



Load Short Form
Entire House
SHATTO HEATING & AIR, INC.

Job: YATES RESIDENCE
Date: May 10, 2024
By: KARLY SHATTO

595 WEST MAIN STREET, LAKE BUTLER, FL 32054 Phone: 386-496-8224 Fax: 386-496-8065 Email: SERVICE@SHATTOAIR.COM Web: WWW.SHATTOAIR.COM License: CAC057...

Project Information

For: FEAGIN CONSTRUCTION
PO BOX 1537, HIGH SPRINGS, FL 32643
Phone: 352-316-6767

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	33	92	Method	Average
Inside db (°F)	70	75	Construction quality	0
Design TD (°F)	37	17	Fireplaces	
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	33	45		

HEATING EQUIPMENT

Make THE TRANE COMPANY
Trade THE TRANE COMPANY
Model 4TWR4048
AHRI ref 8908430

Efficiency 8.5 HSPF2
Heating input
Heating output 46500 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 1550 cfm
Air flow factor 0.053 cfm/Btuh
Static pressure 0 in H2O
Space thermostat
Capacity balance point = 21 °F

Backup:

Input = 9 kW. Output = 29370 Btuh, 100 AFUE

COOLING EQUIPMENT

Make THE TRANE COMPANY
Trade THE TRANE COMPANY
Cond 4TWR4048
Coil TEM4A0C48
AHRI ref 8908430

Efficiency 11.5 EER2, 14.3 SEER2
Sensible cooling 32550 Btuh
Latent cooling 13950 Btuh
Total cooling 46500 Btuh
Actual air flow 1550 cfm
Air flow factor 0.050 cfm/Btuh
Static pressure 0 in H2O
Load sensible heat ratio 0.85

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
LAUNDRY	91	2878	3196	152	161
MUD/PANTRY	79	1164	527	61	27
BATH	28	1114	1340	59	68
MASTER BATH	91	116	1007	6	51
CLOSET	42	971	335	51	17
BATH	42	62	82	3	4
HALL	35	0	0	0	0
MASTER BEDROOM	221	4833	5336	255	269
KIT/DNG/LVG	814	7724	9357	408	472
BEDROOM 2	165	4285	4284	226	216
HALL	36	0	0	0	0
A/C	18	0	0	0	0
BATH	78	1964	2249	104	114
Room14	35	0	0	0	0

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



Right-Suite® Universal 2023 23.0.03 RSU61634

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...HVACProject1.rup FEAGIN CONSTRUCTION YATES.rup Calc = MJ8 Front Door faces: N

Room15	28	57	76	3	4
BEDROOM 3	195	4201	2920	222	147
Entire House	1998	29370	30710	1550	1550
Other equip loads		0	0		
Equip. @ 1.00 RSM			30710		
Latent cooling			5441		
TOTALS	1998	29370	36151	1550	1550

Calculations approved by ACCA to meet all requirements of Manual J 8th Ed.



