FORM R405-2023

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Tepedino - Addition	Builder Name:	
Street:	135 SW Stoneridge Drive	Permit Office:	Columbia County
City, State, Zip:	Lake City, FL, 32024	Permit Number:	
Owner:	Miguel & Kelly Tepedino	Jurisdiction:	
Design Location:	FL, Gainesville	County:	Columbia(Florida Climate Zone 2)

1. New construction or existing	Addition
2. Single family or multiple family	Detached
3. Number of units, if multiple family	1
4. Number of Bedrooms	0
5. Is this a worst case?	No
6. Conditioned floor area above grade (ft²)	520
Conditioned floor area below grade (ft²)	0

7. Windows(43.0 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.36	43.00 ft²
SHGC:	SHGC=0.25	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		1.500 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	520.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(860.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=19.0	860.00 ft²
b. N/A		
c. N/A		
d. N/A		

11. Ceiling Types(572.0 sqft.)	Insulation	Area
a. Flat ceiling under att (Vented)	R=38.0	572.00 ft²
b. N/A		
c. N/A		

12. Roof(Comp. Shingles, Vented)	Deck R=0.0	735 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Attic, AH: 1st Floor	6	130
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	6.6	SEER2:15.50

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Heat Pump	10.5	HSPF2:8.80

16. Hot Water Systems - None required	
a. N/A	N/A
b. Conservation features	

17. Credits	CV, Pstat

Glass/Floor Area: 0.083

Total Proposed Modified Loads: 12.89

Total Baseline Loads: 16.41

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: 9 / 11 / 2024

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.

- 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). (Exception may apply)

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Tepedino - Addition			Address type:	Street Address
Building Type:	User	Bedrooms:	0	Lot #:	---
Owner:	Miguel & Kelly Tepedino	Conditioned Area:	520	Block/SubDivision:	---
Builder Home ID:		Total Stories:	1	PlatBook:	---
Builder Name:		Worst Case:	No	Street:	135 SW Stoneridge Drive
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:	Addition	Terrain:	Suburban		
Year Construct:	2024	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	520	5200 cu ft

SPACES

√	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___	1	1st Floor	520	5200	Yes	1	0	Yes	Yes	Yes

FLOORS (Total Exposed Area = 520 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	1st Floor	86	520 sqft	0	---	0.304	2 (ft)/0 (ft)	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	Hip	Composition shingles	735 ft²	0 ft²	Medium	Y	0.96	No	0.9	No	0	45

ATTIC

√	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___	1	Partial cathedral ceiling	Vented	300	520 ft²	Y	N

CEILING (Total Exposed Area = 572 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	572.0ft²	0.024	0.11	Wood

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

WALLS (Total Exposed Area = 860 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	19.0	4.0	0	10.0	0	40.0	0.061		0.23	0.75	0 %
___ 2	W	Exterior	Frame - Wood	1st Floor	19.0	2.0	0	10.0	0	20.0	0.061		0.23	0.75	0 %
___ 3	S	Exterior	Frame - Wood	1st Floor	19.0	20.0	0	10.0	0	200.0	0.061		0.23	0.75	0 %
___ 4	E	Exterior	Frame - Wood	1st Floor	19.0	24.0	0	10.0	0	240.0	0.061		0.23	0.75	0 %
___ 5	N	Exterior	Frame - Wood	1st Floor	19.0	20.0	0	10.0	0	200.0	0.061		0.23	0.75	0 %
___ 6	W	Exterior	Frame - Wood	1st Floor	19.0	12.0	0	10.0	0	120.0	0.061		0.23	0.75	0 %
___ 7	N	Exterior	Frame - Wood	1st Floor	19.0	4.0	0	10.0	0	40.0	0.061		0.23	0.75	0 %

DOORS (Total Exposed Area = 20 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	6.00	8	20.0ft²

WINDOWS (Total Exposed Area = 43 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	3	Vinyl	Low-E Double	Y	0.36	0.25	N	N	33.0	1	6.00	5.50	1.5	1.0	None	None
___ 2	N	5	Vinyl	Low-E Double	Y	0.36	0.25	N	N	10.0	1	5.00	2.00	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)	0.00044	607	33.28	62.49	0.1500	7.0	All	5200 cu ft

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/Fl. Addition	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	----Geothermal HeatPump---- Entry	Power	Volt	Current	Ducts	Block
___ 1	Electric Heat Pump/Existing/co	None/Single		HSPF2: 8.80	10.5		0.00	0.00	0.00	sys#1	1

