

Project Name: Urrutia Residence		Builder Name: IC Construction, LLC.	
Street:		Permit Office: Columbia County	
City, State, Zip: Lake City, FL, 32055		Permit Number:	
Owner: Jose & Mercy Urrutia		Jurisdiction:	
Design Location: FL, Gainesville		County: Columbia(Florida Climate Zone 2)	

1. New construction or existing	New (From Plans)	10. Wall Types(3395.8 sqft.)	Insulation	Area
2. Single family or multiple family	Detached	a. Frame - Wood, Exterior	R=13.0	3009.00 ft²
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent	R=13.0	386.83 ft²
4. Number of Bedrooms	4	c. N/A		
5. Is this a worst case?	No	d. N/A		
6. Conditioned floor area above grade (ft²)	2784	11. Ceiling Types(3038.0 sqft.)	Insulation	Area
Conditioned floor area below grade (ft²)	0	a. Flat ceiling under att (Vented)	R=38.0	3038.00 ft²
7. Windows(523.0 sqft.)	Description	b. N/A		
a. U-Factor:	Dbl, U=0.36	c. N/A		
SHGC:	SHGC=0.25	12. Roof(Comp. Shingles, Vented)	Deck R=0.0	3346 ft²
b. U-Factor:	N/A	13. Ducts, location & insulation level	R	ft²
SHGC:		a. Sup: Attic, Ret: Attic, AH: Attic	6	696
c. U-Factor:	N/A	b.		
SHGC:		c.		
Area Weighted Average Overhang Depth:	4.970 ft	14. Cooling Systems	kBtu/hr	Efficiency
Area Weighted Average SHGC:	0.250	a. Central Unit	41.3	SEER2:15.00
8. Skylights	Description	15. Heating Systems	kBtu/hr	Efficiency
U-Factor:(AVG)	N/A	a. Electric Heat Pump	46.9	HSPF2:8.80
SHGC(AVG):	N/A	16. Hot Water Systems		
9. Floor Types	Insulation	a. Electric Tankless		Cap: 1 gallons
a. Slab-On-Grade Edge Insulation	R= 0.0			EF: 0.920
b. Floor over Garage	R= 19.0	b. Conservation features		
c. N/A	R=			None
	ft²	17. Credits		CV, Pstat

PASS

DATE: _____

- Page 1

PROJECT												
Title:		Urrutia Residence				Address type:		Lot				
Building Type:		User		Bedrooms:		4		Lot #:		1		
Owner:		Jose & Mercy Urrutia				Conditioned Area:		2784				
Builder Home ID:						Total Stories:		2				
Builder Name:		IC Construction, LLC.				Worst Case:		No				
Permit Office:		Columbia County				Rotate Angle:		0				
Jurisdiction:						Cross Ventilation:		Yes		Columbia		
Family Type:		Detached				Whole House Fan:		No		Lake City,		
New/Existing:		New (From Plans)				Terrain:		Suburban		FL, 32055		
Year Construct:		2023				Shielding:		Suburban				
Comment:												
CLIMATE												
✓	Design Location	Tmy Site		Design Temp		Int Design Temp		Heating		Design		Daily temp
				97.5%	2.5%	Winter	Summer	Degree Days	Moisture	Range		
	___ FL, Gainesville	FL_GAINESVILLE_REGIONA		32	92	70	75	1305.5	51	Medium		
BLOCKS												
✓	Number	Name		Area		Volume						
	___ 1	Block1		2784		24576 cu ft						
SPACES												
✓	Number	Name		Area		Volume		Kitchen		Occupants		Bedrooms
	___ 1	1st Floor		2304		20736		Yes		8		3
	___ 2	2nd Floor		480		3840		No		2		1
										Yes		Yes
										Yes		Yes
FLOORS (Total Exposed Area = 2784 sq.ft.)												
✓	#	Floor Type		Space		Exposed Perim		Perimeter R-Value		Area		U-Factor
	___ 1	Slab-On-Grade Edge Ins		1st Floor		266.833		0		2304 ft		0.304
	___ 2	Floor over Garage		2nd Floor		---		---		480 ft		0.046
										19		0.00
										0.00		1.00
ROOF												
✓	#	Type		Materials		Roof Area		Gable Area		Roof Color		Rad Barr
	___ 1	Gable or shed		Composition shingles		3346 ft²		520 ft²		Medium		Y
										0.96		No
										0.9		No
										0		33.69
ATTIC												
✓	#	Type		Ventilation		Vent Ratio (1 in)		Area		RBS		IRCC
	___ 1	Partial cathedral ceiling		Vented		300		2784 ft²		Y		N
CEILING (Total Exposed Area = 3038 sq.ft.)												
✓	#	Ceiling Type		Space		R-Value		Ins. Type		Area		U-Factor
	___ 1	Flat ceiling under attic(Vented)		1st Floor		38.0		Double Batt		2534.0ft²		0.024
										0.11		Wood

