Generated by RES*check-Web* Software

Compliance Certificate

Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 09/18/17

Project Peaks Island Cottage

Energy Code:	**2009 IECC**
Location:	**Cumberland County, Maine**
Construction Type:	**Single-family**
Project Type:	**New Construction**
Orientation:	**Bldg. faces 90 deg. from North**
Conditioned Floor Area:	**4,284 ft2**
Glazing Area	**26%**
Climate Zone:	**6 (8499 HDD)**
Permit Date:	
Permit Number:	

Construction Site:
7 Diamond Pass
Portland, Maine 04108

Owner/Agent:
Sam Spirn
61 Chandler St. Apt. 2
Boston, Massachusetts 02116
617-849-0601
sspirn@berkshirepartners.com

Designer/Contractor:
Bill Bunton
Bunton Construction
87 Middle Road
Cumberland, Maine 04021
207-829-6438
MBunton@maine.rr.com

Compliance: Passes using UA trade-off

Compliance: **3.9% Better Than Code** Maximum UA: **867** Your UA: **833**

The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules.
It DOES NOT provide an estimate of energy use or cost relative to a minimum-code home.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Factor	UA
Clng-MainUpper: Flat or Scissor Truss	1,128	49.0	0.0	0.026	29
Skylight: Wood Frame, 2 Pane w/ Low-E	10			0.490	5
Clng-MainLower: Cathedral	443	49.0	0.0	0.022	10
Clng-Guest: Cathedral	324	49.0	0.0	0.022	7
Wall-Main-E: Wood Frame, 16in. o.c. Orientation: Front	659	20.0	0.0	0.059	31
Window: Wood Frame, 2 Pane w/ Low-E Orientation: Front	105			0.320	34
Door-Inswing: Glass Orientation: Front	22			0.300	7
Wall-Main-N: Wood Frame, 16in. o.c. Orientation: Right side	1,773	20.0	0.0	0.059	80
Window: Wood Frame, 2 Pane w/ Low-E Orientation: Right side	392			0.320	125
Door-Inswing: Glass Orientation: Right side	25			0.300	8
Wall-Main-W: Wood Frame, 16in. o.c. Orientation: Back	846	20.0	0.0	0.059	28
Window: Wood Frame, 2 Pane w/ Low-E Orientation: Back	78			0.320	25

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Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	U-Fa	
Door-Sliding: Glass Orientation: Back	291			0.300	87
Wall-Main-S: Wood Frame, 16in. o.c. Orientation: Left side	1,201	20.0	0.0	0.059	53
Window: Wood Frame, 2 Pane w/ Low-E Orientation: Left side	311			0.320	100
Wall-Main-1/2Base-S: null Orientation: Left side	200	20.0	0.0	0.057	11
Window: Wood Frame, 2 Pane w/ Low-E Orientation: Left side	8			0.320	3
Wall-Guest-SW: Wood Frame, 16in. o.c. Orientation: Front	122	20.0	0.0	0.059	6
Window: Wood Frame, 2 Pane w/ Low-E Orientation: Front	15			0.320	5
Wall-Guest-NE: Wood Frame, 16in. o.c. Orientation: Right side	156	20.0	0.0	0.059	9
Window: Wood Frame, 2 Pane w/ Low-E Orientation: Right side	5			0.320	2
Wall-Guest-NW: Wood Frame, 16in. o.c. Orientation: Back	122	20.0	0.0	0.059	5
Window: Wood Frame, 2 Pane w/ Low-E Orientation: Back	31			0.320	10
Wall-Guest-SW: Wood Frame, 16in. o.c. Orientation: Left side	156	0.0	0.0	0.238	24
Door: Glass Orientation: Left side	54			0.300	16
Basement-E: Solid Concrete or Masonry Orientation: Front Wall height: 8.5' Depth below grade: 7.0' Insulation depth: 8.5'	168	0.0	20.0	0.038	6
Basement-N: Solid Concrete or Masonry Orientation: Right side Wall height: 8.5' Depth below grade: 7.0' Insulation depth: 8.5'	171	0.0	20.0	0.038	6
Basement-S: Solid Concrete or Masonry Orientation: Left side Wall height: 8.5' Depth below grade: 7.0' Insulation depth: 8.5'	171	0.0	20.0	0.038	6
Floor-Main: All-Wood Joist/Truss Over Outside Air	168	30.0	0.0	0.033	6
Floor-Main: Unheated Slab-On-Grade Insulation depth: 4.0'	59		10.0	0.684	40
Floor-Guest: Unheated Slab-On-Grade Insulation depth: 4.0'	72		10.0	0.684	49

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2009 IECC requirements in RES*check* Version 5.5.0 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title | Signature | Date

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RES*check* Software Version 5.5.0

Inspection Checklist

Energy Code: 2009 IECC

Requirements: 100.0% were addressed directly in the RES*check* software

Text in the "Comments/Assumptions" column is provided by the user in the REScheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req.ID	Pre-Inspection/Plan Review	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
103.2 [PR1][1]	Construction drawings and documentation demonstrate energy code compliance for the building envelope.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-7
103.2, 403.7 [PR3][1]	Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the commercial code.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-15 & 16
403.6 [PR2][2]	Heating and cooling equipment is sized per ACCA Manual S based on loads per ACCA Manual J or other approved methods.	Heating: Btu/hr_____ Cooling: Btu/hr_____	Heating: Btu/hr_____ Cooling: Btu/hr_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-15

Additional Comments/Assumptions:

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)

