FORM R405-2023

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Maura Hill Residence	Builder Name:	Lanier Construction, LLC
Street:	PID 02-7S-16-04111-121	Permit Office:	Columbia
City, State, Zip:	Fort White, FL, 32038	Permit Number:	
Owner:	Maura Hill	Jurisdiction:	221000
Design Location:	FL, Gainesville	County:	Columbia(Florida Climate Zone 2)

1. New construction or existing	New (From Plans)			
2. Single family or multiple family	Detached			
3. Number of units, if multiple family	1			
4. Number of Bedrooms	3			
5. Is this a worst case?	No			
6. Conditioned floor area above grade (ft²)	1373			
Conditioned floor area below grade (ft²)	0			
7. Windows(135.0 sqft.)	Description		Area	
a. U-Factor:	Dbl, U=0.47		75.00 ft²	
SHGC:	SHGC=0.31			
b. U-Factor:	Dbl, U=0.49		60.00 ft²	
SHGC:	SHGC=0.32			
c. U-Factor:	N/A		ft²	
SHGC:				
Area Weighted Average Overhang Depth:			4.474 ft	
Area Weighted Average SHGC:			0.314	
8. Skylights	Description		Area	
U-Factor:(AVG)	N/A		N/A ft²	
SHGC(AVG):	N/A			
9. Floor Types		Insulation	Area	
a. Slab-On-Grade Edge Insulation		R= 0.0	1371.90 ft²	
b. N/A		R=	ft²	
c. N/A		R=	ft²	

10. Wall Types(1589.7 sqft.)	Insulation	Area	
a. Frame - Wood, Exterior	R=13.0	1589.70 ft²	
b. N/A			
c. N/A			
d. N/A			
11. Ceiling Types(1373.0 sqft.)	Insulation	Area	
a. Flat ceiling under att (Vented)	R=38.0	1373.00 ft²	
b. N/A			
c. N/A			
12. Roof(Metal, Vented)	Deck R=0.0	1534 ft²	
13. Ducts, location & insulation level		R	ft²
a. Sup: Attic, Ret: Attic, AH: Mud Rm		6	547
b.			
c.			
14. Cooling Systems	kBtu/hr	Efficiency	
a. Central Unit	28.0	SEER2:15.20	
15. Heating Systems	kBtu/hr	Efficiency	
a. Electric Heat Pump	28.0	HSPF2:7.50	
16. Hot Water Systems			
a. Electric		Cap: 50 gallons	
		EF: 0.945	
b. Conservation features		None	
17. Credits		CF, Pstat	

Glass/Floor Area: 0.098

Total Proposed Modified Loads: 41.23

Total Baseline Loads: 43.38

PASS

NOTE: Proposed residence must have annual total normalized Modified Loads that are less than or equal to 95 percent of the annual total loads of the standard reference design in order to comply.

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

PREPARED BY: John Pirkl

DATE: 09/12/2024

I hereby certify that this building, as designed, is in compliance with the Florida Energy Code.

OWNER/AGENT: [signature]

DATE: 9/25/24

Review of the plans and specifications covered by this calculation indicates compliance with the Florida Energy Code. Before construction is completed this building will be inspected for compliance with Section 553.908 Florida Statutes.

BUILDING OFFICIAL: _____

DATE: _____

- Compliance requires certification by the air handler unit manufacturer that the air handler enclosure qualifies as certified factory-sealed in accordance with R403.3.2.1.

- 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 4.86 ACH50 (R402.4.1.2).

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Maura Hill Residence			Address type:	Street Address
Building Type:	User	Bedrooms:	3	Lot #:	---
Owner:	Maura Hill	Conditioned Area:	1373	Block/SubDivision:	---
Builder Home ID:		Total Stories:	1	PlatBook:	---
Builder Name:	Lanier Construction, LLC	Worst Case:	No	Street:	PID 02-7S-16-04111-121
Permit Office:	Columbia	Rotate Angle:	0	County:	Columbia
Jurisdiction:	221000	Cross Ventilation:	No	City, State, Zip:	Fort White, FL, 32038
Family Type:	Detached	Whole House Fan:	No		
New/Existing:	New (From Plans)	Terrain:	Suburban		
Year Construct:	2024	Shielding:	Suburban		
Comment:					

