FORM R405-2020

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Lot 2 Forest Country, 6th Edition	Builder Name:	
Street:		Permit Office:	Columbia County
City, State, Zip:	Lake City , FL , 32025	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	4
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	2239
Conditioned floor area below grade (ft²)	0

7. Windows (177.2 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.36	177.17 ft²
SHGC:	SHGC=0.25	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		5.112 ft.
Area Weighted Average SHGC:		0.250

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

9. Floor Types (2239.0 sqft.)	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	2239.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(1992.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1770.00 ft²
b. Frame - Wood, Adjacent	R=13.0	222.00 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²

11. Ceiling Types (2351.0 sqft.)	Insulation	Area
a. Under Attic (Vented)	R=38.0	2351.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

12. Ducts	R	ft²
a. Sup: Attic, Ret: Attic, AH: Garage	6	559.75

13. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	23.9	SEER:14.00

14. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	33.6	HSPF:8.20

15. Hot water systems	
a. Electric	Cap: 50 gallons
	EF: 0.920
b. Conservationfeatures	
None	
16. Credits	CV, Pstat

Glass/Floor Area: 0.079

Total Proposed Modified Loads: 50.79

Total Baseline Loads: 51.49

PASS

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

PREPARED BY: _____

DATE: 7/1/2021

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).

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Lot 2 Forest Country, 6th Editio	Bedrooms:	4	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	2239	Lot #	2
Owner Name:		Total Stories:	1	Block/Subdivision:	Forest Country
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:		Rotate Angle:	0	Street:	
Permit Office:	Columbia County	Cross Ventilation:	Yes	County:	Columbia
Jurisdiction:		Whole House Fan:	No	City, State, Zip:	Lake City , FL , 32025
Family Type:	Detached				
New/Existing:	New (From Plans)				
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_REGI	32	92	70	75	1305.5	51	Medium

BLOCKS

Number	Name	Area	Volume
1	Block1	2239	20151

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	2239	20151	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	260 ft	0	2239 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	2691 ft²	746 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	2239 ft²	Y	N

CEILING

√	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	2351 ft²	0.11	Wood

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

WALLS

√	#	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area	Sheathing R-Value	Framing Fraction	Solar Absor.	Below Grade%
____	1	S	Exterior	Frame - Wood	Main	13	17	4	9		156.0 ft²		0.23	0.75	0
____	2	W	Exterior	Frame - Wood	Main	13	3		9		27.0 ft²		0.23	0.75	0
____	3	S	Exterior	Frame - Wood	Main	13	24		9		216.0 ft²		0.23	0.75	0
____	4	S	Garage	Frame - Wood	Main	13	24	8	9		222.0 ft²		0.23	0.75	0
____	5	E	Exterior	Frame - Wood	Main	13	29		9		261.0 ft²		0.23	0.75	0
____	6	N	Exterior	Frame - Wood	Main	13	22		9		198.0 ft²		0.23	0.75	0
____	7	N	Exterior	Frame - Wood	Main	13	26	4	9		237.0 ft²		0.23	0.75	0
____	8	E	Exterior	Frame - Wood	Main	13	14		9		126.0 ft²		0.23	0.75	0
____	9	N	Exterior	Frame - Wood	Main	13	17	8	9		159.0 ft²		0.23	0.75	0
____	10	W	Exterior	Frame - Wood	Main	13	43	4	9		390.0 ft²		0.23	0.75	0

DOORS

√	#	Ornt	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
_____	1	S	Insulated	Main	None	.46	3		6	8	20 ft²
_____	2	S	Insulated	Main	None	.46	3		6	8	20 ft²

WINDOWS

Orientation shown is the entered, Proposed orientation.