Right-Size® Universal 2023 23.0.03 RSU61634

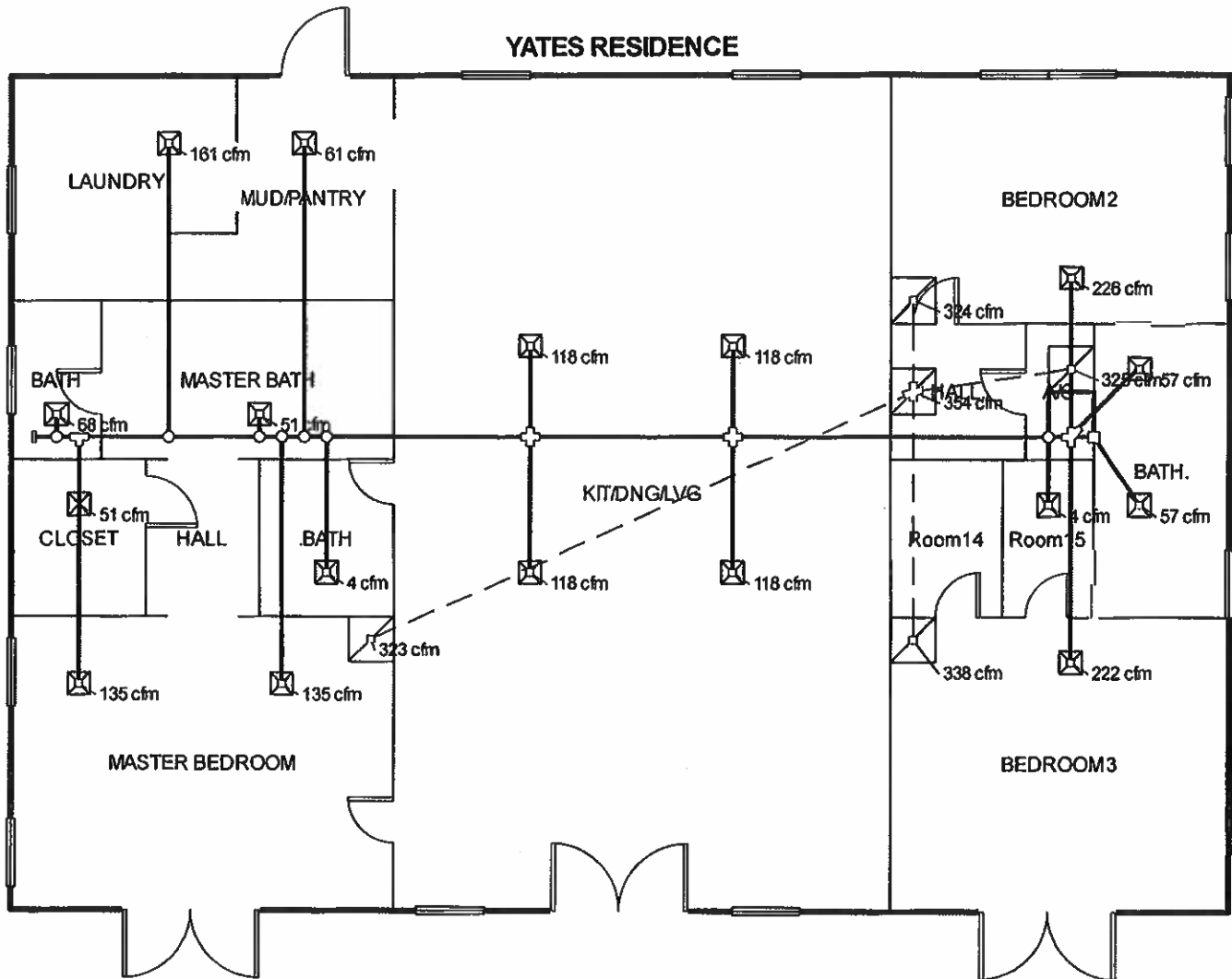
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Phone: 352-316-6767

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Right-Suite@ Universal 2023
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ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 85

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

„FL,

1. New construction or existing	New (From Plans)	10. Wall Types(1632.0 sqft.)	Insulation	Area
2. Single family or multiple family	Detached	a. Frame - Wood, Exterior	R=13.0	1632.00 ft ²
3. Number of units, if multiple family	1	b. N/A		
4. Number of Bedrooms	3	c. N/A		
5. Is this a worst case?	No	d. N/A		
6. Conditioned floor area above grade (ft ²)	1996	11. Ceiling Types(1996.0 sqft.)	Insulation	Area
Conditioned floor area below grade (ft ²)	0	a. Single assembly, with (Unvented)	R=30.0	1996.00 ft ²
7. Windows**	Description	b. N/A		
a. U-Factor:	Dbl, U=0.26	c. N/A		
SHGC:	SHGC=0.20	12. Roof(Comp. Shingles, Unvent) Deck	R=30.0	2311 ft ²
b. U-Factor:	N/A	13. Ducts, location & insulation level	R	ft ²
SHGC:		a. Sup: Main, Ret: Main, AH: Main	6	399
c. U-Factor:	N/A	b.		
SHGC:		c.		
Area Weighted Average Overhang Depth:	1.500 ft	14. Cooling Systems	kBtu/hr	Efficiency
Area Weighted Average SHGC:	0.200	a. Central Unit	36.0	SEER2:15.00
8. Skylights	Description	15. Heating Systems	kBtu/hr	Efficiency
U-Factor:(AVG)	N/A	a. Electric Heat Pump	36.0	HSPF2:8.50
SHGC(AVG):	N/A	16. Hot Water Systems		
9. Floor Types	Insulation	a. Electric		Cap: 50 gallons
a. Slab-On-Grade Edge Insulation	R= 0.0	b. Conservation features		EF: 0.920
b. N/A	R=			
c. N/A	R=	17. Credits		None
				CF, 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: „FL,