CLIMATE

✓	Design Location	Tmy Site	Design Temp 97.5%	Design Temp 2.5%	Int Design Temp Winter	Int Design Temp Summer	Heating Degree Days	Design Moisture	Daily temp Range
___	FL, Gainesville	FL_GAINESVILLE_REGIONA	32	92	70	75	1305.5	51	Medium

BLOCKS

✓	Number	Name	Area	Volume
___	1	Entire House	1373	15721 cu ft

SPACES

✓	Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___	1	Bedroom #3	132	1188	No	1	1	Yes	Yes	Yes
___	2	Bathrm	41	369	No	0		Yes	Yes	Yes
___	3	Bedroom #2	132	1188	No	1	1	Yes	Yes	Yes
___	4	Kitchen	228	3374	Yes	0		Yes	Yes	Yes
___	5	Great Room	352	5210	No	0		Yes	Yes	Yes
___	6	Mstr Bedroom	215	1935	No	2	1	Yes	Yes	Yes
___	7	Mstr WIC	42	378	No	0		No	Yes	Yes
___	8	Mstr Bathrm	86	774	No	0		Yes	Yes	Yes
___	9	Mud Rm	74	666	No	0		Yes	Yes	Yes
___	10	Laundry	71	639	No	0		Yes	Yes	Yes

FLOORS (Total Exposed Area = 1372 sq.ft.)

✓	#	Floor Type	Space	Exposed Perim(ft)	Area	R-Value Perim.	R-Value Joist	U-Factor	Slab Insul. Vert/Horiz	Tile	Wood	Carpet
___	1	Slab-On-Grade Edge Ins	Bedroom #3	23	132 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	2	Slab-On-Grade Edge Ins	Bathrm	5.5	41.3 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	3	Slab-On-Grade Edge Ins	Bedroom #2	23	132 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	4	Slab-On-Grade Edge Ins	Kitchen	19	228 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	5	Slab-On-Grade Edge Ins	Great Room	19	351.8 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	6	Slab-On-Grade Edge Ins	Mstr Bedroom	29.5	214.5 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	7	Slab-On-Grade Edge Ins	Mstr WIC	1	42 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	8	Slab-On-Grade Edge Ins	Mstr Bathrm	9	85.5 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	9	Slab-On-Grade Edge Ins	Mud Rm	7	73.5 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	10	Slab-On-Grade Edge Ins	Laundry	17	71.3 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

ROOF

✓ #	Type	Materials	Roof Area	Gable Area	Framing. Fract.	Roof Color	Rad Barr	Solar Absor.	SA Tested	Emitt	Emitt Tested	Deck Insul.	Pitch (deg)
___ 1	Gable or Shed	Metal	1534 ft²	344 ft²	0.	Unfinished, Galvalum	N	0.9	No	0.4	No	0	26.57

ATTIC

✓ #	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___ 1	Full attic	Vented	150	1372 ft²	N	N

CEILING (Total Exposed Area = 1373 sq.ft.)

✓ #	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___ 1	Flat ceiling under attic(Vented)	Bedroom #3	38.0	Blown	132.0ft²	0.049	0.10	Wood
___ 2	Flat ceiling under attic(Vented)	Bathrm	38.0	Blown	41.0ft²	0.049	0.10	Wood
___ 3	Flat ceiling under attic(Vented)	Bedroom #2	38.0	Blown	132.0ft²	0.049	0.10	Wood
___ 4	Flat ceiling under attic(Vented)	Kitchen	38.0	Blown	228.0ft²	0.049	0.10	Wood
___ 5	Flat ceiling under attic(Vented)	Great Room	38.0	Blown	352.0ft²	0.049	0.10	Wood
___ 6	Flat ceiling under attic(Vented)	Mstr Bedroom	38.0	Blown	215.0ft²	0.049	0.10	Wood
___ 7	Flat ceiling under attic(Vented)	Mstr WIC	38.0	Blown	42.0ft²	0.049	0.10	Wood
___ 8	Flat ceiling under attic(Vented)	Mstr Bathrm	38.0	Blown	86.0ft²	0.049	0.10	Wood
___ 9	Flat ceiling under attic(Vented)	Mud Rm	38.0	Blown	74.0ft²	0.049	0.10	Wood
___ 10	Flat ceiling under attic(Vented)	Laundry	38.0	Blown	71.0ft²	0.049	0.10	Wood

WALLS (Total Exposed Area = 1590 sq.ft.)