COOLING SYSTEM

√ #	System Type/Fl. Addition	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	Air Flow cfm	SHR	Duct	Block
___ 1	Central Unit/Existing/co	None/Single		SEER2:15.5	6.6	198	0.75	sys#1	1

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

HOT WATER SYSTEM

√ #	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixture Flow	Pipe Ins.	Pipe length

Recirculation System	Recirc Control Type	Loop length	Branch length	Pump power	DWHR	Facilities Connected	Equal Flow	DWHR Eff	Other Credits

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 OUT	RLF	HVAC # Heat	HVAC # Cool
___ 1	Attic	6.0	130 ft²	Attic	6.0	26 ft²	Default Leakage	1st Floor	(Default)	(Default)			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	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

FORM R405-2023

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 79

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

135 SW Stoneridge Drive,Lake City,FL,32024

1. New construction or existing		Addition
2. Single family or multiple family		Detached
3. Number of units, if multiple family		1
4. Number of Bedrooms		0
5. Is this a worst case?		No
6. Conditioned floor area above grade (ft²)		520
Conditioned floor area below grade (ft²)		0

7. Windows**	Description	Area
a. U-Factor:	Dbl, U=0.36	43.00 ft²
SHGC:	SHGC=0.25	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		1.500 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	520.00 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(860.0 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=19.0	860.00 ft²
b. N/A		
c. N/A		
d. N/A		

11. Ceiling Types(572.0 sqft.)	Insulation	Area
a. Flat ceiling under att (Vented)	R=38.0	572.00 ft²
b. N/A		
c. N/A		

12. Roof(Comp. Shingles, Vented)	Deck R=0.0	735 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Attic, AH: 1st Floor	6	130
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	6.6	SEER2:15.50

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Heat Pump	10.5	HSPF2:8.80

16. Hot Water Systems - None required
a. N/A — N/A

b. Conservation features

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: 135 SW Stoneridge Drive 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
2023 Florida Building Code, Energy Conservation, 8th Edition

Jurisdiction:	Permit #:

Job Information

Builder: Community: Lot: NA

Address: 135 SW Stoneridge Drive

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 R405-2023 (Performance) or R406-2023 (ERI), section labeled as infiltration, sub-section ACH50.

ACH(50) specified on Form R405-2023-Energy Calc (Performance) or R406-2023 (ERI): 7.000

_____ x 60 ÷ 5200 = _____
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. The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding seven air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Dwelling units with an air leakage rate less than three air changes per hour shall be provided with whole-house mechanical ventilation in accordance with Section R403.6.1 of this code and Section M1507.3 if the *Florida Building Code, Residential*. 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.
7. If an attic is both sealed and insulated at the roof deck, interior access doors and hatches between the conditioned space volume and the attic shall be opened during the test and the volume of the attic shall be added to the conditioned space volume for purposes of reporting the infiltration volume and calculating the air leakage of the home.

Testing Company

Company Name: _____ Phone: _____

I hereby verify that the above Air Leakage results are in accordance with the 2023 8th 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

Miguel & Kelly Tepedino
135 SW Stoneridge Drive
Lake City, FL 32024

Project Title:
Tepedino - Addition

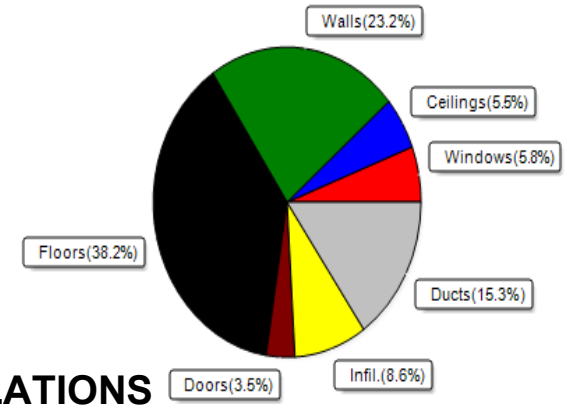
9/11/2024

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(152 ft.) Temp Range(M)					
Humidity data: Interior RH (50%) Outdoor wet bulb (79F) Humidity difference(54gr.)					
Winter design temperature(MJ8 99%/Cu)	33	F	Summer design temperature(MJ8 99%/Cu)	99	F
Winter setpoint	70	F	Summer setpoint	75	F
Winter temperature difference	37	F	Summer temperature difference	24	F
Total heating load calculation	**9834**	**Btuh**	**Total cooling load calculation**	**7248**	**Btuh**
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	107.1	10531	Sensible (SHR = 0.75)	81.1	4950
Heat Pump + Auxiliary(0.0kW)	107.1	10531	Latent	143.8	1650
			Total (Electric Heat Pump)	91.1	6600

