

# Pikes Peak (Colorado) 2023 UA Compliance

## Property

10226 Hartwood Dr  
Peyton, CO 80831  
Model: 5291  
Community: Paint Brush Hills

## Organization

EnergyLogic  
Justin Alletto

## Inspection Status

2025-08-06  
Rater ID (RTIN): 2151087  
RESNET Registered  
(Confirmed)

10226 Hartwood Dr Meritage Homes  
Partial Crawlspace - with Inspection Data

## Builder

Meritage Homes

## Building UA


Elements	IECC Reference	As Designed
Ceilings	47.1	47.9
Above-Grade Walls	176.2	163.3
Windows, Doors and Skylights	115.2	102.5
Slab Floor:	32.1	32.1
Framed Floors	12.5	12.2
Foundation Walls	60.0	46.3
Rim Joists	13.5	11.7
<b>Overall UA (Design must be equal or lower):</b>	<b>456.6</b>	<b>416.0</b>

## Requirements

✓	R402.1.5	Total UA alternative compliance passes by 8.9%.	The proposed home meets the UA requirement by 8.9%
✓	R402.3.2	Glazed Fenestration SHGC	
i	R402.2.9	Slab insulation is evaluated through total UA.	
✓	R402.4.1.2	Air Leakage Testing	Air sealing is 1.20 ACH at 50 Pa and 0.11 CFM50 / ft <sup>2</sup> Shell Area. It must not exceed 5.00 ACH at 50 Pa or 0.28 CFM50 / ft <sup>2</sup> Shell Area.
✓	R403.3.1	Duct Insulation	All ducts are inside the thermal envelope or outside and insulated to at least R8.0.
✓	R403.3.5	Duct Testing	
✓	R403.6	Mechanical Ventilation	
✓	R404.1	Lighting Equipment	
✓	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.	2021 IECC Required Items must be checked as complete.
✓	R403.6.2	Mechanical Ventilation Efficacy	
✓	R403.6.1	Mechanical Ventilation Energy Recovery	

**Design exceeds requirements for Pikes Peak (Colorado) 2023 Prescriptive compliance by 8.9%.**

Name: Justin Alletto  
Organization: EnergyLogic

Signature:   
Digitally signed: 8/6/25 at 4:17 PM

Ekotrope RATER - Version 4.2.3.3684

Pikes Peak (Colorado) 2023 Prescriptive compliance results calculated using Ekotrope RATER's energy and code compliance algorithm, including appropriate amendments.  
Ekotrope RATER is a RESNET Accredited HERS Rating Tool. All results are based on data entered by Ekotrope users.  
Ekotrope disclaims all liability for the information shown on this report.

# 10226 Hartwood Dr

Peyton, CO 80831

Builder: Meritage Homes

Model: 5291 Community: Paint Brush Hills

**THIS HOME IS CERTIFIED TO MEET THE PIKES PEAK (COLORADO)  
2023 ENERGY CODE**

## Building Features

**Ceiling** Vaulted Roof, R-38

**Duct** Supply R-0.0, Return R-0.0

**Above Grade Walls** R-20

**Duct Leakage to Outside** Untested Forced Air

**Foundation Walls** R-19

**Total Duct Leakage** 152 CFM @ 25Pa (Rough-In, with Air Handler)

**Framed Floor** R-30

**Heating** Furnace • Natural Gas • 96.7 AFUE

**Slab** R-0.0 Perimeter, R-0.0 Under

**Cooling** Air Conditioner • Electric • 13.4 SEER2

**Infiltration** 908.3 CFM50 (1.20 ACH50)

**Water Heating** Residential Water Heater • Electric • 0.92 UEF

**Window** U-Value: 0.3, SHGC: 0.36

As a 3rd party extension of the code jurisdiction utilizing these reports, I certify that this energy code compliance document has been created in accordance with the requirements of Chapter 4 of the adopted International Energy Conservation Code based on EL PASO County. If rating is Projected, I certify that the building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. If rating is Confirmed, I certify that the address referenced above has been inspected/tested and that the mandatory provisions of the IECC have been installed to meet or exceed the intent of the IECC or will be verified as such by another party.

