

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name: Lot 12 Turkey Creek
 Street:
 City, State, Zip: Lake City, FL, 32055
 Owner:
 Design Location: FL, Gainesville

Builder Name: Don Little Construction & Roofing
 Permit Office: Columbia County
 Permit Number:
 Jurisdiction:
 County: Columbia (Florida Climate Zone 2)

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 3
 5. Is this a worst case? No
 6. Conditioned floor area above grade (ft²) 1690
 Conditioned floor area below grade (ft²) 0

7. Windows (214.0 sqft.) Description Area
 a. U-Factor: Dbl, U=0.36 214.00 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: 4.224 ft.
 Area Weighted Average SHGC: 0.250

8. Floor Types (1690.0 sqft.) Insulation Area
 a. Slab-On-Grade Edge Insulation R=0.0 1690.00 ft²
 b. N/A R= ft²
 c. N/A R= ft²

9. Wall Types (1767.0 sqft.) Insulation Area
 a. Frame - Wood, Exterior R=13.0 1569.00 ft²
 b. Frame - Wood, Adjacent R=13.0 198.00 ft²
 c. N/A R= ft²
 d. N/A R= ft²
 10. Ceiling Types (1774.0 sqft.) Insulation Area
 a. Under Attic (Vented) R=38.0 1774.00 ft²
 b. N/A R= ft²
 c. N/A R= ft²
 11. Ducts R ft²
 a. Sup: Attic, Ret: Attic, AH: Garage 6 422.5

12. Cooling systems kBtu/hr Efficiency
 a. Central Unit 20.1 SEER:14.00

13. Heating systems kBtu/hr Efficiency
 a. Electric Heat Pump 27.5 HSPF:8.20

14. Hot water systems
 a. Electric Cap: 50 gallons
 EF: 0.920

b. Conservation features
 None

15. Credits CV, Pstat

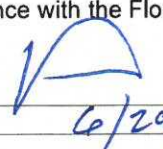
Glass/Floor Area: 0.127

Total Proposed Modified Loads: 47.24

Total Baseline Loads: 48.27

PASS

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

PREPARED BY: 

DATE: 6/29/2020

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:	Lot 12 Turkey Creek	Bedrooms:	3	Address Type:	Lot Information
Building Type:	User	Conditioned Area:	1690	Lot #	12
Owner Name:		Total Stories:	1	Block/Subdivision:	Turkey Creek
# of Units:	1	Worst Case:	No	PlatBook:	
Builder Name:	Don Little Construction & Roofi	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:	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	1690	15210

SPACES

Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Infil ID	Finished	Cooled	Heated
1	Main	1690	15210	Yes	6	3	1	Yes	Yes	Yes

FLOORS

✓	#	Floor Type	Space	Perimeter	R-Value	Area		Tile	Wood	Carpet
_____	1	Slab-On-Grade Edge Insulation	Main	200 ft	0	1690 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	Composition shingles	1957 ft²	494 ft²	Medium	Y	0.96	No	0.9	No	0	30.3

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
_____	1	Partial cathedral ceili	Vented	300	1690 ft²	Y	N

