

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Lot 45 Jewel Lake I

Street:

City, State, Zip: Lake City, FL, 32025

Owner:

Design Location: FL, Gainesville

Builder Name: Sorensen & Smith, LLC.

Permit Office: Columbia County

Permit Number:

Jurisdiction:

County: Columbia (Florida Climate Zone 2)

1. New construction or existing	New (From Plans)
2. Single family or multiple family	Detached
3. Number of units, if multiple family	1
4. Number of Bedrooms	3
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft ²)	1867
Conditioned floor area below grade (ft ²)	0
7. Windows (202.0 sqft.)	Description Area
a. U-Factor:	Dbl, U=0.36 202.00 ft ²
SHGC:	SHGC=0.25
b. U-Factor:	N/A ft ²
SHGC:	
c. U-Factor:	N/A ft ²
SHGC:	
Area Weighted Average Overhang Depth:	3.533 ft.
Area Weighted Average SHGC:	0.250
8. Skylights	Area
c. U-Factor (AVG):	N/A ft ²
SHGC (AVG):	N/A
9. Floor Types (1867.0 sqft.)	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 1867.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²

10. Wall Types (1795.5 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 1602.00 ft ²
b. Frame - Wood, Adjacent	R=13.0 193.50 ft ²
c. N/A	R= ft ²
d. N/A	R= ft ²
11. Ceiling Types (1960.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=38.0 1960.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²
12. Ducts	R ft ²
a. Sup: Attic, Ret: Attic, AH: Garage	6 466.75
13. Cooling systems	kBtu/hr Efficiency
a. Central Unit	21.4 SEER:14.00
14. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	28.3 HSPF:8.20
15. Hot water systems	
a. Electric	Cap: 50 gallons
b. Conservation features	EF: 0.920
None	
16. Credits	CV, Pstat

Glass/Floor Area: 0.108

Total Proposed Modified Loads: 46.15

Total Baseline Loads: 46.53

PASS

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.

PREPARED BY: _____

DATE: 1/31/2022

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: _____

DATE: _____

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.



BUILDING OFFICIAL: _____

DATE: _____

- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.

- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires an envelope leakage test report with envelope leakage no greater than 5.00 ACH50 (R402.4.1.2).

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Lot 45 Jewel Lake I	Bedrooms:	3	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	1867	Lot #	45
Owner Name:		Total Stories:	1	Block/Subdivision:	Jewel Lake I
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Sorensen & Smith, LLC.	Rotate Angle:	0	Street:	
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City , FL , 32025
Family Type:	Detached				
New/Existing:	New (From Plans)				
Comment:					

CLIMATE

✓	Design Location	TMY Site	Design Temp		Int Design Temp		Heating	Design	Daily Temp
			97.5 %	2.5 %	Winter	Summer	Degree Days	Moisture	Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	1867	16803

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1867	16803	Yes	6	3	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	199.5 ft	0	1867 ft²	----	0	0	1

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Hip	Composition shingles	2244 ft²	0 ft²	Medium	Y	0.96	No	0.9	No	0	33.7

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1867 ft²	Y	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	1960 ft²	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

WALLS

✓	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
___	1	S	Exterior	Frame - Wood	Main	13	16	8	9		150.0 ft²		0.23	0.75	0
___	2	E	Exterior	Frame - Wood	Main	13	4		9		36.0 ft²		0.23	0.75	0
___	3	S	Exterior	Frame - Wood	Main	13	4		9		36.0 ft²		0.23	0.75	0
___	4	W	Exterior	Frame - Wood	Main	13	4		9		36.0 ft²		0.23	0.75	0
___	5	S	Exterior	Frame - Wood	Main	13	9	10	9		88.5 ft²		0.23	0.75	0
___	6	S	Garage	Frame - Wood	Main	13	21	6	9		193.5 ft²		0.23	0.75	0
___	7	E	Exterior	Frame - Wood	Main	13	41	6	9		373.5 ft²		0.23	0.75	0
___	8	N	Exterior	Frame - Wood	Main	13	12	10	9		115.5 ft²		0.23	0.75	0
___	9	E	Exterior	Frame - Wood	Main	13	7	2	9		64.5 ft²		0.23	0.75	0
___	10	N	Exterior	Frame - Wood	Main	13	11	4	9		102.0 ft²		0.23	0.75	0
___	11	W	Exterior	Frame - Wood	Main	13	8	8	9		78.0 ft²		0.23	0.75	0
___	12	N	Exterior	Frame - Wood	Main	13	15	0	9		135.0 ft²		0.23	0.75	0
___	13	N	Exterior	Frame - Wood	Main	13	12	10	9		115.5 ft²		0.23	0.75	0
___	14	W	Exterior	Frame - Wood	Main	13	30	2	9		271.5 ft²		0.23	0.75	0