*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.

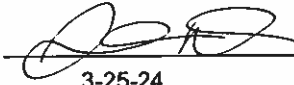
FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION**Florida Department of Business and Professional Regulation - Residential Performance Method**

Project Name: Yates Residence Street: City, State, Zip: , FL, Owner: Design Location: FL, Gainesville	Builder Name: Permit Office: Permit Number: Jurisdiction: County: Columbia(Florida Climate Zone 2)
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Glass/Floor Area: 0.105	Total Proposed Modified Loads: 44.00	PASS
	Total Baseline Loads: 51.97	

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: 3-25-24 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: _____
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- 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 5.24 ACH50 (R402.4.1.2).

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Yates Residence	Bedrooms:	3	Address type:	Street Address
Building Type:	User	Conditioned Area:	1996	Lot #:	---
Owner:		Total Stories:	1	Block/SubDivision:	---
Builder Home ID:		Worst Case:	No	PlatBook:	---
Builder Name:		Rotate Angle:	0	Street:	
Permit Office:		Cross Ventilation:		County:	Columbia
Jurisdiction:		Whole House Fan:		City, State, Zip:	, FL,
Family Type:	Detached	Terrain:	Rural		
New/Existing:	New (From Plans)	Shielding:	Moderate/Rural		
Year Construct:	2024				
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	1996	17964 cu ft

SPACES

✓ Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___ 1	Main	1996	17964	Yes	6	3	Yes	Yes	Yes

FLOORS

(Total Exposed Area = 1996 sq.ft.)

✓ #	Floor Type	Space	Exposed Perim(ft)	Area	R-Value Perim.	U-Factor Joist	Slab Insul. Vert/Horiz	Tile	Wood	Carpet
___ 1	Slab-On-Grade Edge Ins	Main	230	1996 sqft	0	---	0.563	0 (ft)/0 (ft)	0.20	0.60 0.20

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	2311 ft²	582 ft²	Dark	N	0.96	No	0.9	No	30	30.26

ATTIC

✓ #	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___ 1	No attic	Unvented	0	1996 ft²	N	N

CEILING

(Total Exposed Area = 1996 sq.ft.)

✓ #	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___ 1	Single assembly, with airspace(Unvented)	Main	30.0	Blown	1996.0ft²	0.017	0.11	Wood

INPUT SUMMARY CHECKLIST REPORT

WALLS														(Total Exposed Area = 1632 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	N	Exterior	Frame - Wood	Main	13.0	53.0	0	9.0	0	477.0	0.084		0.23	0.75	0 %		
___ 2	E	Exterior	Frame - Wood	Main	13.0	37.0	8	9.0	0	339.0	0.084		0.23	0.75	0 %		
___ 3	S	Exterior	Frame - Wood	Main	13.0	53.0	0	9.0	0	477.0	0.084		0.23	0.75	0 %		
___ 4	W	Exterior	Frame - Wood	Main	13.0	37.0	8	9.0	0	339.0	0.084		0.23	0.75	0 %		

DOORS												(Total Exposed Area = 131 sq.ft.)	
✓ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	In	Height Ft	In	Area		
___ 1	N	Exterior	Wood	Main	None	0.46	3.00	0	8.00	0	24.0ft²		
___ 2	S	Exterior	Insulated	Main	None	0.46	5.00	0	6.00	8	33.3ft²		
___ 3	S	Exterior	Insulated	Main	None	0.46	5.00	0	8.00	0	40.0ft²		
___ 4	S	Exterior	Insulated	Main	None	0.46	5.00	0	6.00	8	33.3ft²		

