

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

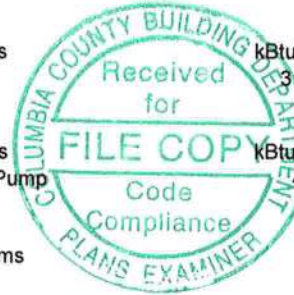
Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Jones_FreemanRes
 Street: 587 Pinehurst Drive
 City, State, Zip: Lake City, FL, 32055
 Owner: Jones / Freeman
 Design Location: FL, Gainesville

Builder Name: Sparks Construction, Inc.
 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 ²)	2900
Conditioned floor area below grade (ft ²)	0
7. Windows (418.0 sqft.)	Description Area
a. U-Factor:	Dbl, U=0.36 418.00 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:	7.816 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 (2900.0 sqft.)	Insulation Area
a. Slab-On-Grade Edge Insulation	R=0.0 2900.00 ft ²
b. N/A	R= ft ²
c. N/A	R= ft ²

10. Wall Types(2800.0 sqft.)	Insulation Area
a. Frame - Wood, Exterior	R=13.0 2100.00 ft ²
b. Frame - Wood, Adjacent	R=13.0 700.00 ft ²
c. N/A	R= ft ²
d. N/A	R= ft ²
11. Ceiling Types (3045.0 sqft.)	Insulation Area
a. Under Attic (Vented)	R=38.0 3045.00 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	6 725
13. Cooling systems	kBtu/hr Efficiency
a. Central Unit	31.8 SEER:14.00
14. Heating systems	kBtu/hr Efficiency
a. Electric Heat Pump	43.4 HSPF:8.20
15. Hot water systems	Cap: 50 gallons
a. Propane	EF: 0.590
b. Conservation features	None
16. Credits	CV, Pstat



Glass/Floor Area: 0.144

Total Proposed Modified Loads: 61.40

Total Baseline Loads: 71.51

PASS

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

PREPARED BY:
 DATE: 6/8/2021

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:	Jones_FreemanRes	Bedrooms:	4	Address Type:	Street Address
Building Type:	User	Conditioned Area:	2900	Lot #	
Owner Name:	Jones / Freeman	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Sparks Construction, Inc.	Rotate Angle:	0	Street:	587 Pinehurst Drive
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City , FL , 32055
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	2900	29000

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	2900	29000	Yes	8	4	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	271.667 ft	0	2900 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	Gable or shed	Composition shingles	3485 ft²	966 ft²	Medium	Y	0.96	No	0.9	No	0	33.69

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	2900 ft²	Y	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	3045 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	12		10		120.0 ft²		0.23	0.75	0
2	S	Exterior	Frame - Wood	Main	13	31	4	10		313.3 ft²		0.23	0.75	0
3	S	Exterior	Frame - Wood	Main	13	7	8	10		76.7 ft²		0.23	0.75	0
4	E	Garage	Frame - Wood	Main	13	23	4	20		466.7 ft²		0.23	0.75	0
5	S	Garage	Frame - Wood	Main	13	23	4	10		233.3 ft²		0.23	0.75	0
6	E	Exterior	Frame - Wood	Main	13	31		10		310.0 ft²		0.23	0.75	0
7	N	Exterior	Frame - Wood	Main	13	26	4	10		263.3 ft²		0.23	0.75	0
8	W	Exterior	Frame - Wood	Main	13	10		10		100.0 ft²		0.23	0.75	0
9	N	Exterior	Frame - Wood	Main	13	36		10		360.0 ft²		0.23	0.75	0
10	N	Exterior	Frame - Wood	Main	13	15		10		150.0 ft²		0.23	0.75	0
11	W	Exterior	Frame - Wood	Main	13	40	8	10		406.7 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		8		24 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	18.0 ft²	1 ft 6 in	1 ft 0 in	None	None
2	S	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	72.0 ft²	9 ft 6 in	1 ft 0 in	None	None
3	S	2	TIM	Low-E Double	Yes	0.36	0.25	N	48.0 ft²	9 ft 6 in	1 ft 0 in	None	None
4	S	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	12.0 ft²	1 ft 6 in	1 ft 0 in	None	None
5	E	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	8.0 ft²	1 ft 6 in	1 ft 0 in	None	None
6	E	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	6.0 ft²	1 ft 6 in	1 ft 0 in	None	None
7	E	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	16.0 ft²	1 ft 6 in	1 ft 0 in	None	None
8	N	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	24.0 ft²	1 ft 6 in	1 ft 0 in	None	None
9	W	8	TIM	Low-E Double	Yes	0.36	0.25	N	48.0 ft²	6 ft 6 in	1 ft 0 in	None	None
10	N	9	TIM	Low-E Double	Yes	0.36	0.25	N	144.0 ft²	11 ft 6 in	1 ft 0 in	None	None
11	N	10	Vinyl	Low-E Double	Yes	0.36	0.25	N	18.0 ft²	1 ft 6 in	1 ft 0 in	None	None
12	W	11	Vinyl	Low-E Double	Yes	0.36	0.25	N	4.0 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	552.15111 ft²	552.15111 ft²	51 ft	10 ft	1

