

# FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Lot 14 Jewel Lake I  
 Street:  
 City, State, Zip: Lake City, FL, 32025  
 Owner:  
 Design Location: FL, Gainesville

Builder Name: Sorensen & Smith  
 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	4
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft <sup>2</sup> )	1853
Conditioned floor area below grade (ft <sup>2</sup> )	0
7. Windows (242.0 sqft.)	Description Area
a. U-Factor:	Dbl, U=0.36 242.00 ft <sup>2</sup>
SHGC:	SHGC=0.25
b. U-Factor:	N/A ft <sup>2</sup>
SHGC:	
c. U-Factor:	N/A ft <sup>2</sup>
SHGC:	
Area Weighted Average Overhang Depth:	2.905 ft.
Area Weighted Average SHGC:	0.250
8. Skylights	Area
c. U-Factor:(AVG)	N/A ft <sup>2</sup>
SHGC(AVG):	N/A
9. Floor Types (1853.0 sqft.)	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 963.00 ft <sup>2</sup>
b. Floor Over Other Space	R=19.0 890.00 ft <sup>2</sup>
c. N/A	R= ft <sup>2</sup>

10. Wall Types (2237.3 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 2101.30 ft <sup>2</sup>
b. Frame - Wood, Adjacent	R=13.0 136.00 ft <sup>2</sup>
c. N/A	R= ft <sup>2</sup>
d. N/A	R= ft <sup>2</sup>
11. Ceiling Types (1011.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=38.0 1011.00 ft <sup>2</sup>
b. N/A	R= ft <sup>2</sup>
c. N/A	R= ft <sup>2</sup>
12. Ducts	R ft <sup>2</sup>
a. Sup: Attic, Ret: Attic, AH: 2nd Floor	6 463.25
13. Cooling systems	kBtu/hr Efficiency
a. Central Unit	18.4 SEER:14.00
14. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	29.6 HSPF:8.20
15. Hot water systems	
a. Electric	Cap: 50 gallons
	EF: 0.920
b. Conservation features	
None	
16. Credits	CV, Pstat

Glass/Floor Area: 0.131

Total Proposed Modified Loads: 49.68

Total Baseline Loads: 53.41

**PASS**

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

PREPARED BY: Will C. Smith  
 DATE: 5 / 25 / 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 14 Jewel Lake I	Bedrooms:	4	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	1853	Lot #	14
Owner Name:		Total Stories:	2	Block/Subdivision:	Jewel Lake I
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Sorensen & Smith	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 97.5 %	2.5 %	Int Design Temp Winter	Summer	Heating Degree Days	Design Moisture	Daily Temp Range
_____	FL, Gainesville	FL_GAINESVILLE_REGI	32	92	70	75	1305.5	51	Medium

## BLOCKS

Number	Name	Area	Volume
1	Block1	1853	14824

## SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	1st Floor	963	7704	Yes	4	1	1	Yes	Yes	Yes
2	2nd Floor	890	7120	No	6	3	1	Yes	Yes	Yes

## FLOORS

✓	#	Floor Type	Space	Perimeter	Perimeter R-Value	Area	Joist R-Value	Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	1st Floor	140 ft	0	963 ft²	----	0	0	1
_____	2	Floor Over Other Space	2nd Floor	----	----	890 ft²	19	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	1115 ft²	0 ft²	Medium	Y	0.96	No	0.9	No	0	30.26

## ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	963 ft²	Y	N



## INPUT SUMMARY CHECKLIST REPORT

## CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
✓	1	Under Attic (Vented)	1st Floor	38	Double Batt	77 ft²	0.11	Wood
✓	2	Under Attic (Vented)	2nd Floor	38	Double Batt	934 ft²	0.11	Wood