WINDOWS														(Total Exposed Area = 210 sq.ft.)			
✓ #	Ornt	Wall ID	Frame	Panels	NFRC U-Factor	SHGC	Imp	Storm	Total Area (ft²)	Same Units	Width (ft)	Height (ft)	--Overhang-- Depth (ft)	Sep. (ft)	Interior Shade	Screen	
___ 1	N	1	Vinyl	Low-E Double	Y 0.26	0.20	N	N	32.0	2	4.00	4.00	1.5	1.3	None	None	
___ 2	N	1	Vinyl	Low-E Double	Y 0.26	0.20	N	N	36.0	2	3.00	6.00	1.5	1.3	None	None	
___ 3	E	2	Vinyl	Low-E Double	Y 0.26	0.20	N	N	24.0	2	2.00	6.00	1.5	1.3	None	None	
___ 4	E	2	Vinyl	Low-E Double	Y 0.26	0.20	N	N	3.0	1	3.00	1.00	1.5	1.3	None	None	
___ 5	S	3	Vinyl	Low-E Double	Y 0.26	0.20	N	N	60.0	4	2.50	6.00	1.5	1.3	None	None	
___ 6	S	3	Vinyl	Low-E Double	Y 0.26	0.20	N	N	10.0	2	5.00	1.00	1.5	1.3	None	None	
___ 7	W	4	Vinyl	Low-E Double	Y 0.26	0.20	N	N	24.0	2	2.00	6.00	1.5	1.3	None	None	
___ 8	W	4	Vinyl	Low-E Double	Y 0.26	0.20	N	N	6.0	1	2.00	3.00	1.5	1.3	None	None	
___ 9	W	4	Vinyl	Low-E Double	Y 0.26	0.20	N	N	15.0	1	2.50	6.00	1.5	1.3	None	None	

INFILTRATION										
✓ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___ 1	Wholehouse	Proposed ACH(50)	0.00030	1569	86.08	161.61	0.1076	5.2	All	17964 cu ft

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

HEATING SYSTEM										
✓ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	---Geothermal HeatPump--- Entry Power Volt Current			Ducts	Block
___ 1	Electric Heat Pump	None/Single		HSPF2: 8.50	36.0	0.00	0.00	0.00	sys#1	1

INPUT SUMMARY CHECKLIST REPORT

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	36.0	1080	0.75	sys#1	1

HOT WATER SYSTEM

✓ #	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixture Flow	Pipe Ins.	Pipe length
___ 1	Electric	None	Main	0.92 (0.92)	50.00 gal	60 gal	120 deg	Standard	None	99
	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 #	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	RLF	HVAC # Heat Cool
___ 1	Main	6.0	399 ft²	Main	6.0	100 ft²	Default Leakage	Main	(Default)	(Default)			1 1

TEMPERATURES

Programable Thermostat: Y					Ceiling Fans: N								
Cooling	[] Jan	[] Feb	[] Mar	[] Apr	[] May	[X] Jun	[X] Jul	[X] Aug	[X] Sep	[] Oct	[] Nov	[] Dec	
Heating	[X] Jan	[X] Feb	[X] Mar	[] Apr	[] May	[] Jun	[] Jul	[] Aug	[] Sep	[] Oct	[X] Nov	[X] Dec	
Venting	[] Jan	[] Feb	[X] Mar	[X] Apr	[] May	[] Jun	[] Jul	[] Aug	[] Sep	[X] Oct	[X] Nov	[] Dec	
Thermostat Schedule: HERS 2006 Reference													
✓ Schedule Type		1	2	3	4	5	6	Hours 7	8	9	10	11	12
___ Cooling (WD)	AM PM	78 80	78 80	78 80	78 80	78 78	78 78	78 78	78 78	80 78	80 78	80 78	80 78
___ Cooling (WEH)	AM PM	78 80	78 80	78 80	78 80	78 78	78 78	78 78	78 78	80 78	80 78	80 78	80 78
___ Heating (WD)	AM PM	65 68	65 68	65 68	65 68	65 68	65 68	65 68	68 68	68 68	68 68	68 68	68 68
___ Heating (WEH)	AM PM	65 68	65 68	65 68	65 68	65 68	65 68	65 68	68 68	68 68	68 68	68 68	68 68

