

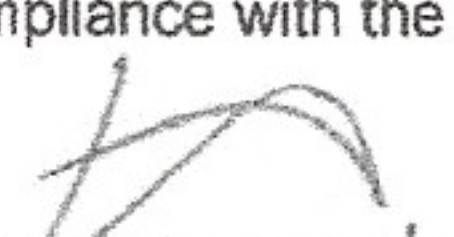
FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Button Residence Street: 1687 NW Queen Road City, State, Zip: Lake City, FL, 32055 Owner: Charles & Dorris Button Design Location: FL, Gainesville	Builder Name: Permit Office: Columbia County Permit Number: Jurisdiction: County: Columbia (Florida Climate Zone 2)
---	--

<table style="width: 100%;"> <tr> <td style="width: 30%;">1. New construction or existing</td> <td style="width: 70%;">New (From Plans)</td> </tr> <tr> <td>2. Single family or multiple family</td> <td>Single-family</td> </tr> <tr> <td>3. Number of units, if multiple family</td> <td>1</td> </tr> <tr> <td>4. Number of Bedrooms</td> <td>2</td> </tr> <tr> <td>5. Is this a worst case?</td> <td>No</td> </tr> <tr> <td>6. Conditioned floor area above grade (ft²)</td> <td>1800</td> </tr> <tr> <td>Conditioned floor area below grade (ft²)</td> <td>0</td> </tr> <tr> <td>7. Windows (172.0 sqft.)</td> <td> <table style="width: 100%;"> <tr> <th style="width: 40%;">Description</th> <th style="width: 60%;">Area</th> </tr> <tr> <td>a. U-Factor: Dbl, U=0.36</td> <td>172.00 ft²</td> </tr> <tr> <td>SHGC: SHGC=0.25</td> <td></td> </tr> <tr> <td>b. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>c. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>d. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>Area Weighted Average Overhang Depth:</td> <td>9.500 ft.</td> </tr> <tr> <td>Area Weighted Average SHGC:</td> <td>0.250</td> </tr> </table> </td> </tr> <tr> <td>8. Floor Types (1800.0 sqft.)</td> <td> <table style="width: 100%;"> <tr> <th style="width: 30%;">Insulation</th> <th style="width: 70%;">Area</th> </tr> <tr> <td>a. Slab-On-Grade Edge Insulation</td> <td>R=0.0 1800.00 ft²</td> </tr> <tr> <td>b. N/A</td> <td>R= ft²</td> </tr> <tr> <td>c. N/A</td> <td>R= ft²</td> </tr> </table> </td> </tr> </table>	1. New construction or existing	New (From Plans)	2. Single family or multiple family	Single-family	3. Number of units, if multiple family	1	4. Number of Bedrooms	2	5. Is this a worst case?	No	6. Conditioned floor area above grade (ft ²)	1800	Conditioned floor area below grade (ft ²)	0	7. Windows (172.0 sqft.)	<table style="width: 100%;"> <tr> <th style="width: 40%;">Description</th> <th style="width: 60%;">Area</th> </tr> <tr> <td>a. U-Factor: Dbl, U=0.36</td> <td>172.00 ft²</td> </tr> <tr> <td>SHGC: SHGC=0.25</td> <td></td> </tr> <tr> <td>b. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>c. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>d. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>Area Weighted Average Overhang Depth:</td> <td>9.500 ft.</td> </tr> <tr> <td>Area Weighted Average SHGC:</td> <td>0.250</td> </tr> </table>	Description	Area	a. U-Factor: Dbl, U=0.36	172.00 ft ²	SHGC: SHGC=0.25		b. U-Factor: N/A	ft ²	SHGC:		c. U-Factor: N/A	ft ²	SHGC:		d. U-Factor: N/A	ft ²	SHGC:		Area Weighted Average Overhang Depth:	9.500 ft.	Area Weighted Average SHGC:	0.250	8. Floor Types (1800.0 sqft.)	<table style="width: 100%;"> <tr> <th style="width: 30%;">Insulation</th> <th style="width: 70%;">Area</th> </tr> <tr> <td>a. Slab-On-Grade Edge Insulation</td> <td>R=0.0 1800.00 ft²</td> </tr> <tr> <td>b. N/A</td> <td>R= ft²</td> </tr> <tr> <td>c. N/A</td> <td>R= ft²</td> </tr> </table>	Insulation	Area	a. Slab-On-Grade Edge Insulation	R=0.0 1800.00 ft ²	b. N/A	R= ft ²	c. N/A	R= ft ²	<table style="width: 100%;"> <tr> <td style="width: 30%;">9. Wall Types (1376.0 sqft.)</td> <td style="width: 40%;">Insulation</td> <td style="width: 30%;">Area</td> </tr> <tr> <td>a. Frame - Wood, Exterior</td> <td>R=19.0</td> <td>1376.00 ft²</td> </tr> <tr> <td>b. N/A</td> <td>R=</td> <td>ft²</td> </tr> <tr> <td>c. N/A</td> <td>R=</td> <td>ft²</td> </tr> <tr> <td>d. N/A</td> <td>R=</td> <td>ft²</td> </tr> <tr> <td>10. Ceiling Types (1800.0 sqft.)</td> <td>Insulation</td> <td>Area</td> </tr> <tr> <td>a. Under Attic (Vented)</td> <td>R=38.0</td> <td>1800.00 ft²</td> </tr> <tr> <td>b. N/A</td> <td>R=</td> <td>ft²</td> </tr> <tr> <td>c. N/A</td> <td>R=</td> <td>ft²</td> </tr> <tr> <td>11. Ducts</td> <td>R</td> <td>ft²</td> </tr> <tr> <td>a. Sup: Attic, Ret: Attic, AH: Main</td> <td>6</td> <td>450</td> </tr> <tr> <td>12. Cooling systems</td> <td>kBtu/hr</td> <td>Efficiency</td> </tr> <tr> <td>a. Central Unit</td> <td>16.6</td> <td>SEER:14.00</td> </tr> <tr> <td>13. Heating systems</td> <td>kBtu/hr</td> <td>Efficiency</td> </tr> <tr> <td>a. Electric Heat Pump</td> <td>24.0</td> <td>HSPF:8.20</td> </tr> <tr> <td>14. Hot water systems</td> <td></td> <td></td> </tr> <tr> <td>a. Electric</td> <td></td> <td>Cap: 50 gallons</td> </tr> <tr> <td></td> <td></td> <td>EF: 0.920</td> </tr> <tr> <td>b. Conservation features</td> <td></td> <td></td> </tr> <tr> <td>None</td> <td></td> <td></td> </tr> <tr> <td>15. Credits</td> <td></td> <td>CV, Pstat</td> </tr> </table>	9. Wall Types (1376.0 sqft.)	Insulation	Area	a. Frame - Wood, Exterior	R=19.0	1376.00 ft ²	b. N/A	R=	ft ²	c. N/A	R=	ft ²	d. N/A	R=	ft ²	10. Ceiling Types (1800.0 sqft.)	Insulation	Area	a. Under Attic (Vented)	R=38.0	1800.00 ft ²	b. N/A	R=	ft ²	c. N/A	R=	ft ²	11. Ducts	R	ft ²	a. Sup: Attic, Ret: Attic, AH: Main	6	450	12. Cooling systems	kBtu/hr	Efficiency	a. Central Unit	16.6	SEER:14.00	13. Heating systems	kBtu/hr	Efficiency	a. Electric Heat Pump	24.0	HSPF:8.20	14. Hot water systems			a. Electric		Cap: 50 gallons			EF: 0.920	b. Conservation features			None			15. Credits		CV, Pstat
1. New construction or existing	New (From Plans)																																																																																																															
2. Single family or multiple family	Single-family																																																																																																															
3. Number of units, if multiple family	1																																																																																																															
4. Number of Bedrooms	2																																																																																																															
5. Is this a worst case?	No																																																																																																															
6. Conditioned floor area above grade (ft ²)	1800																																																																																																															