✓ #	Ornt	Adjacent To	Wall Type	Space	Cavity R-Value	Width Ft	Width In	Height Ft	Height In	Area sq.ft.	U-Factor	Sheath R-Value	Frm. Frac.	Solar Absor.	Below Grade
___ 1	N	Exterior	Frame - Wood	Bedroom #3	13.0	12.0	0	9.0	0	108.0	0.095	0	0.25	0.23	0 %
___ 2	E	Exterior	Frame - Wood	Bedroom #3	13.0	11.0	0	9.0	0	99.0	0.095	0	0.25	0.23	0 %
___ 3	N	Exterior	Frame - Wood	Bathrm	13.0	5.0	6	9.0	0	49.5	0.095	0	0.25	0.23	0 %
___ 4	N	Exterior	Frame - Wood	Bedroom #2	13.0	12.0	0	9.0	0	108.0	0.095	0	0.25	0.23	0 %
___ 5	W	Exterior	Frame - Wood	Bedroom #2	13.0	11.0	0	9.0	0	99.0	0.095	0	0.25	0.23	0 %
___ 6	E	Exterior	Frame - Wood	Kitchen	13.0	19.0	0	14.0	10	281.8	0.095	0	0.25	0.23	0 %
___ 7	W	Exterior	Frame - Wood	Great Room	13.0	19.0	0	14.0	10	281.8	0.095	0	0.25	0.23	0 %
___ 8	S	Exterior	Frame - Wood	Mstr Bedroom	13.0	13.0	0	9.0	0	117.0	0.095	0	0.25	0.23	0 %
___ 9	W	Exterior	Frame - Wood	Mstr Bedroom	13.0	16.0	6	9.0	0	148.5	0.095	0	0.25	0.23	0 %
___ 10	S	Exterior	Frame - Wood	Mstr Bathrm	13.0	9.0	0	9.0	0	81.0	0.095	0	0.25	0.23	0 %
___ 11	E	Exterior	Frame - Wood	Mud Rm	13.0	7.0	0	9.0	0	63.0	0.095	0	0.25	0.23	0 %
___ 12	E	Exterior	Frame - Wood	Laundry	13.0	9.0	6	9.0	0	85.5	0.095	0	0.25	0.23	0 %
___ 13	S	Exterior	Frame - Wood	Laundry	13.0	7.0	6	9.0	0	67.5	0.095	0	0.25	0.23	0 %

DOORS (Total Exposed Area = 0 sq.ft.)

✓ #	Ornt	Adjacent To	Door Type	Space	Storms	U-Value	Width Ft	Width In	Height Ft	Height In	Area
___ 1	N(Front)	Exterior	Wood	Bedroom #3	None	0.20	0.10	0	0.10	0	0.1ft²

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

WINDOWS (Total Exposed Area = 135 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	E	2	Vinyl	Low-E Double	Y	0.47	0.31	N	N	15.0	1	3.00	5.00	2.0	1.3	Drapes/blinds	Ex. 50%
___2	N	3	Vinyl	Low-E Double	Y	0.47	0.31	N	N	6.0	1	2.00	3.00	2.0	8.0	Drapes/blinds	Ex. 50%
___3	W	5	Vinyl	Low-E Double	Y	0.47	0.31	N	N	15.0	1	3.00	5.00	2.0	1.3	Drapes/blinds	Ex. 50%
___4	E	6	Vinyl	Low-E Double	Y	0.49	0.32	N	N	20.0	1	3.00	6.67	8.0	1.3	None	None
___5	E	6	Vinyl	Low-E Double	Y	0.47	0.31	N	N	9.0	1	3.00	3.00	8.0	1.3	Drapes/blinds	Ex. 50%
___6	W	7	Vinyl	Low-E Double	Y	0.49	0.32	N	N	40.0	1	6.00	6.67	6.0	1.3	None	None
___7	W	9	Vinyl	Low-E Double	Y	0.47	0.31	N	N	15.0	1	3.00	5.00	2.0	1.3	Drapes/blinds	Ex. 50%
___8	S	10	Vinyl	Low-E Double	Y	0.47	0.31	N	N	6.0	1	2.00	3.00	2.0	8.0	Drapes/blinds	Ex. 50%
___9	E	12	Vinyl	Low-E Double	Y	0.47	0.31	N	N	9.0	1	3.00	3.00	2.0	1.3	Drapes/blinds	Ex. 50%