DOORS

✓	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
___	1	S	Insulated	Main	None	.46	3		6	8	20 ft²
___	2	S	Insulated	Main	None	.46	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Separation	Int Shade	Screening
___	1	S	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	16.0 ft²	5 ft 6 in	1 ft 0 in	None	None
___	2	S	5	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	3	E	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	4	E	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	6.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	5	N	8	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	6	N	10	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	7	N	12	Vinyl	Low-E Double	Yes	0.36	0.25	N	40.0 ft²	10 ft 2 in	1 ft 0 in	None	None
___	8	N	13	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 6 in	2 ft 0 in	None	None
___	9	W	14	Vinyl	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	1 ft 6 in	1 ft 0 in	None	None

GARAGE

✓	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
___	1	437.1595 ft²	437.1595 ft²	65.2 ft	9 ft	1

INPUT SUMMARY CHECKLIST REPORT

INFILTRATION												
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50				
1	Wholehouse	Proposed ACH(50)	.000286	1400.3	76.82	144.22	.1027	5				

HEATING SYSTEM										
✓	#	System Type	Subtype	Speed	Efficiency	Capacity	Block		Ducts	
✓	1	Electric Heat Pump/	None	Single	HSPF:8.2	28.29 kBtu/hr	1		sys#1	

COOLING SYSTEM										
✓	#	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
✓	1	Central Unit/	None	Single	SEER: 14	21.44 kBtu/hr	630 cfm	0.7	1	sys#1

HOT WATER SYSTEM									
✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Electric	None	Garage	0.92	50 gal	40 gal	120 deg	None

SOLAR HOT WATER SYSTEM							
✓	FSEC Cert #	Company Name	System Model#	Collector Model#	Collector Area	Storage Volume	FEF
✓	None	None			ft²		

DUCTS														
✓	#	---- Supply ----			---- Return ----		Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC #	
		Location	R-Value	Area	Location	Area							Heat	Cool
✓	1	Attic	6	466.75 f	Attic	93.35 ft²	Default Leakage	Garage	(Default) c	(Default) c			1	1

TEMPERATURES																								
Programable Thermostat: Y				Ceiling Fans:																				
Cooling	<input type="checkbox"/>	Jan	<input type="checkbox"/>	Feb	<input type="checkbox"/>	Mar	<input type="checkbox"/>	Apr	<input type="checkbox"/>	May	<input checked="" type="checkbox"/>	Jun	<input checked="" type="checkbox"/>	Jul	<input checked="" type="checkbox"/>	Aug	<input checked="" type="checkbox"/>	Sep	<input type="checkbox"/>	Oct	<input type="checkbox"/>	Nov	<input type="checkbox"/>	Dec
Heating	<input checked="" type="checkbox"/>	Jan	<input checked="" type="checkbox"/>	Feb	<input checked="" type="checkbox"/>	Mar	<input checked="" type="checkbox"/>	Apr	<input checked="" type="checkbox"/>	May	<input type="checkbox"/>	Jun	<input type="checkbox"/>	Jul	<input type="checkbox"/>	Aug	<input type="checkbox"/>	Sep	<input type="checkbox"/>	Oct	<input checked="" type="checkbox"/>	Nov	<input checked="" type="checkbox"/>	Dec
Venting	<input type="checkbox"/>	Jan	<input type="checkbox"/>	Feb	<input checked="" type="checkbox"/>	Mar	<input checked="" type="checkbox"/>	Apr	<input checked="" type="checkbox"/>	May	<input type="checkbox"/>	Jun	<input type="checkbox"/>	Jul	<input type="checkbox"/>	Aug	<input type="checkbox"/>	Sep	<input type="checkbox"/>	Oct	<input checked="" type="checkbox"/>	Nov	<input checked="" type="checkbox"/>	Dec

INPUT SUMMARY CHECKLIST REPORT

Thermostat Schedule: HERS 2006 Reference		Hours											
Schedule Type		1	2	3	4	5	6	7	8	9	10	11	12
Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	78	78	78	78	78	78	78	78	78	78
Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
MASS													
Mass Type			Area		Thickness		Furniture Fraction			Space			
Default(8 lbs/sq.ft.			0 ft²		0 ft		0.3			Main			

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 99

The lower the EnergyPerformance Index, the more efficient the home.