INPUT SUMMARY CHECKLIST REPORT

CEILING(Continued)

___ 2 Flat ceiling under attic(Vented) 2nd Floor 38.0 Double Batt 504.0ft² 0.024 0.11 Wood

WALLS

(Total Exposed Area = 3396 sq.ft.)

✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	In	Height Ft	In	Area sq.ft.	U-Factor	Sheath R-Value	Frm. Frac.	Solar Absor.	Below Grade
___ 1	NE	Exterior	Frame - Wood	1st Floor	13.0	30.0	0	10.0	0	300.0	0.084		0.23	0.75	0 %
___ 2	NW	Exterior	Frame - Wood	1st Floor	13.0	14.0	2	9.0	0	127.5	0.084		0.23	0.75	0 %
___ 3	NE	Exterior	Frame - Wood	1st Floor	13.0	14.0	2	9.0	0	127.5	0.084		0.23	0.75	0 %
___ 4	SE	Exterior	Frame - Wood	1st Floor	13.0	14.0	2	9.0	0	127.5	0.084		0.23	0.75	0 %
___ 5	NE	Exterior	Frame - Wood	1st Floor	13.0	2.0	0	9.0	0	18.0	0.084		0.23	0.75	0 %
___ 6	SE	Exterior	Frame - Wood	1st Floor	13.0	24.0	4	9.0	0	219.0	0.084		0.23	0.75	0 %
___ 7	SW	Exterior	Frame - Wood	1st Floor	13.0	33.0	2	10.0	0	331.7	0.084		0.23	0.75	0 %
___ 8	SE	Exterior	Frame - Wood	1st Floor	13.0	11.0	0	10.0	0	110.0	0.084		0.23	0.75	0 %
___ 9	SW	Exterior	Frame - Wood	1st Floor	13.0	13.0	0	10.0	0	130.0	0.084		0.23	0.75	0 %
___ 10	SE	Exterior	Frame - Wood	1st Floor	13.0	17.0	4	9.0	0	156.0	0.084		0.23	0.75	0 %
___ 11	SW	Exterior	Frame - Wood	1st Floor	13.0	24.0	0	9.0	0	216.0	0.084		0.23	0.75	0 %
___ 12	NW	Exterior	Frame - Wood	1st Floor	13.0	32.0	6	9.0	0	292.5	0.084		0.23	0.75	0 %
___ 13	NE	Garage	Frame - Wood	1st Floor	13.0	24.0	0	9.0	0	216.0	0.084		0.23	0.75	0 %
___ 14	NW	Garage	Frame - Wood	1st Floor	13.0	17.0	1	10.0	0	170.8	0.084		0.23	0.75	0 %
___ 15	NE	Exterior	Frame - Wood	2nd Floor	13.0	18.0	4	8.0	0	146.7	0.084		0.23	0.75	0 %
___ 16	NW	Exterior	Frame - Wood	2nd Floor	13.0	35.0	0	8.0	0	280.0	0.084		0.23	0.75	0 %
___ 17	SW	Exterior	Frame - Wood	2nd Floor	13.0	18.0	4	8.0	0	146.7	0.084		0.23	0.75	0 %
___ 18	SE	Exterior	Frame - Wood	2nd Floor	13.0	35.0	0	8.0	0	280.0	0.084		0.23	0.75	0 %

DOORS

(Total Exposed Area = 24 sq.ft.)