## WALLS

✓	#	Ornt	Adj To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
✓	1	E	Exterior	Frame - Wood	1st Floor	13	15	8	8		125.3 ft²		0.23	0.75	0
✓	2	S	Exterior	Frame - Wood	1st Floor	13	6		8		48.0 ft²		0.23	0.75	0
✓	3	E	Exterior	Frame - Wood	1st Floor	13	12		8		96.0 ft²		0.23	0.75	0
✓	4	N	Garage	Frame - Wood	1st Floor	13	17		8		136.0 ft²		0.23	0.75	0
✓	5	N	Exterior	Frame - Wood	1st Floor	13	9		8		72.0 ft²		0.23	0.75	0
✓	6	W	Exterior	Frame - Wood	1st Floor	13	4	8	8		37.3 ft²		0.23	0.75	0
✓	7	N	Exterior	Frame - Wood	1st Floor	13	10		8		80.0 ft²		0.23	0.75	0
✓	8	W	Exterior	Frame - Wood	1st Floor	13	7	4	8		58.7 ft²		0.23	0.75	0
✓	9	N	Exterior	Frame - Wood	1st Floor	13	6		8		48.0 ft²		0.23	0.75	0
✓	10	W	Exterior	Frame - Wood	1st Floor	13	6		8		48.0 ft²		0.23	0.75	0
✓	11	W	Exterior	Frame - Wood	1st Floor	13	10		8		80.0 ft²		0.23	0.75	0
✓	12	S	Exterior	Frame - Wood	1st Floor	13	36		8		288.0 ft²		0.23	0.75	0
✓	13	E	Exterior	Frame - Wood	2nd Floor	13	15	8	8		125.3 ft²		0.23	0.75	0
✓	14	S	Exterior	Frame - Wood	2nd Floor	13	6		8		48.0 ft²		0.23	0.75	0
✓	15	E	Exterior	Frame - Wood	2nd Floor	13	12	4	8		98.7 ft²		0.23	0.75	0
✓	16	N	Exterior	Frame - Wood	2nd Floor	13	26		8		208.0 ft²		0.23	0.75	0
✓	17	W	Exterior	Frame - Wood	2nd Floor	13	12		8		96.0 ft²		0.23	0.75	0
✓	18	N	Exterior	Frame - Wood	2nd Floor	13	16		8		128.0 ft²		0.23	0.75	0
✓	19	W	Exterior	Frame - Wood	2nd Floor	13	16		8		128.0 ft²		0.23	0.75	0
✓	20	S	Exterior	Frame - Wood	2nd Floor	13	36		8		288.0 ft²		0.23	0.75	0

## DOORS

✓	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
✓	1	E	Insulated	1st Floor	None	.46	3		6	8	20 ft²
✓	2	N	Insulated	1st Floor	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	E	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	7 ft 6 in	0 ft 6 in	None	None
✓	2	E	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 6 in	9 ft 0 in	None	None
✓	3	N	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	12.0 ft²	1 ft 6 in	0 ft 6 in	None	None
✓	4	W	10	Vinyl	Low-E Double	Yes	0.36	0.25	N	9.0 ft²	1 ft 6 in	9 ft 0 in	None	None
✓	5	W	11	TIM	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	9 ft 6 in	0 ft 4 in	None	None
✓	6	S	12	Vinyl	Low-E Double	Yes	0.36	0.25	N	60.0 ft²	1 ft 6 in	9 ft 0 in	None	None
✓	7	E	13	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None
✓	8	E	15	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None

## INPUT SUMMARY CHECKLIST REPORT

## 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
✓	9	N	18	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None
✓	10	W	19	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None
✓	11	S	20	Vinyl	Low-E Double	Yes	0.36	0.25	N	6.0 ft²	1 ft 6 in	0 ft 6 in	None	None
✓	12	S	20	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	0 ft 6 in	None	None

## GARAGE

✓	#	Floor Area	Ceiling Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
✓	1	352 ft²	352 ft²	58.6667 ft	8 ft	1

## INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000254	1235.3	67.77	127.24	.1293	5

## HEATING SYSTEM

✓	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
✓	1	Electric Heat Pump/	None	Single	HSPF:8.2	29.64 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	18.43 kBtu/hr	540 cfm	0.7	1	sys#1

## HOT WATER SYSTEM

✓	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
✓	1	Electric	None	2nd Floor	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 --- Location	R-Value	Area	--- Return --- Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat Cool
✓	1	Attic	6	463.25 f	Attic	93.15 ft²	Default Leakage	2nd Floor	(Default) c	(Default) c			1 1

