

The Shanley Residence Project

Energy Code:	2021 IECC
Location:	Routt County, Colorado
Construction Type:	Single-family
Project Type:	New Construction
Conditioned Floor Area:	4,740 ft2
Glazing Area	16%
Climate Zone:	7 (12999 HDD)
Permit Date:	
Permit Number:	

Construction Site: 24660 Creek Ranch Road Oak Creek, Colorado 80467 Owner/Agent: Matt & Connie Jo Shanley 810 Anderson St. Bellaire, Texas 77401

Designer/Contractor: Woodhouse, The Timber Frame Company 3295 Route 549 Mansfield, PA 16933 570-549-6232

Compliance: Passes using UA trade-off

Compliance: 5.5% Better Than Code

Maximum UA: 600 Your UA: 567

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.

Slab-on-grade tradeoffs are no longer considered in the UA or performance compliance path in REScheck. Each slab-on-grade assembly in the specified climate zone must meet the minimum energy code insulation R-value and depth requirements.

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Prop. U-Factor	Req. U-Factor	Prop. UA	Req. UA
Roof R1: Structural Insulated Panels (SIPs)	640		41.0	0.026	0.024	17	15
Roof R2: Structural Insulated Panels (SIPs)	693		41.0	0.026	0.024	18	17
Roof R3: Structural Insulated Panels (SIPs)	151		41.0	0.026	0.024	4	4
Roof R4: Structural Insulated Panels (SIPs)	151		41.0	0.026	0.024	4	4
Roof R5: Structural Insulated Panels (SIPs)	309		41.0	0.026	0.024	8	7
Roof R6: Structural Insulated Panels (SIPs)	58		41.0	0.026	0.024	2	1
Roof R7: Structural Insulated Panels (SIPs)	58		41.0	0.026	0.024	2	1
Roof R8: Structural Insulated Panels (SIPs)	58		41.0	0.026	0.024	2	1
Roof R9: Structural Insulated Panels (SIPs)	58		41.0	0.026	0.024	2	1
Roof R10: Structural Insulated Panels (SIPs)	49		41.0	0.026	0.024	1	1
Roof R11: Structural Insulated Panels (SIPs)	49		41.0	0.026	0.024	1	1
Roof R12: Structural Insulated Panels (SIPs)	49		41.0	0.026	0.024	1	1
Roof R13: Structural Insulated Panels (SIPs)	49		41.0	0.026	0.024	1	1
Roof R14: Structural Insulated Panels (SIPs)	27		41.0	0.026	0.024	1	1

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Prop. U-Factor	Req. U-Factor	Prop. UA	Req. UA
Roof R15: Structural Insulated Panels (SIPs)	27		41.0	0.026	0.024	1	1
Wall L1: Structural Insulated Panels	150		27.0	0.040	0.045	5	6
Window 26: Wood Frame	13			0.300	0.320	4	4
Wall L2: Structural Insulated Panels	24		27.0	0.040	0.045	1	1
Wall L3: Structural Insulated Panels	120		27.0	0.040	0.045	2	3
Door 103: Glass Door (over 50% glazing)	64			0.330	0.320	21	20
Wall L4: Structural Insulated Panels	120		27.0	0.040	0.045	5	5
Wall L5: Structural Insulated Panels	193		27.0	0.040	0.045	6	6
Window 27: Wood Frame	51			0.300	0.320	15	16
Wall L6: Structural Insulated Panels	120		27.0	0.040	0.045	4	4
Door 301: Solid Door (under 50% glazing)	26			0.290	0.320	8	8
Wall L7: Structural Insulated Panels	160		27.0	0.040	0.045	5	6
Door 301: Solid Door (under 50% glazing)	26			0.290	0.320	8	8
Wall L8: Structural Insulated Panels	283		27.0	0.040	0.045	6	6
Overhead Door: Solid Door (under 50% glazing)	72			0.200	0.320	14	23
Overhead Door: Solid Door (under 50% glazing)	72			0.200	0.320	14	23
Wall 1: Structural Insulated Panels	205		27.0	0.040	0.045	6	6
Door 102: Glass Door (over 50% glazing)	64			0.330	0.320	21	21
Wall 2: Structural Insulated Panels	226		27.0	0.040	0.045	6	7
Window 16: Wood Frame	46			0.340	0.320	16	15
Window 15: Wood Frame	11			0.300	0.320	3	4
Window 17: Wood Frame	11			0.300	0.320	3	4
Wall 3: Structural Insulated Panels	205		27.0	0.040	0.045	6	7
Window 12: Wood Frame	11			0.300	0.320	3	4
Window 13: Wood Frame	25			0.300	0.320	7	8
Window 14: Wood Frame	11			0.300	0.320	3	4
Wall 4: Structural Insulated Panels	324		27.0	0.040	0.045	12	14
Window 24: Wood Frame	9			0.300	0.320	3	3
Window 25: Wood Frame	9			0.300	0.320	3	3
Wall 5: Structural Insulated Panels	643		27.0	0.040	0.045	23	25
Window 8: Wood Frame	7			0.300	0.320	2	2
Window 9: Wood Frame	10			0.300	0.320	3	3
Window 10: Wood Frame	22			0.300	0.320	6	7
Window 11: Wood Frame	10			0.300	0.320	3	3
Window 22: Wood Frame	15			0.300	0.320	5	5
Window 23: Wood Frame	15			0.300	0.320	5	5
Wall 6: Structural Insulated Panels	44		27.0	0.040	0.045	2	2
Wall 7: Structural Insulated Panels	142		27.0	0.040	0.045	4	4
Door 201: Glass Door (over 50% glazing)	51			0.290	0.320	15	16
Wall 8: Structural Insulated Panels	44		27.0	0.040	0.045	2	2