Residential System Sizing Calculation

Summary

Project Title:
Yates Residence

, FL

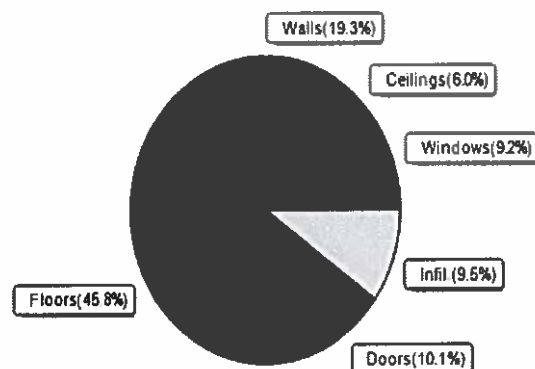
3/25/2024

Location for weather data: Gainesville, FL - Defaults: Latitude(29.7) Altitude(100 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	23704	Btuh	Total cooling load calculation	16907	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	151.9	36000	Sensible (SHR = 0.75)	187.9	27000
Heat Pump + Auxiliary(0.0kW)	151.9	36000	Latent	354.8	9000
			Total (Electric Heat Pump)	212.9	36000

WINTER CALCULATIONS

Winter Heating Load (for 1996 sqft)

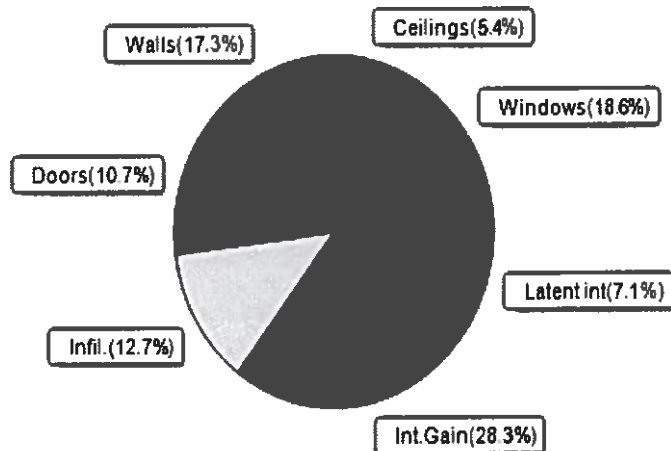
Load component		Load	
Window total	210 sqft	2184	Btuh
Wall total	1291 sqft	4585	Btuh
Door total	131 sqft	2404	Btuh
Ceiling total	1996 sqft	1413	Btuh
Floor total	1996 sqft	10856	Btuh
Infiltration	52 cfm	2262	Btuh
Duct loss		0	Btuh
Subtotal		23704	Btuh
Ventilation	Ex:0 cfm; Sup:0 cfm	0	Btuh
TOTAL HEAT LOSS		23704	Btuh



SUMMER CALCULATIONS

Summer Cooling Load (for 1996 sqft)

Load component		Load	
Window total	210 sqft	3140	Btuh
Wall total	1291 sqft	2923	Btuh
Door total	131 sqft	1803	Btuh
Ceiling total	1996 sqft	919	Btuh
Floor total		0	Btuh
Infiltration	39 cfm	806	Btuh
Internal gain		4780	Btuh
Duct gain		0	Btuh
Sens.Ventilation	Ex:0 cfm; Sup:0 cfm	0	Btuh
Blower Load		0	Btuh
Total sensible gain		14370	Btuh
Latent gain(ducts)		0	Btuh
Latent gain(infiltration)		1337	Btuh
Latent gain(ventilation)		0	Btuh
Latent gain(internal/occupants/other)		1200	Btuh
Total latent gain		2537	Btuh
TOTAL HEAT GAIN		16907	Btuh