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Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/As
402.1.1 [FO1][1]	Slab edge insulation R-value.	R-_____ ☐ Unheated ☐ Heated	R-_____ ☐ Unheated ☐ Heated	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope A table for values.*
303.2, 402.2.8 [FO2][1]	Slab edge insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-1
402.1.1 [FO3][1]	Slab edge insulation depth/length.	_____ ft	_____ ft	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
402.1.1 [FO4][1]	Conditioned basement wall insulation R-value. Where interior insulation is used, verification may need to occur during Insulation Inspection. Not required in warm-humid locations in Climate Zone 3.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2 [FO5][1]	Conditioned basement wall insulation installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-1
402.2.7 [FO6][1]	Conditioned basement wall insulation depth of burial or distance from top of wall.	_____ ft	_____ ft	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2.1 [FO11][2]	A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable. **Location on plans/spec:** NA
403.8 [FO12][2]	Snow- and ice-melting system controls installed.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable. **Location on plans/spec:** NA

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Section # & Req.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/As
402.1.1, 402.3.1, 402.3.3, 402.5 [FR2][1]	Glazing U-factor (area-weighted average).	U-_____	U-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope A table for values.*
303.1.3 [FR4][1]	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-8
402.1.1, 402.3.3, 402.5 [FR5][1]	Skylight U-factor.	U-_____	U-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
402.4.4 [FR20][1]	Fenestration that is not site built is listed and labeled as meeting AAMA/WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
402.4.5 [FR16][2]	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate ≤2.0 cfm leakage at 75 Pa.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable. **Location on plans/spec:** NA
403.2.1 [FR12][1]	Supply ducts in attics are insulated to ≥R-8. All other ducts in unconditioned spaces or outside the building envelope are insulated to ≥R-6.	R-_____ R-_____	R-_____ R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Ducts located completely inside the building envelope. **Location on plans/spec:** NA
403.2.2 [FR13][1]	All joints and seams of air ducts, air handlers, filter boxes, and building cavities used as return ducts are sealed.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-15
403.2.3 [FR15][3]	Building cavities are not used for supply ducts.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-15
403.3 [FR17][2]	HVAC piping conveying fluids above 105 ºF or chilled fluids below 55 ºF are insulated to ≥R-3.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable. **Location on plans/spec:** NA
403.4 [FR18][2]	Circulating service hot water pipes are insulated to R-2.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-15
403.5 [FR19][2]	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Divison-15

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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/As
303.1 [IN13][2]	All installed insulation is labeled or the installed R-values provided.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will
402.1.1, 402.2.5, 402.2.6 [IN1][1]	Floor insulation R-value.	R-_____ ☐ Wood ☐ Steel	R-_____ ☐ Wood ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2, 402.2.6 [IN2][1]	Floor insulation installed per manufacturer's instructions, and in substantial contact with the underside of the subfloor.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-1
402.1.1, 402.2.4, 402.2.5 [IN3][1]	Wall insulation R-value. If this is a mass wall with at least ½ of the wall insulation on the wall exterior, the exterior insulation requirement applies.	R-_____ ☐ Wood ☐ Mass ☐ Steel	R-_____ ☐ Wood ☐ Mass ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope Assemblies table for values.*
303.2 [IN4][1]	Wall insulation is installed per manufacturer's instructions.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-1

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Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/As
402.1.1, 402.2.1, 402.2.2 [FI1][1]	Ceiling insulation R-value. Where > R-30 is required, R-30 can be used if insulation is not compressed at eaves. R-30 may be used for 500 ft² or 20% (whichever is less) where sufficient space is not available.	R-_____ ☐ Wood ☐ Steel	R-_____ ☐ Wood ☐ Steel	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	*See the Envelope A table for values.*
303.1.1.1, 303.2 [FI2][1]	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft².			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-1
402.2.3 [FI3][1]	Attic access hatch and door insulation ≥R-value of the adjacent assembly.	R-_____	R-_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** NA - (Attic is fully insulated)
402.4.2, 402.4.2.1 [FI17][1]	Building envelope tightness verified by blower door test result of <7 ACH at 50 Pa. This requirement may instead be met via visual inspection, in which case verification may need to occur during Insulation Inspection.	ACH 50 =_____	ACH 50 =_____	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-1
403.2.2 [FI4][1]	Post construction duct tightness test result of ≤8 cfm to outdoors, or ≤12 cfm across systems. Or, rough-in test result of ≤6 cfm across systems or ≤4 cfm without air handler. Rough-in test verification may need to occur during Framing Inspection.	_____ cfm	_____ cfm	☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** All ducts and air handlers are located within conditioned space. **Location on plans/spec:** Outline Specifications Division-15
403.1.1 [FI9][2]	Programmable thermostats installed on forced air furnaces.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	**Exception:** Requirement is not applicable. **Location on plans/spec:** NA
403.1.2 [FI10][2]	Heat pump thermostat installed on heat pumps.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-15
403.4 [FI11][2]	Circulating service hot water systems have automatic or accessible manual controls.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications
404.1 [FI6][1]	50% of lamps in permanent fixtures are high efficacy lamps.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met. **Location on plans/spec:** Outline Specifications Division-16
401.3 [FI7][2]	Compliance certificate posted.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.
303.3 [FI18][3]	Manufacturer manuals for mechanical and water heating equipment have been provided.			☐Complies ☐Does Not ☐Not Observable ☐Not Applicable	Requirement will be met.

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Insulation Rating	R-Value
Above-Grade Wall	20.00
Below-Grade Wall	20.00
Floor	30.00
Ceiling / Roof	49.00
Ductwork (unconditioned spaces):	_____

Glass & Door Rating	U-Factor	SHGC
Window	0.32	
Door	0.30	
Skylight	0.49	

Heating & Cooling Equipment	Efficiency
Heating System:_____	_____
Cooling System:_____	_____
Water Heater:_____	_____

Name: _____ **Date:**_____

Comments