , Qty:1                      Series 4700 Fly Screen GENE White ,.652, X769                      Series 4700 Fly Screen GENE White ,.652, X769</p>  <p>View from Exterior</p>		
3	1	<p><b>Thermo+ 4700 Series - Window</b>                      Outer dimension: W: 59 x H: 19 inch                      Type: Roto Frank Hardware                      Color: Ext: White / Int: White                      4mm E270 Ann/5/8"Arg/5mm Satin Etch Ann/5/8"Arg/4mm E270 Ann                      Tilt Only Left Hinge Window                      Technical Options: Hinge Color: "White", No exterior extension , Weight: "26.12 "kg, 1, J , N, Area: "7.78 "sqft. , Y, Ext: "White" / Int: "White"                      NT RL HNDL 43MM SILVER , Qty:1                      Series 4700 Fly Screen GENE White ,.1379, X363</p>  <p>View from Exterior</p>		
4	1	<p><b>Thermo+ 4700 Series - Window</b>                      Outer dimension: W: 53 x H: 35 inch                      Type: Roto Frank Hardware                      Division Dimension                      Color: Ext: White / Int: White                      4mm E270 Ann/ 5/8"ARG/4mm Clr Ann/ 5/8" ARG/4mm E270 Ann                      Field 1: Picture Window                      Field 2: Right Hinge Tilt &amp; Turn Window                      Technical Options: Hinge Color: "White", No exterior extension , Weight: "34.66 "kg, 1, J , N, Area: "12.88</p>  <p>View from Exterior</p>		

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Slabs	None		
Windows and glazed doors	Windows: Double glazed windows, low-e argon fill Doors: Double glazed windows, low-e argon fill	RSI	0.85
		ACH	2.50
Air Barrier System & Location	Exterior: Building house wrap Interior: 6mm Poly vapor barrier	NLA	1.08
		NLR	0.80
Space Heating/ Cooling	Principal Air source heat pump Supplementary Gas furnace	HSPF	7.00
		SEER	14.00
		AFUE	0.96
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			

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Request red-line details to ensure continuity of air barrier

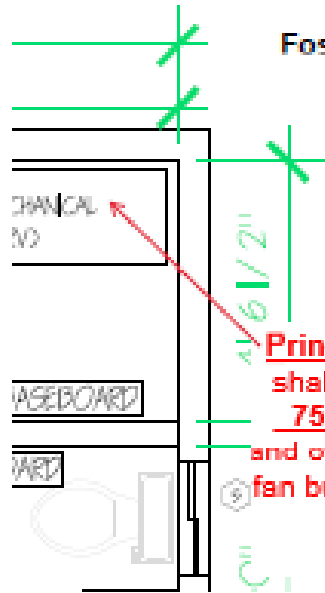


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Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			

# Permit Application Review

Domestic Hot Water	Electric DHW	AFUE	
		EF	0.88
Ventilation	CRV: Central Re-circulating Ventilator	% EFF	L/s
		-	28.00
Other			
Fossil Fuels			



**Principal Ventilation System Exhaust Fan** shall run continuously, and provide at least **75 cfm** air-flow rate, have 2 settings (on and off) and a manual reset button.

**9.32.3.5. PRINCIPAL VENTILATION SYSTEM SHALL BE MIN. 35 L/s (75cfm)**

**Table 9.32.3.5.**  
Principal Ventilation System Exhaust Fan Minimum Air-flow Rate  
Forming Part of Sentence 9.32.3.5.(1)

Floor Area, m <sup>2</sup>	Minimum Air-flow Rate, L/s				
	Number of Bedrooms				
	0-1	2-3	4-5	6-7	> 7
< 140	14	21	28	35	42
140-280	21	28	35	42	49
281-420	28	35	42	49	56