✓ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area
___ 1	NE	Garage	Insulated	1st Floor	None	0.46	3.00	0	8.00	0	24.0ft²

WINDOWS

(Total Exposed Area = 523 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	NE	1	Vinyl	Low-E Double	Y 0.36	0.25	N	N	60.0	4	2.50	6.00	9.5	1.0	None	None
___ 2	NE	1	TIM	Low-E Double	Y 0.36	0.25	N	N	24.0	1	3.00	8.00	9.5	1.0	None	None
___ 3	NE	3	Vinyl	Low-E Double	Y 0.36	0.25	N	N	36.0	2	3.00	6.00	1.0	1.0	None	None
___ 4	SE	6	Vinyl	Low-E Double	Y 0.36	0.25	N	N	4.0	1	4.00	1.00	1.0	3.0	None	None
___ 5	SW	7	Vinyl	Low-E Double	Y 0.36	0.25	N	N	15.0	1	3.00	5.00	12.5	1.0	None	None
___ 6	SW	7	TIM	Low-E Double	Y 0.36	0.25	N	N	96.0	4	3.00	8.00	12.5	1.0	None	None
___ 7	SE	8	Vinyl	Low-E Double	Y 0.36	0.25	N	N	36.0	2	3.00	6.00	1.5	1.0	None	None
___ 8	SW	9	Vinyl	Low-E Double	Y 0.36	0.25	N	N	36.0	2	3.00	6.00	1.5	1.0	None	None
___ 9	SE	10	Vinyl	Low-E Double	Y 0.36	0.25	N	N	36.0	2	3.00	6.00	1.5	4.0	None	None
___ 10	SW	11	Vinyl	Low-E Double	Y 0.36	0.25	N	N	36.0	3	2.00	6.00	1.0	8.0	None	None
___ 11	NW	12	Vinyl	Low-E Double	Y 0.36	0.25	N	N	64.0	4	4.00	4.00	1.5	4.0	None	None
___ 12	NW	12	Vinyl	Low-E Double	Y 0.36	0.25	N	N	16.0	2	2.00	4.00	1.0	4.0	None	None
___ 13	NE	15	Vinyl	Low-E Double	Y 0.36	0.25	N	N	32.0	2	3.00	5.33	1.0	5.0	None	None
___ 14	NW	16	Vinyl	Low-E Double	Y 0.36	0.25	N	N	32.0	2	3.00	5.33	1.0	2.0	None	None

INFILTRATION

✓ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___ 1	Wholehouse	Proposed ACH(50)	0.00028	2048	112.36	210.94	0.1345	5.0	All	24576 cu ft

INPUT SUMMARY CHECKLIST REPORT

GARAGE													
✓ #	Floor Area	Roof Area	Exposed Wall Perimeter	Avg. Wall Height	Exposed Wall Insulation								
___ 1	840 ft²	840 ft²	73 ft	9 ft	1								

MASS					
✓ #	Mass Type	Area	Thickness	Furniture Fraction	Space
___ 1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	1st Floor
___ 2	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	2nd Floor

HEATING SYSTEM											
✓ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	---Geothermal Entry	HeatPump--- Power	Volts	Current	Ducts	Block
___ 1	Electric Heat Pump	None/Single		HSPF2: 8.80	46.9		0.00	0.00	0.00	sys#1	1

COOLING SYSTEM									
✓ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	Air Flow cfm	SHR	Duct	Block
___ 1	Central Unit	None/Single		SEER2:15.0	41.3	1230	0.70	sys#1	1