WINTER CALCULATIONS

Winter Heating Load (for 520 sqft)

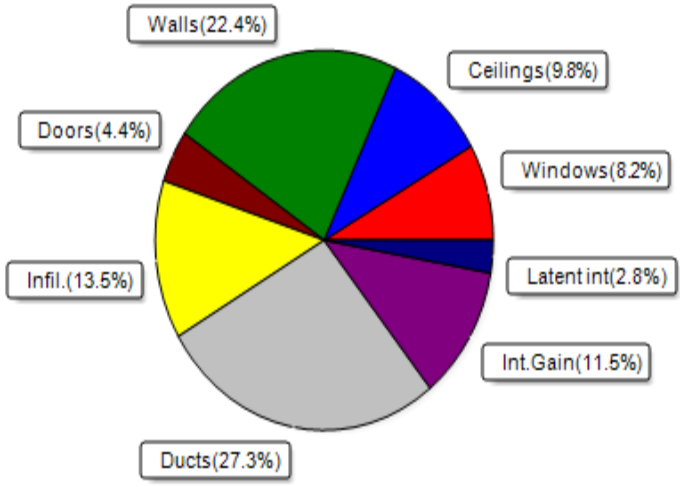
Load component			Load	
Window total	43	sqft	573	Btuh
Wall total	797	sqft	2279	Btuh
Door total	20	sqft	340	Btuh
Ceiling total	572	sqft	537	Btuh
Floor total	520	sqft	3755	Btuh
Infiltration	21	cfm	842	Btuh
Duct loss			1507	Btuh
Subtotal			**9834**	**Btuh**
Ventilation	Ex:0 cfm; Sup:0 cfm		0	Btuh
TOTAL HEAT LOSS			**9834**	**Btuh**



SUMMER CALCULATIONS

Summer Cooling Load (for 520 sqft)

Load component			Load	
Window total	43	sqft	598	Btuh
Wall total	797	sqft	1626	Btuh
Door total	20	sqft	322	Btuh
Ceiling total	572	sqft	711	Btuh
Floor total			0	Btuh
Infiltration	16	cfm	410	Btuh
Internal gain			830	Btuh
Duct gain			1603	Btuh
Sens.Ventilation	Ex:0 cfm; Sup:0 cfm		0	Btuh
Blower Load			0	Btuh
Total sensible gain			**6100**	**Btuh**
Latent gain(ducts)			378	Btuh
Latent gain(infiltration)			570	Btuh
Latent gain(ventilation)			0	Btuh
Latent gain(internal/occupants/other)			200	Btuh
Total latent gain			**1148**	**Btuh**
TOTAL HEAT GAIN			**7248**	**Btuh**



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EnergyGauge® System Sizing
PREPARED BY: _____
DATE: 9 / 11 / 2024

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Miguel & Kelly Tepedino
135 SW Stoneridge Drive
Lake City, FL 32024

Project Title:
Tepedino - Addition
Building Type: User

9/11/2024

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 37.0 °F (MJ8 99%/Cu)
Winter Setpoint: 70 °F (Required Manual J default)

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	33.0	13.3	440 Btuh
2	2, NFRC 0.25	Vinyl	0.36	N	10.0	13.3	133 Btuh
	Window Total				43.0(sqft)		573 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area X	HTM=	Load
1	Frame - Wood	- Ext	(0.077)	19.0/0.0	20	2.86	57 Btuh
2	Frame - Wood	- Ext	(0.077)	19.0/0.0	20	2.86	57 Btuh
3	Frame - Wood	- Ext	(0.077)	19.0/0.0	167	2.86	477 Btuh
4	Frame - Wood	- Ext	(0.077)	19.0/0.0	240	2.86	686 Btuh
5	Frame - Wood	- Ext	(0.077)	19.0/0.0	190	2.86	543 Btuh
6	Frame - Wood	- Ext	(0.077)	19.0/0.0	120	2.86	343 Btuh
7	Frame - Wood	- Ext	(0.077)	19.0/0.0	40	2.86	114 Btuh
	Wall Total				797(sqft)		2279 Btuh
Doors	Type	Storm	Ueff.		Area X	HTM=	Load
1	Insulated - Exterior, n		(0.460)		20	17.0	340 Btuh
	Door Total				20(sqft)		340Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area X	HTM=	Load
1	Flat ceil/D/Shing		(0.025)	38.0/0.0	572	0.94	537 Btuh
	Ceiling Total				572(sqft)		537Btuh
Floors	Type		Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	86.0 ft(perim.)	43.7	3755 Btuh
	Floor Total				520 sqft		3755 Btuh
					Envelope Subtotal:		7484 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural		0.24	5200	1.00	20.8	842 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att)					(DLM of 0.181)	1507 Btuh
All Zones				**Sensible Subtotal All Zones**			**9834 Btuh**