CEILING

✓	#	Ceiling Type	Space	R-Value	Ins Type	Area	Framing Frac	Truss Type
_____	1	Under Attic (Vented)	Main	38	Double Batt	1774 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	13	8		9		72.0 ft²		0.23	0.75	0
___	2	E	Exterior	Frame - Wood	Main	13	2	8	9		24.0 ft²		0.23	0.75	0
___	3	S	Exterior	Frame - Wood	Main	13	6		9		54.0 ft²		0.23	0.75	0
___	4	W	Exterior	Frame - Wood	Main	13	12	4	9		111.0 ft²		0.23	0.75	0
___	5	S	Exterior	Frame - Wood	Main	13	12	8	9		114.0 ft²		0.23	0.75	0
___	6	E	Exterior	Frame - Wood	Main	13	35	4	9		318.0 ft²		0.23	0.75	0
___	7	N	Exterior	Frame - Wood	Main	13	21	4	9		192.0 ft²		0.23	0.75	0
___	8	E	Exterior	Frame - Wood	Main	13	11		9		99.0 ft²		0.23	0.75	0
___	9	N	Exterior	Frame - Wood	Main	13	27	4	9		246.0 ft²		0.23	0.75	0
___	10	W	Exterior	Frame - Wood	Main	13	37	8	9		339.0 ft²		0.23	0.75	0
___	11	S	Garage	Frame - Wood	Main	13	22		9		198.0 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	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	Separation	Int Shade	Screening
___	1	S	1	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	7 ft 6 in	1 ft 0 in	None	None
___	2	S	5	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 0 in	4 ft 0 in	None	None
___	3	E	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	4.0 ft²	1 ft 0 in	10 ft 0 in	None	None
___	4	N	7	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	12 ft 6 in	1 ft 0 in	None	None
___	5	E	8	Vinyl	Low-E Double	Yes	0.36	0.25	N	40.0 ft²	6 ft 0 in	1 ft 0 in	None	None
___	6	N	9	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	7	N	9	Vinyl	Low-E Double	Yes	0.36	0.25	N	30.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	8	E	6	Vinyl	Low-E Double	Yes	0.36	0.25	N	15.0 ft²	1 ft 6 in	1 ft 0 in	None	None
___	9	W	10	Vinyl	Low-E Double	Yes	0.36	0.25	N	20.0 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	506 ft²	506 ft²	68 ft	9 ft	1

INFILTRATION

#	Scope	Method	SLA	CFM 50	ELA	EqLA	ACH	ACH 50
1	Wholehouse	Proposed ACH(50)	.000286	1267.5	69.58	130.86	.1128	5

INPUT SUMMARY CHECKLIST REPORT

HEATING SYSTEM														
✓	#	System Type	Subtype	Speed	Efficiency	Capacity	Block	Ducts						
_____	1	Electric Heat Pump/	None	Single	HSPF:8.2	27.48 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	20.09 kBtu/hr	600 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 ----		---- Return ----		Leakage Type		Air Handler	CFM 25 TOT	CFM25 OUT	QN	RLF	HVAC # Heat Cool	
_____	1	Attic	6	422.5 ft²	Attic	84.5 ft²	Default Leakage	Garage	(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	66	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	66	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* =98****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>3</u>	c) AHU location <u>Garage</u>
5. Is this a worst case? (yes/no)	5. <u>No</u>	13. Cooling system: Capacity <u>20.1</u>
6. Conditioned floor area (sq. ft.)	6. <u>1690</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>214.0</u>	e) Other <u>14.0</u>
8. Skylights		14. Heating system: Capacity <u>27.5</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>13.0</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>13.0</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: _____ 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: Don Little Construction & Roofing Community: _____

Lot: 12

Address: _____

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

$$\frac{\text{CFM}(50)}{\text{Building Volume}} \times 60 \div \frac{15210}{\text{ACH}(50)} = \text{PASS}$$

☐ **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

Project Title:
Lot 12 Turkey Creek

Lake City, FL 32055

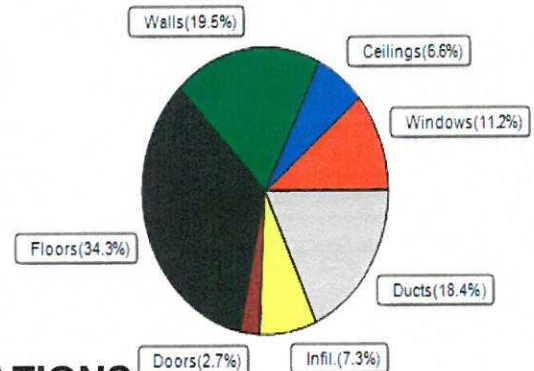
7/1/2020

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	27482 Btuh	Total cooling load calculation	20093 Btuh
Submitted heating capacity	% of calc Btuh	Submitted cooling capacity	% of calc Btuh
Total (Electric Heat Pump)	100.0 27482	Sensible (SHR = 0.70)	85.2 14065
Heat Pump + Auxiliary(0.0kW)	100.0 27482	Latent	167.8 6028
		Total (Electric Heat Pump)	100.0 20093

WINTER CALCULATIONS

Winter Heating Load (for 1690 sqft)