Conditioned floor area below grade (ft ²)	0																																																																																																															
7. Windows (172.0 sqft.)	<table style="width: 100%;"> <tr> <th style="width: 40%;">Description</th> <th style="width: 60%;">Area</th> </tr> <tr> <td>a. U-Factor: Dbl, U=0.36</td> <td>172.00 ft²</td> </tr> <tr> <td>SHGC: SHGC=0.25</td> <td></td> </tr> <tr> <td>b. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>c. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>d. U-Factor: N/A</td> <td>ft²</td> </tr> <tr> <td>SHGC:</td> <td></td> </tr> <tr> <td>Area Weighted Average Overhang Depth:</td> <td>9.500 ft.</td> </tr> <tr> <td>Area Weighted Average SHGC:</td> <td>0.250</td> </tr> </table>	Description	Area	a. U-Factor: Dbl, U=0.36	172.00 ft ²	SHGC: SHGC=0.25		b. U-Factor: N/A	ft ²	SHGC:		c. U-Factor: N/A	ft ²	SHGC:		d. U-Factor: N/A	ft ²	SHGC:		Area Weighted Average Overhang Depth:	9.500 ft.	Area Weighted Average SHGC:	0.250																																																																																									
Description	Area																																																																																																															
a. U-Factor: Dbl, U=0.36	172.00 ft ²																																																																																																															
SHGC: SHGC=0.25																																																																																																																
b. U-Factor: N/A	ft ²																																																																																																															
SHGC:																																																																																																																
c. U-Factor: N/A	ft ²																																																																																																															
SHGC:																																																																																																																
d. U-Factor: N/A	ft ²																																																																																																															
SHGC:																																																																																																																
Area Weighted Average Overhang Depth:	9.500 ft.																																																																																																															
Area Weighted Average SHGC:	0.250																																																																																																															
8. Floor Types (1800.0 sqft.)	<table style="width: 100%;"> <tr> <th style="width: 30%;">Insulation</th> <th style="width: 70%;">Area</th> </tr> <tr> <td>a. Slab-On-Grade Edge Insulation</td> <td>R=0.0 1800.00 ft²</td> </tr> <tr> <td>b. N/A</td> <td>R= ft²</td> </tr> <tr> <td>c. N/A</td> <td>R= ft²</td> </tr> </table>	Insulation	Area	a. Slab-On-Grade Edge Insulation	R=0.0 1800.00 ft ²	b. N/A	R= ft ²	c. N/A	R= ft ²																																																																																																							
Insulation	Area																																																																																																															
a. Slab-On-Grade Edge Insulation	R=0.0 1800.00 ft ²																																																																																																															
b. N/A	R= ft ²																																																																																																															
c. N/A	R= ft ²																																																																																																															
9. Wall Types (1376.0 sqft.)	Insulation	Area																																																																																																														
a. Frame - Wood, Exterior	R=19.0	1376.00 ft ²																																																																																																														
b. N/A	R=	ft ²																																																																																																														
c. N/A	R=	ft ²																																																																																																														
d. N/A	R=	ft ²																																																																																																														
10. Ceiling Types (1800.0 sqft.)	Insulation	Area																																																																																																														
a. Under Attic (Vented)	R=38.0	1800.00 ft ²																																																																																																														
b. N/A	R=	ft ²																																																																																																														
c. N/A	R=	ft ²																																																																																																														
11. Ducts	R	ft ²																																																																																																														
a. Sup: Attic, Ret: Attic, AH: Main	6	450																																																																																																														
12. Cooling systems	kBtu/hr	Efficiency																																																																																																														
a. Central Unit	16.6	SEER:14.00																																																																																																														
13. Heating systems	kBtu/hr	Efficiency																																																																																																														
a. Electric Heat Pump	24.0	HSPF:8.20																																																																																																														
14. Hot water systems																																																																																																																
a. Electric		Cap: 50 gallons																																																																																																														
		EF: 0.920																																																																																																														
b. Conservation features																																																																																																																
None																																																																																																																
15. Credits		CV, Pstat																																																																																																														