HOT WATER SYSTEM										
✓ #	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixture Flow	Pipe Ins.	Pipe length
___ 1	Electric	Tankless	Garage	0.92 (0.92)	1.00 gal	40 gal	120 deg	Standard	None	12

	Recirculation System	Recirc Control Type	Loop length	Branch length	Pump power	DWHR	Facilities Connected	Equal Flow	DWHR Eff	Other Credits
___ 1	No		NA	NA	NA	No	NA	NA	NA	None

DUCTS													
✓ Duct #	Location	Supply R-Value	Area	Location	Return R-Value	Area	Leakage Type	Air Handler	CFM 25 TOT	CFM 25 OUT	QN	RLF	HVAC # Heat Cool
___ 1	Attic	6.0	696 ft²	Attic	6.0	139 ft²	Default Leakage	Attic	(Default)	(Default)			1 1

TEMPERATURES													
Programable Thermostat: Y 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	Hours											
	Schedule Type	1	2	3	4	5	6	7	8	9	10	11	12
___	Cooling (WD)	AM PM	78 80	78 80	78 78	78 78	78 78	78 78	78 78	78 78	80 78	80 78	80 78
___	Cooling (WEH)	AM PM	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78	78 78

INPUT SUMMARY CHECKLIST REPORT

TEMPERATURES(Continued)													
___ 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

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 90

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

,Lake City,FL,32055

1. New construction or existing		New (From Plans)		10. Wall Types(3395.8 sqft.)	Insulation	Area
2. Single family or multiple family		Detached		a. Frame - Wood, Exterior	R=13.0	3009.00 ft²
3. Number of units, if multiple family		1		b. Frame - Wood, Adjacent	R=13.0	386.83 ft²
4. Number of Bedrooms		4		c. N/A		
5. Is this a worst case?		No		d. N/A		
6. Conditioned floor area above grade (ft²)		2784		11. Ceiling Types(3038.0 sqft.)	Insulation	Area
Conditioned floor area below grade (ft²)		0		a. Flat ceiling under att (Vented)	R=38.0	3038.00 ft²
7. Windows**		Area		b. N/A		
a. U-Factor:	Dbl, U=0.36	523.00 ft²		c. N/A		
SHGC:	SHGC=0.25			12. Roof(Comp. Shingles, Vented) Deck	R=0.0	3346 ft²
b. U-Factor:	N/A	ft²		13. Ducts, location & insulation level		R ft²
SHGC:				a. Sup: Attic, Ret: Attic, AH: Attic		6 696
c. U-Factor:	N/A	ft²		b.		
SHGC:				c.		
Area Weighted Average Overhang Depth:		4.970 ft		14. Cooling Systems	kBtu/hr	Efficiency
Area Weighted Average SHGC:		0.250		a. Central Unit	41.3	SEER2:15.00
8. Skylights		Area		15. Heating Systems	kBtu/hr	Efficiency
U-Factor:(AVG)	N/A	N/A ft²		a. Electric Heat Pump	46.9	HSPF2:8.80
SHGC(AVG):	N/A					
9. Floor Types		Insulation		16. Hot Water Systems		
a. Slab-On-Grade Edge Insulation	R= 0.0	2304.00 ft²		a. ElectricTankless	Cap: 1 gallons	
b. Floor over Garage	R= 19.0	480.00 ft²			EF: 0.920	
c. N/A	R=	ft²		b. Conservation features		
						None
				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: _____ City/FL Zip: Lake City,FL,32055



*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: IC Construction, LLC. Community: Lot: 1	
Address:	
City: Lake City State: FL Zip: 32055	
Air Leakage Test Results <i>Passing results must meet either the Performance, Prescriptive, or ERI Method</i>	
☐ 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	
$\frac{\text{CFM}(50) \times 60}{\text{Building Volume}} = \text{ACH}(50)$ 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 <i>(7) Florida Statutes</i> 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 <i>code official</i>. Testing shall be performed at any time after creation of all penetrations of the <i>building thermal envelope</i>. 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