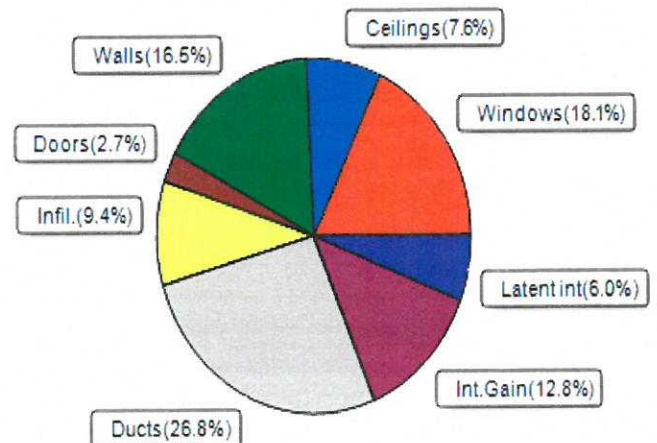
Load component		Load	
Window total	214 sqft	3082	Btuh
Wall total	1513 sqft	5372	Btuh
Door total	40 sqft	736	Btuh
Ceiling total	1774 sqft	1801	Btuh
Floor total	1690 sqft	9440	Btuh
Infiltration	46 cfm	2003	Btuh
Duct loss		5049	Btuh
Subtotal		27482	Btuh
Ventilation	0 cfm	0	Btuh
TOTAL HEAT LOSS		27482	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1690 sqft)

Load component		Load	
Window total	214 sqft	3630	Btuh
Wall total	1513 sqft	3322	Btuh
Door total	40 sqft	552	Btuh
Ceiling total	1774 sqft	1531	Btuh
Floor total		0	Btuh
Infiltration	34 cfm	714	Btuh
Internal gain		2580	Btuh
Duct gain		4173	Btuh
Sens. Ventilation	0 cfm	0	Btuh
Blower Load		0	Btuh
Total sensible gain		16501	Btuh
Latent gain(ducts)		1208	Btuh
Latent gain(infiltration)		1184	Btuh
Latent gain(ventilation)		0	Btuh
Latent gain(internal/occupants/other)		1200	Btuh
Total latent gain		3592	Btuh
TOTAL HEAT GAIN		20093	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____

6/29/2020

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Lake City, FL 32055

Project Title:
Lot 12 Turkey Creek
Building Type: User

7/1/2020

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	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	4.0		14.4	58 Btuh
4	2, NFRC 0.25	Vinyl	0.36	N	30.0		14.4	432 Btuh
5	2, NFRC 0.25	Vinyl	0.36	E	40.0		14.4	576 Btuh
6	2, NFRC 0.25	Vinyl	0.36	N	30.0		14.4	432 Btuh
7	2, NFRC 0.25	Vinyl	0.36	N	30.0		14.4	432 Btuh
8	2, NFRC 0.25	Vinyl	0.36	E	15.0		14.4	216 Btuh
9	2, NFRC 0.25	Vinyl	0.36	W	20.0		14.4	288 Btuh
Window Total					214.0(sqft)			3082 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	57		3.55	202 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	24		3.55	85 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	34		3.55	121 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	111		3.55	394 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	84		3.55	298 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	299		3.55	1062 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	162		3.55	575 Btuh
8	Frame - Wood	- Ext	(0.089)	13.0/0.0	59		3.55	209 Btuh
9	Frame - Wood	- Ext	(0.089)	13.0/0.0	186		3.55	660 Btuh
10	Frame - Wood	- Ext	(0.089)	13.0/0.0	319		3.55	1133 Btuh
11	Frame - Wood	- Adj	(0.089)	13.0/0.0	178		3.55	632 Btuh
Wall Total					1513(sqft)			5372 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	1774		1.0	1801 Btuh
Ceiling Total					1774(sqft)			1801Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	200.0 ft(perim.)		47.2	9440 Btuh
Floor Total					1690 sqft			9440 Btuh
Envelope Subtotal:								20430 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		
	Natural		0.18	15210	1.00	45.7		2003 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.225)							5049 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Lake City, FL 32055

Project Title:
Lot 12 Turkey Creek
Building Type: User

7/1/2020

All Zones	Sensible Subtotal All Zones	27482 Btuh
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WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sensible Heat Loss Total Heat Loss	27482 Btuh 0 Btuh 27482 Btuh
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EQUIPMENT