Glass/Floor Area: 0.096	Total Proposed Modified Loads: 39.22	PASS
	Total Baseline Loads: 42.75	

I hereby certify that the plans and specifications covered by this calculation are in compliance with the Florida Energy Code. PREPARED BY:  DATE: 10/14/2020 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:	Button Residence	Bedrooms:	2	Address Type:	Street Address
Building Type:	User	Conditioned Area:	1800	Lot #	
Owner Name:	Charles & Dorris Button	Total Stories:	1	Block/Subdivision:	
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:		Rotate Angle:	0	Street:	1687 NW Queen Road
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City , FL , 32055
Family Type:	Single-family				
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	1800	14400

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1800	14400	Yes	4	2	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	172 ft	0	1800 ft²	----	0	0	1

ROOF

✓	#	Type	Materials	Roof Area	Gable Area	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt Tested	Emitt Tested	Deck Insul.	Pitch (deg)
_____	1	Gable or shed	Metal	2013 ft²	450 ft²	Light	Y	0.96	No	0.9	No	0	26.6

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Full attic	Vented	300	1800 ft²	Y	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	1800 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	19	50	8	400.0 ft²		0.23	0.75	0
2	E	Exterior	Frame - Wood	Main	19	36	8	288.0 ft²		0.23	0.75	0
3	N	Exterior	Frame - Wood	Main	19	50	8	400.0 ft²		0.23	0.75	0
4	W	Exterior	Frame - Wood	Main	19	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	S	Insulated	Main	None	.46	3	6 8	20 ft²
2	W	Insulated	Main	None	.46	3	6 8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