√	#	Ornt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	Imp	Area	Overhang Depth	Overhang Separation	Int Shade	Screening
_____	1	S	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	2	S	3	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	7 ft 6 in	1 ft 0 in	None	None
_____	3	E	5	Vinyl	Low-E Double	Yes	0.36	0.25	N	14.7 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	4	N	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 6 in	1 ft 0 in	None	None
_____	5	N	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	17.5 ft²	9 ft 6 in	1 ft 0 in	None	None
_____	6	N	7	TIM	Low-E Double	Yes	0.36	0.25	N	40.0 ft²	9 ft 6 in	1 ft 0 in	None	None
_____	7	W	10	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 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	550.81411 ft²	550.81411 ft²	65.6667 ft	9 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000286	1679.3	92.13	172.96	.1027	5

FORM R405-2020

INPUT SUMMARY CHECKLIST REPORT

HEATING SYSTEM

√	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts
_____	1	Electric Heat Pump/	None	Single	HSPF:8.2	33.56 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	23.87 kBtu/hr	720 cfm	0.7	1	sys#1

HOT WATER SYSTEM

√	#	System Type	SubType	Location	EF	Cap	Use	SetPnt	Conservation
_____	1	Electric	None	Garage	0.92	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 ---- Location	R-Value	Area	---- Return ---- Location	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat	Cool
_____	1	Attic	6	559.75 f	Attic	111.95 f	Default Leakage	Garage	(Default) c	(Default) c			1	1

TEMPERATURES

Programable Thermostat: Y

Ceiling Fans:

	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	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

FORM R405-2020

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 99

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

, Lake City, FL, 32025

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 (ft²)		2239
7. Windows**	Description	Area
a. U-Factor:	Dbl, U=0.36	177.17 ft²
SHGC:	SHGC=0.25	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
d. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		5.112 ft.
Area Weighted Average SHGC:		0.250
8. Skylights	Description	Area
a. U-Factor(AVG):	N/A	ft²
SHGC(AVG):	N/A	
9. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R=0.0	2239.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Type and Insulation	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1770.00 ft²
b. Frame - Wood, Adjacent	R=13.0	222.00 ft²
c. N/A	R=	ft²
d. N/A	R=	ft²
11. Ceiling Type and insulation level	Insulation	Area
a. Under Attic (Vented)	R=38.0	2351.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²
12. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Attic, AH: Garage	6	559.75
13. Cooling systems	kBtu/hr	Efficiency
a. Central Unit	23.9	SEER:14.00
14. Heating systems	kBtu/hr	Efficiency
a. Electric Heat Pump	33.6	HSPF:8.20
15. Hot water systems		
a. Electric		Cap: 50 gallons
		EF: 0.92
b. Conservation features		
None		
Credits (Performance method)		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: _____ 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: Community: Lot: 2

Address:

City: Lake City State: FL Zip: 32025

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

_____ x 60 ÷ 20151 = _____
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: _____

Residential System Sizing Calculation

Summary

Project Title:
Lot 2 Forest Country, 6th Edition

Lake City, FL 32025

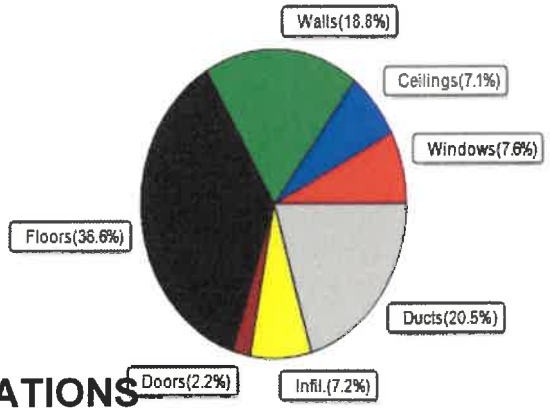
6/30/2021

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	**33556**	**Btuh**	**Total cooling load calculation**	**23866**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	100.0	33556	Sensible (SHR = 0.70)	87.5	16706
Heat Pump + Auxiliary(0.0kW)	100.0	33556	Latent	150.0	7160
			Total (Electric Heat Pump)	100.0	23866

WINTER CALCULATIONS

Winter Heating Load (for 2239 sqft)

