#### FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

•	19 Russwood		Builder Name:	
Street:	- Oit - El 20004		Permit Office: Columbia County	
	e City, FL, 32024 er & Anna Lev		Permit Number: Jurisdiction:	
	Gainesville		County: Columbia(Florida	Climate Zone 2)
New construction or 6	avistina New (F	rom Plans)	10. Wall Types(1974.0 sqft.)	Insulation Area
Single family or multip	• ,	Detached	a. Frame - Wood, Exterior	R=13.0 1630.50 ft <sup>2</sup>
Number of units, if mu	•	1	b. Frame - Wood, Adjacent	R=13.0 343.50 ft <sup>2</sup>
Number of Bedrooms	•	4	c. N/A d. N/A	
5. Is this a worst case?		No	11. Ceiling Types(2783.0 sqft.)	Insulation Area
Conditioned floor area	a above grade (ft²)	2530	a. Flat ceiling under att (Vented)	R=38.0 2783.00 ft <sup>2</sup>
Conditioned floor area		0	b. N/A c. N/A	
7. Windows(231.3 sqft.		Area	12. Roof(Comp. Shingles, Vented)	Deck R=0.0 3041 ft <sup>2</sup>
a. U-Factor: SHGC:	Dbl, U=0.36	231.33 ft <sup>2</sup>	13. Ducts, location & insulation leve	
b. U-Factor:	SHGC=0.25 N/A	ft²	<ul><li>a. Sup: Attic, Ret: Attic, AH: 1st Flo</li><li>b.</li></ul>	oor 6 633
SHGC:			C.	
c. U-Factor: SHGC:	N/A	ft <sup>2</sup>	14. Cooling Systems	kBtu/hr Efficiency
Area Weighted Average	e Overhang Depth:	4.586 ft	a. Central Unit	29.7 SEER2:16.00
Area Weighted Average		0.250		
8. Skylights	Description	Area	15. Heating Systems	kBtu/hr Efficiency 34.6 HSPF2:8.80
U-Factor:(AVG) SHGC(AVG):	N/A N/A	N/A ft <sup>2</sup>	a. Electric Heat Pump	34.0 HSPF2:8.80
9. Floor Types	Insulation	Area		
a. Slab-On-Grade Edg		2530.00 ft <sup>2</sup>	16. Hot Water Systems a. Electric	Cap: 50 gallons
b. N/A	R=	ft <sup>2</sup>	a. Licettic	EF: 0.920
c. N/A	R=	ft²	b. Conservation features	
			17. Credits	None CV, Pstat
OI /FI A 0.004	T ( 1 D	1.84		OV, i otat
Glass/Floor Area: 0.091	lotal Pi	roposed Modifie Total Baselir		PASS
·		ds that are less than or	equal to 95 percent of the annual total loads of the standard	
	plans and specifications of mpliance with the Florida	•	Review of the plans and specifications covered by this	THEST
Code.		Chergy	calculation indicates compliance	OF THE STATE
		A)	with the Florida Energy Code.	8/10/2
PREPARED BY:	10/000 0 1	<u> </u>	Before construction is completed this building will be inspected for	dinac
DATE:	01 / 15 / 2024		compliance with Section 553.908	5
			Florida Statutes.	
I hereby certify that this I with the Florida Energy (	ouilding, as designed, is in Code.	n compliance		COD WE TRUSTED
OWNER/AGENT:			BUILDING OFFICIAL:	
DATE:			DATE:	
- Compliance requires	certification by the air l	nandler unit ma	anufacturer that the air handler encl	osure qualifies as

- 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.
- 1 of the 1 duct systems requires a Duct Leakage Test Report. Systems with Default duct leakage do not require this 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).

# **INPUT SUMMARY CHECKLIST REPORT**

				PROJE	СТ						
Title: Building Type Owner: Builder Home Builder Name Permit Office Jurisdiction: Family Type: New/Existing Year Constru Comment:	Peter & Anna Level ID:  Columbia County  Detached  New (From Plans	; ;	Bedrooms Conditione Total Stori Worst Cas Rotate Ang Cross Ven Whole Hou Terrain: Shielding:	ed Area: es: e: gle: tilation:	4 2530 1 No 0 Yes No Suburban Suburban	Lot # Blocl PlatE Stree Cour	k/SubDivisi Book: et:	Lot 19 on: Russwood Columbia Lake City, FL, 32024			
				CLIMA	TE						
Design Location		Tmy Site		Design 97.5%	Temp 2.5%	Int Desig Winter		Heating Degree Days	Desig Moisture		ly temp nge
FL, Gaines	sville	FL_GAINESVILLE_I	REGIONA	32	92	70	75	1305.5	51	Mediu	ım
				BLOC	<b>KS</b>						
Number	Name	Area	Volu	me							
1	Block1	2530	2277	70 cu ft							
				SPAC	ES						
Number	Name	Area	Volume I	Kitchen	Occupants	Bedr	ooms	Finished	Coo	led H	eated
1	1st Floor	2530	22770	Yes	8	4	1	Yes	Y	es	Yes
				FLOOI	RS	(	Total Ex	cposed Are	ea = 25	530 sq.	ft.)
√# Floor	Туре	Space	Expos Perim(			Value l n. Joist	J-Factor	Slab Insul. Vert/Horiz	Tile	Wood	Carpet
1 Slab-O	n-Grade Edge Ins	1st Floor	219.3	2530 s	qft 0		0.304	2 (ft)/0 (ft)	0.00	0.00	1.00
				ROO	F						
√# Type	,	Materials	Ro Are		able Roof rea Colo		Solar Absor.	SA Emitt Tested	Emitt Tested	Deck Insul.	Pitch (deg)
1 Hip		Composition shingle	s 304	1 ft² 0	ft² Mediu	m Y	0.96	No 0.9	No	0	33.69
				ATTI	С						
// # Type		Ventilation		Vent Rati	o (1 in)	Area	RBS	IRCC			
1 Full att	ic	Vented		300	)	2530 ft²	Υ	N			
				CEILIN	IG	(	Total Ex	cposed Are	ea = 27	783 sq.	ft.)
/ # Ceilir	ng Type		Space	R-Valu	e Ins. Ty	pe Are	ea U-F	actor Framin	g Frac.	Truss	з Туре
4 - Elet 1	iling under attic(Vented	1) 16	st Floor	38.0	Double	Batt 2783	Off2 O	024 0.1	1	\//	ood