✓ #	Ornt	Wall ID	Frame	Panels	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	60.0 ft²	9 ft 6 in	0 ft 6 in	None	None
2	E	2	Vinyl	Low-E Double	Yes	0.36	0.25	N	20.0 ft²	9 ft 6 in	0 ft 6 in	None	None
3	N	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	18.0 ft²	9 ft 6 in	0 ft 6 in	None	None
4	N	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	9 ft 6 in	0 ft 6 in	None	None
5	N	3	TIM	Low-E Double	Yes	0.36	0.25	N	40.0 ft²	9 ft 6 in	0 ft 6 in	None	None
6	W	4	Vinyl	Low-E Double	Yes	0.36	0.25	N	4.0 ft²	9 ft 6 in	0 ft 6 in	None	None
7	W	4	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	9 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	1200	65.88	123.89	.0956	5

HEATING SYSTEM

✓ #	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
1	Electric Heat Pump/	None	Single	HSPF:8.2	23.99 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	16.55 kBtu/hr	510 cfm	0.7	1	sys#1

HOT WATER SYSTEM

✓ #	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
1	Electric	None	Main	0.92	50 gal	40 gal	120 deg	None

INPUT SUMMARY CHECKLIST REPORT

SOLAR HOT WATER SYSTEM													
✓	FSEC Cert #	Company Name	System Model #		Collector Model #		Collector Area	Storage Volume	FEF				
None		None					ft²						
DUCTS													
✓	#	Location	Supply R-Value	Area	Location	Return Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat Cool
1		Attic	6	450 ft²	Attic	90 ft²	Default Leakage	Main	(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	
Thermostat Schedule: HERS 2006 Reference													
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	78	80	80	80 80
	PM	80	80	78	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 78
	PM	78	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 68
	PM	68	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 68
	PM	68	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* = 92

The lower the Energy Performance Index, the more efficient the home.

1. New home or, addition	1. <u>New (From Plans)</u>	12. Ducts, location & insulation level	
2. Single-family or multiple-family	2. <u>Single-family</u>	a) Supply ducts	R <u>6.0</u>
3. No. of units (if multiple-family)	3. <u>1</u>	b) Return ducts	R <u>6.0</u>
4. Number of bedrooms	4. <u>2</u>	c) AHU location	Main
5. Is this a worst case? (yes/no)	5. <u>No</u>	13. Cooling system:	Capacity <u>16.6</u>
6. Conditioned floor area (sq. ft.)	6. <u>1800</u>	a) Split system	SEER <u> </u>
7. Windows, type and area		b) Single package	SEER <u> </u>
a) U-factor:(weighted average)	7a. <u>0.360</u>	c) Ground/water source	SEER/COP <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	7b. <u>0.250</u>	d) Room unit/PTAC	EER <u> </u>
c) Area	7c. <u>172.0</u>	e) Other	<u>14.0</u>
8. Skylights		14. Heating system:	Capacity <u>24.0</u>
a) U-factor:(weighted average)	8a. <u>NA</u>	a) Split system heat pump	HSPF <u> </u>
b) Solar Heat Gain Coefficient (SHGC)	8b. <u>NA</u>	b) Single package heat pump	HSPF <u> </u>
9. Floor type, insulation level:		c) Electric resistance	COP <u> </u>
a) Slab-on-grade (R-value)	9a. <u>0.0</u>	d) Gas furnace, natural gas	AFUE <u> </u>
b) Wood, raised (R-value)	9b. <u> </u>	e) Gas furnace, LPG	AFUE <u> </u>
c) Concrete, raised (R-value)	9c. <u> </u>	f) Other	<u>8.20</u>
10. Wall type and insulation:		15. Water heating system	
A. Exterior:		a) Electric resistance	EF <u>0.92</u>
1. Wood frame (Insulation R-value)	10A1. <u>19.0</u>	b) Gas fired, natural gas	EF <u> </u>
2. Masonry (Insulation R-value)	10A2. <u> </u>	c) Gas fired, LPG	EF <u> </u>
B. Adjacent:		d) Solar system with tank	EF <u> </u>
1. Wood frame (Insulation R-value)	10B1. <u> </u>	e) Dedicated heat pump with tank	EF <u> </u>
2. Masonry (Insulation R-value)	10B2. <u> </u>	f) Heat recovery unit	HeatRec% <u> </u>
11. Ceiling type and insulation level		g) Other	<u> </u>
a) Under attic	11a. <u>38.0</u>	16. HVAC credits claimed (Performance Method)	
b) Single assembly	11b. <u> </u>	a) Ceiling fans	<u> </u>
c) Knee walls/skylight walls	11c. <u> </u>	b) Cross ventilation	<u>Yes</u>
d) Radiant barrier installed	11d. <u>Yes</u>	c) Whole house fan	<u>No</u>
		d) Multizone cooling credit	<u> </u>
		e) Multizone heating credit	<u> </u>
		f) Programmable thermostat	<u>Yes</u>

*Label required by Section R303.1.3 of the Florida Building Code, Energy Conservation, if not DEFAULT.