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Prop. U-Factor	Req. U-Factor	Prop. UA	Req. UA
Wall 9: Structural Insulated Panels	550		27.0	0.040	0.045	20	22
Window 6: Wood Frame	24			0.300	0.320	7	8
Window 7: Wood Frame	15			0.300	0.320	5	5
Window 24: Wood Frame	9			0.300	0.320	3	3
Window 25: Wood Frame	9			0.300	0.320	3	3
Wall 10: Structural Insulated Panels	285		27.0	0.040	0.045	8	9
Door 101: Glass Door (over 50% glazing)	64			0.330	0.320	21	21
Window 21: Wood Frame	14			0.300	0.320	4	5
Wall 11: Structural Insulated Panels	162		27.0	0.040	0.045	6	7
Wall 12: Structural Insulated Panels	340		27.0	0.040	0.045	8	9
Window 3: Wood Frame	17			0.300	0.320	5	5
Window 4: Wood Frame	51			0.300	0.320	15	16
Window 5: Wood Frame	17			0.300	0.320	5	5
Window 18: Wood Frame	6			0.300	0.320	2	2
Window 18: Wood Frame	6			0.300	0.320	2	2
Window 19: Wood Frame	34			0.300	0.320	10	11
Wall 13: Structural Insulated Panels	162		27.0	0.040	0.045	5	6
Window 2: Wood Frame	34			0.300	0.320	10	11
Wall 14: Structural Insulated Panels	231		27.0	0.040	0.045	7	8
Window 1: Wood Frame	31			0.350	0.320	11	10
Window 20: Wood Frame	14			0.300	0.320	4	5
Wall 15: Structural Insulated Panels	17		27.0	0.040	0.045	1	1
Wall 16: Structural Insulated Panels	17		27.0	0.040	0.045	1	1
Wall 17: Structural Insulated Panels	17		27.0	0.040	0.045	1	1
Wall 18: Structural Insulated Panels	17		27.0	0.040	0.045	1	1
Wall 19: Structural Insulated Panels	23		27.0	0.040	0.045	1	1
Wall 20: Structural Insulated Panels	23		27.0	0.040	0.045	1	1
Wall 21: Structural Insulated Panels	23		27.0	0.040	0.045	1	1
Wall 22: Structural Insulated Panels	23		27.0	0.040	0.045	1	1
Floor: Slab-On-Grade (Heated) Insulation depth: 4.0' Insulation position: Horizontal Insulation	208		15.0	1.110	0.645	0	0
Basement Wall B1: Solid Concrete or Masonry Wall height: 8.8' Depth below grade: 8.1' Insulation depth: 8.8'	200	13.0	0.0	0.055	0.050	11	10
Basement Wall B2: Solid Concrete or Masonry Wall height: 8.8' Depth below grade: 8.1' Insulation depth: 8.8'	150	13.0	0.0	0.055	0.050	8	8
Basement Wall B3: Solid Concrete or Masonry Wall height: 8.8' Depth below grade: 8.1' Insulation depth: 8.8'	59	13.0	0.0	0.055	0.050	3	3

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Prop. U-Factor	Req. U-Factor	Prop. UA	Req. UA
Basement Wall B4: Solid Concrete or Masonry Wall height: 8.8' Depth below grade: 8.1' Insulation depth: 8.8'	160	13.0	0.0	0.055	0.050	9	8
Basement Wall B5: Solid Concrete or Masonry Wall height: 8.8' Depth below grade: 8.1' Insulation depth: 8.8'	40	13.0	0.0	0.055	0.050	2	2
Basement Wall B6: Solid Concrete or Masonry Wall height: 8.8' Depth below grade: 8.1' Insulation depth: 8.8'	103	13.0	0.0	0.055	0.050	6	5
Basement Wall B7: Solid Concrete or Masonry Wall height: 8.8' Depth below grade: 8.1' Insulation depth: 8.8'	40	13.0	0.0	0.055	0.050	2	2
Basement Wall B8: Solid Concrete or Masonry Wall height: 8.8' Depth below grade: 8.1' Insulation depth: 8.8'	210	13.0	0.0	0.055	0.050	12	11

Additional Efficiency Package(s)

Required: 1 Proposed: 1

	Description	Credits
Efficient HVAC Performance		1.0

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 2021 IECC requirements in RES*check* Version : REScheck-Web and to comply with the mandatory requirements listed in the RES*check* Inspection Checklist.

Jeff Kriner - Home Designer	Jeff Kriner	5-10-2024
Name - Title	Signature	Date



Insulation Rating	R-Value	
Above-Grade Wall	27.00	
Below-Grade Wall	13.00	
Floor	15.00	
Ceiling / Roof	41.00	
Ductwork (unconditioned spaces):		
Glass & Door Rating	U-Factor	SHGC
Window	0.30	0.27
Door	0.20	0.26
Heating & Cooling Equipment	Efficiency	
Heating System:		
Cooling System:		
Water Heater:		
Name:	Date:	
Comments		