

### Project

Energy Code:	2015 IECC
Location:	Pueblo, Colorado
Construction Type:	Single-family
Project Type:	<b>New Construction</b>
Conditioned Floor Area:	3,755 ft2
Glazing Area	<b>16</b> %
Climate Zone:	5 (5413 HDD)
Permit Date:	
Permit Number:	

Construction Site: GΑ

Owner/Agent: **Building Builderson**  Designer/Contractor: **Builders Building Plans** 

	<b>Passes using</b>	IIA Anada af
Compliance:	Passes usino	UA Trade-on
e e in price i e e e	1 40000 401119	

Compliance: 3.1% Better Than Code

Maximum UA: 388 Your UA: 376 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
Ceiling area of home forming top of insulation envelope: Flat Ceiling or Scissor Truss	1,959	38.0	0.0	0.030	59
Front Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c.:Not Attic Kneewall	833	19.0	0.0	0.060	41
Window area of home using energy efficient units: Vinyl/Fiberglass Frame:Double Pane with Low-E	111			0.300	33
Energy efficient door unit: Solid	21			0.200	4
20 minute fire door: Solid	21			0.200	4
Left Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c.:Not Attic Kneewall	41	19.0	0.0	0.060	2
Back Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c.:Not Attic Kneewall	833	19.0	0.0	0.060	35
Window area of home using energy efficient units copy 1: Vinyl/Fiberglass Frame:Double Pane with Low-E	231			0.300	69
Energy efficient door unit: Glass	21			0.300	6
Right Wall area of home forming sides of insulation envelope: Wood Frame, 16" o.c.:Not Attic Kneewall	799	19.0	0.0	0.060	45
Window area of home using energy efficient units: Vinyl/Fiberglass Frame:Double Pane with Low-E	51			0.300	15
Slab perimeter of home forming bottom of insulation envelope: Slab-On- Grade:Unheated Insulation depth: 4.0'	87		6.0	0.728	63

*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 2015 IECC requirements in RES*check* Version 4.6.5 and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Name - Title

Signature

Date

## REScheck Software Version 4.6.5 Inspection Checklist

Energy Code: 2015 IECC

Requirements: 0.0% were addressed directly in the REScheck 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
103.1, 103.2 [PR1] <sup>1</sup> ©	Construction drawings and documentation demonstrate energy code compliance for the building envelope. Thermal envelope represented on construction documents.			□Complies □Does Not □Not Observable □Not Applicable	
103.1, 103.2, 403.7 [PR3] <sup>1</sup> ③	Construction drawings and documentation demonstrate energy code compliance for lighting and mechanical systems. Systems serving multiple dwelling units must demonstrate compliance with the IECC Commercial Provisions.			□Complies □Does Not □Not Observable □Not Applicable	
302.1, 403.7 [PR2] <sup>2</sup>	Heating and cooling equipment is sized per ACCA Manual S based on loads calculated per ACCA Manual J or other methods approved by the code official.	Heating: Btu/hr Cooling: Btu/hr	Heating: Btu/hr Cooling: Btu/hr	□Complies □Does Not □Not Observable □Not Applicable	

**Additional Comments/Assumptions:** 

1 High Impact (Tier 1) 2 Mediu

2 Medium Impact (Tier 2)

Section # & Req.ID	Foundation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.2 [FO1] <sup>1</sup>	Slab edge insulation R-value.	R Unheated Heated	R Unheated Heated	□Complies □Does Not □Not Observable □Not Applicable	<i>See the Envelope Assemblies table for values.</i>
402.1.2 [FO3] <sup>1</sup>	Slab edge insulation depth/length.	ft	ft	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
303.2.1 [FO11] <sup>2</sup>	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	
403.9 [FO12] <sup>2</sup>	Snow- and ice-melting system controls installed.			□Complies □Does Not □Not Observable □Not Applicable	