I certify that this home has complied with the Florida Building Code, Energy Conservation, 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: 1687 NW Queen Road City/FL Zip: Lake City, FL 32055

Envelope Leakage Test Report (Blower Door Test)

Residential Prescriptive, Performance or ERI Method Compliance 2017 Florida Building Code, Energy Conservation, 6th Edition

Jurisdiction:

Permit #:

Job Information

Builder:

Community:

Lot: NA

Address: 1687 NW Queen Road

City: Lake City

State: FL

Zip: 32055

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 R405-2017 (Performance) or R406-2017 (ERI), section labeled as infiltration, sub-section ACH50.
ACH(50) specified on Form R405-2017-Energy Calc (Performance) or R406-2017 (ERI): 5.000

$$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div 14400 = \text{ACH}(50)$$

☐ **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 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 2017 6th 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: _____

Residential System Sizing Calculation

Summary

Charles & Dorris Button
1687 NW Queen Road
Lake City, FL 32055

Project Title:
Button Residence

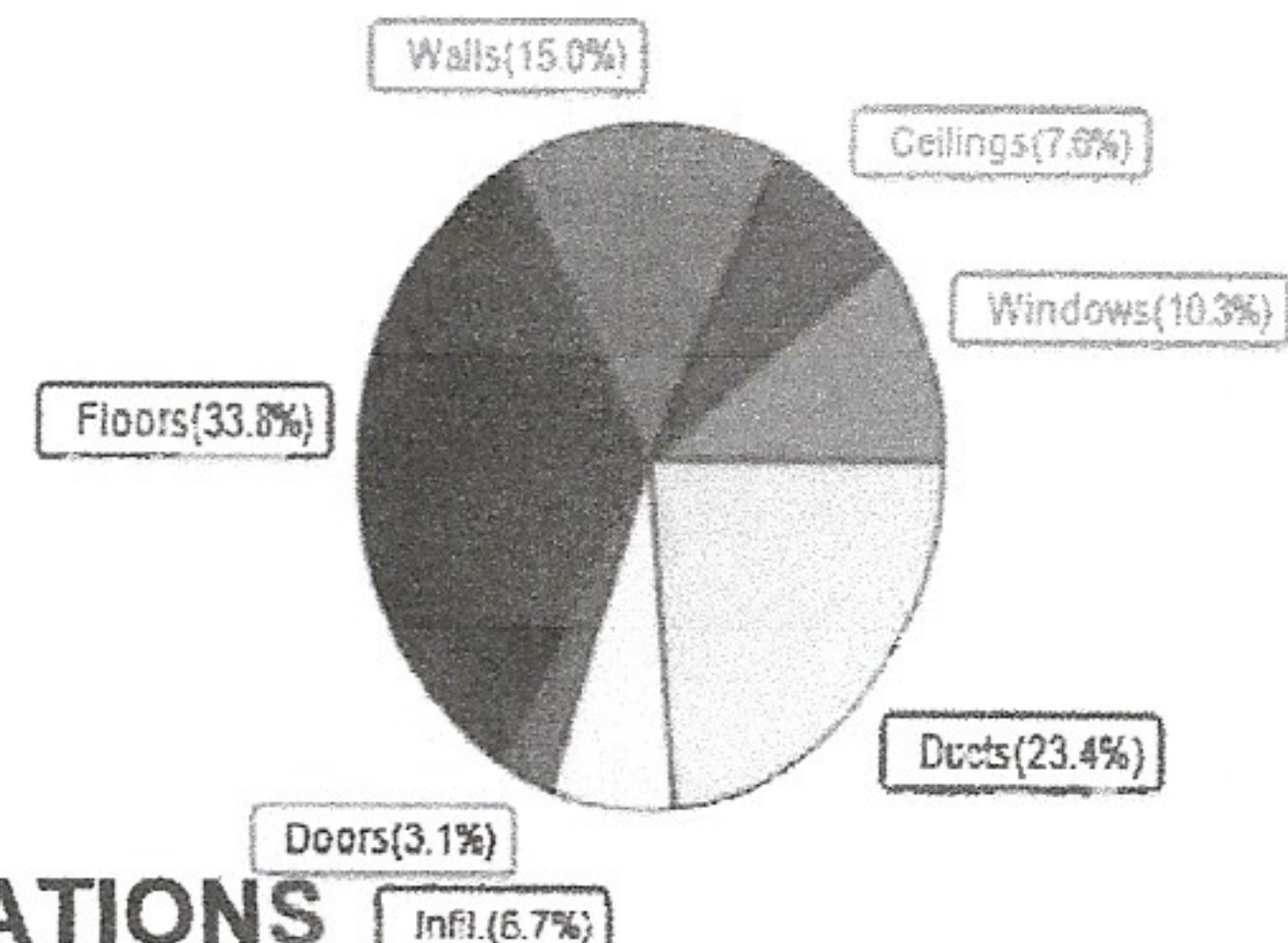
10/14/2020

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M)			
Humidity data: Interior RH (50%) Outdoor wet bulb (77F) Humidity difference(51gr.)			
Winter design temperature(TMY3 99%)	30 F	Summer design temperature(TMY3 99%)	94 F
Winter setpoint	70 F	Summer setpoint	75 F
Winter temperature difference	40 F	Summer temperature difference	19 F
Total heating load calculation	23990 Btuh	Total cooling load calculation	16716 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	100.0 23990	Sensible (SHR = 0.70)	85.2 11587
Heat Pump + Auxiliary(0.0kW)	100.0 23990	Latent	159.4 4966
		Total (Electric Heat Pump)	99.0 16553

WINTER CALCULATIONS

Winter Heating Load (for 1800 sqft)

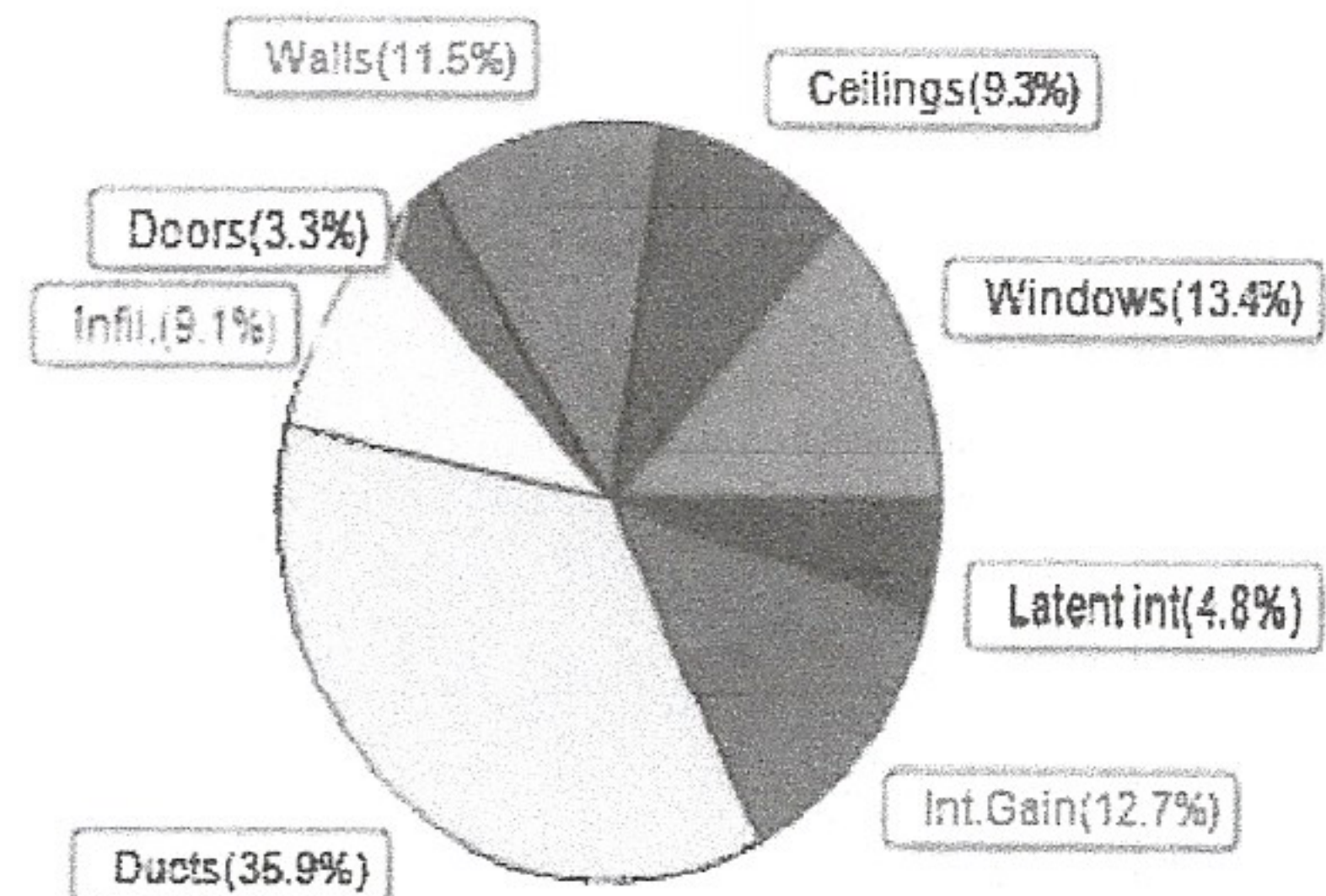
Load component		Load	
Window total	172 sqft	2477	Btuh
Wall total	1164 sqft	3598	Btuh
Door total	40 sqft	736	Btuh
Ceiling total	1800 sqft	1827	Btuh
Floor total	1800 sqft	8118	Btuh
Infiltration	37 cfm	1608	Btuh
Duct loss		5625	Btuh
Subtotal		23990	Btuh
Ventilation	0 cfm	0	Btuh
TOTAL HEAT LOSS		23990	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1800 sqft)