Jose & Mercy Urrutia

Project Title:
Urrutia Residence

Lake City, FL 32055

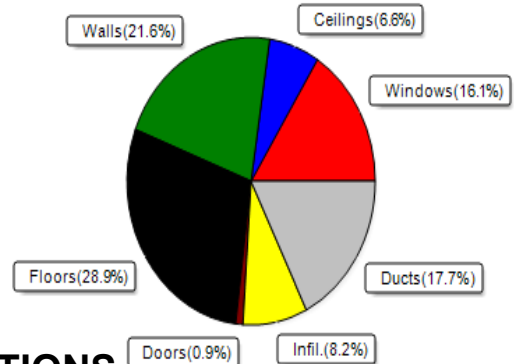
6/22/2023

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	
Winter setpoint			70	F	
Winter temperature difference			40	F	
Summer design temperature(TMY3 99%)			94	F	
Summer setpoint			75	F	
Summer temperature difference			19	F	
Total heating load calculation		46874	Btuh	Total cooling load calculation	
Submitted heating capacity		% of calc	Btuh	Submitted cooling capacity	
Total (Electric Heat Pump)		100.0	46874	Sensible (SHR = 0.70)	
Heat Pump + Auxiliary(0.0kW)		100.0	46874	Latent	
				Total (Electric Heat Pump)	
				100.0	

WINTER CALCULATIONS

Winter Heating Load (for 2784 sqft)

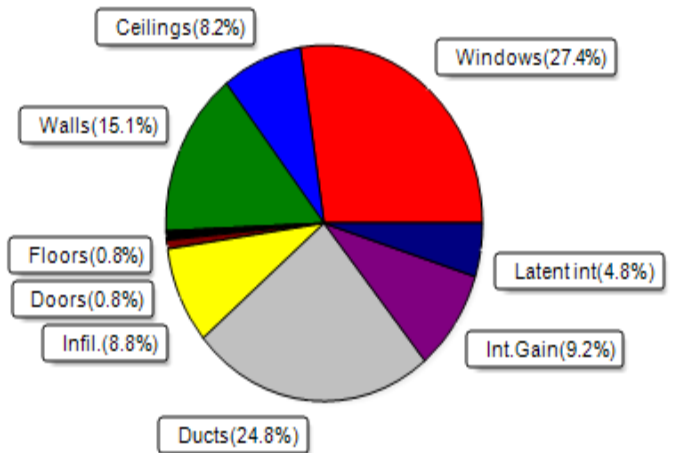
Load component	Load
Window total 523 sqft	7531 Btuh
Wall total 2849 sqft	10114 Btuh
Door total 24 sqft	442 Btuh
Ceiling total 3038 sqft	3084 Btuh
Floor total See detail report	13557 Btuh
Infiltration 88 cfm	3859 Btuh
Duct loss	8287 Btuh
Subtotal	46874 Btuh
Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
TOTAL HEAT LOSS	46874 Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 2784 sqft)

Load component	Load
Window total 523 sqft	11325 Btuh
Wall total 2849 sqft	6239 Btuh
Door total 24 sqft	331 Btuh
Ceiling total 3038 sqft	3393 Btuh
Floor total	337 Btuh
Infiltration 66 cfm	1375 Btuh
Internal gain	3800 Btuh
Duct gain	8209 Btuh
Sens.Ventilation Ex:0 cfm; Sup:0 cfm	0 Btuh
Blower Load	0 Btuh
Total sensible gain	35008 Btuh
Latent gain(ducts)	2041 Btuh
Latent gain(infiltration)	2281 Btuh
Latent gain(ventilation)	0 Btuh
Latent gain(internal/occupants/other)	2000 Btuh
Total latent gain	6322 Btuh
TOTAL HEAT GAIN	41330 Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: 7 / 3 / 2023