# **INPUT SUMMARY CHECKLIST REPORT**

								W	ALLS	5		(	Tota	al Exp	osed	Area :	= 197	'4 sq.1	ft.)
√# o	rnt		acent Го	Wall Type		Space	)		avity -Value	Width Ft I	n	Heiç Ft	,	Area sq.ft.		Sheath R-Valu		Solar . Absor.	Below Grade
1 2 3 4 5 6 7 8 9	N N W S S S E N E		Exterior Exterior Exterior Exterior Exterior Exterior Exterior Garage Garage	Frame - Wood Frame - Wood		1st 1st 1st 1st 1st 1st	Floor Floor Floor Floor Floor Floor Floor Floor		13.0 13.0 13.0 13.0 13.0 13.0 13.0 13.0	16.0 43.0 16.0 19.0 30.0 27.0	0 4 8 4 4 4 2 4	9.0 9.0 9.0 9.0 9.0 9.0 9.0	0 0 0 0 0 0 0	252.0 147.0 393.0 147.0 174.0 273.0 244.5 192.0 151.5	0.084 0.084 0.084 0.084 0.084 0.084 0.084		0.23 0.23 0.23 0.23 0.23 0.23 0.23 0.23	0.75 0.75 0.75 0.75 0.75 0.75 0.75 0.75	0 % 0 % 0 % 0 % 0 % 0 % 0 %
								DC	ORS	3			(T	otal E	xpose	ed Are	a = 4	0 sq.1	ft.)
√# o	rnt		Adjacent	To Door Type		Space	)		Stor	ms		U-Va	alue		/idth <sup>-</sup> t In		eight In	Are	ea
1	N E		Exterio Garage			1st Flo				one			46 46	3.00 3.00		6.00 6.00	8 8	20.0 20.0	
							W	/IN	DOW	/S			(To	tal Ex <sub>l</sub>	posed	d Area	= 23	31 sq.t	ft.)
√# o	rnt	Wall ID	Frame	Panes	NFRC	U-Factor	SHGC	lmp	Storm	Total Area (ft²)	Sam Unit		/idth (ft)	Height (ft)	Over Depth (ft)		Interior	Shade	Screen
1 N 2 N 3 N 4 N 5 W 6 W 7 S 8 S 9 S 10E 11E	I I V V	1 1 1 2 3 3 4 5 6 7	Vinyl Vinyl TIM Vinyl Vinyl Vinyl Vinyl Vinyl TIM Vinyl Vinyl Vinyl	Low-E Double	Y Y Y Y Y Y Y Y	0.36 0.36 0.36 0.36 0.36 0.36 0.36 0.36	0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	X	N N N N N N N N N N N N N N N N N N N	9.0 30.0 13.3 30.0 15.0 4.0 30.0 40.0 30.0 10.0 20.0	1 2 2 2 1 1 2 2 2 1 1	3 1 3 4 3 3 3 3	3.00 3.00 3.00 3.00 3.00 3.00 3.00 3.00	3.00 5.00 6.67 5.00 5.00 1.00 5.00 6.67 5.00 5.00 4.00	7.5 7.5 7.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	No No No No No No No No	ne ne ne ne ne ne ne ne	None None None None None None None None
							INF	IL1	RAT	ION									
√# s	cope	9	Me	ethod	SI	_A	CFM50		ELA	EqL	A	AC	Н	ACH5	0 Spac	ce(s)	Infiltra	tion Test	Volume
1	Wh	olehou	ıse Pro <sub>l</sub>	posed ACH(50)	0.00	0040	2657	1	45.74	273.0	62	0.14	38	7.0	A	II	22770	cu ft	
							(	3A	RAG	E									
<b>√</b> #		ı	Floor Area	a F	Roof Are	а	Ex	pose	d Wall P	erimete	r		Avg	. Wall He	ight	Exp	osed Wa	all Insula	tion
1			557 ft²		557 ft²				58 ft					9 ft			1		
								M	ASS										
\vert #	Mas	ss Typ	e		Ar	ea		1	Thicknes	s	F	urnitu	re Fra	ection		Space			
1	Def	ault(8	lbs/sq.ft.)		0	ft²			0 ft			C	).30		,	1st Floor			

# **INPUT SUMMARY CHECKLIST REPORT**

					Н	EATING	SYS	TEM						
<b>\</b> #	System Type		Sul	btype/Spee	d	AHRI#	Efficiend			Geothe atry Pov		atPump olt Curi		Block
1	Electric Heat F	ump	N	one/Single			HSPF2: 8	.80 3	34.6	0.0	00 0.	.00 0.0	00 sys#1	1
					CC	OOLING	SYS	TEM						
<b>√</b> #	System Type		Sul	btype/Spee	d	AHRI#	Efficie	ency	Capacity kBtu/hr		r Flow cfm	SHR	Duct	Block
1	Central Unit			None/Sing	le		SEER2	:16.0 2	29.7	!	900	0.75	sys#1	1
					НО	T WATI	ER SY	STEM						
<b>\</b> #	System Type	Subtype		Location		EF(UEF)	Сар	Use	SetPnt	Fixture	Flow	Pipe Ins	s. Pip	e length
1	Electric	None		Garage		0.92 (0.92)	50.00 ga	I 40 ga	l 120 deg	Stand	dard	None		12
	Recirculation System		C Control Type		Loop length	Branch length	Pump power	DWHF	R Faciliti Connec			DWHR Eff	Othe	er Credits
1	No				NA	NA	NA	No	NA	N	Α	NA	Nor	ne
						DU	CTS							
Duct #		upply R-Value Ar	rea Loc	Reti ation I			Leakage 1	Гуре	Air Handler	CFM 25 TOT	CFM 2 OUT	5 QN OUT	RLF H	HVAC # leat Cool
1 A	attic	6.0 633 f	t² Attic		6.0	127 ft² [	Default Lea	akage	1st Floor	(Default) (	Default)			1 1
					Т	EMPER	RATUF	RES						
Progr Coolii Heati Ventii	ng [X] Jan	ostat: Y [] Feb [X] Feb [] Feb	[] Mar [X] Mar [X] Mar	[ ] Apr [ ] Apr [X] Apr	1[] 1[]	May []	Jun Jun	[X] Jul [ ] Jul [ ] Jul	[X] Aug [] Aug [] Aug	[X] Sep [] Sep [] Sep	[] C [] C [X] C	Oct [	[] Nov X] Nov X] Nov	[] Dec [X] Dec [] Dec
	ermostat Sched nedule Type	ule: HERS 2	006 Refere 1	nce 2	3	4	5	Ho 6	ours 7	8	9	10	11	12
Co	oling (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	80 78
Co	oling (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	78 78
He	ating (WD)	AM PM	66 68	66 68	66 68	66 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66
He	ating (WEH)	AM PM	66 68	66 68	66 68	66 68	66 68	68 68	68 68	68 68	68 68	68 68	68 66	68 66

# ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD ESTIMATED ENERGY PERFORMANCE INDEX\* = 95

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

,Lake City,FL,32024

New construction or existing	New (From Plans)	10. Wall Types(1974.0 sqft.)	Insulation Area
2. Single family or multiple family	Detached	a. Frame - Wood, Exterior	R=13.0 1630.50 ft <sup>2</sup>
3. Number of units, if multiple family	1	b. Frame - Wood, Adjacent c. N/A	R=13.0 343.50 ft <sup>2</sup>
4. Number of Bedrooms	4	d. N/A	
5. Is this a worst case?	No	11. Ceiling Types(2783.0 sqft.)	Insulation Area
<ol> <li>Conditioned floor area above grade Conditioned floor area below grade (</li> </ol>		<ul><li>a. Flat ceiling under att (Vented)</li><li>b. N/A</li><li>c. N/A</li></ul>	R=38.0 2783.00 ft <sup>2</sup>
7. Windows** Description a. U-Factor: Dbl, U=0.36 SHGC: SHGC=0.25 b. U-Factor: N/A SHGC: c. U-Factor: N/A	Area 231.33 ft $^2$ ft $^2$	<ul> <li>12. Roof(Comp. Shingles, Vented)</li> <li>13. Ducts, location &amp; insulation level</li> <li>a. Sup: Attic, Ret: Attic, AH: 1st Fl</li> <li>b.</li> <li>c.</li> <li>14. Cooling Systems</li> </ul>	el R ft²
SHGC: Area Weighted Average Overhang De Area Weighted Average SHGC:	pth: 4.586 ft 0.250	a. Central Unit	29.7 SEER2:16.00
8. Skylights Description U-Factor:(AVG) N/A SHGC(AVG): N/A	Area N/A ft²	<ul><li>15. Heating Systems</li><li>a. Electric Heat Pump</li></ul>	kBtu/hr Efficiency 34.6 HSPF2:8.80
Slab-On-Grade Edge Insulation F     N/A F	Insulation Area $R=0.0$ 2530.00 ft <sup>2</sup> $R=$ ft <sup>2</sup> $R=$ ft <sup>2</sup>	<ul><li>16. Hot Water Systems</li><li>a. Electric</li><li>b. Conservation features</li></ul>	Cap: 50 gallons EF: 0.920
		17. Credits	None 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: \_\_\_\_\_ Date: \_\_\_\_\_ 
Address of New Home: 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: 19
Address:	
City: Lake City State	e: FL Zip: 32024
Air Leakage Test Results Passing results must meet	t either the Performance, Prescriptive, or ERI Method
changes per hour at a pressure of 0.2 inch w.g. (50 Pascals) in Clim	all be tested and verified as having an air leakage rate of not exceeding ) or R406-2023 (ERI), section labeled as infiltration, sub-section ACH50.
The control of the co	Method for calculating building volume:  ○ Retrieved from architectural plans ○ Code software calculated  installation  Field measured and calculated
R402.4.1.2 Testing. The building or dwelling unit shall be tested and verified per hour in Climate Zones 1 and 2, and three air changes per hour in Climate than three air changes per hour shall be provided with whole-house mechal and Section M1507.3 if the Florida Building Code, Residential. Testing shall be reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conditional Florida Statues, or individuals licensed as set forth in Section 489.105(3)(f), results of the test shall be signed by the party conducting the test and provider creation of all penetrations of the building thermal envelope. During testing:  1. Exterior windows and doors, fireplace and stove doors shall be closed, be control measures.  2. Dampers including exhaust, intake, makeup air, back draft and flue dampeasures.  3. Interior doors, if installed at the time of the test, shall be open.  4. Exterior doors for continuous ventilation systems and heat recovery vent 5. Heating and cooling systems, if installed at the time of the test, shall be to 6. Supply and return registers, if installed at the time of the test, shall be fully. If an attic is both sealed and insulated at the roof deck, interior access deattic shall be opened during the test and the volume of the attic shall be adulted the infiltration volume and calculating the air leakage of the home.	ate Zones 3 through 8. Dwelling units with an air leakage rate less inical ventilation in accordance with Section R403.6.1 of this code be conducted in accordance with ANSI/RESNET/ICC 380 and ucted by either individuals as defined in Section 553.993(5) or (7), (g), or (i) or an approved third party. A written report of the ided to the deficial. Testing shall be performed at any time out not sealed, beyond the intended weatherstripping or other infiltration pers shall be closed, but not sealed beyond intended infiltration control tilators shall be closed and sealed. Sturned off.
Testing Company	
Company Name: I hereby verify that the above Air Leakage results are in accordance with t requirements according to the compliance method selected above.	Phone: the 2023 8th Edition Florida Building Code Energy Conservation
Signature of Tester:	Date of Test:
Printed Name of Tester:	
License/Certification #:	Issuing Authority:

# **Residential System Sizing Calculation**

#### Summary Project Title:

Peter & Anna Lev

Project Title: Lot 19 Russwood

Lake City, FL 32024

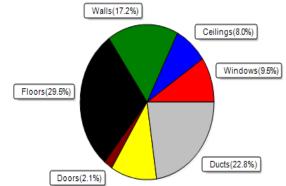
1/15/2024

Location for weather data: Gaine	sville, FL -	Defaults:	Latitude(29.7) Altitude(152 ft.) Ter	mp Range(M	1)
Humidity data: Interior RH (50%	6) Outdoo	r wet bulb (	79F) Humidity difference(54gr.)		
Winter design temperature(MJ8 9	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	32471	Btuh	Total cooling load calculation	32500	Btuh
Submitted heating capacity	% of calc	Btuh	Submitted cooling capacity	% of calc	Btuh
Total (Electric Heat Pump)	106.4	34553	Sensible (SHR = 0.75)	83.9	22261
Heat Pump + Auxiliary(0.0kW)	106.4	34553	Latent	124.3	7420
			Total (Electric Heat Pump)	91.3	29682

#### **WINTER CALCULATIONS**

Winter Heating Load (for 2530 sqft)