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

Section # & Reg.ID	Framing / Rough-In Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.4 [FR1] <sup>1</sup>	Door U-factor.	U	U	Complies	See the Envelope Assemblies table for values.
0				□Not Observable □Not Applicable	
402.1.1, 402.3.1, 402.3.3,	Glazing U-factor (area-weighted average).	U	U	□Complies □Does Not □Not Observable	See the Envelope Assemblies table for values.
402.5 [FR2] <sup>1</sup> ③				□Not Applicable	
303.1.3 [FR4] <sup>1</sup> ©	U-factors of fenestration products are determined in accordance with the NFRC test procedure or			Complies Does Not Not Observable	
<u> </u>	taken from the default table.			Not Applicable	
[FR23] <sup>1</sup>	Air barrier and thermal barrier installed per manufacturer's instructions.			Complies	
0				□Not Observable □Not Applicable	
402.4.3 [FR20] <sup>1</sup>	Fenestration that is not site built is listed and labeled as meeting			□Complies □Does Not	
0	AAMA /WDMA/CSA 101/I.S.2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.			□Not Observable □Not Applicable	
402.4.5 [FR16] <sup>2</sup>	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate $\leq$ 2.0 cfm leakage at 75 Pa.			Complies Does Not	
403.3.1	Supply and return ducts in attics	<u></u>	1	□Not Applicable □Complies	
[FR12] <sup>1</sup>	insulated $>=$ R-8 where duct is >= 3 inches in diameter and $>=R-6 where < 3 inches. Supply andreturn ducts in other portions ofthe building insulated >= R-6 for$			Does Not Not Observable Not Applicable	
	diameter $>=$ 3 inches and R-4.2 for < 3 inches in diameter.				
403.3.5 [FR15] <sup>3</sup>	Building cavities are not used as ducts or plenums.			□Complies □Does Not	
0				□Not Observable □Not Applicable	
403.4 [FR17] <sup>2</sup>	HVAC piping conveying fluids above 105 °F or chilled fluids	R	R	Complies Does Not	
0	below 55 $^{\text{Q}}\text{F}$ are insulated to $\geq \text{R}$ - 3.			□Not Observable □Not Applicable	
403.4.1 [FR24] <sup>1</sup>	Protection of insulation on HVAC piping.			□Complies □Does Not	
0				□Not Observable □Not Applicable	
403.5.3 [FR18] <sup>2</sup>	Hot water pipes are insulated to ≥R-3.	R	R	Complies Does Not	
			- - - - - - -	□Not Observable □Not Applicable	
403.6 [FR19] <sup>2</sup>	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.			□Complies □Does Not	
	ווונסגפט מווע פאוומעטנט.			□Not Observable □Not Applicable	

1 High Impact (Tier 1)

2 Medium Impact (Tier 2)

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Section # & Req.ID	Insulation Inspection	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13] <sup>2</sup>	All installed insulation is labeled or the installed R-values provided.			□Complies □Does Not □Not Observable □Not Applicable	
402.1.1, 402.2.5, 402.2.6 [IN3] <sup>1</sup>	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 (FR10).	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] <sup>1</sup>	Wall insulation is installed per manufacturer's instructions.			□Complies □Does Not □Not Observable □Not Applicable	

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Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2, 402.2.6 [FI1] <sup>1</sup>	Ceiling insulation R-value.	R Wood Steel	R Wood Steel	□Complies □Does Not □Not Observable □Not Applicable	See the Envelope Assemblies table for values.
303.1.1.1, 303.2 [FI2] <sup>1</sup>	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft <sup>2</sup> .			Complies Does Not Not Observable Not Applicable	
402.2.3 [FI22] <sup>2</sup>	Vented attics with air permeable insulation include baffle adjacent to soffit and eave vents that extends over insulation.			Complies Does Not Not Observable Not Applicable	
402.2.4 [FI3] <sup>1</sup>	Attic access hatch and door insulation $\geq$ R-value of the adjacent assembly.	R	R	Complies Does Not Not Observable Not Applicable	
402.4.1.2 [FI17] <sup>1</sup>	Blower door test @ 50 Pa. <=5 ach in Climate Zones 1-2, and <=3 ach in Climate Zones 3-8.	ACH 50 =	ACH 50 =	Complies Does Not Not Observable Not Applicable	
403.3.4 [FI4] <sup>1</sup>	Duct tightness test result of <=4 cfm/100 ft2 across the system or <=3 cfm/100 ft2 without air handler @ 25 Pa. For rough-in tests, verification may need to occur during Framing Inspection.	cfm/100 ft <sup>2</sup>	cfm/100 ft <sup>2</sup>	Complies Does Not Not Observable Not Applicable	
403.3.3 [FI27] <sup>1</sup>	Ducts are pressure tested to determine air leakage with either: Rough-in test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the system including the manufacturer's air handler enclosure if installed at time of test. Postconstruction test: Total leakage measured with a pressure differential of 0.1 inch w.g. across the entire system including the manufacturer's air handler enclosure.	cfm/100 ft <sup>2</sup>	cfm/100 ft <sup>2</sup>	□Complies □Does Not □Not Observable □Not Applicable	
403.3.2.1 [FI24] <sup>1</sup>	Air handler leakage designated by manufacturer at $<=2\%$ of design air flow.			Complies Does Not Not Observable	
403.1.1 [FI9] <sup>2</sup>	Programmable thermostats installed for control of primary heating and cooling systems and initially set by manufacturer to code specifications.			Complies Does Not Not Observable Not Applicable	
403.1.2 [FI10] <sup>2</sup>	Heat pump thermostat installed on heat pumps.			Complies Does Not Not Observable Not Applicable	
403.5.1 [FI11] <sup>2</sup>	Circulating service hot water systems have automatic or accessible manual controls.			□Complies □Does Not □Not Observable □Not Applicable	