## INPUT SUMMARY CHECKLIST REPORT

## 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 type="checkbox"/> May	<input type="checkbox"/> Jun	<input type="checkbox"/> Jul	<input type="checkbox"/> Aug	<input type="checkbox"/> Sep	<input checked="" type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input checked="" type="checkbox"/> Dec
Venting	<input type="checkbox"/> Jan	<input type="checkbox"/> Feb	<input type="checkbox"/> Mar	<input type="checkbox"/> Apr	<input type="checkbox"/> May	<input type="checkbox"/> Jun	<input type="checkbox"/> Jul	<input type="checkbox"/> Aug	<input type="checkbox"/> Sep	<input type="checkbox"/> Oct	<input type="checkbox"/> Nov	<input type="checkbox"/> Dec

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	1st Floor
Default(8 lbs/sq.ft.	0 ft²	0 ft	0.3	2nd Floor



# ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX\* = 93

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	2101.30 ft <sup>2</sup>
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	136.00 ft <sup>2</sup>
4. Number of Bedrooms	4	c. N/A	R=	ft <sup>2</sup>
5. Is this a worst case?	No	d. N/A	R=	ft <sup>2</sup>
6. Conditioned floor area (ft <sup>2</sup> )	1853	11. Ceiling Type and insulation level	Insulation	Area
7. Windows**	Description	a. Under Attic (Vented)	R=38.0	1011.00 ft <sup>2</sup>
a. U-Factor:	Dbl, U=0.36	b. N/A	R=	ft <sup>2</sup>
SHGC:	SHGC=0.25	c. N/A	R=	ft <sup>2</sup>
b. U-Factor:	N/A	12. Ducts, location & insulation level	R	ft <sup>2</sup>
SHGC:		a. Sup: Attic, Ret: Attic, AH: 2nd Floor	6	463.25
c. U-Factor:	N/A	13. Cooling systems	kBtu/hr	Efficiency
SHGC:		a. Central Unit	18.4	SEER:14.00
d. U-Factor:	N/A	14. Heating systems	kBtu/hr	Efficiency
SHGC:		a. Electric Heat Pump	29.6	HSPF:8.20
Area Weighted Average Overhang Depth:	2.905 ft.	15. Hot water systems		
Area Weighted Average SHGC:	0.250	a. Electric	Cap: 50 gallons	
8. Skylights	Description		EF: 0.92	
a. U-Factor(AVG):	N/A	b. Conservation features		
SHGC(AVG):	N/A	None		
9. Floor Types	Insulation	Credits (Performance method)	CV, Pstat	
a. Slab-On-Grade Edge Insulation	R=0.0			
b. Floor Over Other Space	R=19.0			
c. N/A	R=			

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 #:
<b>Job Information</b>	
Builder: Sorensen & Smith	Community: Lot: 14
Address:	
City: Lake City	State: FL Zip: 32025
<b>Air Leakage Test Results</b> <i>Passing results must meet either the Performance, Prescriptive, or ERI Method</i>	
<input type="radio"/> <b>PRESCRIPTIVE METHOD</b> -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"/> <b>PERFORMANCE or ERI METHOD</b> -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): <span style="border: 1px solid black; padding: 2px 20px;">5.000</span>	
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 60%;"> <math display="block">\frac{\text{CFM}(50) \times 60}{\text{Building Volume}} = \text{ACH}(50)</math> <div style="border: 1px solid black; width: 40px; height: 40px; margin: 10px auto; display: flex; align-items: center; justify-content: center; font-weight: bold; font-size: 1.2em;">PASS</div> <input type="checkbox"/> When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.         </div> <div style="width: 35%;"> <p><u>Method for calculating building volume:</u></p> <input type="radio"/> Retrieved from architectural plans  <input checked="" type="radio"/> Code software calculated  <input type="radio"/> Field measured and calculated         </div> </div>	
<p><b>R402.4.1.2 Testing.</b> 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 (7) <i>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 code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.</p> <p>During testing:</p> <ol style="list-style-type: none"> <li>1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.</li> <li>2. Dampers including exhaust, intake, makeup air, back draft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.</li> <li>3. Interior doors, if installed at the time of the test, shall be open.</li> <li>4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.</li> <li>5. Heating and cooling systems, if installed at the time of the test, shall be turned off.</li> <li>6. Supply and return registers, if installed at the time of the test, shall be fully open.</li> </ol>	
<b>Testing Company</b>	
Company Name: _____ Phone: _____ 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.	
Signature of Tester: _____ Date of Test: _____	
Printed Name of Tester: _____	
License/Certification #: _____ Issuing Authority: _____	