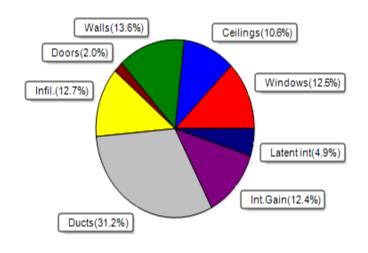
Load component			Load				
Window total	231	sqft	3081	Btuh			
Wall total	1703	sqft	5592	Btuh			
Door total	40	sqft	681	Btuh			
Ceiling total	2783	sqft	2613	Btuh			
Floor total	2530	sqft	9575	Btuh			
Infiltration	3536	Btuh					
Duct loss			7393	Btuh			
Subtotal			32471	Btuh			
Ventilation	0	Btuh					
TOTAL HEAT LO	TOTAL HEAT LOSS						



#### SUMMER CALCULATIONS Infl.(10.9%)

Summer Cooling Load (for 2530 sqft)

Load component			Load	
Window total	231	sqft	4074	Btuh
Wall total	1703	sqft	4423	Btuh
Door total	40	sqft	644	Btuh
Ceiling total	2783	sqft	3461	Btuh
Floor total			0	Btuh
Infiltration	65	cfm	1720	Btuh
Internal gain			4040	Btuh
Duct gain			8169	Btuh
Sens.Ventilation Ex:0	cfm; Sup:0	cfm	0	Btuh
Blower Load			0	Btuh
Total sensible gain			26531	Btuh
Latent gain(ducts)			1976	Btuh
Latent gain(infiltration)			2393	Btuh
Latent gain(ventilation)	0	Btuh		
Latent gain(internal/occu	1600	Btuh		
Total latent gain	5969	Btuh		
TOTAL HEAT GAIN			32500	Btuh





EnergyGauge® System Sizing
PREPARED BY:
DATE:
01 / 15 / 2024

# **System Sizing Calculations - Winter**

### Residential Load - Whole House Component Details

Peter & Anna Lev Lake City, FL 32024 Project Title: Lot 19 Russwood Building Type: User