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Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
403.6.1 [FI25] <sup>2</sup>	All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits.			□Complies □Does Not □Not Observable □Not Applicable	
403.2 [FI26] <sup>2</sup>	Hot water boilers supplying heat through one- or two-pipe heating systems have outdoor setback control to lower boiler water temperature based on outdoor temperature.			□Complies □Does Not □Not Observable □Not Applicable	
403.5.1.1 [FI28] <sup>2</sup>	Heated water circulation systems have a circulation pump. The system return pipe is a dedicated return pipe or a cold water supply pipe. Gravity and thermos- syphon circulation systems are not present. Controls for circulating hot water system pumps start the pump with signal for hot water demand within the occupancy. Controls automatically turn off the pump when water is in circulation loop is at set-point temperature and no demand for hot water exists.			Complies Does Not Not Observable Not Applicable	
403.5.1.2 [FI29] <sup>2</sup>	Electric heat trace systems comply with IEEE 515.1 or UL 515. Controls automatically adjust the energy input to the heat tracing to maintain the desired water temperature in the piping.			□Complies □Does Not □Not Observable □Not Applicable	
403.5.2 [FI30] <sup>2</sup>	Water distribution systems that have recirculation pumps that pump water from a heated water supply pipe back to the heated water source through a cold water supply pipe have a demand recirculation water system. Pumps have controls that manage operation of the pump and limit the temperature of the water entering the cold water piping to $104^{\circ}F$ .			□Complies □Does Not □Not Observable □Not Applicable	
403.5.4 [FI31] <sup>2</sup>	Drain water heat recovery units tested in accordance with CSA B55.1. Potable water-side pressure loss of drain water heat recovery units < 3 psi for individual units connected to one or two showers. Potable water- side pressure loss of drain water heat recovery units < 2 psi for individual units connected to three or more showers.			□Complies □Does Not □Not Observable □Not Applicable	
404.1 [FI6] <sup>1</sup>	75% of lamps in permanent fixtures or 75% of permanent fixtures have high efficacy lamps. Does not apply to low-voltage lighting.			□Complies □Does Not □Not Observable □Not Applicable	
404.1.1 [FI23] <sup>3</sup>	Fuel gas lighting systems have no continuous pilot light.			□Complies □Does Not □Not Observable □Not Applicable	

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Section # & Req.ID	Final Inspection Provisions	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
401.3 [FI7] <sup>2</sup>	Compliance certificate posted.			□Complies □Does Not	
				□Not Observable □Not Applicable	
303.3 [FI18] <sup>3</sup>	Manufacturer manuals for mechanical and water heating systems have been provided.			□Complies □Does Not	
	systems have been provided.			□Not Observable □Not Applicable	

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

# 2015 IECC Energy Efficiency Certificate

Insulation Rating	R-Value	
Above-Grade Wall	19.00	
Below-Grade Wall	0.00	
Floor	6.00	
Ceiling / Roof	38.00	
Ductwork (unconditioned spaces):		
Glass & Door Rating	U-Factor	SHGC
Window	0.30	0.25
Door	0.20	0.25
Heating & Cooling Equipment	Efficiency	
Heating System:	_	
Cooling System:		
Water Heater:		
Name:	Date <u>:</u>	
Comments		