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Jose & Mercy Urrutia

Project Title:
Urrutia Residence
Building Type: User

Lake City, FL 32055

6/22/2023

Reference City: Gainesville, FL (Defaults) Winter Temperature Difference: 40.0 °F (TMY3 99%)
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	NE	60.0		14.4	864 Btuh
2	2, NFRC 0.25	TIM	0.36	NE	24.0		14.4	346 Btuh
3	2, NFRC 0.25	Vinyl	0.36	NE	36.0		14.4	518 Btuh
4	2, NFRC 0.25	Vinyl	0.36	SE	4.0		14.4	58 Btuh
5	2, NFRC 0.25	Vinyl	0.36	SW	15.0		14.4	216 Btuh
6	2, NFRC 0.25	TIM	0.36	SW	96.0		14.4	1382 Btuh
7	2, NFRC 0.25	Vinyl	0.36	SE	36.0		14.4	518 Btuh
8	2, NFRC 0.25	Vinyl	0.36	SW	36.0		14.4	518 Btuh
9	2, NFRC 0.25	Vinyl	0.36	SE	36.0		14.4	518 Btuh
10	2, NFRC 0.25	Vinyl	0.36	SW	36.0		14.4	518 Btuh
11	2, NFRC 0.25	Vinyl	0.36	NW	64.0		14.4	922 Btuh
12	2, NFRC 0.25	Vinyl	0.36	NW	16.0		14.4	230 Btuh
13	2, NFRC 0.25	Vinyl	0.36	NE	32.0		14.4	461 Btuh
14	2, NFRC 0.25	Vinyl	0.36	NW	32.0		14.4	461 Btuh
Window Total					523.0(sqft)			7531 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	216		3.55	767 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	128		3.55	453 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	92		3.55	325 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	128		3.55	453 Btuh
5	Frame - Wood	- Ext	(0.089)	13.0/0.0	18		3.55	64 Btuh
6	Frame - Wood	- Ext	(0.089)	13.0/0.0	215		3.55	763 Btuh
7	Frame - Wood	- Ext	(0.089)	13.0/0.0	221		3.55	783 Btuh
8	Frame - Wood	- Ext	(0.089)	13.0/0.0	74		3.55	263 Btuh
9	Frame - Wood	- Ext	(0.089)	13.0/0.0	94		3.55	334 Btuh
10	Frame - Wood	- Ext	(0.089)	13.0/0.0	120		3.55	426 Btuh
11	Frame - Wood	- Ext	(0.089)	13.0/0.0	180		3.55	639 Btuh
12	Frame - Wood	- Ext	(0.089)	13.0/0.0	213		3.55	754 Btuh
13	Frame - Wood	- Adj	(0.089)	13.0/0.0	192		3.55	682 Btuh
14	Frame - Wood	- Adj	(0.089)	13.0/0.0	171		3.55	607 Btuh
15	Frame - Wood	- Ext	(0.089)	13.0/0.0	115		3.55	407 Btuh
16	Frame - Wood	- Ext	(0.089)	13.0/0.0	248		3.55	880 Btuh
17	Frame - Wood	- Ext	(0.089)	13.0/0.0	147		3.55	521 Btuh
18	Frame - Wood	- Ext	(0.089)	13.0/0.0	280		3.55	994 Btuh
Wall Total					2849(sqft)			10114 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Insulated - Garage, n		(0.460)		24		18.4	442 Btuh
Door Total					24(sqft)			442Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Jose & Mercy Urrutia