8th Edition

EnergyGauge® System Sizing

PREPARED BY: _____

DATE: _____

3-25-24

System Sizing Calculations - Summer

Residential Load - Whole House Component Details

Project Title:
Yates Residence

, FL

3/25/2024

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	0.20, 0.26	No	No	N		1.5ft	1.3ft	32.0	0.0	32.0	9	9	293	Btuh
2	2 NFRC	0.20, 0.26	No	No	N		1.5ft	1.3ft	36.0	0.0	36.0	9	9	329	Btuh
3	2 NFRC	0.20, 0.26	No	No	E		1.5ft	1.3ft	24.0	0.0	24.0	9	24	581	Btuh
4	2 NFRC	0.20, 0.26	No	No	E		1.5ft	1.3ft	3.0	0.0	3.0	9	24	73	Btuh
5	2 NFRC	0.20, 0.26	No	No	S		1.5ft	1.3ft	60.0	60.0	0.0	9	11	549	Btuh
6	2 NFRC	0.20, 0.26	No	No	S		1.5ft	1.3ft	10.0	10.0	0.0	9	11	91	Btuh
7	2 NFRC	0.20, 0.26	No	No	W		1.5ft	1.3ft	24.0	0.0	24.0	9	24	581	Btuh
8	2 NFRC	0.20, 0.26	No	No	W		1.5ft	1.3ft	6.0	0.0	6.0	9	24	145	Btuh
9	2 NFRC	0.20, 0.26	No	No	W		1.5ft	1.3ft	15.0	0.0	15.0	9	24	363	Btuh
	Excursion													134	Btuh
	Window Total								210 (sqft)					3140 Btuh	
Walls	Type					U-Value	R-Value		Area(sqft)		HTM		Load		
							Cav/Sheath								
1	Frame - Wood - Ext					0.09	13.0/0.0		385.0		2.3		871 Btuh		
2	Frame - Wood - Ext					0.09	13.0/0.0		312.0		2.3		706 Btuh		
3	Frame - Wood - Ext					0.09	13.0/0.0		300.3		2.3		680 Btuh		
4	Frame - Wood - Ext					0.09	13.0/0.0		294.0		2.3		665 Btuh		
	Wall Total								1291 (sqft)					2923 Btuh	
Doors	Type								Area (sqft)		HTM		Load		
1	Wood - Exterior								24.0		13.8		331 Btuh		
2	Insulated - Exterior								33.3		13.8		460 Btuh		
3	Insulated - Exterior								40.0		13.8		552 Btuh		
4	Insulated - Exterior								33.3		13.8		460 Btuh		
	Door Total								131 (sqft)					1803 Btuh	
Ceilings	Type/Color/Surface					U-Value	R-Value		Area(sqft)		HTM		Load		
1	SnglAsmb w airsp/DarkShingle					0.018	30.0/30.0		1996.0		0.46		919 Btuh		
	Ceiling Total								1996 (sqft)					919 Btuh	
Floors	Type						R-Value		Size		HTM		Load		
1	Slab On Grade						0.0		1996 (ft-perimeter)		0.0		0 Btuh		
	Floor Total								1996.0 (sqft)					0 Btuh	
	Envelope Subtotal:													8785 Btuh	
Infiltration	Type					Average ACH		Volume(cuft)		Wall Ratio		CFM=		Load	
	Natural					0.13		17964		1		38.7		806 Btuh	
Internal gain						Occupants		Btuh/occupant		Appliance		Load			
						6		X 230		+		3400		4780 Btuh	
	Sensible Envelope Load:													14370 Btuh	
Duct load	Average sealed, Supply(R6.0-Condi), Return(R6.0-Condi) (DGM of 0.000)													0 Btuh	
	Sensible Load All Zones													14370 Btuh	

Manual J Summer Calculations

Residential Load - Component Details (continued)