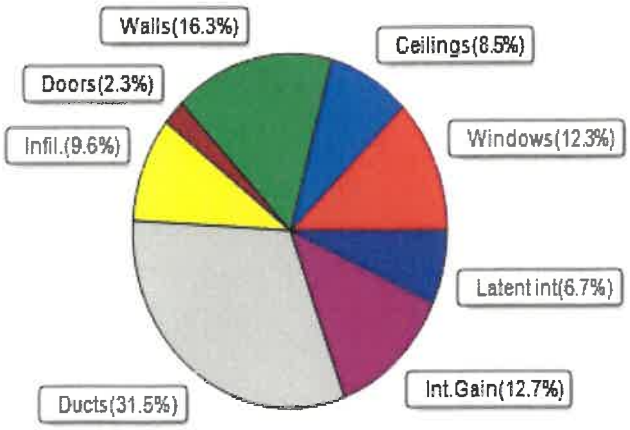
Load component			Load	
Window total	177	sqft	2551	Btuh
Wall total	1775	sqft	6301	Btuh
Door total	40	sqft	736	Btuh
Ceiling total	2351	sqft	2387	Btuh
Floor total	2239	sqft	12272	Btuh
Infiltration	55	cfm	2417	Btuh
Duct loss			6892	Btuh
Subtotal			**33556**	**Btuh**
Ventilation	0	cfm	0	Btuh
TOTAL HEAT LOSS			**33556**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 2239 sqft)

Load component			Load	
Window total	177	sqft	2941	Btuh
Wall total	1775	sqft	3901	Btuh
Door total	40	sqft	552	Btuh
Ceiling total	2351	sqft	2029	Btuh
Floor total			0	Btuh
Infiltration	41	cfm	861	Btuh
Internal gain			3040	Btuh
Duct gain			5771	Btuh
Sens. Ventilation	0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			**19094**	**Btuh**
Latent gain(ducts)			1744	Btuh
Latent gain(infiltration)			1429	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			1600	Btuh
Total latent gain			**4772**	**Btuh**
TOTAL HEAT GAIN			**23866**	**Btuh**



8th Edition

EnergyGauge® System Sizing
PREPARED BY: _____
DATE: 7/1/2021

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Project Title:
Lot 2 Forest Country, 6th Edition
Lake City, FL 32025 Building Type: User

6/30/2021

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	15.0	14.4	216 Btuh
2	2, NFRC 0.25	Vinyl	0.36	S	30.0	14.4	432 Btuh
3	2, NFRC 0.25	Vinyl	0.36	E	14.7	14.4	211 Btuh
4	2, NFRC 0.25	Vinyl	0.36	N	30.0	14.4	432 Btuh
5	2, NFRC 0.25	Vinyl	0.36	N	17.5	14.4	252 Btuh
6	2, NFRC 0.25	TIM	0.36	N	40.0	14.4	576 Btuh
7	2, NFRC 0.25	Vinyl	0.36	W	30.0	14.4	432 Btuh
	Window Total				177.2(sqft)		2551 Btuh

Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	141	3.55	501 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	27	3.55	96 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	166	3.55	589 Btuh
4	Frame - Wood	- Adj	(0.089)	13.0/0.0	202	3.55	717 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	246	3.55	875 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	168	3.55	596 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	180	3.55	637 Btuh
8	Frame - Wood	- Ext	(0.089)	13.0/0.0	126	3.55	447 Btuh
9	Frame - Wood	- Ext	(0.089)	13.0/0.0	159	3.55	565 Btuh
10	Frame - Wood	- Ext	(0.089)	13.0/0.0	360	3.55	1278 Btuh
	Wall Total				1775(sqft)		6301 Btuh

Doors	Type	Storm	Ueff.	Area X	HTM=	Load
1	Insulated - Exterior,	n	(0.460)	20	18.4	368 Btuh
2	Insulated - Garage,	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/Shing	(0.025)	38.0/0.0	2351	1.0	2387 Btuh
	Ceiling Total			2351(sqft)		2387Btuh

Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	260.0 ft(perim.)	47.2	12272 Btuh
	Floor Total			2239 sqft		12272 Btuh

	Envelope Subtotal:	24247 Btuh

Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural		0.16	20151	1.00	55.2	2417 Btuh

Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.258)	6892 Btuh
All Zones	**Sensible Subtotal All Zones**	**33556 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

Project Title:
Lot 2 Forest Country, 6th Edition
Lake City, FL 32025 Building Type: User

6/30/2021

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	33556 Btuh 0 Btuh 33556 Btuh

EQUIPMENT

1. Electric Heat Pump	#	33556 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

Project Title:
Lot 2 Forest Country, 6th Edition

Lake City, FL 32025

6/30/2021

Reference City: Gainesville, FL Temperature Difference: 19.0F(TMY3 99%) Humidity difference: 51gr.