Name: Justin Alletto

Signature: 

Organization: EnergyLogic

Digitally signed: 8/6/25 at 4:17 PM

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## **Pikes Peak (Colorado) 2023 Label**

**10226 Hartwood Dr**

Model: 5291

Ekotrope RATER - Version: 4.2.3.3684

HERS® Index Score: 55

### **Building Envelope Specs**

Ceiling: R-38

Above Grade Walls: R-20

Foundation Walls: R-19

Exposed Floor: R-30

Slab: R-0

Infiltration: 908.3 CFM50 (1.20 ACH50)

Duct Insulation: Supply: R0, Return: R0

Duct Lkg to Outdoors: Untested Forced Air

### **Window & Door Specs**

U-Value: 0.3, SHGC: 0.36

Door: R-5

### **Mechanical Equipment Specs**

Heating: Furnace • Natural Gas • 96.7 AFUE

Cooling: Air Conditioner • Electric • 13.4 SEER2

Hot Water: Residential Water Heater • Electric • 0.92 UEF

Average Mechanical Ventilation: 89 CFM

### **Builder or Design Professional**

Signature: \_\_\_\_\_

## Air Leakage Report

### Property

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Meritage Homes

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10226 Hartwood Dr Meritage Homes  
Partial Crawlspace - with Inspection Data

### General Information

Conditioned Floor Area [ft <sup>2</sup> ]	4,160
Infiltration Volume [ft <sup>3</sup> ]	45,506
Number of Bedrooms	5

### Air Leakage

Measured Infiltration	908.3 CFM50 (1.20 ACH50)
ACH50 (Calculated)	1.20
ELA [sq. in.] (Calculated)	49.83
ELA per 100 s.f. Shell Area (Calculated)	0.600
CFM50 (Calculated)	908
CFM50 / s.f. Shell Area (Calculated)	0.109

### Duct Leakage

	System 1
Leakage to Outdoors	Untested Forced Air
Estimated Leakage to Outside	76 CFM25
Total Leakage Test Type	Rough-In, with Air Handler
Total Leakage [CFM @ 25 Pa]	152.0
Total Leakage [CFM25 / 100 s.f.]	3.7
Total Leakage [CFM25 / CFA]	0.037

### Mechanical Ventilation

Rate [CFM]	89 CFM
Hours per day	24.0
Fan Power	15 Watts
Recovery Efficiency %	0.0
Runs at least once every 3 hrs?	true
Average Rate [CFM]	89.0 CFM
2010 ASHRAE 62.2 Req. Cont. Ventilation	86.6
2013 ASHRAE 62.2 Req. Cont. Ventilation	124.2
2016 ASHRAE 62.2 Req. Cont. Ventilation	157.6

# Building Summary

<b>Property</b> 10226 Hartwood Dr Peyton, CO 80831 Model: 5291 Community: Paint Brush Hills	<b>Organization</b> EnergyLogic Justin Alletto	<b>Inspection Status</b> 2025-08-06 Rater ID (RTIN): 2151087 RESNET Registered (Confirmed)	 theenergylogic.com
10226 Hartwood Dr Meritage Homes Partial Crawlspace - with Inspection Data	<b>Builder</b> Meritage Homes		

General Building Information			
Number Of Bedrooms: 5	Number Of Floors: 2		
Conditioned Floor Area [sq. ft.]: 4,160	Has Electric Vehicle Ready Space: No		
Unconditioned, attached garage? Yes	Conditioned Volume [cu. ft.]: 45,506		
Total Units in Building: 1	Residence Type: Single family detached		
Number of Floors in Building: N/A	Floor Number: N/A		
Model: 5291	Community: Paint Brush Hills		
RESNET/IECC 2006-2018 Climate Zone: 5B	IECC 2021 Climate Zone: 5B		

## Envelope Components

Foundation Wall							
Name	Library Type	Height Above Grade	Depth Below Grade	Perimeter	Location	Enclosing	
Ambient	R19 Draped Full	1	7	94	Exposed Exterior	Conditioned Space	
Crawl	R19 Draped Full	1	3	31	Exposed Exterior	Conditioned Crawlspace	
Garage	R19 Draped Full	1	7	43	Exposed Exterior	Conditioned Space	