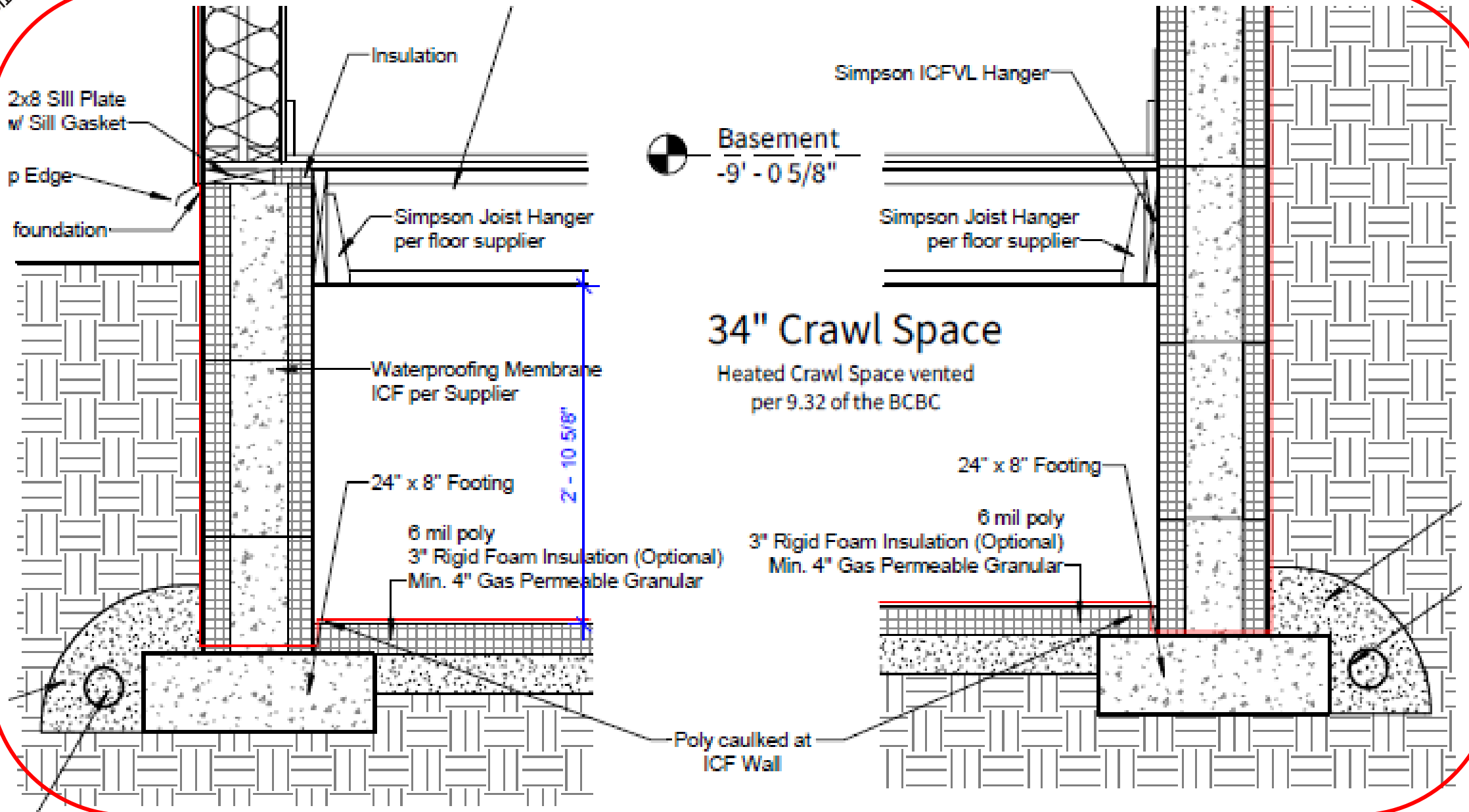




# Permit Application Review



# Permit Application Review







# Permit Application Review







# Permit Application Review





# Permit Application Review







# Permit Application Review

## BC ENERGY STEP CODE & ZERO CARBON STEP CODE PART 3 BUILDINGS ENERGY DESIGN CHECKLIST - v3.0

This Energy Design Checklist v3.0 is endorsed by: Architectural Institute of British Columbia, and Engineers and Geoscientists BC

This reporting form is for buildings that contain major occupancies complying with Subsection 10.2.3. and 10.3.1 of Division B of the BC Building Code 2018 Revision 5. This is intended to capture the reporting requirements of Articles 2.2.2.1. and 2.2.9.2. of Division C of the BC Building Code, as well as local government bylaw requirements related to energy and emissions reductions in buildings. Portions of the building that are subject to Clause 10.2.2.1.(1)(a) or (b) of Division B of the BC Building Code should also be included in this report.  
This form should not be used for projects complying exclusively under Clauses 10.2.2.1.(1)(a) and (b) of Division B of the BC Building Code or for earlier revisions of the Code.