Manual J Winter Calculations

Residential Load - Component Details (continued)

Miguel & Kelly Tepedino
135 SW Stoneridge Drive
Lake City, FL 32024

Project Title:
Tepedino - Addition
Building Type: User

9/11/2024

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	9834 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss	9834 Btuh

EQUIPMENT

1. Electric Heat Pump	#	10531 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)

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Version 8

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Miguel & Kelly Tepedino
135 SW Stoneridge Drive
Lake City, FL 32024

Project Title:
Tepedino - Addition

9/11/2024

Reference City: Gainesville, FL (Defaults)
Humidity difference: 54gr.

Temperature Difference: 24.0F(MJ8 99%/Cu)
Summer Setpoint: 75 °F (Required Manual J default)

Component Loads for Whole House

	Type*						Overhang		Window Area(sqft)			HTM		Load	
Window	Panes	SHGC	U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded		
1	2 NFRC	0.25, 0.36		No	No	S	1.5ft.	1.0ft.	33.0	33.0	0.0	14	16	459	Btuh
2	2 NFRC	0.25, 0.36		No	No	N	1.5ft.	1.0ft.	10.0	0.0	10.0	14	14	139	Btuh
	Window Total								43 (sqft)					598	Btuh

Walls	Type	U-Value	R-Value	Area(sqft)	HTM	Load	
			Cav/Sheath				
1	Frame - Wood - Ext	0.08	19.0/0.0	20.0	2.0	41	Btuh
2	Frame - Wood - Ext	0.08	19.0/0.0	20.0	2.0	41	Btuh
3	Frame - Wood - Ext	0.08	19.0/0.0	167.0	2.0	341	Btuh
4	Frame - Wood - Ext	0.08	19.0/0.0	240.0	2.0	490	Btuh
5	Frame - Wood - Ext	0.08	19.0/0.0	190.0	2.0	388	Btuh
6	Frame - Wood - Ext	0.08	19.0/0.0	120.0	2.0	245	Btuh
7	Frame - Wood - Ext	0.08	19.0/0.0	40.0	2.0	82	Btuh
	Wall Total			797 (sqft)		1626	Btuh

Doors	Type	Area (sqft)	HTM	Load	
1	Insulated - Exterior	20.0	16.1	322	Btuh
	Door Total	20 (sqft)		322	Btuh

Ceilings	Type/Color/Surface	U-Value	R-Value	Area(sqft)	HTM	Load	
1	Vented Attic/DarkShingle/RB	0.025	38.0/0.0	572.0	1.24	711	Btuh
	Ceiling Total			572 (sqft)		711	Btuh

Floors	Type	R-Value	Size	HTM	Load	
1	Slab On Grade	0.0	520 (ft-perimeter)	0.0	0	Btuh
	Floor Total		520.0 (sqft)		0	Btuh

	Envelope Subtotal:	3257	Btuh

Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load	
	Natural	0.18	5200	1	15.6	410	Btuh

Internal gain	Occupants		Btuh/occupant		Appliance	Load	
	1	X	230	+	600	830	Btuh

	Sensible Envelope Load:	4497	Btuh

Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic)	(DGM of 0.357)	1603	Btuh

	Sensible Load All Zones	**6100 Btuh**

Manual J Summer Calculations

Residential Load - Component Details (continued)

Miguel & Kelly Tepedino
135 SW Stoneridge Drive
Lake City, FL 32024

Project Title: Tepedino - Addition

Climate:FL_GAINESVILLE_REGIONAL_A

9/11/2024

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	**Sensible Envelope Load All Zones**	**4497**	**Btuh**
	Sensible Duct Load	1603	Btuh
	Total Sensible Zone Loads	**6100**	**Btuh**
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0	Btuh
	Blower	0	Btuh
	Total sensible gain	**6100**	**Btuh**
	Latent infiltration gain (for 54 gr. humidity difference)	570	Btuh
	Latent ventilation gain	0	Btuh
	Latent duct gain	378	Btuh
	Latent occupant gain (1.0 people @ 200 Btuh per person)	200	Btuh
	Latent other gain	0	Btuh
	Latent total gain	**1148**	**Btuh**
	TOTAL GAIN	**7248**	**Btuh**

EQUIPMENT

1. Central Unit	#	6600 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)

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