FORM R405-2020

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Hart Residence	Builder Name:	
Street:	159 SW Governors Glen	Permit Office:	Columbia County
City, State, Zip:	Lake City, FL, 32024	Permit Number:	
Owner:	Isaac & Marlene Hart	Jurisdiction:	
Design Location:	FL, Gainesville	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 (ft²)	2701
Conditioned floor area below grade (ft²)	0

7. Windows(355.0 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.36	355.00 ft²
SHGC:	SHGC=0.25	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		5.721 ft
Area Weighted Average SHGC:		0.250

8. Skylights	Description	Area
U-Factor:(AVG)	N/A	N/A ft²
SHGC(AVG):	N/A	

9. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R= 0.0	2701.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(2676.7 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	2420.00 ft²
b. Frame - Wood, Adjacent	R=13.0	256.67 ft²
c. N/A		
d. N/A		

11. Ceiling Types(2836.0 sqft.)	Insulation	Area
a. Flat ceiling under att (Vented)	R=38.0	2836.00 ft²
b. N/A		
c. N/A		

12. Roof(Comp. Shingles, Vented)	Deck R=0.0	3246 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Attic, AH: 1st Floor	6	675
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	33.7	SEER:15.50

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Heat Pump	42.0	HSPF:8.80

16. Hot Water Systems	
a. Electric	Cap: 50 gallons
	EF: 0.920
b. Conservation features	
	None
17. Credits	CV, Pstat

Glass/Floor Area: 0.131

Total Proposed Modified Loads: 63.00

Total Baseline Loads: 65.49

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 / 6 / 2023

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.

- Default duct leakage does not require a Duct Leakage Test Report.

- Compliance requires an Air Barrier and Insulation Inspection Checklist in accordance with R402.4.1.1 and this project requires a PERFORMANCE envelope leakage test report with envelope leakage no greater than 7.00 ACH50 (R402.4.1.2).

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Hart Residence			Address type:	Street Address
Building Type:	User	Bedrooms:	4	Lot #:	---
Owner:	Isaac & Marlene Hart	Conditioned Area:	2701	Block/SubDivision:	---
Builder Home ID:		Total Stories:	1	PlatBook:	---
Builder Name:		Worst Case:	No	Street:	159 SW Governors Glen
Permit Office:	Columbia County	Rotate Angle:	0	County:	Columbia
Jurisdiction:		Cross Ventilation:	Yes	City, State, Zip:	Lake City,
Family Type:	Detached	Whole House Fan:	No		FL, 32024
New/Existing:	New (From Plans)	Terrain:	Suburban		
Year Construct:	2023	Shielding:	Suburban		
Comment:					

CLIMATE

√	Design Location	Tmy Site	Design Temp 97.5%	Design Temp 2.5%	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily temp Range
___	FL, Gainesville	FL_GAINESVILLE_REGIONA	32	92	70	75	1305.5	51	Medium

BLOCKS

√	Number	Name	Area	Volume
___	1	Block1	2701	24309 cu ft

SPACES

√	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___	1	1st Floor	2701	24309	Yes	8	4	Yes	Yes	Yes

FLOORS (Total Exposed Area = 2701 sq.ft.)

√	#	Floor Type	Space	Exposed Perim	Perimeter R-Value	Area	U-Factor	Joist R-Value	Tile	Wood	Carpet
___	1	Slab-On-Grade Edge Ins	1st Floor	272	0	2701 ft	0.304	---	0.00	0.00	1.00

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	3246 ft²	504 ft²	Medium	Y	0.96	No	0.9	No	0	33.69

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___	1	Partial cathedral ceiling	Vented	300	2701 ft²	Y	N

CEILING (Total Exposed Area = 2836 sq.ft.)

√	#	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___	1	Flat ceiling under attic(Vented)	1st Floor	38.0	Double Batt	2836.0ft²	0.024	0.11	Wood

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INPUT SUMMARY CHECKLIST REPORT

WALLS (Total Exposed Area = 2677 sq.ft.)

√ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area sq.ft.	U-Factor	Sheath R-Value	Frm. Frac.	Solar Absor.	Below Grade
___ 1	S	Exterior	Frame - Wood	1st Floor	13.0	22.0	4	10.0	0	223.3	0.084		0.23	0.75	0 %
___ 2	W	Exterior	Frame - Wood	1st Floor	13.0	10.0	0	10.0	0	100.0	0.084		0.23	0.75	0 %
___ 3	S	Exterior	Frame - Wood	1st Floor	13.0	14.0	0	10.0	0	140.0	0.084		0.23	0.75	0 %
___ 4	E	Exterior	Frame - Wood	1st Floor	13.0	12.0	0	10.0	0	120.0	0.084		0.23	0.75	0 %
___ 5	S	Exterior	Frame - Wood	1st Floor	13.0	6.0	0	10.0	0	60.0	0.084		0.23	0.75	0 %
___ 6	E	Exterior	Frame - Wood	1st Floor	13.0	24.0	0	10.0	0	240.0	0.084		0.23	0.75	0 %
___ 7	N	Exterior	Frame - Wood	1st Floor	13.0	6.0	0	10.0	0	60.0	0.084		0.23	0.75	0 %
___ 8	E	Exterior	Frame - Wood	1st Floor	13.0	14.0	8	10.0	0	146.7	0.084		0.23	0.75	0 %
___ 9	N	Exterior	Frame - Wood	1st Floor	13.0	14.0	0	10.0	0	140.0	0.084		0.23	0.75	0 %
___ 10	W	Exterior	Frame - Wood	1st Floor	13.0	10.0	0	10.0	0	100.0	0.084		0.23	0.75	0 %
___ 11	N	Exterior	Frame - Wood	1st Floor	13.0	18.0	0	10.0	0	180.0	0.084		0.23	0.75	0 %
___ 12	E	Exterior	Frame - Wood	1st Floor	13.0	10.0	0	10.0	0	100.0	0.084		0.23	0.75	0 %
___ 13	N	Exterior	Frame - Wood	1st Floor	13.0	12.0	0	10.0	0	120.0	0.084		0.23	0.75	0 %
___ 14	E	Exterior	Frame - Wood	1st Floor	13.0	3.0	0	10.0	0	30.0	0.084		0.23	0.75	0 %
___ 15	N	Exterior	Frame - Wood	1st Floor	13.0	15.0	4	10.0	0	153.3	0.084		0.23	0.75	0 %
___ 16	W	Exterior	Frame - Wood	1st Floor	13.0	16.0	4	10.0	0	163.3	0.084		0.23	0.75	0 %
___ 17	N	Exterior	Frame - Wood	1st Floor	13.0	4.0	8	10.0	0	46.7	0.084		0.23	0.75	0 %
___ 18	W	Exterior	Frame - Wood	1st Floor	13.0	29.0	8	10.0	0	296.7	0.084		0.23	0.75	0 %
___ 19	S	Garage	Frame - Wood	1st Floor	13.0	25.0	8	10.0	0	256.7	0.084		0.23	0.75	0 %

DOORS (Total Exposed Area = 48 sq.ft.)

√ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
___ 1	S	Exterior	Insulated	1st Floor	None	0.46	3.00	0	8.00	0	24.0ft²
___ 2	S	Garage	Insulated	1st Floor	None	0.46	3.00	0	8.00	0	24.0ft²

WINDOWS (Total Exposed Area = 355 sq.ft.)

√ #	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Storm	Total Area (ft²)	Same Units	Width (ft)	Height (ft)	--Overhang-- Depth (ft)	Sep. (ft)	Interior Shade	Screen
___ 1	S	1	Vinyl	Low-E Double	Y	0.36	0.25	N	N	18.0	1	3.00	6.00	8.5	1.0	None	None
___ 2	S	3	Vinyl	Low-E Double	Y	0.36	0.25	N	N	33.0	2	3.00	5.50	1.0	0.5	None	None
___ 3	E	6	Vinyl	Low-E Double	Y	0.36	0.25	N	N	4.0	1	2.00	2.00	1.5	1.0	None	None
___ 4	E	6	Vinyl	Low-E Double	Y	0.36	0.25	N	N	4.0	1	4.00	1.00	1.5	1.0	None	None
___ 5	N	9	Vinyl	Low-E Double	Y	0.36	0.25	N	N	18.0	1	3.00	6.00	1.0	2.0	None	None
___ 6	N	11	Vinyl	Low-E Double	Y	0.36	0.25	N	N	72.0	4	3.00	6.00	16.5	1.0	None	None
___ 7	E	12	TIM	Low-E Double	Y	0.36	0.25	N	N	48.0	2	3.00	8.00	8.5	1.0	None	None
___ 8	N	13	Vinyl	Low-E Double	Y	0.36	0.25	N	N	54.0	3	3.00	6.00	1.5	1.0	None	None
___ 9	N	15	Vinyl	Low-E Double	Y	0.36	0.25	N	N	36.0	2	3.00	6.00	1.0	2.0	None	None
___ 10	W	16	Vinyl	Low-E Double	Y	0.36	0.25	N	N	20.0	2	2.00	5.00	1.5	1.0	None	None
___ 11	W	18	Vinyl	Low-E Double	Y	0.36	0.25	N	N	12.0	4	2.00	1.50	1.5	1.0	None	None
___ 12	W	18	Vinyl	Low-E Double	Y	0.36	0.25	N	N	20.0	1	4.00	5.00	1.5	1.0	None	None
___ 13	W	18	Vinyl	Low-E Double	Y	0.36	0.25	N	N	16.0	1	4.00	4.00	1.5	1.0	None	None