All sections of this form are to be completed. Complete all fields that apply to the project, using information that represents the current stage of design or construction. For fields that do not apply or for which there is no information yet, please leave blank, indicate "n/a" or provide comment. Additional explanation or instruction is provided for some cells by hovering over the cell - these are indicated by a red note symbol in the upper right corner of the cell.

### SECTION A: Project Information

Project Name (if applicable)	
Project Address	
Project Stage	
Project Identifier (e.g. Building Permit No.)	
Building Permit Date (YYYY-MM-DD)	
Building Height (storeys)	
Total Modelled Floor Area (m <sup>2</sup> )	
Applicable Version of the BC Building Code	
Jurisdiction	
Heating Degree Days below 18°C	
Climate Zone	

### SECTION B: Building Information and Performance Requirements - Buildings with a Baseline/Reference

Only complete if applicable

Occupancy Classification(s)	Modelled Floor Area (m <sup>2</sup> )	Performance Requirement	% Better Requirement	Optional: Source of Performance Requirement
<b>Total Modelled Floor Area (m<sup>2</sup>)</b>	<b>0</b>			

### Baseline/Reference Energy Model Performance

Total Annual Thermal Energy Demand (kWh)

Annual Energy (kWh)	Emissions Factor (kgCO <sub>2</sub> e/kWh)	Emissions (kgCO <sub>2</sub> e)
Total Electricity	0.011	0
Total Natural Gas	0.180	0
Total District Energy	0.000	0
Total Other 1	0.000	0
Total Other 2	0.000	0
Total Other 3	0.000	0
<b>Total Annual Energy</b>	<b>0</b>	<b>Total Annual Emissions 0</b>

### BASELINE PERFORMANCE REQUIREMENTS

TEUI	TEDI	GHGI
kWh/m <sup>2</sup> /year	kWh/m <sup>2</sup> /year	kgCO <sub>2</sub> e/m <sup>2</sup> /year
0	0	0.0

### SECTION C: Building Information and Performance Requirements - Steps 2 through 4

Only complete if applicable

Occupancy Classification(s)	Modelled Floor Area (m <sup>2</sup> )	Step Required	GHG Emissions Level	Optional: Source of Step Requirement	STEP CODE PERFORMANCE REQUIREMENTS		
					TEUI	TEDI	GHGI
					kWh/m <sup>2</sup> /year	kWh/m <sup>2</sup> /year	kgCO <sub>2</sub> e/m <sup>2</sup> /year
<b>Total Modelled Floor Area (m<sup>2</sup>)</b>	<b>0</b>				<b>0</b>	<b>0</b>	<b>0.0</b>

### SECTION D: Total Building Performance Requirements from SECTION B and SECTION C

### WHOLE BLDG PERFORMANCE REQUIREMENTS

TEUI	TEDI	GHGI
kWh/m <sup>2</sup> /year	kWh/m <sup>2</sup> /year	kg CO <sub>2</sub> e/m <sup>2</sup> /year
-	-	-