Project Title: Climate:FL_GAINESVILLE_REGIONAL_A
Yates Residence

3/25/2024

WHOLE HOUSE TOTALS

Whole House Totals for Cooling	Sensible Envelope Load All Zones	14370 Btuh
	Sensible Duct Load	0 Btuh
	Total Sensible Zone Loads	14370 Btuh
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0 Btuh
	Blower	0 Btuh
	Total sensible gain	14370 Btuh
	Latent infiltration gain (for 51 gr. humidity difference)	1337 Btuh
	Latent ventilation gain	0 Btuh
	Latent duct gain	0 Btuh
	Latent occupant gain (6.0 people @ 200 Btuh per person)	1200 Btuh
	Latent other gain	0 Btuh
	Latent total gain	2537 Btuh
	TOTAL GAIN	16907 Btuh

EQUIPMENT

1. Central Unit	#	36000 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))
(Omt - compass orientation)



Version 8

System Sizing Calculations - Winter

Residential Load - Whole House Component Details

Project Title:
Yates Residence
Building Type: User

3/25/2024

, FL

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 0.20	Vinyl	0.26	N	32.0		10.4	333 Btuh
2	2, NFRC 0.20	Vinyl	0.26	N	36.0		10.4	374 Btuh
3	2, NFRC 0.20	Vinyl	0.26	E	24.0		10.4	250 Btuh
4	2, NFRC 0.20	Vinyl	0.26	E	3.0		10.4	31 Btuh
5	2, NFRC 0.20	Vinyl	0.26	S	60.0		10.4	624 Btuh
6	2, NFRC 0.20	Vinyl	0.26	S	10.0		10.4	104 Btuh
7	2, NFRC 0.20	Vinyl	0.26	W	24.0		10.4	250 Btuh
8	2, NFRC 0.20	Vinyl	0.26	W	6.0		10.4	62 Btuh
9	2, NFRC 0.20	Vinyl	0.26	W	15.0		10.4	156 Btuh
Window Total					210.0(sqft)			2184 Btuh
Walls	Type	Ornt.	Ueff.	R-Value (Cav/Sh)	Area	X	HTM=	Load
1	Frame - Wood	- Ext	(0.089)	13.0/0.0	385		3.55	1367 Btuh
2	Frame - Wood	- Ext	(0.089)	13.0/0.0	312		3.55	1108 Btuh
3	Frame - Wood	- Ext	(0.089)	13.0/0.0	300		3.55	1066 Btuh
4	Frame - Wood	- Ext	(0.089)	13.0/0.0	294		3.55	1044 Btuh
Wall Total					1291(sqft)			4585 Btuh
Doors	Type	Storm	Ueff.		Area	X	HTM=	Load
1	Wood - Exterior,	n	(0.460)		24		18.4	442 Btuh
2	Insulated - Exterior,	n	(0.460)		33		18.4	613 Btuh
3	Insulated - Exterior,	n	(0.460)		40		18.4	736 Btuh
4	Insulated - Exterior,	n	(0.460)		33		18.4	613 Btuh
Door Total					131(sqft)			2404 Btuh
Ceilings	Type/Color/Surface		Ueff.	R-Value	Area	X	HTM=	Load
1	Single as/D/Shing		(0.018)	30.0/30.0	1996		0.71	1413 Btuh
Ceiling Total					1996(sqft)			1413 Btuh
Floors	Type		Ueff.	R-Value	Size	X	HTM=	Load
1	Slab On Grade		(1.180)	0.0	230.0 ft(perim.)		47.2	10856 Btuh
Floor Total					1996 sqft			10856 Btuh
Envelope Subtotal:								21442 Btuh
Infiltration	Type	Wholehouse	ACH	Volume(cuft)	Wall Ratio	CFM=		Load
	Natural		0.17	17964	1.00	51.6		2262 Btuh
Duct load	Average sealed, R6.0, Supply(Con), Return(Con) (DLM of 0.000)							0 Btuh
All Zones	Sensible Subtotal All Zones							23704 Btuh

Manual J Winter Calculations

Residential Load - Component Details (continued)

Project Title:
Yates Residence
Building Type: User

, FL

3/25/2024

WHOLE HOUSE TOTALS

Totals for Heating	Subtotal Sensible Heat Loss Ventilation Sens. Heat Loss (Ex:0 cfm; Sup:0 cfm) Total Heat Loss	23704 Btuh 0 Btuh 23704 Btuh
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EQUIPMENT

1. Electric Heat Pump	#	36000 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