FORM R405-2023

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Maloy Residence	Builder Name:	
Street:		Permit Office:	
City, State, Zip:	, FL,	Permit Number:	
Owner:		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			3	
5. Is this a worst case?			No	
6. Conditioned floor area above grade (ft²)			2890	
Conditioned floor area below grade (ft²)			0	
7. Windows(391.0 sqft.)	Description		Area	
a. U-Factor:	Dbl, U=0.26		391.00 ft²	
SHGC:	SHGC=0.20			
b. U-Factor:	N/A		ft²	
SHGC:				
c. U-Factor:	N/A		ft²	
SHGC:				
Area Weighted Average Overhang Depth:			1.500 ft	
Area Weighted Average SHGC:			0.200	
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	2890.00 ft²	
b. N/A		R=	ft²	
c. N/A		R=	ft²	

10. Wall Types(2806.7 sqft.)	Insulation	Area	
a. Frame - Wood, Exterior	R=13.0	2566.70 ft²	
b. Frame - Wood, Adjacent	R=13.0	240.00 ft²	
c. N/A			
d. N/A			
11. Ceiling Types(2890.0 sqft.)	Insulation	Area	
a. Single assembly, no ai (Unvented)	R=30.0	2890.00 ft²	
b. N/A			
c. N/A			
12. Roof(Metal, Unvent)	Deck R=44.0	3346 ft²	
13. Ducts, location & insulation level		R	ft²
a. Sup: Main, Ret: Main, AH: Main		6	578
b.			
c.			
14. Cooling Systems	kBtu/hr	Efficiency	
a. Central Unit	48.0	SEER2:16.00	
15. Heating Systems	kBtu/hr	Efficiency	
a. Electric Heat Pump	48.0	HSPF2:8.00	
16. Hot Water Systems			
a. PropaneTankless		Cap: 1 gallons EF: 0.590	
b. Conservation features		None	
17. Credits		CF, Pstat	

Glass/Floor Area: 0.135

Total Proposed Modified Loads: 56.19

Total Baseline Loads: 76.82

PASS

NOTE: Proposed residence must have annual total normalized Modified Loads that are less than or equal to 95 percent of the annual total loads of the standard reference design in order to comply.

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

PREPARED BY: _____

DATE: 4-16-24

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.

Columbia County Building Department — Plans Reviewed for Code Compliance — State of Florida

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 with a proposed duct leakage Qn requires a PERFORMANCE Duct Leakage Test Report confirming duct leakage to outdoors, tested in accordance with ANSI/RESNET/ICC 380, is not greater than 0.030 Qn for whole house.

- 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 4.72 ACH50 (R402.4.1.2).

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INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Maloy Residence			Address type:	Street Address
Building Type:	User	Bedrooms:	3	Lot #:	---
Owner:		Conditioned Area:	2890	Block/SubDivision:	---
Builder Home ID:		Total Stories:	1	PlatBook:	---
Builder Name:		Worst Case:	No	Street:	
Permit Office:		Rotate Angle:	0	County:	Columbia
Jurisdiction:		Cross Ventilation:		City, State, Zip:	,
Family Type:	Detached	Whole House Fan:			FL,
New/Existing:	New (From Plans)	Terrain:	Rural		
Year Construct:	2024	Shielding:	Moderate/Rural		
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	2890	28900 cu ft

SPACES

√	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___	1	Main	2890	28900	Yes	6	3	Yes	Yes	Yes

FLOORS (Total Exposed Area = 2890 sq.ft.)

√	#	Floor Type	Space	Exposed Perim(ft)	Area	R-Value Perim.	R-Value Joist	U-Factor	Slab Insul. Vert/Horiz	Tile	Wood	Carpet
___	1	Slab-On-Grade Edge Ins	Main	280	2890 sqft	0	---	0.563	0 (ft)/0 (ft)	0.20	0.60	0.20

ROOF

√	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
___	1	Hip	Metal	3346 ft²	0 ft²	Unf, Gal.	N	0.7	No	0.7	No	44	30.26

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___	1	No attic	Unvented	0	2890 ft²	N	N

CEILING (Total Exposed Area = 2890 sq.ft.)

√	#	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___	1	Single assembly, no airspace(Unvented)	Main	30.0	Blown	2890.0ft²	0.014	0.11	Wood