### SECTION E: Summary of Building Performance Characteristics / Modelled Inputs

Software Used			
Simulation Weather File			
Document References	Document(s) Name and Issued For	Date Issued	Prepared By (Company)
Architectural Drawing Set			
Mechanical Drawing Set			
Electrical Drawing Set			
Other			
Other			
Other			
Modelled Above-Ground Wall Area (m <sup>2</sup> )		Vertical facade-to-Floor Area Ratio (VFAR)	-
Window-to-Wall Area Ratio (WWR)		Window-to-Floor Area Ratio	-
Assumed Design Airtightness (L/s·m <sup>3</sup> @ 75 Pa)		Tested Airtightness (L/s·m <sup>3</sup> enclosure @ 75 Pa)	
Modelled Infiltration Rate (L/s·m <sup>2</sup> facade)		As-Built Modelled Infiltration Rate (L/s·m <sup>2</sup> facade)	
Average Wall Clear Field R-Value (m <sup>2</sup> /K)	0.0 (ft <sup>2</sup> ·h <sup>2</sup> /Btu)	Average Wall Effective R-Value (m <sup>2</sup> /K)	
Average Roof Clear Field R-Value (m <sup>2</sup> /K)	0.0 (ft <sup>2</sup> ·h <sup>2</sup> /Btu)	Average Roof Effective R-Value (m <sup>2</sup> /K)	
Average Window Effective U-Value (W/m <sup>2</sup> /K)	0.00 (Btu/ft <sup>2</sup> ·h <sup>2</sup> /F)	Average Window Solar Heat Gain Coefficient	
Average Occupant Density (m <sup>2</sup> /pers)		Average Lighting Power Density (W/m <sup>2</sup> )	
Average Ventilation Rate (L/s·m <sup>3</sup> )		Total Building DHW Low-Flow Savings (%)	
Is demand control ventilation used?		Average HRV/ERV Sensible Efficiency	
Plant		System Type	
Heating System Type			
Heating System Description			
Cooling System Type			
Cooling System Description			

### SECTION E: Modelled Building Performance

Compliance indicators in Section E are determined using an area weighted average of all entered occupancies and requirements from Sections B and C.

### Modelled Outputs for Entire Building

	Annual Energy (kWh)	Fuel Type	Emissions Factor (kgCO <sub>2</sub> e/kWh)	Emissions (kgCO <sub>2</sub> e)
Interior Lighting				
Exterior Lighting				
Heating				
Cooling				
Pumps				
Fans				
Domestic Hot Water				
Plug Loads				
Enter other end use here				
Enter other end use here				
Enter other end use here				
Total Electricity	0		0.011	0
Total Natural Gas	0		0.180	0
Total District Energy	0		0.000	0
Total Other 1	0		0.000	0
Total Other 2	0		0.000	0
Total Other 3	0		0.000	0
<b>Total Annual Energy</b>	<b>0</b>		<b>Total Annual Emissions 0</b>	

### Whole Building - Annual Energy for Calculations

Annual Thermal Energy Demand for TEDI (kWh)	-	Step Code Building Portions	
Annual Cooling Energy Demand for CEDI (kWh)	-	Annual Thermal Energy Demand for TEDI (kWh)	
		(kWh/(m <sup>2</sup> ·year))	

### Emissions Factors & Renewable Energy

Description	Emissions Factor (kgCO <sub>2</sub> e/kWh)	Reference Source
Electricity	0.011	BCBC Division B Article 10.3.1.3
Natural Gas	0.180	BCBC Division B Article 10.3.1.3
District Energy System		
Other 1		
Other 2		
Other 3		

If project includes on-site generated renewable electricity for compliance, use this section to determine the applicable adjusted Emissions Factor. Other fuels are to be entered as "Other" fuel types above with corresponding emissions factors and results entries for associated end uses.

Total Electricity Generated On-Site (kWh)		% of Use	0%
Adjusted Electricity Emissions Factor (kgCO <sub>2</sub> e/kWh)	0.011		

### Overheating Requirements

Is Project Subject to Overheating Limits

Overheating Hours Limit: \_\_\_\_\_

Overheating Hours for Worst Case Suite/Zone: \_\_\_\_\_

Building Complies with Overheating Criteria?

### Residential Project Adjustments

Corridor Pressurization Adjustment

Heating Degree Days \_\_\_\_\_

Number of Suite Doors Pressurized \_\_\_\_\_

Airflow for Pressurization per Door (L/s/door) \_\_\_\_\_

Area of Corridors Pressurized (m<sup>2</sup>) \_\_\_\_\_

Make-Up Air Fuel Type \_\_\_\_\_

Make-Up Air Emissions Factor \_\_\_\_\_

Whole Building Adjustment (kWh/m<sup>2</sup>/yr) 0.0

Step Code Portion Adjustment (kWh/m<sup>2</sup>/yr) 0.0

Suite Sub-Metering Adjustment

Is Suite Hydronic Heating Sub-Metered?