1. Electric Heat Pump	#	27482 Btuh
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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 12 Turkey Creek

Lake City, FL 32055

7/1/2020

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		7.5ft.	1.0ft.	15.0	15.0	0.0	12	14	181 Btuh	
2	2 NFRC	0.25, 0.36	No	No	S		1.0ft.	4.0ft.	30.0	10.1	19.9	12	14	402 Btuh	
3	2 NFRC	0.25, 0.36	No	No	E		1.0ft.	10.0f	4.0	0.0	4.0	12	31	124 Btuh	
4	2 NFRC	0.25, 0.36	No	No	N		12.5f	1.0ft.	30.0	0.0	30.0	12	12	363 Btuh	
5	2 NFRC	0.25, 0.36	No	No	E		6.0ft.	1.0ft.	40.0	23.9	16.1	12	31	788 Btuh	
6	2 NFRC	0.25, 0.36	No	No	N		1.5ft.	1.0ft.	30.0	0.0	30.0	12	12	363 Btuh	
7	2 NFRC	0.25, 0.36	No	No	N		1.5ft.	1.0ft.	30.0	0.0	30.0	12	12	363 Btuh	
8	2 NFRC	0.25, 0.36	No	No	E		1.5ft.	1.0ft.	15.0	0.7	14.3	12	31	450 Btuh	
9	2 NFRC	0.25, 0.36	No	No	W		1.5ft.	1.0ft.	20.0	1.2	18.8	12	31	596 Btuh	
	Window Total									214 (sqft)					3630 Btuh
Walls	Type					U-Value	R-Value	Area(sqft)			HTM		Load		
							Cav/Sheath								
1	Frame - Wood - Ext						0.09	13.0/0.0	57.0			2.3		129 Btuh	
2	Frame - Wood - Ext						0.09	13.0/0.0	24.0			2.3		54 Btuh	
3	Frame - Wood - Ext						0.09	13.0/0.0	34.0			2.3		77 Btuh	
4	Frame - Wood - Ext						0.09	13.0/0.0	111.0			2.3		251 Btuh	
5	Frame - Wood - Ext						0.09	13.0/0.0	84.0			2.3		190 Btuh	
6	Frame - Wood - Ext						0.09	13.0/0.0	299.0			2.3		677 Btuh	
7	Frame - Wood - Ext						0.09	13.0/0.0	162.0			2.3		367 Btuh	
8	Frame - Wood - Ext						0.09	13.0/0.0	59.0			2.3		134 Btuh	
9	Frame - Wood - Ext						0.09	13.0/0.0	186.0			2.3		421 Btuh	
10	Frame - Wood - Ext						0.09	13.0/0.0	319.0			2.3		722 Btuh	
11	Frame - Wood - Adj						0.09	13.0/0.0	178.0			1.7		300 Btuh	
	Wall Total									1513 (sqft)					3322 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 AtticLight/Shingle/RB						0.025	38.0/0.0	1774.0			0.86		1531 Btuh	
	Ceiling Total									1774 (sqft)			1531 Btuh		
Floors	Type					R-Value			Size			HTM		Load	
	1 Slab On Grade						0.0			1690 (ft-perimeter)			0.0		0 Btuh
	Floor Total									1690.0 (sqft)					0 Btuh
	Envelope Subtotal:													9034 Btuh	

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
 Lot 12 Turkey Creek

Lake City, FL 32055

7/1/2020

Infiltration	Type Natural	Average ACH 0.14	Volume(cuft) 15210	Wall Ratio 1	CFM= 34.3	Load 714 Btuh
Internal gain		Occupants 6	Btuh/occupant X 230	Appliance +	1200	Load 2580 Btuh
					Sensible Envelope Load:	12328 Btuh
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.339)					4173 Btuh
					Sensible Load All Zones	16501 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Lot 12 Turkey Creek

Lake City, FL 32055

7/1/2020

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	12328 Btuh
	Sensible Duct Load	4173 Btuh
	Total Sensible Zone Loads	16501 Btuh
	Sensible ventilation	0 Btuh
	Blower	0 Btuh
	Total sensible gain	16501 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	1184 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	1208 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	3592 Btuh
	TOTAL GAIN	20093 Btuh

EQUIPMENT

1. Central Unit	#	20093 Btuh
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*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