Foundation Wall Library List							
Name	Feet From Wall Top To Continuous Insulation Top	Feet From Wall Top To Continuous Insulation Bottom	Is Fully Insulated	Continuous R-value	Cavity R-value	Effective Insulation R-value	
R19 Draped Full	N/A	N/A	Yes	19.00	N/A	N/A	

Slab								
Name	Library Type	Perimeter	Floor Grade	Carpet R	Exposed Masonry Area	Surface Area	Location	Enclosing
Basement	Uninsulated Slab	124	Below Grade	0	1,104	1,104.0 ft²	Exposed Exterior	Conditioned Space
Crawlspace	Uninsulated Slab	44	Below Grade	0	234	234.0 ft²	Exposed Exterior	Conditioned Crawlspace

Slab Library List								
Name	Wall Construction Type	Slab Completely Insulated?	Underslab Insulation Width [ft]	Perimeter Insulation Depth [ft]	Perimeter Insulation R Value	Perimeter Insulation Is Exterior	Thermal Break	Effective R-value
Uninsulated Slab	Wood Frame / Other	No	0	0	0	Yes	No	0.00

Framed Floor							
Name	Library Type	Carpet R	Floor Grade	Surface Area	Location	Effective R-value	
Over Garage	12" R30 OCF 19.2" OC	1	Above Grade	380.0 ft²	Unconditioned, attached garage	31.256	

Rim Joist				
Name	Library Type	Surface Area	Location	Effective Insulation R-value
Ambient	R 20	250.0 ft²	Exposed Exterior	20.00
Garage	R 20	43.0 ft²	Unconditioned, attached garage	20.00

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Wall							
Name	Library Type	Surface Color	Solar Absorptance	Surface Area	Location	Effective R-value	
All 2x6 exterior walls	2x6 R20 16" OC OCF	Medium	0.75	2,878.0 ft²	Exposed Exterior	17.986	
Garage 2x6	2x6 R20 16" OC OCF	Medium	0.75	387.0 ft²	Unconditioned, attached garage	17.986	

Glazing									
Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Area
Back 2x6	3036	All 2x6 exterior walls		Yes	0	0	0	West	130.0 ft²
Back Slider 2x6	2840	All 2x6 exterior walls		Yes	0	0	0	West	48.0 ft²
Back bsmt	2923		Ambient	Yes	0	0	0	West	32.0 ft²
Front 2x6	3036	All 2x6 exterior walls		Yes	0	0	0	East	81.0 ft²
Left 2x6	3036	All 2x6 exterior walls		Yes	0	0	0	South	21.0 ft²
Right 2x6	3036	All 2x6 exterior walls		Yes	0	0	0	North	6.0 ft²

Glazing Library List			
Name	Shgc	U-factor	
2840	0.4	0.280	
2923	0.23	0.290	
3036	0.36	0.300	

Opaque Door									
Name	Library Type	Wall Assignment	Foundation Wall Assignment	Emittance	Solar Absorptance	Surface Color	Surface Area	Location	Effective R-value
Front 2x6	R 5; U-value 0.20	All 2x6 exterior walls		0.9	0.75	Medium	21.0 ft²	Exposed Exterior	5.00
Garage x6	R 5; U-value 0.20	Garage 2x6		0.9	0.75	Medium	21.0 ft²	Unconditioned, attached garage	5.00

Roof Insulation									
Name	Library Type	Attic Exterior Area [ft²]	Clay or Concrete Roof Tiles	Does the Roof have Eaves?	Effective R-Value after eaves	Surface Color	Solar Absorptance	Surface Area	Location
Vault OPEN	R-38 OCF 24"oc roof	1,810	No	No	-	Medium	0.75	1,810.0 ft²	Vaulted Roof

Roof Insulation Library List		
Name	Has Radiant Barrier	Effective R-value
R-38 OCF 24"oc roof	No	37.811

Whole House Infiltration		
Infiltration	Measurement Type	Shelter Class
908.3 CFM at 50 Pa	Blower-door tested	4

## Mechanicals, Lights & Water



# Building Summary

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Mechanical Ventilation							
Ventilation Type	Ventilation Rate [ft³ / Minute]	Operational hours per day	Fan Watts	Runs once every three hours	Energy Recovery Percent	Model Number	Manufacturer
Exhaust Only	89 CFM	24	15 Watts	Yes	0		