Residential Occupancies Heating Energy (kWh) \_\_\_\_\_

Do Step Code Portions Comply with TEDI Requirements

### WHOLE BUILDING PERFORMANCE RESULTS

	TEUI	TEDI	GHGI
	kWh/m <sup>2</sup> /year	kWh/m <sup>2</sup> /year	kg CO <sub>2</sub> e/m <sup>2</sup> /year
Requirements	-	-	-
Results as Modelled	-	-	-
Corridor Pressurization Adjustment	0.0	0.0	0.0
Suite Sub-Metering Adjustment	0	N/A	N/A
Adjusted Whole-Building Performance for Compliance	-	-	-
Does Building Comply?	-	-	N/A
Step Code TEDI Requirement	-	-	-
Step Code TEDI Results as Modelled	-	-	-
Step Code Building Portion Corridor Adjustment	-	-	-
Adjusted Step Code Performance for Compliance	-	-	-
Do Step Code Portions Comply with TEDI Requirements	-	-	-



# Site Inspections and Verification

## D: BUILDING CHARACTERISTICS SUMMARY

	Details (Assembly / System Type / Fuel Type / Etc.)	Average Effective RSI	
		USI	SHGC
Roof / Ceilings	Eng Roof Trusses @ 24" o/c R-50 insulation	8.90	
Above Grade Walls	2x6" wood studs @24" o/c R-22 Batts, 2" exterior Rockwool	5.36	
Rim Joists / Floor Headers and Lintels	Rim Joist: R-24 Spray Foam + 2" Rockwool	5.34	
Floors Over Unheated Space	11 7/8 TJI floor joists 16" o/c R-28	4.96	
Walls Below Grade	ICF, 8" concrete	3.73	
Slabs	None		
		Performance Values	
Windows and glazed doors	Windows: Double glazed windows, low-e argon fill Doors: Double glazed windows, low-e argon fill	USI	SHGC
		1.48	0.30
Doors	Fibreglass polystyrene Core	RSI	0.85
Air Barrier System & Location	Exterior: Building house wrap Interior: 6mm Poly vapor barrier	ACH	2.50
		NLA	1.08
		NLR	0.80
Space Heating/ Cooling	Principal	HSPF	7.00
	Air source heat pump	SEER	14.00
	Supplementary	AFUE	0.96
	Gas furnace		
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			



# Site Inspections and Verification





# Site Inspections and Verification





# Site Inspections and Verification

## D: BUILDING CHARACTERISTICS SUMMARY

	Details (Assembly / System Type / Fuel Type / Etc.)	Average Effective RSI	
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	Supplementary	AFUE	0.96
	Gas furnace		
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			



# Site Inspections and Verification

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	Air source heat pump	SEER	14.00
	Supplementary	AFUE	0.96
	Gas furnace		
Domestic Hot Water			
Ventilation		% EFF	L/s
	Heat Recovery Ventilator	65%@0C	49.00
Other			
Fossil Fuels			





# Site Inspections and Verification

## D: BUILDING CHARACTERISTICS SUMMARY

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	Supplementary	AFUE	0.96
	Gas furnace		
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			







# Site Inspections and Verification

## D: BUILDING CHARACTERISTICS SUMMARY

	Details (Assembly / System Type / Fuel Type / Etc.)	Average Effective RSI	
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		NLR	0.80
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		SEER	14.00
		AFUE	0.96
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
Other			
Fossil Fuels			





# Site Inspections and Verification





# Site Inspections and Verification

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Details (Assembly / System Type / Fuel Type / Etc.)		Average Effective RSI	
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	Air source heat pump	SEER	14.00
	Supplementary	AFUE	0.96
Gas furnace			
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			







# Site Inspections and Verification





# Site Inspections and Verification

## D: BUILDING CHARACTERISTICS SUMMARY

	Details (Assembly / System Type / Fuel Type / Etc.)	Average Effective RSI	
Roof / Ceilings	Eng Roof Trusses @ 24" o/c R-50 insulation	8.90	
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		SEER	14.00
		AFUE	0.96
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			