1/15/2024

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**

1	Window	Panes/Type	Frame	e U	Orientation	Area(sqft) X	HTM=	Load
2         2, NFRC 0.25         Vinyl 0.36         N         30.0         13.3         400 Btuh           3         2, NFRC 0.25         TIM 0.36         N         30.0         13.3         178 Btuh           4         2, NFRC 0.25         Vinyl 0.36         N         30.0         13.3         400 Btuh           5         2, NFRC 0.25         Vinyl 0.36         W         4.0         13.3         53 Btuh           7         2, NFRC 0.25         Vinyl 0.36         S         30.0         13.3         400 Btuh           8         2, NFRC 0.25         Vinyl 0.36         S         40.0         13.3         533 Btuh           9         2, NFRC 0.25         Vinyl 0.36         S         30.0         13.3         400 Btuh           10         2, NFRC 0.25         Vinyl 0.36         E         20.0         13.3         133 Btuh           11         2, NFRC 0.25         Vinyl 0.36         E         20.0         13.3         266 Btuh           12         NFRC 0.25         Vinyl 0.36         E         20.0         13.3         3081 Btuh           Walls         Type         Ornt. Ueff.         R-Value         Cava/Sh)         Area X         HTM= <tr< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>120 Btuh</th></tr<>								120 Btuh
3         2, NFRC 0.25         TIM         0.36         N         13.3         13.3         178 Btuh           4         2, NFRC 0.25         Vinyl         0.36         N         30.0         13.3         400 Btuh           5         2, NFRC 0.25         Vinyl         0.36         W         4.0         13.3         53 Btuh           7         2, NFRC 0.25         Vinyl         0.36         S         30.0         13.3         400 Btuh           8         2, NFRC 0.25         Vinyl         0.36         S         30.0         13.3         400 Btuh           9         2, NFRC 0.25         Vinyl         0.36         S         30.0         13.3         400 Btuh           10         2, NFRC 0.25         Vinyl         0.36         E         10.0         13.3         133 Btuh           11         2, NFRC 0.25         Vinyl         0.36         E         20.0         13.3         266 Btuh           11         1, Trame - Vood         - Ext         (0.089)         13.0/0.0         180         3.28         590 Btuh           2         Frame - Wood         - Ext         (0.089)         13.0/0.0         117         3.28         384 Btuh			•					
4         2, NFRC 0.25         Vinyl         0.36         N         30.0         13.3         400 Btuh           5         2, NFRC 0.25         Vinyl         0.36         W         15.0         13.3         200 Btuh           6         2, NFRC 0.25         Vinyl         0.36         W         4.0         13.3         53 Btuh           7         2, NFRC 0.25         Vinyl         0.36         S         30.0         13.3         400 Btuh           8         2, NFRC 0.25         Vinyl         0.36         S         30.0         13.3         533 Btuh           9         2, NFRC 0.25         Vinyl         0.36         E         10.0         13.3         400 Btuh           10         2, NFRC 0.25         Vinyl         0.36         E         20.0         13.3         133 Btuh           11         2, NFRC 0.25         Vinyl         0.36         E         20.0         13.3         266 Btuh           3         17pe         Ornt. Ueff.         R-Value (Cav/Sh)         Area X         HTM=         Load           4         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           3         Frame - Wood - Ext (			•					
5         2, NFRC 0.25         Vinyl 0.36         W         15.0         13.3         200 Btuh 6           6         2, NFRC 0.25         Vinyl 0.36         W         4.0         13.3         53 Btuh 7           7         2, NFRC 0.25         Vinyl 0.36         S         30.0         13.3         400 Btuh 3.3           8         2, NFRC 0.25         Vinyl 0.36         S         30.0         13.3         400 Btuh 400 Btuh 10.0           10         2, NFRC 0.25         Vinyl 0.36         E         10.0         13.3         400 Btuh 13.3           11         2, NFRC 0.25         Vinyl 0.36         E         20.0         13.3         266 Btuh 13.3           11         2, NFRC 0.25         Vinyl 0.36         E         20.0         13.3         266 Btuh 13.3           11         2, NFRC 0.25         Vinyl 0.36         E         20.0         13.3         208 Btuh 13.3           12         4, NFRC 0.25         Vinyl 0.36         E         20.0         13.3         3081 Btuh 13.3           12         4, NFRC 0.25         Vinyl 0.36         E         20.0         13.3         400 Btuh 13.3           4, North 10         2, NFRC 0.25         Vinyl 0.36         E         20.0								
6 2, NFRC 0.25 Vinyl 0.36 W 4.0 13.3 53 Btuh 7 2, NFRC 0.25 Vinyl 0.36 S 30.0 13.3 400 Btuh 8 2, NFRC 0.25 Vinyl 0.36 S 30.0 13.3 400 Btuh 9 2, NFRC 0.25 Vinyl 0.36 S 30.0 13.3 400 Btuh 10 2, NFRC 0.25 Vinyl 0.36 E 10.0 13.3 133 Btuh 11 2, NFRC 0.25 Vinyl 0.36 E 20.0 13.3 266 Btuh Window Total 231.3(sqft) 3081 Btuh Walls Type Ornt. Ueff. R-Value (Cav/Sh) 1 Frame - Wood - Ext (0.089) 13.0/0.0 180 3.28 590 Btuh 2 Frame - Wood - Ext (0.089) 13.0/0.0 180 3.28 1228 Btuh 4 Frame - Wood - Ext (0.089) 13.0/0.0 117 3.28 384 Btuh 5 Frame - Wood - Ext (0.089) 13.0/0.0 117 3.28 384 Btuh 6 Frame - Wood - Ext (0.089) 13.0/0.0 117 3.28 384 Btuh 5 Frame - Wood - Ext (0.089) 13.0/0.0 117 3.28 384 Btuh 6 Frame - Wood - Ext (0.089) 13.0/0.0 117 3.28 384 Btuh 7 Frame - Wood - Ext (0.089) 13.0/0.0 134 3.28 798 Btuh 7 Frame - Wood - Ext (0.089) 13.0/0.0 243 3.28 798 Btuh 7 Frame - Wood - Ext (0.089) 13.0/0.0 243 3.28 798 Btuh 7 Frame - Wood - Adj (0.089) 13.0/0.0 192 3.28 631 Btuh 8 Frame - Wood - Adj (0.089) 13.0/0.0 192 3.28 631 Btuh 9 Frame - Wood - Adj (0.089) 13.0/0.0 192 3.28 631 Btuh 9 Frame - Wood - Adj (0.089) 13.0/0.0 192 3.28 631 Btuh 1 Insulated - Exterior, n (0.460) 20 17.0 340 Btuh Ceilings Type/Color/Surface Ueff. R-Value Area X HTM= Load 1 Insulated - Garage, n (0.460) 20 17.0 340 Btuh Ceilings Total 2783(sqft) 5592 Btuh Floors Type Ueff. R-Value Area X HTM= Load 1 Flat ceil/D/Shing (0.025) 38.0/0.0 2783 0.94 2613 Btuh Ceilings Total 2783(sqft) 2613 Btuh Floor Type Ueff. R-Value Size X HTM= Load 1 Slab On Grade (1.180) 0.0 2783 0.94 2613 Btuh Floor Total 2783(sqft) 39575 Btuh			•					
7         2, NFRC 0.25         Vinyl         0.36         S         30.0         13.3         400 Btuh           8         2, NFRC 0.25         Vinyl         0.36         S         40.0         13.3         533 Btuh           9         2, NFRC 0.25         Vinyl         0.36         E         10.0         13.3         400 Btuh           10         2, NFRC 0.25         Vinyl         0.36         E         10.0         13.3         266 Btuh           11         2, NFRC 0.25         Vinyl         0.36         E         20.0         13.3         266 Btuh           Walls         Type         Ornt.         Ueff.         R-Value (Cav/Sh)         Area X         HTM=         Load           1         Frame - Wood         - Ext         (0.089)         13.0/0.0         117         3.28         384 Btuh           2         Frame - Wood         - Ext         (0.089)         13.0/0.0         117         3.28         384 Btuh           3         Frame - Wood         - Ext         (0.089)         13.0/0.0         117         3.28         384 Btuh           5         Frame - Wood         - Ext         (0.089)         13.0/0.0         243         3.28	6		•					
8         2, NFRC 0.25         TIM         0.36         S         40.0         13.3         533 Btuh           9         2, NFRC 0.25         Vinyl         0.36         S         30.0         13.3         400 Btuh           10         2, NFRC 0.25         Vinyl         0.36         E         10.0         13.3         133 Btuh           11         2, NFRC 0.25         Vinyl         0.36         E         20.0         13.3         266 Btuh           Window Total         Caolon Time Type         Ornt. Ueff.         R-Value (Cav/Sh)           1         Frame - Wood - Ext (0.089)         13.0/0.0         180         3.28         590 Btuh           2         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           3         Frame - Wood - Ext (0.089)         13.0/0.0         374         3.28         1228 Btuh           4         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           5         Frame - Wood - Ext (0.089)         13.0/0.0         134         3.28         440 Btuh           6         Frame - Wood - Ext (0.089)	7		•					
