

Pikes Peak **REGIONAL** Building Department

2024 INTERNATIONAL ENERGY CONSERVATION CODE (IECC) RESIDENTIAL INSULATION CERTIFICATE

This certificate is based on the 2024 International Energy Conservation Code (IECC). This certificate is applicable to One- and Two- family Dwellings as well as Townhouses, R2, R-3 and R-4 buildings three stories or less in height. *This certificate is required to be submitted as part of the plan review package.*

ADDRESS OR MASTER #:

GARAGE IS: **HEATED** **UNHEATED** **N/A**

ADDITIONAL ENERGY EFFICIENCY OPTIONS (MUST CHOOSE AT LEAST TWO)

10 PTS REQUIRED (15 PTS FOR DWELLING UNITS >5000 SF OF LIVING SPACE ABOVE GRADE)

ENTER THE CREDIT VALUE NEXT TO THE OPTIONS BEING USED:

<input type="checkbox"/> Enhanced building thermal envelope (IECC R408.2.1)	<input type="checkbox"/> Improved air sealing and efficient ventilation system (IECC R408.2.5)	<input type="checkbox"/> Whole-home lighting control (IECC R408.2.10)
<input type="checkbox"/> More efficient HVAC equipment performance (IECC R408.2.2)	<input type="checkbox"/> Energy efficient appliances (IECC 408.2.6)	<input type="checkbox"/> Higher efficacy lighting (IECC R408.2.11)
<input type="checkbox"/> Reduced energy use in service water-heating (IECC R408.2.3)	<input type="checkbox"/> Renewable energy (IECC R408.2.7)	<input type="checkbox"/> N/A - Simulated Building Performance or Energy Rating Index (IECC R405 or R406)
<input type="checkbox"/> More efficient thermal distribution system (IECC R408.2.4)	<input type="checkbox"/> Demand response (IECC R408.2.8)	
	<input type="checkbox"/> Opaque walls (IECC R408.2.9)	

INSPECTION REQUIREMENTS

Section R402.5 of the IECC requires the thermal envelope to be sealed to limit air leakage. The IECC requires the thermal envelope to be visually inspected and tested to demonstrate compliance with building envelope tightness requirements. Selection of the method of inspection shall occur when the Building Frame inspection is scheduled. Below is a summary of inspection options.

1. Third party visual inspection and testing with documentation required at time of final inspection.
2. RBD visual inspection and third party testing with documentation required at time of final inspection.

NOTE: *The Simulated Building Performance and Energy Rating Index options require third party inspections.*

METHOD OF ENERGY CODE COMPLIANCE (Climate Zone 5):

The IECC provides various options for compliance with minimum standards. Check the box to indicate the method of compliance and proceed to indicated form section. If additional documentation is required, it must accompany this form.

Insulation and fenestration criteria

(IECC R402.1.2)

See Section 1

R-value alternative

(IECC R402.1.3)

See Section 2

R-value computation

(IECC R402.1.4)

See Section 2

Component performance alternative or

REScheck

(IECC R402.1.5)

See Section 3

Heated sunroom or garage

(IECC 402.2.13 and R402.4.5)

See Section 4

Simulated Building Performance or REScheck

(IECC R405)

See Section 5

Energy Rating Index Compliance Alternative

(IECC R406)

See Section 6

For the following tables, ci = continuous insulation

SECTION 1 INSULATION AND FENESTRATION CRITERIA (Table R402.1.2)

Door and Window U-Factor	Skylight U-Factor	Ceiling U-Value	Wood Frame Wall U-Value	Mass Wall U-Value	Floor U-Value	Basement Wall U-Value	Slab R-Value/Depth	Crawlspace Wall U-Value
0.30	0.50	0.026	0.045	0.082	0.033	0.050	R10ci/2.5 ft	0.055

_____ Wall U-Factor (wood frame or mass) _____ Floor U-Factor _____ Slab perimeter R-value
_____ Ceiling U-Factor _____ Basement Wall U-Factor _____ Glazing U-Factor
_____ Crawlspace Wall U-Factor _____ Door(s) U-Factor

SECTION 2 R VALUE ALTERNATIVE OR R VALUE COMPUTATION (Table R402.1.3)

Door and Window U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value/Depth	Crawlspace Wall R-Value
0.30	0.50	49	30 or 20+5ci or 13+10ci or 20ci	13/17	30 or 19+7.5ci or 20ci	19 or 15ci or 13+5ci	10ci/2.5 ft	19 or 15ci or 13+5ci

_____ Wall R-Value (wood frame or mass) _____ Floor R-Value _____ Slab perimeter R-Value
_____ Ceiling R-Value _____ Basement Wall R-Value _____ Glazing U-Factor
_____ Crawlspace Wall R-Value _____ Door(s) U-Factor

SECTION 3 COMPONENT PERFORMANCE ALTERNATIVE OR RESCHECK (IECC R402.1.5)

This method requires additional documentation to prove compliance. Include calculations showing the total building thermal envelope thermal conductance is less than or equal to the thermal conductance using factors in Table R402.1.1. The total thermal conductance shall be determined using IECC Equation 4-1. This can either be manual calculations, or calculation using the Department of Energy REScheck software.

_____ Wall R/U-Value _____ Floor R/U-Value _____ Slab perimeter R/U-Value
(wood frame or mass) _____ Basement Wall R/U-Value _____ Glazing U-Factor
_____ Ceiling R/U-Value _____ Crawlspace Wall R/U-Value _____ Door(s) U-Factor

SECTION 4 HEATED SUNROOM OR GARAGE (IECC R402.2.13 / R402.4.5)

This section applies to sunrooms and heated garages only. Roof and wall insulation is allowed to be reduced due to these areas not being considered living spaces.

Door and Window U-Factor	Skylight U-Factor	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value	Slab R-Value/Depth	Crawlspace Wall R-Value
0.45	0.70	24	13	13	30 or 19+7.5ci or 20ci	19 or 15ci or 13+5ci	10ci/2.5 ft	19 or 15ci or 13+5ci

_____ Wall R-Value _____ Floor R-Value _____ Slab perimeter R-Value
(wood frame or mass) _____ Basement Wall R-Value _____ Glazing U-Factor
_____ Ceiling R-Value _____ Crawlspace Wall R-Value _____ Door(s) U-Factor

SECTION 5 SIMULATED BUILDING PERFORMANCE OR RESCHECK (IECC R405)

This method requires additional documentation to prove compliance. Include the software compliance report and summarize the values below. *Available only to design professionals licensed in the State of Colorado or by qualified persons as approved by the Building Official.*

_____ Wall R-Value _____ Floor R-Value _____ Slab perimeter R-Value
(wood frame or mass) _____ Basement Wall R-Value _____ Glazing U-Factor
_____ Ceiling R-Value _____ Crawlspace Wall R-Value _____ Door(s) U-Factor

SECTION 6 ENERGY RATING INDEX COMPLIANCE ALTERNATIVE (IECC R406)

This method requires additional documentation to prove compliance. Include the software compliance report and summarize the values below. *Available only to design professionals licensed in the State of Colorado or by qualified persons as approved by the Building Official.*

_____ Wall R-Value _____ Floor R-Value _____ Slab perimeter R-Value
(wood frame or mass) _____ Basement Wall R-Value _____ Glazing U-Factor
_____ Ceiling R-Value _____ Crawlspace Wall R-Value _____ Door(s) U-Factor