Project Title:
Urrutia Residence
Building Type: User

Lake City, FL 32055

6/22/2023

Ceilings	Type/Color/Surface	Ueff.	R-Value	Area X	HTM=	Load
1	Flat ceil/M/Shing	(0.025)	38.0/0.0	2534	1.0	2573 Btuh
2	Flat ceil/M/Shing	(0.025)	38.0/0.0	504	1.0	512 Btuh
	Ceiling Total			3038(sqft)		3084Btuh
Floors	Type	Ueff.	R-Value	Size X	HTM=	Load
1	Slab On Grade	(1.180)	0.0	266.8 ft(perim.)	47.2	12595 Btuh
2	Raised Wood - Adj	(0.050)	19.0	480.0 sqft	2.0	963 Btuh
	Floor Total			2784 sqft		13557 Btuh
	Envelope Subtotal:					34729 Btuh
Infiltration	Type	Wholehouse ACH	Volume(cuft)	Wall Ratio	CFM=	
	Natural	0.22	24576	1.00	88.1	3859 Btuh
Duct load	Average sealed, R6.0, Supply(Att), Return(Att) (DLM of 0.215)					8287 Btuh
All Zones	Sensible Subtotal All Zones					46874 Btuh

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss	46874 Btuh
	Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Total Heat Loss	46874 Btuh

EQUIPMENT

1. Electric Heat Pump	#	46874 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

Jose & Mercy Urrutia

Project Title:
Urrutia Residence

Lake City, FL 32055

6/22/2023

Reference City: Gainesville, FL (Defaults)
Humidity difference: 51gr.

Temperature Difference: 19.0F(TMY3 99%)
Summer Setpoint: 75 °F (Required Manual J default)

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	NE		9.5ft.	1.0ft.	60.0	0.0	60.0	12	24	1418 Btuh
2	2 NFRC	0.25, 0.36	No	No	NE		9.5ft.	1.0ft.	24.0	0.0	24.0	12	24	567 Btuh
3	2 NFRC	0.25, 0.36	No	No	NE		1.0ft.	1.0ft.	36.0	0.0	36.0	12	24	851 Btuh
4	2 NFRC	0.25, 0.36	No	No	SE		1.0ft.	3.0ft.	4.0	0.0	4.0	12	25	99 Btuh
5	2 NFRC	0.25, 0.36	No	No	SW		12.5f	1.0ft.	15.0	15.0	0.0	12	25	181 Btuh
6	2 NFRC	0.25, 0.36	No	No	SW		12.5f	1.0ft.	96.0	96.0	0.0	12	25	1161 Btuh
7	2 NFRC	0.25, 0.36	No	No	SE		1.5ft.	1.0ft.	36.0	8.8	27.2	12	25	780 Btuh
8	2 NFRC	0.25, 0.36	No	No	SW		1.5ft.	1.0ft.	36.0	8.8	27.2	12	25	780 Btuh
9	2 NFRC	0.25, 0.36	No	No	SE		1.5ft.	4.0ft.	36.0	0.0	36.0	12	25	891 Btuh
10	2 NFRC	0.25, 0.36	No	No	SW		1.0ft.	8.0ft.	36.0	0.0	36.0	12	25	891 Btuh
11	2 NFRC	0.25, 0.36	No	No	NW		1.5ft.	4.0ft.	64.0	0.0	64.0	12	24	1513 Btuh
12	2 NFRC	0.25, 0.36	No	No	NW		1.0ft.	4.0ft.	16.0	0.0	16.0	12	24	378 Btuh
13	2 NFRC	0.25, 0.36	No	No	NE		1.0ft.	5.0ft.	32.0	0.0	32.0	12	24	756 Btuh
14	2 NFRC	0.25, 0.36	No	No	NW		1.0ft.	2.0ft.	32.0	0.0	32.0	12	24	756 Btuh
	Excursion													301 Btuh
	Window Total								523 (sqft)					11325 Btuh
Walls	Type	U-Value				R-Value		Area(sqft)			HTM		Load	
						Cav/Sheath								
1	Frame - Wood - Ext					0.09	13.0/0.0		216.0		2.3		489 Btuh	
2	Frame - Wood - Ext					0.09	13.0/0.0		127.5		2.3		289 Btuh	
3	Frame - Wood - Ext					0.09	13.0/0.0		91.5		2.3		207 Btuh	
4	Frame - Wood - Ext					0.09	13.0/0.0		127.5		2.3		289 Btuh	
5	Frame - Wood - Ext					0.09	13.0/0.0		18.0		2.3		41 Btuh	
6	Frame - Wood - Ext					0.09	13.0/0.0		215.0		2.3		487 Btuh	
7	Frame - Wood - Ext					0.09	13.0/0.0		220.7		2.3		499 Btuh	
8	Frame - Wood - Ext					0.09	13.0/0.0		74.0		2.3		167 Btuh	
9	Frame - Wood - Ext					0.09	13.0/0.0		94.0		2.3		213 Btuh	
10	Frame - Wood - Ext					0.09	13.0/0.0		120.0		2.3		272 Btuh	
11	Frame - Wood - Ext					0.09	13.0/0.0		180.0		2.3		407 Btuh	
12	Frame - Wood - Ext					0.09	13.0/0.0		212.5		2.3		481 Btuh	
13	Frame - Wood - Adj					0.09	13.0/0.0		192.0		1.7		324 Btuh	
14	Frame - Wood - Adj					0.09	13.0/0.0		170.8		1.7		288 Btuh	
15	Frame - Wood - Ext					0.09	13.0/0.0		114.7		2.3		260 Btuh	
16	Frame - Wood - Ext					0.09	13.0/0.0		248.0		2.3		561 Btuh	
17	Frame - Wood - Ext					0.09	13.0/0.0		146.7		2.3		332 Btuh	
18	Frame - Wood - Ext					0.09	13.0/0.0		280.0		2.3		634 Btuh	
	Wall Total								2849 (sqft)					6239 Btuh
Doors	Type					Area (sqft)			HTM		Load			
1	Insulated - Garage					24.0			13.8		331 Btuh			
	Door Total						24 (sqft)					331 Btuh		
Ceilings	Type/Color/Surface	U-Value				R-Value		Area(sqft)			HTM		Load	
1	Vented Attic/Med/Shingle/RB	0.025				38.0/0.0		2534.0			1.12		2830 Btuh	
2	Vented Attic/Med/Shingle/RB	0.025				38.0/0.0		504.0			1.12		563 Btuh	
	Ceiling Total						3038 (sqft)					3393 Btuh		
Floors	Type					R-Value		Size			HTM		Load	
1	Slab On Grade					0.0		2304 (ft-perimeter)			0.0		0 Btuh	
2	Raised Wood - Adj					19.0		480 (sqft)			0.7		337 Btuh	
	Floor Total						2784.0 (sqft)					337 Btuh		