9			•		S			
10		1 '			S			
11		1 '	•		Ē			
Walls         Type         Ornt. Ueff.         R-Value (Cav/Sh)         Area X         HTM=         Load           1         Frame - Wood - Ext (0.089)         13.0/0.0         180         3.28         590 Btuh           2         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           3         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           4         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           5         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           6         Frame - Wood - Ext (0.089)         13.0/0.0         134         3.28         440 Btuh           6         Frame - Wood - Ext (0.089)         13.0/0.0         243         3.28         798 Btuh           7         Frame - Wood - Adj (0.089)         13.0/0.0         215         3.28         704 Btuh           8         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           9         Frame - Wood - Adj (0.089)			•					
Walls         Type         Ornt. Ueff.         R-Value (Cav/Sh)         Area X         HTM=         Load           1         Frame - Wood - Ext (0.089)         13.0/0.0         180         3.28         590 Btuh           2         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           3         Frame - Wood - Ext (0.089)         13.0/0.0         374         3.28         1228 Btuh           4         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           5         Frame - Wood - Ext (0.089)         13.0/0.0         134         3.28         440 Btuh           6         Frame - Wood - Ext (0.089)         13.0/0.0         243         3.28         798 Btuh           7         Frame - Wood - Ext (0.089)         13.0/0.0         215         3.28         704 Btuh           8         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         432 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         432 Btuh           9         Type         Storm Ueff.			·y.	0.00	_			
Cav/Sh	Walls		Ornt. l	Jeff.	R-Value		HTM=	
1       Frame - Wood - Ext (0.089)       13.0/0.0       180       3.28       590 Btuh         2       Frame - Wood - Ext (0.089)       13.0/0.0       117       3.28       384 Btuh         3       Frame - Wood - Ext (0.089)       13.0/0.0       374       3.28       1228 Btuh         4       Frame - Wood - Ext (0.089)       13.0/0.0       117       3.28       384 Btuh         5       Frame - Wood - Ext (0.089)       13.0/0.0       134       3.28       440 Btuh         6       Frame - Wood - Ext (0.089)       13.0/0.0       243       3.28       798 Btuh         7       Frame - Wood - Ext (0.089)       13.0/0.0       215       3.28       704 Btuh         8       Frame - Wood - Adj (0.089)       13.0/0.0       192       3.28       631 Btuh         9       Frame - Wood - Adj (0.089)       13.0/0.0       192       3.28       631 Btuh         9       Frame - Wood - Adj (0.089)       13.0/0.0       132       3.28       704 Btuh         9       Frame - Wood - Adj (0.089)       13.0/0.0       132       3.28       432 Btuh         9       Frame - Wood - Adj (0.089)       13.0/0.0       132       3.28       432 Btuh         1       Insulated - Exter		1.762	•			7.1.05. 71		
2         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           3         Frame - Wood - Ext (0.089)         13.0/0.0         374         3.28         1228 Btuh           4         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           5         Frame - Wood - Ext (0.089)         13.0/0.0         134         3.28         440 Btuh           6         Frame - Wood - Ext (0.089)         13.0/0.0         243         3.28         798 Btuh           7         Frame - Wood - Ext (0.089)         13.0/0.0         215         3.28         704 Btuh           8         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           9         Type         Storm Ueff.         Area X         HTM=         Load           1         Insulated - Exterior, n (0.460)         20         17.0 <th>1</th> <th>Frame - Wood</th> <th>- Ext (</th> <th>0.089)</th> <th></th> <th>180</th> <th>3.28</th> <th>590 Btuh</th>	1	Frame - Wood	- Ext (	0.089)		180	3.28	590 Btuh
3         Frame - Wood         - Ext         (0.089)         13.0/0.0         374         3.28         1228 Btuh           4         Frame - Wood         - Ext         (0.089)         13.0/0.0         117         3.28         384 Btuh           5         Frame - Wood         - Ext         (0.089)         13.0/0.0         134         3.28         440 Btuh           6         Frame - Wood         - Ext         (0.089)         13.0/0.0         243         3.28         798 Btuh           7         Frame - Wood         - Ext         (0.089)         13.0/0.0         215         3.28         704 Btuh           8         Frame - Wood         - Adj         (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood         - Adj         (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood         - Adj         (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood         - Adj         (0.089)         13.0/0.0         132         3.28         432 Btuh           9         Type         Storm Ueff.         Area X         HTM=         Load <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>								
4         Frame - Wood - Ext (0.089)         13.0/0.0         117         3.28         384 Btuh           5         Frame - Wood - Ext (0.089)         13.0/0.0         134         3.28         440 Btuh           6         Frame - Wood - Ext (0.089)         13.0/0.0         243         3.28         798 Btuh           7         Frame - Wood - Adj (0.089)         13.0/0.0         215         3.28         704 Btuh           8         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           9         Type         Storm Ueff.         Area X         HTM=         Load           1         Insulated - Exterior, n (0.460)         20         17.0         340 Btuh           2         Insulated - Garage, n (0.460)         20         17.0         340 Btuh </th <th>3</th> <th></th> <th>•</th> <th>,</th> <th></th> <th></th> <th></th> <th></th>	3		•	,				
5         Frame - Wood - Ext (0.089)         13.0/0.0         134         3.28         440 Btuh           6         Frame - Wood - Ext (0.089)         13.0/0.0         243         3.28         798 Btuh           7         Frame - Wood - Ext (0.089)         13.0/0.0         215         3.28         704 Btuh           8         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           9         Type         Storm Ueff.         Area X         HTM=         Load           1         Insulated - Exterior, n (0.460)         20         17.0         340 Btuh           2         Insulated - Garage, n (0.460)         20         17.0         340 Btuh           681Btuh         Flat ceil/D/Shing (0.025)         38.0/0.0         2783 0.94         2613 Btuh </th <th></th> <th></th> <th>•</th> <th>,</th> <th></th> <th></th> <th></th> <th></th>			•	,				
6         Frame - Wood         - Ext         (0.089)         13.0/0.0         243         3.28         798 Btuh           7         Frame - Wood         - Ext         (0.089)         13.0/0.0         215         3.28         704 Btuh           8         Frame - Wood         - Adj         (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood         - Adj         (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood         - Adj         (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood         - Adj         (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood         - Adj         (0.089)         13.0/0.0         132         3.28         432 Btuh           9592 Btuh         10.0         132         3.28         432 Btuh         5592 Btuh           1         Insulated - Exterior, n         (0.460)         20         17.0         340 Btuh           2         Insulated - Exterior, n         (0.460)         20         17.0         340 Btuh           2         Insulated - Garage,			•	,				