INPUT SUMMARY CHECKLIST REPORT

INFILTRATION										
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50		
1	Wholehouse	Proposed ACH(50)	.000317	2416.7	132.59	248.91	.1071	5		

HEATING SYSTEM										
☒	#	System Type	Subtype	Speed	Efficiency	Capacity	Block		Ducts	
☒	1	Electric Heat Pump/	None	Single	HSPF:8.2	43.37 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	31.75 kBtu/hr	960 cfm	0.7	1	sys#1

HOT WATER SYSTEM										
☒	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation	
☒	1	Propane	None	Garage	0.59	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	725 ft²	Attic	145 ft²	Default Leakage	Garage	(Default) c	(Default) c			1	1

TEMPERATURES																								
Programable Thermostat: Y							Ceiling Fans:																	
Cooling	☐	Jan	☐	Feb	☐	Mar	☐	Apr	☐	May	☒	Jun	☒	Jul	☒	Aug	☒	Sep	☐	Oct	☐	Nov	☐	Dec
Heating	☒	Jan	☒	Feb	☒	Mar	☐	Apr	☐	May	☐	Jun	☐	Jul	☐	Aug	☐	Sep	☐	Oct	☒	Nov	☒	Dec
Venting	☐	Jan	☐	Feb	☒	Mar	☒	Apr	☒	May	☐	Jun	☐	Jul	☐	Aug	☐	Sep	☐	Oct	☒	Nov	☒	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* = 86

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

587 Pinehurst Drive, Lake City, FL, 32055

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	2100.00 ft ²
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	700.00 ft ²
4. Number of Bedrooms	4	c. N/A	R=	ft ²
5. Is this a worst case?	No	d. N/A	R=	ft ²
6. Conditioned floor area (ft ²)	2900	11. Ceiling Type and insulation level	Insulation	Area
7. Windows**	Description	a. Under Attic (Vented)	R=38.0	3045.00 ft ²
a. U-Factor:	DbI, U=0.36	b. N/A	R=	ft ²
SHGC:	SHGC=0.25	c. N/A	R=	ft ²
b. U-Factor:	N/A	12. Ducts, location & insulation level		R ft ²
SHGC:		a. Sup: Attic, Ret: Attic, AH: Garage		6 725
c. U-Factor:	N/A			
SHGC:		13. Cooling systems	kBtu/hr	Efficiency
d. U-Factor:	N/A	a. Central Unit	31.8	SEER:14.00
SHGC:				
Area Weighted Average Overhang Depth:	7.816 ft.	14. Heating systems	kBtu/hr	Efficiency
Area Weighted Average SHGC:	0.250	a. Electric Heat Pump	43.4	HSPF:8.20
8. Skylights	Description			
a. U-Factor(AVG):	N/A	15. Hot water systems		Cap: 50 gallons
SHGC(AVG):	N/A	a. Propane		EF: 0.59
9. Floor Types	Insulation	b. Conservation features		
a. Slab-On-Grade Edge Insulation	R=0.0	None		
b. N/A	R=	Credits (Performance method)		CV, Pstat
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 #:
Job Information	
Builder: Sparks Construction, Inc.	Community: Lot: NA
Address: 587 Pinehurst Drive	
City: Lake City	State: FL Zip: 32055
Air Leakage Test Results <i>Passing results must meet either the Performance, Prescriptive, or ERI Method</i>	
☐ 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.	
☐ 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	
$\frac{\text{CFM}(50) \times 60}{\text{Building Volume}} = \text{ACH}(50)$ PASS ☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department. <u>Method for calculating building volume:</u> ☐ Retrieved from architectural plans ☒ Code software calculated ☐ Field measured and calculated	
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 (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. During testing: 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	
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: _____	