Manual J Summer Calculations

Residential Load - Component Details (continued)

Jose & Mercy Urrutia

Project Title:
Urrutia Residence

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL 32055

6/22/2023

	Envelope Subtotal:					21624 Btuh
Infiltration	Type	Average ACH	Volume(cuft)	Wall Ratio	CFM=	Load
	Natural	0.16	24576	1	66.1	1375 Btuh
Internal gain		Occupants	Btuh/occupant		Appliance	Load
		10	X 230	+	1500	3800 Btuh
	Sensible Envelope Load:					26799 Btuh
Duct load	Average sealed,Supply(R6.0-Attic), Return(R6.0-Attic) (DGM of 0.306)					8209 Btuh
	Sensible Load All Zones					35008 Btuh

Manual J Summer Calculations

Residential Load - Component Details (continued)

Jose & Mercy Urrutia

Project Title: Urrutia Residence

Climate:FL_GAINESVILLE_REGIONAL_A

Lake City, FL 32055

6/22/2023

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	26799 Btuh
	Sensible Duct Load	8209 Btuh
	Total Sensible Zone Loads	35008 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	35008 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	2281 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	2041 Btuh
	Latent occupant gain (10.0 people @ 200 Btuh per person)	2000 Btuh
	Latent other gain	0 Btuh
	Latent total gain	6322 Btuh
	TOTAL GAIN	41330 Btuh

EQUIPMENT

1. Central Unit	#	41330 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