Load component		Load	
Window total	172 sqft	2244	Btuh
Wall total	1164 sqft	1925	Btuh
Door total	40 sqft	552	Btuh
Ceiling total	1800 sqft	1553	Btuh
Floor total		0	Btuh
Infiltration	28 cfm	573	Btuh
Internal gain		2120	Btuh
Duct gain		4634	Btuh
Sens. Ventilation	0 cfm	0	Btuh
Blower Load		0	Btuh
Total sensible gain		13601	Btuh
Latent gain(ducts)		1364	Btuh
Latent gain(infiltration)		951	Btuh
Latent gain(ventilation)		0	Btuh
Latent gain(internal/occupants/other)		800	Btuh
Total latent gain		3115	Btuh
TOTAL HEAT GAIN		16716	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____

EnergyGauge® / USRCZB v6.1.04

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Charles & Dorris Button
1687 NW Queen Road
Lake City, FL 32055

Project Title:
Button Residence
Building Type: User

10/14/2020

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 F (TMY3 99%)

Component Loads for Whole House								
Window	Panes/Type	Frame	U	Orientation	Area(sqft)	X	HTM=	Load
1	2, NFRC 0.25	Vinyl	0.36	S	60.0		14.4	864 Btuh
2	2, NFRC 0.25	Vinyl	0.36	E	20.0		14.4	288 Btuh
3	2, NFRC 0.25	Vinyl	0.36	N	18.0		14.4	259 Btuh
4	2, NFRC 0.25	Vinyl	0.36	N	15.0		14.4	216 Btuh
5	2, NFRC 0.25	TIM	0.36	N	40.0		14.4	576 Btuh
6	2, NFRC 0.25	Vinyl	0.36	W	4.0		14.4	58 Btuh
7	2, NFRC 0.25	Vinyl	0.36	W	15.0		14.4	216 Btuh
Window Total					172.0(sqft)			2477 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.077)	19.0/0.0	320		3.09	989 Btuh
2	Frame - Wood	- Ext	(0.077)	19.0/0.0	268		3.09	828 Btuh
3	Frame - Wood	- Ext	(0.077)	19.0/0.0	327		3.09	1011 Btuh
4	Frame - Wood	- Ext	(0.077)	19.0/0.0	249		3.09	770 Btuh
Wall Total					1164(sqft)			3598 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		20		18.4	368 Btuh
2	Insulated - Exterior, n		(0.460)		20		18.4	368 Btuh
Door Total					40(sqft)			736Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Vented Attic/L/Metal		(0.025)	38.0/0.0	1800		1.0	1827 Btuh
Ceiling Total					1800(sqft)			1827Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	172.0 ft(perim.)		47.2	8118 Btuh
Floor Total					1800 sqft			8118 Btuh
Envelope Subtotal:								16756 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		Load
	Natural		0.15	14400	1.00	36.7		1608 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.306)							5625 Btuh
All Zones	Sensible Subtotal All Zones							23990 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Charles & Dorris Button
1687 NW Queen Road
Lake City, FL 32055

Project Title:
Button Residence
Building Type: User

10/14/2020

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	23990 Btuh
	Ventilation Sensible Heat Loss	0 Btuh
	Total Heat Loss	23990 Btuh

EQUIPMENT

1. Electric Heat Pump	#	23990 Btuh
-----------------------	---	------------

Key: Window types - NFRC (Requires U-Factor and Shading coefficient(SHGC) of glass as numerical values)
or - Glass as 'Clear' or 'Tint' (Uses U-Factor and SHGC defaults)
U - (Window U-Factor)
HTM - (ManualJ Heat Transfer Multiplier)



Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Charles & Dorris Button
1687 NW Queen Road
Lake City, FL 32055

Project Title:
Button Residence

10/14/2020

Reference City: Gainesville, FL

Temperature Difference: 19.0F(TMY3 99%) Humidity difference: 51gr.

