

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Senn Garage Street: City, State, Zip: Lake City , FL , 32055 Owner: David & Pam Senn Design Location: FL, Gainesville	Builder Name: Sparks Construction, Inc. Permit Office: Columbia County Permit Number: Jurisdiction: County: Columbia (Florida Climate Zone 2)
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Glass/Floor Area: 0.058	Total Proposed Modified Loads: 17.14	PASS
	Total Baseline Loads: 17.45	

<p>I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code.</p> <p>PREPARED BY: _____ DATE: <u>8/4/2021</u></p> <p>I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.</p> <p>OWNER/AGENT: _____ DATE: _____</p>	<p>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.</p> <p>BUILDING OFFICIAL: _____ DATE: _____</p> <div style="text-align: right;">  </div>
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- 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).
- Proposed Qn of NAN exceeds the performance method default limit of 0.08 and therefore does not require duct testing. R405.2.3

INPUT SUMMARY CHECKLIST REPORT

PROJECT													
Title:	Senn Garage	Bedrooms:	0	Address Type:	Lot Information								
Building Type:	User	Conditioned Area:	624	Lot #	22								
Owner Name:	David & Pam Senn	Total Stories:	1	Block/Subdivision:	Blackberry Farm								
# of Units:	1	Worst Case:	No	PlatBook:									
Builder Name:	Sparks Construction, Inc.	Rotate Angle:	0	Street:									
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 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	624	4992									
SPACES													
	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated		
	1	Main	624	4992	Yes	2	0	1	Yes	Yes	Yes		
FLOORS													
✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet			
_____	1	Slab-On-Grade Edge Insulation	Main	100 ft	0	624 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	722 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	624 ft²	Y	N						
CEILING													
✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type					
_____	1	Under Attic (Vented)	Main	38	Double Batt	624 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	W	Exterior	Frame - Wood	Main	13	24		8		192.0 ft²		0.23	0.75	0
___ 2	S	Exterior	Frame - Wood	Main	13	26		8		208.0 ft²		0.23	0.75	0
___ 3	E	Exterior	Frame - Wood	Main	13	24		8		192.0 ft²		0.23	0.75	0
___ 4	N	Exterior	Frame - Wood	Main	13	26		8		208.0 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	N	Insulated	Main	None	.46	10		7		70 ft²	
___ 3	N	Insulated	Main	None	.46	10		7		70 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	W	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	18.0 ft²	1 ft 6 in	0 ft 6 in	None	None
___ 2	S	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	9.0 ft²	1 ft 6 in	0 ft 6 in	None	None
___ 3	E	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	9.0 ft²	1 ft 6 in	0 ft 6 in	None	None

INFILTRATION								
#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000254	416	22.82	42.85	.098	5

HEATING SYSTEM									
✓ #	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts		
___ 1	Electric Heat Pump/	None	Single	HSPF:8.2	10 kBtu/hr	1	Ductless		

COOLING SYSTEM									
✓ #	System Type	Subtype	Subtype	Efficiency	Capacity	Air Flow	SHR	Block	Ducts
___ 1	Central Unit/	None	Single	SEER: 17	10 kBtu/hr	300 cfm	0.7	1	Ductless

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

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 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 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 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 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 ft ²	0 ft	0.3	Main

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 98

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

, 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	800.00 ft ²
3. Number of units, if multiple family	1		b. N/A	R=	ft ²
4. Number of Bedrooms	0		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)	624		11. Ceiling Type and insulation level	Insulation	Area
7. Windows**	Description	Area	a. Under Attic (Vented)	R=38.0	624.00 ft ²
a. U-Factor:	Dbl, U=0.36	36.00 ft ²	b. N/A	R=	ft ²
SHGC:	SHGC=0.25		c. N/A	R=	ft ²
b. U-Factor:	N/A	ft ²	12. Ducts, location & insulation level	R	ft ²
SHGC:					
c. U-Factor:	N/A	ft ²	13. Cooling systems	kBtu/hr	Efficiency
SHGC:			a. Central Unit	10.0	SEER:17.00
d. U-Factor:	N/A	ft ²			
SHGC:			14. Heating systems	kBtu/hr	Efficiency
Area Weighted Average Overhang Depth:	1.500 ft.		a. Electric Heat Pump	10.0	HSPF:8.20
Area Weighted Average SHGC:	0.250				
8. Skylights	Description	Area	15. Hot water systems		Cap: 50 gallons
a. U-Factor(AVG):	N/A	ft ²	a.		EF:
SHGC(AVG):	N/A				
9. Floor Types	Insulation	Area	b. Conservation features		
a. Slab-On-Grade Edge Insulation	R=0.0	624.00 ft ²	None		
b. N/A	R=	ft ²	Credits (Performance method)		CV, Pstat
c. N/A	R=	ft ²			

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 #:
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Job Information

Builder: Sparks Construction, Inc.	Community:	Lot: 22
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Address:

City: Lake City	State: FL	Zip: 32055
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Air Leakage Test Results *Passing results must meet either the Performance, Prescriptive, or ERI Method*

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

$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div 4992 = \text{ACH}(50)$ <div style="text-align: center; margin: 10px 0;"> <input type="checkbox"/> PASS </div> <p><input type="checkbox"/> When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.</p>	<p>Method for calculating building volume:</p> <p><input type="radio"/> Retrieved from architectural plans</p> <p><input checked="" type="radio"/> Code software calculated</p> <p><input type="radio"/> Field measured and calculated</p>
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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 (*Florida Statutes*) 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: _____