INFILTRATION

√ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___ 1	Wholehouse	Proposed ACH(50)	0.00040	2836	155.59	292.11	0.1438	7.0	All	24309 cu ft

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INPUT SUMMARY CHECKLIST REPORT

GARAGE

√ #	Floor Area	Roof Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
___ 1	796 ft²	796 ft²	91 ft	10 ft	1

MASS

√ #	Mass Type	Area	Thickness	Furniture Fraction	Space
___ 1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	1st Floor

HEATING SYSTEM

√ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	----Geothermal HeatPump---- Entry	Power	Volt	Current	Ducts	Block
___ 1	Electric Heat Pump	None/Single		HSPF: 8.80	42.0		0.00	0.00	0.00	sys#1	1

COOLING SYSTEM

√ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	Air Flow cfm	SHR	Duct	Block
___ 1	Central Unit	None/Single		SEER:15.5	33.7	1020	0.70	sys#1	1

HOT WATER SYSTEM

√ #	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixture Flow	Pipe Ins.	Pipe length
___ 1	Electric	None	1st Floor	0.92 (0.92)	50.00 gal	40 gal	120 deg	Standard	None	12

	Recirculation System	Recirc Control Type	Loop length	Branch length	Pump power	DWHR	Facilities Connected	Equal Flow	DWHR Eff	Other Credits
___ 1	No		NA	NA	NA	No	NA	NA	NA	None

DUCTS

√ Duct #	---------Supply--------- Location	R-Value	Area	---------Return--------- Location	R-Value	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM 25 OUT	QN	RLF	HVAC # Heat	Cool
___ 1	Attic	6.0	675 ft²	Attic	6.0	135 ft²	Default Leakage	1st Floor	(Default)	(Default)			1	1

TEMPERATURES

Programable Thermostat: Y Ceiling Fans: N

Cooling	[ ] Jan	[ ] Feb	[ ] Mar	[ ] Apr	[ ] May	[X] Jun	[X] Jul	[X] Aug	[X] Sep	[ ] Oct	[ ] Nov	[ ] Dec
Heating	[X] Jan	[X] Feb	[X] Mar	[ ] Apr	[ ] May	[ ] Jun	[ ] Jul	[ ] Aug	[ ] Sep	[ ] Oct	[X] Nov	[X] Dec
Venting	[ ] Jan	[ ] Feb	[X] Mar	[X] Apr	[ ] May	[ ] Jun	[ ] Jul	[ ] Aug	[ ] Sep	[X] Oct	[X] Nov	[ ] Dec

√ Thermostat Schedule: HERS 2006 Reference Schedule Type		Hours 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

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES(Continued)

___ 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

FORM R405-2020

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 96

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

159 SW Governors Glen,Lake City,FL,32024

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 (ft²)		2701
Conditioned floor area below grade (ft²)		0

7. Windows**	Description	Area
a. U-Factor:	Dbl, U=0.36	355.00 ft²
SHGC:	SHGC=0.25	
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SHGC:		
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SHGC:		
Area Weighted Average Overhang Depth:		5.721 ft
Area Weighted Average SHGC:		0.250

8. Skylights	Description	Area
U-Factor:(AVG)	N/A	N/A ft²
SHGC(AVG):	N/A	

9. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R= 0.0	2701.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(2676.7 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	2420.00 ft²
b. Frame - Wood, Adjacent	R=13.0	256.67 ft²
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11. Ceiling Types(2836.0 sqft.)	Insulation	Area
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c. N/A		

12. Roof(Comp. Shingles, Vented)	Deck R=0.0	3246 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Attic, AH: 1st Floor	6	675
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	33.7	SEER:15.50

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Heat Pump	42.0	HSPF:8.80

16. Hot Water Systems	
a. Electric	Cap: 50 gallons
	EF: 0.920
b. Conservation features	
	None
17. Credits	CV, Pstat

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: 159 SW Governors Glen City/FL Zip: Lake City,FL,32024

*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: Community: Lot: NA

Address: 159 SW Governors Glen

City: Lake City State: FL Zip: 32024

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): 7.000

_____ x 60 ÷ 24309 = _____
CFM(50) Building Volume ACH(50)

☐ **PASS**

☐ When ACH(50) is less than 3, Mechanical Ventilation installation must be verified by building department.

Method for calculating building volume:

○ 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), *Florida Statues*, 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: _____