Component Loads for Whole House

Window	Type* Panes	SHGC	U	InSh	IS	Ornt	Overhang Len	Hgt	Window Area(sqft) Gross	Shaded	Unshaded	HTM Shaded	Unshaded	Load
1	2 NFRC	0.25, 0.36		No	No	S	1.5ft.	1.0ft.	15.0	15.0	0.0	12	14	181 Btuh
2	2 NFRC	0.25, 0.36		No	No	S	7.5ft.	1.0ft.	30.0	30.0	0.0	12	14	363 Btuh
3	2 NFRC	0.25, 0.36		No	No	E	1.5ft.	1.0ft.	14.7	0.9	13.8	12	31	437 Btuh
4	2 NFRC	0.25, 0.36		No	No	N	1.5ft.	1.0ft.	30.0	0.0	30.0	12	12	363 Btuh
5	2 NFRC	0.25, 0.36		No	No	N	9.5ft.	1.0ft.	17.5	0.0	17.5	12	12	212 Btuh
6	2 NFRC	0.25, 0.36		No	No	N	9.5ft.	1.0ft.	40.0	0.0	40.0	12	12	484 Btuh
7	2 NFRC	0.25, 0.36		No	No	W	1.5ft.	1.0ft.	30.0	1.5	28.5	12	31	901 Btuh
	Window Total								177 (sqft)					2941 Btuh

Walls	Type	U-Value	R-Value Cav/Sheath	Area(sqft)	HTM	Load
1	Frame - Wood - Ext	0.09	13.0/0.0	141.0	2.3	319 Btuh
2	Frame - Wood - Ext	0.09	13.0/0.0	27.0	2.3	61 Btuh
3	Frame - Wood - Ext	0.09	13.0/0.0	166.0	2.3	376 Btuh
4	Frame - Wood - Adj	0.09	13.0/0.0	202.0	1.7	341 Btuh
5	Frame - Wood - Ext	0.09	13.0/0.0	246.3	2.3	558 Btuh
6	Frame - Wood - Ext	0.09	13.0/0.0	168.0	2.3	380 Btuh
7	Frame - Wood - Ext	0.09	13.0/0.0	179.5	2.3	406 Btuh
8	Frame - Wood - Ext	0.09	13.0/0.0	126.0	2.3	285 Btuh
9	Frame - Wood - Ext	0.09	13.0/0.0	159.0	2.3	360 Btuh
10	Frame - Wood - Ext	0.09	13.0/0.0	360.0	2.3	815 Btuh
	Wall Total			1775 (sqft)		3901 Btuh

Doors	Type	Area (sqft)	HTM	Load
1	Insulated - Exterior	20.0	13.8	276 Btuh
2	Insulated - Garage	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/Shingle/RB	0.025	38.0/0.0	2351.0	0.86	2029 Btuh
	Ceiling Total			2351 (sqft)		2029 Btuh

Floors	Type	R-Value	Size	HTM	Load
1	Slab On Grade	0.0	2239 (ft-perimeter)	0.0	0 Btuh
	Floor Total		2239.0 (sqft)		0 Btuh

	Envelope Subtotal:	9422 Btuh

Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.12	20151	1	41.4	861 Btuh
Internal gain		Occupants	Btuh/occupant		Appliance	Load
		8	X 230	+	1200	3040 Btuh
				Sensible Envelope Load:		13323 Btuh
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic)			(DGM of 0.433)		5771 Btuh
				Sensible Load All Zones		**19094 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Lot 2 Forest Country, 6th Edition
Lake City, FL 32025

6/30/2021

WHOLE HOUSE TOTALS

	Sensible Envelope Load All Zones	**13323**	**Btuh**
	Sensible Duct Load	5771	Btuh
	Total Sensible Zone Loads	**19094**	**Btuh**
	Sensible ventilation	0	Btuh
	Blower	0	Btuh
Whole House	**Total sensible gain**	**19094**	**Btuh**
Totals for Cooling	Latent infiltration gain (for 51 gr. humidity difference)	1429	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	1744	Btuh
	Latent occupant gain (8.0 people @ 200 Btuh per person)	1600	Btuh
	Latent other gain	0	Btuh
	Latent total gain	**4772**	**Btuh**
	TOTAL GAIN	**23866**	**Btuh**

EQUIPMENT

1. Central Unit	#	23866 Btuh

*Key: Window types (Panes - 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