Lighting					
% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting	% Exterior LED Lighting	% Garage Fluorescent Lighting	% Garage LED Lighting
0	100	0	100	0	100

Conditioning Equipment						
Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	Location
Air conditioner (3)	13.4SEER2/48BTU 4 Ton		0%	100%	0%	Conditioned Space
Fuel-fired air distribution (1)	59TP6C080V21--20		100%	0%	0%	Conditioned Space
Water Heating (2)	ENT-50 130		0%	0%	100%	Conditioned Space

Equipment Type: 13.4SEER2/48BTU 4 Ton	
Equipment Type	Air Conditioner
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	ECM (Variable Speed)
Heat Pump System Type	Unspecified
Cooling Efficiency	13.4 SEER2
Cooling Capacity [kBtu/h]	48

Equipment Type: 59TP6C080V21--20	
Equipment Type	Furnace
Fuel Type	Natural Gas
Distribution Type	Forced Air
Motor Type	ECM (Variable Speed)
Heating Efficiency	96.7 AFUE
Heating Capacity [kBtu/h]	78
Use default EAE	No
EAE [kWh]	360

Equipment Type: ENT-50 130	
Equipment Type	Residential Water Heater
Fuel Type	Electric
Distribution Type	Hydronic Delivery (Radiant)
Hot Water Efficiency	0.92 UEF
Tank Capacity (gal.)	50
Hot Water Capacity [kBtu/h]	15.4
Recovery Efficiency	0.98

Distribution System	
Distribution Type	Forced Air
Heating Equipment	Fuel-fired air distribution (1)
Cooling Equipment	Air conditioner (3)
Sq. Feet Served	4,160
# Return Grilles	5
Supply Duct R Value	0
Return Duct R Value	0
Supply Duct Area [ft²]	1123.2
Return Duct Area [ft²]	1040
Leakage to Outdoors	Untested Forced Air
Estimated LtO	76.00 CFM25
Total Leakage	152 CFM25
Total Leakage Duct Test Conditions	Rough-In, with Air Handler
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Conditioned Space
Percent Supply Area	100
Percent Return Area	100

# Building Summary

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Water Distribution	
Water Fixture Type	Low-flow
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	60
At Least R3 Pipe Insulation?	Yes
Hot Water Recirculation System?	No
Drain Water Heat Recovery?	No

## Appliances & Notes

Clothes Dryer	
Cef	3.01
Fuel Type	Electric
Field Utilization	Timer Controls
Is Outside Conditioned Space	No
Defaults Type	HERS Reference
Is Ventless	No
Is Heat Pump	No
Clothes Dryer Available	Yes

Clothes Washer	
Label Energy Rating	400 kWh/Year
Annual Gas Cost	\$27.00
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Capacity	3
Imef	1
Defaults Type	HERS Reference
Load Type	Front-load
Loads Per Week	6
Is Outside Conditioned Space	No
Clothes Washer Available	Yes

Dishwasher	
Dishwasher Defaults Type	Custom
Dishwasher Size	Standard
Dishwasher Efficiency	240 kWh
Annual Gas Cost	\$33.12
Electric Rate	\$0.12/kWh
Gas Rate	\$1.09/Therm
Is Outside Conditioned Space	No
Dishwasher Available	Yes

Appliances and Controls	
Programmable thermostat?	Yes
Range/Oven Fuel	Natural Gas
Convection Oven?	No
Induction Range?	No
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	640 kWh/Year
Refrigerator Outside Conditioned Space?	No

**Components Not Found:** Skylight, Onsite Generation, Solar Generation, Dehumidifier, Whole House Fan, Whole House Fan Library List, HVAC Grading (Not Conducted), Ceiling Fan, Notes



## East Elevation

● 38°58'54"N, 104°37'51"W ±19ft ▲ 7245ft



Prepared for: Meritage Homes

10226 Hartwood Dr  
Peyton, CO 80831Supervisor: Michael Fischer  
Subdivision: Paint Brush Hills  
Plan name: 5291Inspection performed by:  
Justin Alletto (RTIN: 2151087)