, Lake City, FL, 32025

1. New construction or existing	New (From Plans)	10. Wall Type and Insulation	Insulation	Area
2. Single family or multiple family	Detached	a. Frame - Wood, Exterior	R=13.0	1602.00 ft²
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	193.50 ft²
4. Number of Bedrooms	3	c. N/A	R=	ft²
5. Is this a worst case?	No	d. N/A	R=	ft²
6. Conditioned floor area (ft²)	1867	11. Ceiling Type and insulation level	Insulation	Area
7. Windows**	Description	a. Under Attic (Vented)	R=38.0	1960.00 ft²
a. U-Factor:	Dbl, U=0.36	b. N/A	R=	ft²
SHGC:	SHGC=0.25	c. N/A	R=	ft²
b. U-Factor:	N/A	12. Ducts, location & insulation level	R	ft²
SHGC:		a. Sup: Attic, Ret: Attic, AH: Garage	6	466.75
c. U-Factor:	N/A	13. Cooling systems	kBtu/hr	Efficiency
SHGC:		a. Central Unit	21.4	SEER:14.00
d. U-Factor:	N/A	14. Heating systems	kBtu/hr	Efficiency
SHGC:		a. Electric Heat Pump	28.3	HSPF:8.20
Area Weighted Average Overhang Depth:	3.533 ft.	15. Hot water systems	Cap: 50 gallons	
Area Weighted Average SHGC:	0.250	a. Electric	EF: 0.92	
8. Skylights	Description	b. Conservation features		
a. U-Factor(AVG):	N/A	None		
SHGC(AVG):	N/A	Credits (Performance method)		CV, Pstat
9. Floor Types	Insulation	Area		
a. Slab-On-Grade Edge Insulation	R=0.0	1867.00 ft²		
b. N/A	R=	ft²		
c. N/A	R=	ft²		

I certify that this home has complied with the Florida Energy Efficiency Code for Building Construction through the above energy saving features which will be installed (or exceeded) in this home before final inspection. Otherwise, a new EPL Display Card will be completed based on installed Code compliant features.

Builder Signature: _____ Date: _____

Address of New Home: _____ City/FL Zip: _____



*Note: This is not a Building Energy Rating. If your Index is below 70, your home may qualify for energy efficient mortgage (EEM) incentives if you obtain a Florida Energy Rating. For information about the Florida Building Code, Energy Conservation, contact the Florida Building Commission's support staff.

**Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

Envelope Leakage Test Report (Blower Door Test)

Residential Prescriptive, Performance or ERI Method Compliance

2020 Florida Building Code, Energy Conservation, 7th Edition

Jurisdiction:	Permit #:
Job Information	
Builder: Sorensen & Smith, LLC.	Community: Lot: 45
Address:	
City: Lake City	State: FL Zip: 32025
Air Leakage Test Results <i>Passing results must meet either the Performance, Prescriptive, or ERI Method</i>	
<input type="radio"/> PRESCRIPTIVE METHOD -The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 7 air changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Climate Zones 1 and 2.	
<input type="radio"/> PERFORMANCE or ERI METHOD -The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding the selected ACH(50) value, as shown on Form R405-2020 (Performance) or R406-2020 (ERI), section labeled as infiltration, sub-section ACH50. ACH(50) specified on Form R405-2020-Energy Calc (Performance) or R406-2020 (ERI): 5.000	
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 60%;"> $\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{16803}{\text{ACH}(50)} =$ <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="border: 1px solid black; width: 30px; height: 30px; margin-right: 10px;"></div> <div style="font-size: 24px; font-weight: bold;">PASS</div> </div> <div style="margin-top: 10px;"> <input type="checkbox"/> When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department. </div> </div> <div style="width: 35%;"> <p>Method for calculating building volume:</p> <div style="margin-top: 10px;"> <input type="radio"/> Retrieved from architectural plans <input checked="" type="radio"/> Code software calculated <input type="radio"/> Field measured and calculated </div> </div> </div>	
<p>R402.4.1.2 Testing. Testing shall be conducted in accordance with ANSI/RESNET/ICC 380 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by either individuals as defined in Section 553.993(5) or <i>(7) Florida Statutes</i> or individuals licensed as set forth in Section 489.105(3)(f), (g), or (i) or an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the <i>code official</i>. Testing shall be performed at any time after creation of all penetrations of the <i>building thermal envelope</i>.</p> <p>During testing:</p> <ol style="list-style-type: none"> 1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures. 2. Dampers including exhaust, intake, makeup air, back draft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures. 3. Interior doors, if installed at the time of the test, shall be open. 4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed. 5. Heating and cooling systems, if installed at the time of the test, shall be turned off. 6. Supply and return registers, if installed at the time of the test, shall be fully open. 	
Testing Company	
<p>Company Name: _____ Phone: _____</p> <p>I hereby verify that the above Air Leakage results are in accordance with the 2020 7th Edition Florida Building Code Energy Conservation requirements according to the compliance method selected above.</p> <p>Signature of Tester: _____ Date of Test: _____</p> <p>Printed Name of Tester: _____</p> <p>License/Certification #: _____ Issuing Authority: _____</p>	