7         Frame - Wood - Ext (0.089)         13.0/0.0         215         3.28         704 Btuh           8         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           Wall Total         1703(sqft)         5592 Btuh           Doors         Type         Storm Ueff.         Area X HTM=         Load           1         Insulated - Exterior, n (0.460)         20 17.0         340 Btuh           2         Insulated - Garage, n (0.460)         20 17.0         340 Btuh           2         Door Total         40(sqft)         681Btuh           Ceilings         Type/Color/Surface         Ueff.         R-Value         Area X HTM=         Load           1         Flat ceil/D/Shing (0.025)         38.0/0.0         2783 0.94         2613 Btuh           Ceiling Total         2783(sqft)         2613Btuh           Floors         Type         Ueff.         R-Value         Size X HTM=         Load           1         Slab On Grade         (1.180)         0.0         219.3 ft(perim.) 43.7         9575 Btuh           Floor Total         2530 sqft         9575 Btuh	6		•	,				
8         Frame - Wood - Adj (0.089)         13.0/0.0         192         3.28         631 Btuh           9         Frame - Wood - Adj (0.089)         13.0/0.0         132         3.28         432 Btuh           Doors         Type         Storm Ueff.         Area X         HTM=         Load           1         Insulated - Exterior, n (0.460)         20         17.0         340 Btuh           2         Insulated - Garage, n (0.460)         20         17.0         340 Btuh           2         Insulated - Garage, n (0.460)         20         17.0         340 Btuh           681Btuh         40(sqft)         681Btuh           Ceilings         Type/Color/Surface         Ueff.         R-Value         Area X         HTM=         Load           1         Flat ceil/D/Shing (0.025)         38.0/0.0         2783 0.94         2613 Btuh           Ceiling Total         2783(sqft)         2613 Btuh           513 Btuh         2530 sqft         9575 Btuh           1         Floor Total         2530 sqft         9575 Btuh	7		•	,				
9 Frame - Wood - Adj (0.089) 13.0/0.0 132 3.28 Wall Total 1703(sqft) 5592 Btuh  Doors Type Storm Ueff. Area X HTM= Load 1 Insulated - Exterior, n (0.460) 20 17.0 340 Btuh 2 Insulated - Garage, n (0.460) 20 17.0 340 Btuh Door Total 40(sqft) 681Btuh  Ceilings Type/Color/Surface Ueff. R-Value Area X HTM= Load 1 Flat ceil/D/Shing (0.025) 38.0/0.0 2783 0.94 2613 Btuh Ceiling Total 2783(sqft) 2613Btuh  Floors Type Ueff. R-Value Size X HTM= Load 1 Slab On Grade (1.180) 0.0 219.3 ft(perim.) 43.7 9575 Btuh Floor Total 2530 sqft 9575 Btuh			•	,				
Wall Total         1703(sqft)         5592 Btuh           Doors         Type         Storm Ueff.         Area X         HTM=         Load           1         Insulated - Exterior, n (0.460)         20         17.0         340 Btuh           2         Insulated - Garage, n (0.460)         20         17.0         340 Btuh           Door Total         40(sqft)         681Btuh           Ceilings         Type/Color/Surface         Ueff.         R-Value         Area X         HTM=         Load           1         Flat ceil/D/Shing (0.025)         38.0/0.0         2783 0.94         2613 Btuh           Ceiling Total         2783(sqft)         2613Btuh           Floors         Type         Ueff.         R-Value         Size X         HTM=         Load           1         Slab On Grade         (1.180)         0.0         219.3 ft(perim.) 43.7         9575 Btuh           Floor Total         2530 sqft         9575 Btuh			• •	,				
Doors         Type         Storm Ueff.         Area X         HTM=         Load           1         Insulated - Exterior, n (0.460)         20         17.0         340 Btuh           2         Insulated - Garage, n (0.460)         20         17.0         340 Btuh           Door Total         40(sqft)         681 Btuh           Ceilings         Type/Color/Surface         Ueff.         R-Value         Area X         HTM=         Load           1         Flat ceil/D/Shing (0.025)         38.0/0.0         2783         0.94         2613 Btuh           Ceiling Total         2783(sqft)         2613Btuh           Floors         Type         Ueff.         R-Value         Size X         HTM=         Load           1         Slab On Grade         (1.180)         0.0         219.3 ft(perim.) 43.7         9575 Btuh           Floor Total         2530 sqft         9575 Btuh	· ·		, (4)	0.000)	10.0,0.0		0.20	
1       Insulated - Exterior, n (0.460)       20       17.0       340 Btuh         2       Insulated - Garage, n (0.460)       20       17.0       340 Btuh         Door Total       40(sqft)       681 Btuh         Ceilings         Type/Color/Surface       Ueff.       R-Value       Area X       HTM=       Load         Flat ceil/D/Shing       (0.025)       38.0/0.0       2783       0.94       2613 Btuh         Ceiling Total       2783(sqft)       2613 Btuh       2613 Btuh         Type       Ueff.       R-Value       Size X       HTM=       Load         Slab On Grade       (1.180)       0.0       219.3 ft(perim.) 43.7       9575 Btuh         Floor Total       2530 sqft       9575 Btuh	Doors		Storm	Ueff			HTM=	
2       Insulated - Garage, n (0.460)       20 17.0       340 Btuh 681Btuh         Ceilings       Type/Color/Surface       Ueff. R-Value Area X HTM=       Load         1       Flat ceil/D/Shing (0.025) 38.0/0.0 2783 0.94 Ceiling Total       2783(sqft) 2613 Btuh 2783(sqft)       2613 Btuh 2613 Btuh 2783(sqft)         Floors       Type       Ueff. R-Value Size X HTM=       Load 29575 Btuh 2530 sqft       9575 Btuh 9575 Btuh		1 .						
Ceilings         Type/Color/Surface         Ueff.         R-Value         Area X         HTM=         Load           1         Flat ceil/D/Shing (0.025)         38.0/0.0         2783 0.94         2613 Btuh           Ceiling Total         2783(sqft)         2613Btuh           Floors         Type         Ueff.         R-Value         Size X         HTM=         Load           1         Slab On Grade         (1.180)         0.0         219.3 ft(perim.) 43.7         9575 Btuh           Floor Total         2530 sqft         9575 Btuh				,				
Ceilings         Type/Color/Surface         Ueff.         R-Value         Area X         HTM=         Load           1         Flat ceil/D/Shing (0.025)         38.0/0.0         2783         0.94         2613 Btuh           Ceiling Total         2783(sqft)         2613 Btuh           Floors         Type         Ueff.         R-Value         Size X         HTM=         Load           1         Slab On Grade         (1.180)         0.0         219.3 ft(perim.) 43.7         9575 Btuh           Floor Total         2530 sqft         9575 Btuh	_		.90, (	0.100)				
1         Flat ceil/D/Shing Ceiling Total         (0.025)         38.0/0.0         2783         0.94         2613 Btuh 2613Btuh 2613B	Ceilings		ace l	Jeff.	R-Value		HTM=	
Floors         Type         Ueff. R-Value Size X         HTM= HTM= HTM= HTM= HTM= HTM= HTM= HTM=	_	1 * *						
Floors         Type         Ueff.         R-Value         Size X         HTM=         Load           1         Slab On Grade         (1.180)         0.0         219.3 ft(perim.) 43.7         9575 Btuh           Floor Total         2530 sqft         9575 Btuh			, (5.	,	00.0,0.0		0.0.	
1 Slab On Grade (1.180) 0.0 219.3 ft(perim.) 43.7 9575 Btuh Floor Total 2530 sqft 9575 Btuh	Floors			Ueff.	R-Value		HTM=	
Floor Total 2530 sqft 9575 Btuh		1 .						
	•			( )			,	
Envelope Subtotal: 21542 Btuh								90.0
					ı	Envelope Subto	otal:	21542 Btuh
						•		
Infiltration Type Wholehouse ACH Volume(cuft) Wall Ratio CFM=	Infiltration	Туре	Whole	ehouse A	CH Volume(	cuft) Wall Rat	io CFM=	
Natural 0.23 22770 1.00 87.3 3536 Btuh					,	,	I	3536 Btuh
Duct loadAverage sealed, R6.0, Supply(Att), Return(Att)(DLM of 0.295)7393 Btuh	<b>Duct load</b>	Average sealed	, R6.0, Si	upply(Att	), Return(Att)	) (DLM	l of 0.295)	7393 Btuh
				Energy	Gauge® / USRC	ZB v8.1.00	ŕ	