## Inspected for the following programs/codes:

- Energy Star
- IAP
- PPRBC - 2023 IECC Compliance

Inspection Results: **Passed**

## Inspection History

Date	Inspection	Rater	Result
08/06/2025	Final Inspection	Justin Alletto	✓
07/01/2025	Insulation & Air Barrier Inspection	Kevin Coleman - RFI	✓
07/01/2025	Duct Leakage Inspection	Kevin Coleman - RFI	✓
07/01/2025		Kevin Coleman - RFI	

If you have any questions about this report, do not hesitate to contact me directly.  
**Justin Alletto**, [justin.alletto@nrglogic.com](mailto:justin.alletto@nrglogic.com), 720-818-3770

Local Mechanical Exhaust

Inspection item:	Bath Fans: exhaust more than 50 CFM intermittent or 20 CFM continuous.	Result:
Inspection log: 8/6/2025	<div>✓</div> Action needed: All fans passed ventilation requirements Note from rater:	<div>✓</div>

Building Shell/Blower Door Test

		Target	Measured
CFM@50	3 ACH50	2275.30 CFM50	908.3 CFM50
ACH@50		3 ACH50	1.20 ACH50
House to Garage Connection		45 Pa	45 Pa

## Building Shell/Blower Door Test

		Target	Measured
CFM@50	3 ACH50	2275.30 CFM50	908.3 CFM50
ACH@50		3 ACH50	1.20 ACH50
House to Garage Connection		45 Pa	45 Pa

## Building Shell/Insulation (Insulation installed to manufacturer's specs/Grade 1)

Exterior Walls	Insulation Type	R-Value
Walls	B6 - Open Celled Foam - R3.7 per inch	20
Rim/Box	B6 - Open Celled Foam - R3.7 per inch	19
Ceiling	Insulation Type	R-Value
Blown attic	B6 - Open Celled Foam - R3.7 per inch	38
Floor Systems	Insulation Type	R-Value
Floors	B6 - Open Celled Foam - R3.7 per inch	30
Foundation	Insulation Type	R-Value
Foundation	B4 - Fiberglass Blanket Vinyl	19

## Building Shell/Windows

	U Value	SHGC
Above grade windows	.30	.36
Foundation windows	.29	.23
Above grade slider	.28	.40

## Whole House Mech Ventilation

	Target	Measured
Flow volume	87 CFM	89 CFM

## Mechanical System #1 Furnace - Conditioned Area

### Rough Duct Testing Results

Furnace Carrier - 59TP6C080V211120

Test Condition Rough In With Air Handler - 2021 IECC R403.3.6 #3

AC Coil Carrier - CVAVA4821XMAE

Manual JDS used

Conditioned floor area 4160

Calculated for 6 CFM/100SF

Max duct leakage allowed 249

**Testing result 152**

Duct Location	Supply %	Return %
Conditioned Space	100	100

## Mechanical System #1 Furnace - Conditioned Area

Item	Design	As Built
Cooling season design temperatures used in loads are within defined ENERGY STAR limits	90	90
Heating season design temperatures used in loads are within defined ENERGY STAR limits	0	0
HVAC design home orientation matches rated home AND sensible, latent, and total DESIGN heat gains are documented for the correct orientation	E	E
Number of occupants used in loads is withing +/- 2 of home to be certified	5	6
Conditioned Floor Area used in HVAC design is between 100sqft less than and 300sqft greater than the home being certified	4437.6	4160
Window area used in HVAC design loads is between 15sqft less than and 60sqft larger than home being certified, or, for homes with > 500 sq ft of window area, between 3% smaller and 12% larger	338	318
Predominant window SHGC used in loads is within 0.1 of predominant value of home to be certified	.36	.36
HVAC DESIGN REPORT FOR MODELS: variations in total heat gain across orientations is = or < 6kBtuh on Design Report	18.2	24.1
HVAC DESIGN REPORT: Cooling size % (4.13) is within the cooling sizing limit (4.15) selected by HVAC designer	113	130

Item	Design	As Built
Furnace manufacturer and model number on installed equipment matches HVAC Design report	59TP6C080V211120	59TP6C080V211120
A/C Coil manufacturer and model number on installed equipment matches HVAC Design report	CVAVA4821XMAE	CVAVA4821XMAE
A/C Condenser manufacturer and model number on installed equipment matches HVAC Design report	GA4SAN54800NABAA	GA4SAN54800NABAA