# Site Inspections and Verification

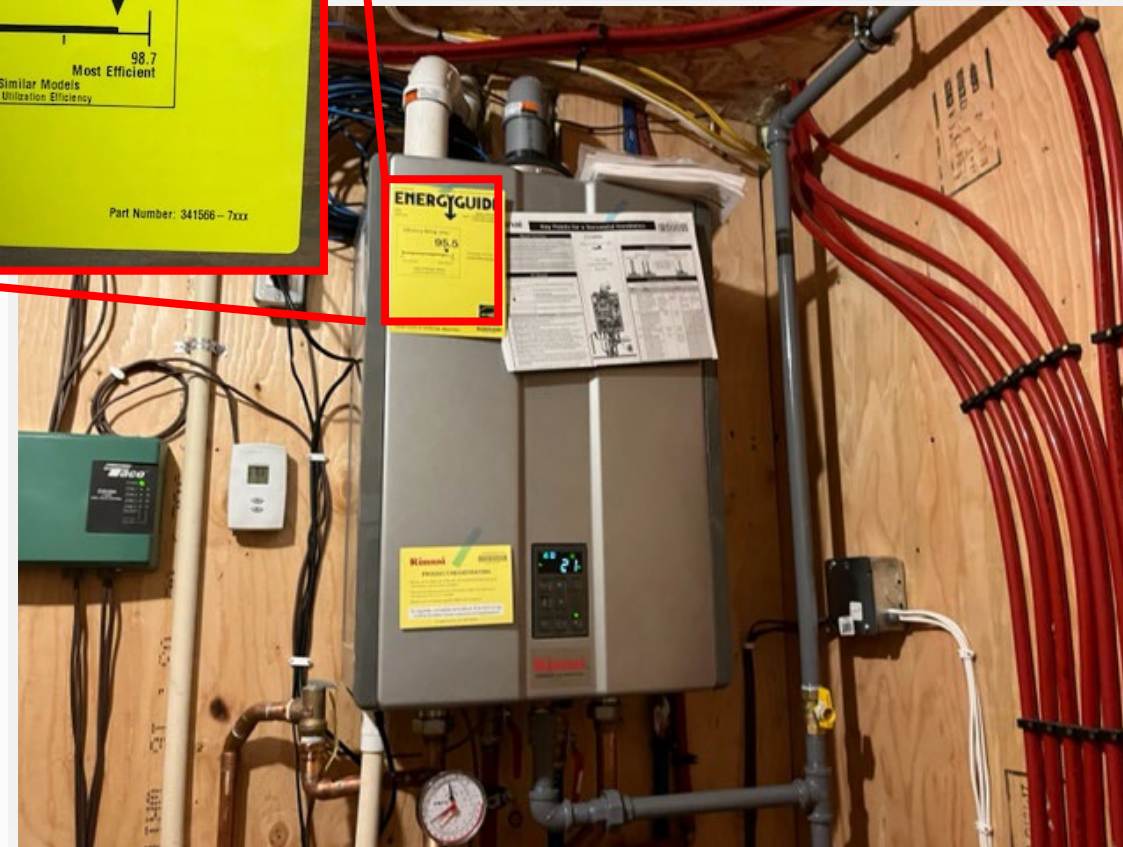
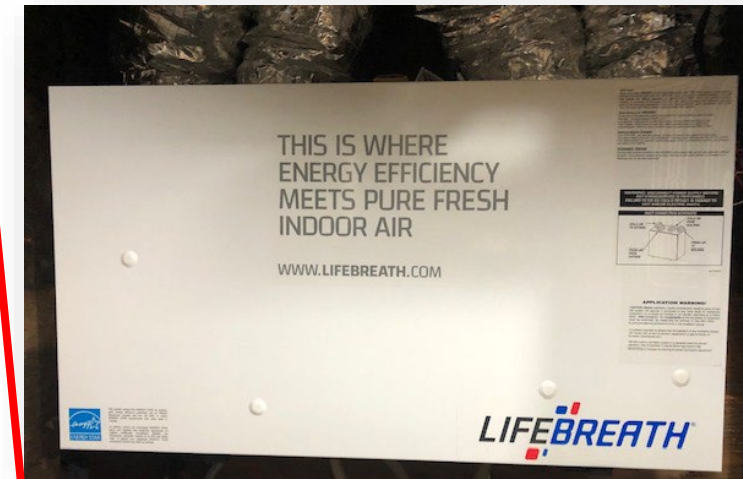
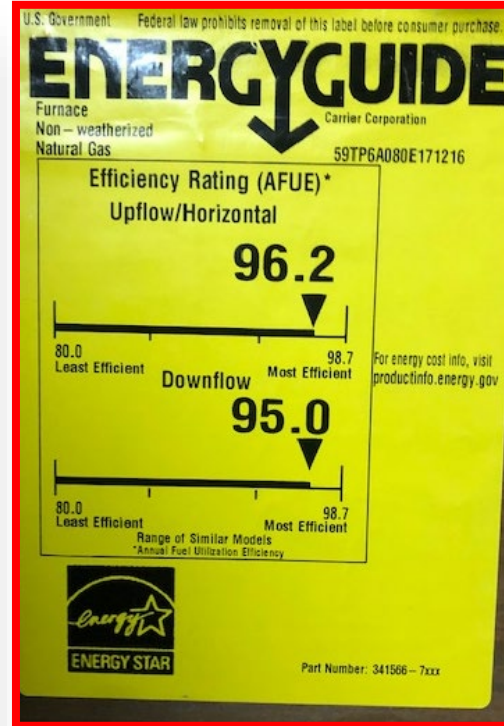