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WALLS (Total Exposed Area = 2807 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	N	Exterior	Frame - Wood	Main	13.0	18.0	0	10.0	0	180.0	0.084		0.23	0.75	0 %
___ 2	E	Exterior	Frame - Wood	Main	13.0	14.0	4	10.0	0	143.3	0.084		0.23	0.75	0 %
___ 3	N	Exterior	Frame - Wood	Main	13.0	24.0	8	10.0	0	246.7	0.084		0.23	0.75	0 %
___ 4	W	Exterior	Frame - Wood	Main	13.0	6.0	0	10.0	0	60.0	0.084		0.23	0.75	0 %
___ 5	N	Exterior	Frame - Wood	Main	13.0	15.0	4	10.0	0	153.3	0.084		0.23	0.75	0 %
___ 6	W	Exterior	Frame - Wood	Main	13.0	4.0	0	10.0	0	40.0	0.084		0.23	0.75	0 %
___ 7	N	Garage	Frame - Wood	Main	13.0	24.0	0	10.0	0	240.0	0.084		0.23	0.75	0 %
___ 8	E	Exterior	Frame - Wood	Main	13.0	12.0	0	10.0	0	120.0	0.084		0.23	0.75	0 %
___ 9	N	Exterior	Frame - Wood	Main	13.0	4.0	0	10.0	0	40.0	0.084		0.23	0.75	0 %
___ 10	E	Exterior	Frame - Wood	Main	13.0	19.0	0	10.0	0	190.0	0.084		0.23	0.75	0 %
___ 11	S	Exterior	Frame - Wood	Main	13.0	4.0	0	10.0	0	40.0	0.084		0.23	0.75	0 %
___ 12	E	Exterior	Frame - Wood	Main	13.0	5.0	0	10.0	0	50.0	0.084		0.23	0.75	0 %
___ 13	S	Exterior	Frame - Wood	Main	13.0	82.0	0	10.0	0	820.0	0.084		0.23	0.75	0 %
___ 14	W	Exterior	Frame - Wood	Main	13.0	5.0	0	10.0	0	50.0	0.084		0.23	0.75	0 %
___ 15	S	Exterior	Frame - Wood	Main	13.0	4.0	0	10.0	0	40.0	0.084		0.23	0.75	0 %
___ 16	W	Exterior	Frame - Wood	Main	13.0	19.0	0	10.0	0	190.0	0.084		0.23	0.75	0 %
___ 17	N	Exterior	Frame - Wood	Main	13.0	4.0	0	10.0	0	40.0	0.084		0.23	0.75	0 %
___ 18	W	Exterior	Frame - Wood	Main	13.0	16.0	4	10.0	0	163.3	0.084		0.23	0.75	0 %

DOORS (Total Exposed Area = 156 sq.ft.)

√ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
___ 1	N	Exterior	Insulated	Main	None	0.46	6.00	0	8.00	0	48.0ft²
___ 2	W	Exterior	Insulated	Main	None	0.46	2.00	6	8.00	0	20.0ft²
___ 3	N	Garage	Insulated	Main	None	0.46	3.00	0	6.00	8	20.0ft²
___ 4	N	Garage	Insulated	Main	None	0.46	3.00	0	6.00	8	20.0ft²
___ 5	S	Exterior	Insulated	Main	None	0.46	6.00	0	8.00	0	48.0ft²

WINDOWS (Total Exposed Area = 391 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	N	1	Vinyl	Low-E Double	Y	0.26	0.20	N	N	45.0	3	2.50	6.00	1.5	1.3	None	None
___ 2	N	3	Vinyl	Low-E Double	Y	0.26	0.20	N	N	72.0	4	3.00	6.00	1.5	1.3	None	None
___ 3	N	5	Vinyl	Low-E Double	Y	0.26	0.20	N	N	24.0	2	3.00	4.00	1.5	1.3	None	None
___ 4	E	8	Vinyl	Low-E Double	Y	0.26	0.20	N	N	12.0	1	3.00	4.00	1.5	1.3	None	None
___ 5	E	10	Vinyl	Low-E Double	Y	0.26	0.20	N	N	36.0	2	3.00	6.00	1.5	1.3	None	None
___ 6	S	13	Vinyl	Low-E Double	Y	0.26	0.20	N	N	72.0	4	3.00	6.00	1.5	1.3	None	None
___ 7	S	13	Vinyl	Low-E Double	Y	0.26	0.20	N	N	90.0	6	2.50	6.00	1.5	1.3	None	None
___ 8	W	16	Vinyl	Low-E Double	Y	0.26	0.20	N	N	8.0	2	2.00	2.00	1.5	1.3	None	None
___ 9	W	16	Vinyl	Low-E Double	Y	0.26	0.20	N	N	8.0	1	2.00	4.00	1.5	1.3	None	None
___ 10	W	18	Vinyl	Low-E Double	Y	0.26	0.20	N	N	24.0	2	2.00	6.00	1.5	1.3	None	None

INFILTRATION

√ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___ 1	Wholehouse	Proposed ACH(50)	0.00030	2272	124.64	233.99	0.1010	4.7	All	28900 cu ft

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GARAGE

✓	#	Floor Area	Roof Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation
___	1	648 ft²	648 ft²	78 ft	10 ft	13

MASS

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

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		HSPF2: 8.00	48.0		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		SEER2:16.0	48.0	1440	0.75	sys#1	1

HOT WATER SYSTEM

✓	#	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixture Flow	Pipe Ins.	Pipe length
___	1	Propane	Tankless	Exterior	0.59 (0.59)	1.00 gal	60 gal	120 deg	Standard	None	99

		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	Supply R-Value	Supply Area	Return Location	Return R-Value	Return Area	Leakage Type	Air Handler	CFM 25 TOT	CFM 25 OUT	QN	RLF	HVAC # Heat	HVAC # Cool
___	1	Main	6.0	578 ft²	Main	6.0	145 ft²	Prop. Leak Free	Main	---	---	0.030	0.50	1	1

TEMPERATURES

Programable Thermostat: Y Ceiling Fans: N

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

✓	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	80	80	78	78	78	78	78	78	78	78
___	Cooling (WEH)	AM	78	78	78	78	78	78	78	78	80	80	80	80
		PM	80	80	80	80	78	78	78	78	78	78	78	78

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES(Continued)

___ Heating (WD)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68
___ Heating (WEH)	AM	65	65	65	65	65	65	65	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	68	68