Component Loads for Whole House

Window	Type*					Overhang		Window Area(sqft)			HTM		Load		
	Panes	SHGC	U	InSh	IS Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded			
1	2 NFRC	0.25, 0.36	No	No	S	9.5ft.	0.5ft.	60.0	60.0	0.0	12	14	726	Btuh	
2	2 NFRC	0.25, 0.36	No	No	E	9.5ft.	0.5ft.	20.0	20.0	0.0	12	31	242	Btuh	
3	2 NFRC	0.25, 0.36	No	No	N	9.5ft.	0.5ft.	18.0	0.0	18.0	12	12	218	Btuh	
4	2 NFRC	0.25, 0.36	No	No	N	9.5ft.	0.5ft.	15.0	0.0	15.0	12	12	181	Btuh	
5	2 NFRC	0.25, 0.36	No	No	N	9.5ft.	0.5ft.	40.0	0.0	40.0	12	12	484	Btuh	
6	2 NFRC	0.25, 0.36	No	No	W	9.5ft.	0.5ft.	4.0	4.0	0.0	12	31	48	Btuh	
7	2 NFRC	0.25, 0.36	No	No	W	9.5ft.	0.5ft.	15.0	15.0	0.0	12	31	181	Btuh	
	Excursion												163	Btuh	
	Window Total							172 (sqft)						2244	Btuh
Walls	Type	U-Value		R-Value		Area(sqft)		HTM		Load					
					Cav/Sheath										
1	Frame - Wood - Ext	0.08	19.0/0.0	320.0	1.7	529	Btuh								
2	Frame - Wood - Ext	0.08	19.0/0.0	268.0	1.7	443	Btuh								
3	Frame - Wood - Ext	0.08	19.0/0.0	327.0	1.7	541	Btuh								
4	Frame - Wood - Ext	0.08	19.0/0.0	249.0	1.7	412	Btuh								
	Wall Total		1164 (sqft)		1925		Btuh								
Doors	Type	Area (sqft)		HTM		Load									
1	Insulated - Exterior	20.0	13.8	276	Btuh										
2	Insulated - Exterior	20.0	13.8	276	Btuh										
	Door Total		40 (sqft)		552		Btuh								
Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load									
1	Vented Attic/Light/Metal/RB	0.025	38.0/0.0	1800.0	0.86	1553	Btuh								
	Ceiling Total		1800 (sqft)		1553		Btuh								
Floors	Type	R-Value	Size	HTM	Load										
1	Slab On Grade	0.0	1800 (ft-perimeter)	0.0	0	Btuh									
	Floor Total		1800.0 (sqft)		0		Btuh								
	Envelope Subtotal:					6274	Btuh								
Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load									
	Natural	0.11	14400	1	27.5	573	Btuh								
Internal gain	Occupants	Btuh/occupant	Appliance	Load											
	4	X 230	+	1200	2120	Btuh									
	Sensible Envelope Load:					8967	Btuh								
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic)					(DGM of 0.517)	4634	Btuh							
	Sensible Load All Zones					13601	Btuh								

Manual J Summer Calculations

Residential Load - Component Details (continued)

Charles & Dorris Button
1687 NW Queen Road
Lake City, FL 32055

Project Title: Button Residence

Climate: FL_GAINESVILLE_REGIONAL_A

10/14/2020

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	8967 Btuh
	Sensible Duct Load	4634 Btuh
	Total Sensible Zone Loads	13601 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	13601 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	951 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1364 Btuh
	Latent occupant gain (4.0 people @ 200 Btuh per person)	800 Btuh
	Latent other gain	0 Btuh
	Latent total gain	3115 Btuh
	TOTAL GAIN	16716 Btuh

EQUIPMENT

1. Central Unit	#	16553 Btuh
-----------------	---	------------

*Key: Window types (Panels - Number and type of panes of glass)
(SHGC - Shading coefficient of glass as SHGC numerical value)
(U - Window U-Factor)
(InSh - Interior shading device: none(No), Blinds(B), Draperies(D) or Roller Shades(R))
- For Blinds: Assume medium color, half closed
For Draperies: Assume medium weave, half closed
For Roller shades: Assume translucent, half closed
(IS - Insect screen: none(N), Full(F) or Half(½))
(Ornt - compass orientation)



Version 8