# Site Inspections and Verification

## D: BUILDING CHARACTERISTICS SUMMARY

	Details (Assembly / System Type / Fuel Type / Etc.)	Average Effective RSI	
		USI	SHGC
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Slabs	None		
Windows and glazed doors	Windows: Double glazed windows, low-e argon fill Doors: Double glazed windows, low-e argon fill	Performance Values	
		USI	SHGC
		1.48	0.30
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	Air source heat pump	SEER	14.00
	Supplementary	AFUE	0.96
	Gas furnace		
Domestic Hot Water			
Ventilation	Heat Recovery Ventilator	% EFF	L/s
		65%@0C	49.00
Other			
Fossil Fuels			







# Site Inspections and Verification





# As-Built / Final Verification Prior to Occupancy





# As-Built / Final Verification Prior to Occupancy

Checklist Last Updated: 2024-01-30

Checklist Last Updated: 2024-01-30



## A: PROJECT INFORMATION

Building Permit #: \_\_\_\_\_  
 Builder: \_\_\_\_\_  
 Project Address: \_\_\_\_\_  
 Municipality / District: \_\_\_\_\_  
 Postal Code: \_\_\_\_\_  
 PID or Legal Description: \_\_\_\_\_

**As Built**

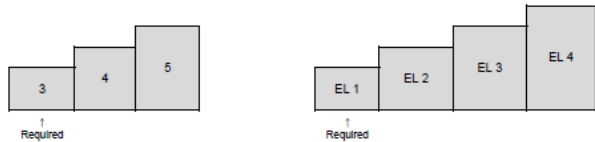
Building Type: \_\_\_\_\_  
 Select One

# of Dwelling Units: \_\_\_\_\_

## B: CODE COMPLIANCE SUMMARY

BC Building Code Performance Compliance Path:  
**9.36.6. BC Energy Step Code ERS**

Energy Step Code	Zero Carbon Step Code
Step Required	Level Required
3	EL 1 - Measure Only
Step Achieved	Level Achieved
<b>Data not yet entered</b>	<b>Data not yet entered</b>



Based on info provided by the builder & drawings prepared by: \_\_\_\_\_  
 Site Visit Date: \_\_\_\_\_

## C: COMPLETED BY

Full Name (Print): \_\_\_\_\_ Date (YYYY-MM-DD): \_\_\_\_\_  
 Company Name: \_\_\_\_\_ Service Organisation: \_\_\_\_\_  
 Phone: \_\_\_\_\_ Energy Advisor ID #: \_\_\_\_\_  
 Address: \_\_\_\_\_ CODECO placed in Field 8 of H2K: \_\_\_\_\_ x  
 Email: \_\_\_\_\_