# **Manual J Winter Calculations**

# Residential Load - Component Details (continued) Project Title:

Peter & Anna Lev Lake City, FL 32024

Project Title: Lot 19 Russwood Building Type: User

1/15/2024

All Zones		Sensible	Subtotal All Zones	32471 Btuh
WHOLE HOUSE	TOTALS			
Totals for	r Heating	Subtotal Sensible Heat Loss Ventilation Sens. Heat Loss Total Heat Loss	(Ex:0 cfm; Sup:0 cfm)	32471 Btuh 0 Btuh 32471 Btuh

#### **EQUIPMENT**

1. Electric Heat Pump	#	34553 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

Peter & Anna Lev

Project Title: Lot 19 Russwood

Lake City, FL 32024

1/15/2024

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*				Ovei	Overhang Window Area(sqft)			a(sqπ)	НТМ		Load	
Window P	Panes S	SHGC U	InSh	IS	Ornt	Len	Hgt	Gross	Shaded	Unshaded	Shaded	Unshaded		
		0.25, 0.36	No	No	N	7.5ft.	1.0ft.	9.0	0.0	9.0	14	14	125	Btuh
2 2	NFRC (	0.25, 0.36	No	No	Ν	7.5ft.	1.0ft.	30.0	0.0	30.0	14	14	417	Btuh
	NFRC (	0.25, 0.36	No	No	Ν	7.5ft.	1.0ft.	13.3	0.0	13.3	14	14	185	Btuh
4 2	2 NFRC	0.25, 0.36	No	No	Ν	1.5ft.	1.0ft.	30.0	0.0	30.0	14	14	417	Btuh
		0.25, 0.36	No	No	W	1.5ft.	1.0ft.	15.0	0.7	14.3	14	33	477	Btuh
		0.25, 0.36	No	No	W	1.5ft.	1.0ft.	4.0	1.0	3.0	14	33	113	Btuh
		0.25, 0.36	No	No	S	1.5ft.	1.0ft.	30.0	30.0	0.0	14	16	417	Btuh
		0.25, 0.36	No	No	S	11.5f	1.0ft.	40.0	40.0	0.0	14	16	556	Btuh
		0.25, 0.36	No	No	S	1.5ft.	1.0ft.	30.0	30.0	0.0	14	16	417	Btuh
		0.25, 0.36	No	No	E	1.5ft.	1.0ft.	10.0	0.5	9.5	14	33	318	Btuh
		0.25, 0.36	No	No	Ε	1.5ft.	1.0ft.	20.0	1.2	18.8	14	33		Btuh
	Nindow	Total						231 (s	<u> </u>				4074	Btuh
Walls T	Гуре				U.	-Value	R-√	/alue	Area	(sqft)		HTM	Load	
							Cav/S	heath						
1 F	Frame - W	Vood - Ext			(	0.09	13.0	/0.0	179	9.7		2.7	486	Btuh
	Frame - Wood - Ext			(	0.09 13.0/		/0.0	117.0			2.7	317	Btuh	
3 F	Frame - Wood - Ext			(	0.09 13.0/0		/0.0	374.0			2.7	1012	Btuh	
	Frame - Wood - Ext				0.09 13.0/0.0			117.0			2.7	317	Btuh	
-	Frame - Wood - Ext				0.09 13.0/0.0			134.0		2.7	363	Btuh		
-	Frame - Wood - Ext				0.09 13.0/0.0			243.0			2.7	658	Btuh	
	Frame - Wood - Ext			0.09 13.0/0			214.5			2.7	581	Btuh		
I	Frame - Wood - Adj			0.09 13.0/0.0		192.0			2.1	409	Btuh			
I		Vood - Adj			(	0.09	13.0	/0.0	131.5			2.1	280	Btuh
V	Nall Tot	tal							170	)3 (sqft)			4423	Btuh
<b>Doors</b> T	Гуре								Area	(sqft)		HTM	Load	
1 Ir	nsulated -	<ul> <li>Exterior</li> </ul>							20			16.1	322	
2 Ir	nsulated ·	- Garage							20			16.1	322	Btuh
[	Door Total							4	40 (sqft)			644	Btuh	
Ceilings T	Type/Co	olor/Surfa	ace		U.	-Value	)	R-Value	Area	(sqft)		HTM	Load	
1 V	/ented At	tic/DarkShi	ngle/R	В		0.025	;	38.0/0.0	278	33.0		1.24	3461	Btuh
	Ceiling Total						2783 (sqft)				3461	Btuh		
Floors T	Туре						R-V	/alue	Si	ze		HTM	Load	
1 S	Slab On G	Grade						0.0	25	30 (ft-perir	neter)	0.0	0	Btuh
I	Floor Total							2530.0 (sqft)				0	Btuh	
										- ( )				
									E	nvelope	Subtota	l:	12602	Btuh

# **Manual J Summer Calculations**

Residential Load - Component Details (continued)

Project Title: Climate:FL\_GAINESVILLE\_REGIONAL\_A
Lot 19 Russwood

Peter & Anna Lev

Lake City, FL 32024

1/15/2024

Infiltration	Type Natural	Average ACH 0.17		(cuft) W 2770	/all Ratio 1	CFM= 65.5	Load 1720	Btuh
Internal		Occupants	Btu	ıh/occu	pant	Appliance	Load	
gain		8	Χ	230	+	2200	4040	Btuh
				Sens	sible Enve	lope Load:	18362	Btuh
Duct load	Average sealed,Supply(R6.0	0-Attic), Return(R6.0-Attic)			(DGM of	0.445)	8169	Btuh
				Sensil	ole Load A	All Zones	26531	Btuh

# **Manual J Summer Calculations**

# Residential Load - Component Details (continued)

Peter & Anna Lev

Project Title: Lot 19 Russwood Climate:FL GAINESVILLE REGIONAL A

Lake City, FL 32024

1/15/2024

WHOLE HOUSE TOTALS							
	Sensible Envelope Load All Zones	18362	Btuh				
	Sensible Duct Load	8169	Btuh				
	Total Sensible Zone Loads	26531	Btuh				
	Sensible ventilation (Ex:0 cfm; Sup:0 cfm)	0	Btuh				
	Blower	0	Btuh				
Whole House	Total sensible gain	26531	Btuh				
Totals for Cooling	Latent infiltration gain (for 54 gr. humidity difference)	2393	Btuh				
	Latent ventilation gain	0	Btuh				
	Latent duct gain	1976	Btuh				
	Latent occupant gain (8.0 people @ 200 Btuh per person)	1600	Btuh				
	Latent other gain	0	Btuh				
	Latent total gain	5969	Btuh				

EQUIPMENT							
1. Central Unit	#	29682 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

**TOTAL GAIN** 

For Roller shades: Assume translucent, half closed

(IS - Insect screen: none(N), Full(F) or Half(1/2))

(Ornt - compass orientation)



32500 Btuh

Version 8