N File # \_\_\_\_\_

## D: BUILDING CHARACTERISTICS SUMMARY

Details (Assembly / System Type / Fuel Type / Etc.)	Average
Ceilings Eng Roof Trusses @ 24" o/c R-50 insulation	
Exterior Walls 2x6" wood studs @24" o/c R-22 Batts, 2" exterior Rockwool	
Floors / Floor and Lintels Rim Joist: R-24 Spray Foam + 2" Rockwool	
Overhead Space 11 7/8 TJI floor joists 16" o/c R-28	
Foundation ICF, 8" concrete	
Roofs None	
Windows and Glazed Doors Windows: Double glazed windows, low-e argon fill Doors: Double glazed windows, low-e argon fill	
Insulation Fibreglass polystyrene Core	
Envelope System & Vapor Barrier Exterior: Building house wrap Interior: 6mm Poly vapor barrier	
Heating/cooling Principal: Air source heat pump Supplementary: Gas furnace	
Hot Water _____	
Ventilation Heat Recovery Ventilator	65%
Fuels _____	

## 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)		Reference House Rated Energy Target (GJ/year)	
HVAC		HVAC	
DHW Heating		DHW Heating	
<b>SUM</b>	<b>0</b>	<b>SUM</b>	<b>0</b>

The airtightness value used in the energy model calculations for the Proposed house is: \_\_\_\_\_  
 Or Tested At: #DIV/0!

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): \_\_\_\_\_  
 Reference House Rated Energy Target (GJ/year): \_\_\_\_\_

Proposed House Metrics	Unit	As Built Step Requirements	As-built Calculations	
			As-built House Result	As-built House Pass or Fail
Step Code Level	Step 3, 4 or 5	0		
Mechanical Energy Use Intensity (MEUI)	kWh/(m <sup>2</sup> -year)	- (max)	0	#N/A
% Improvement	%	#N/A (min)	0	#N/A
Thermal Energy Demand (TEDI)	kWh/(m <sup>2</sup> -year)	- (max)	0	#N/A
% Heat Loss Reduction	%	#N/A (min)	0	#N/A
Airtightness in Air Changes per Hour at 50 Pa differential	ACH @ 50 Pa	- (max)	#DIV/0!	#DIV/0!
Normalized Leakage Area (NLA <sub>10</sub> )	10 Pa (cm <sup>2</sup> /m <sup>2</sup> )	- (max)	#DIV/0!	#DIV/0!
Normalized Leakage Rate (NLR <sub>10</sub> )	L/s/m <sup>2</sup>	- (max)	#DIV/0!	#N/A

Software Used: \_\_\_\_\_ 0 \_\_\_\_\_ Version: \_\_\_\_\_ 0 \_\_\_\_\_  
 Heated Floor Area (m<sup>2</sup>): \_\_\_\_\_ 0.00 \_\_\_\_\_ Climate Data (Location): \_\_\_\_\_ 0 \_\_\_\_\_  
 Building Volume (m<sup>3</sup>): \_\_\_\_\_ 0.00 \_\_\_\_\_ Degree Days Below 18°C (HDD): \_\_\_\_\_ 0 \_\_\_\_\_  
 FWDR: \_\_\_\_\_ 0.0% \_\_\_\_\_ % Of Space Cooled: \_\_\_\_\_ - \_\_\_\_\_

## G: ZERO CARBON STEP CODE

Proposed House Metrics	Unit	Proposed Level Requirement	Proposed Calculations	
			Proposed House Result	Proposed House Pass or Fail
Zero Carbon Step Code Level	EL-1 - EL-4	0		
Total GHG	kg CO <sub>2e</sub> /year	#N/A (max)	0	#N/A
CO <sub>2e</sub> per floor area	kg CO <sub>2e</sub> /m <sup>2</sup> /year	#N/A (max)	#DIV/0!	#DIV/0!
Perspective	with max	#N/A (max)	0	#DIV/0!
	Max	#N/A (max)	0	#DIV/0!
Perspective	Heating	#N/A	Zero Carb	Zero Carb
	Hot Water	#N/A	Zero Carb	Error
	All building systems, equipment and appliances	#N/A	Zero Carb	Zero Carb





**Discussion / Questions**

**Thank You**