INFILTRATION

√ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___1	Wholehouse	Proposed ACH(50)	0.00035	1273	69.86	131.16	0.1099	4.9	All	15721 cu ft

MASS

√ #	Mass Type	Area	Thickness	Furniture Fraction	Space
___1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Bedroom #3
___2	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Bathrm
___3	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Bedroom #2
___4	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Kitchen
___5	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Great Room
___6	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Mstr Bedroom
___7	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Mstr WIC
___8	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Mstr Bathrm
___9	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Mud Rm
___10	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Laundry

HEATING SYSTEM

√ #	System Type	Subtype/Speed	AHRI #	Efficiency	Capacity kBtu/hr	---Geothermal HeatPump--- Entry	Power	Volt	Current	Ducts	Block
___1	Electric Heat Pump	Split/Single		HSPF2: 7.50	28.0		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	Split/Single		SEER2:15.2	28.0	1000	0.70	sys#1	1

HOT WATER SYSTEM

√ #	System Type	Subtype	Location	EF(UEF)	Cap	Use	SetPnt	Fixt. Flow	Trap	Pipe Ins.	Pipe length
___1	Electric	None	Laundry	0.94 (0.93)	50.0 gal	62 gal	120 deg	Low	Yes	None	84

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

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

HOT WATER SYSTEM(Continued)

___ 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	AHU Location	CFM 25 TOT|OUT	QN OUT	AHU SEALED	RLF	HVAC # Heat	HVAC # Cool
___ 1	Attic	6.0	547 ft²	Attic	6.0	547 ft²	Default Leakage	Mud Rm	(Default) (Default)				1	1

TEMPERATURES

Programable Thermostat: Y Ceiling Fans: N

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cooling	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[X]	[X]	[ ]	[ ]	[ ]
Heating	[X]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]
Venting	[ ]	[ ]	[X]	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[X]	[X]	[ ]

✓ Thermostat Schedule: HERS 2006 Reference

Schedule Type		Hours 1	2	3	4	5	6	7	8	9	10	11	12
___ Cooling (WD)	AM	78	78	78	78	78	78	78	78	80	80	80	80
	PM	80	80	78	78	78	78	78	78	78	78	78	78
___ Cooling (WEH)	AM	78	78	78	78	78	78	78	78	78	78	78	78
	PM	78	78	78	78	78	78	78	78	78	78	78	78
___ Heating (WD)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66
___ Heating (WEH)	AM	66	66	66	66	66	68	68	68	68	68	68	68
	PM	68	68	68	68	68	68	68	68	68	68	66	66

wrightsoft

Load Short Form
Entire House
New Age Dimensions, LLC.

Job: Maura Hill
Date: 09/12/2024
By: John Pirkl
Plan: Manual J and D

14080 S.E. 122nd Lane Road, Ocklawaha, FL 32179 Phone: (352) 288 - 0686 Fax: (352) 288 - 0684 Email: john.newage@gmail.com

Project Information

For: Lanier Construction, LLC
8538 N.W. County Road 225, Branford, FL 32008
Phone: (352) 316 - 2389
Email: terryagaines@gmail.com

Design Information

	Htg	Clg
Outside db (°F)	33	92
Inside db (°F)	68	75
Design TD (°F)	35	17
Daily range	-	M
Inside humidity (%)	50	50
Moisture difference (gr/lb)	29	47

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Trane
Trade	TRANE
Model	4TWR5030N1
AHRI ref	210720490

Efficiency	7.5 HSPF2	
Heating input		
Heating output	26000	Btuh @ 47°F
Temperature rise	24	°F
Actual air flow	1000	cfm
Air flow factor	0.042	cfm/Btuh
Static pressure	0.51	in H2O

Space thermostat
Capacity balance point = 31 °F

Backup:
Input = 8 kW, Output = 27297 Btuh, 100 AFUE

COOLING EQUIPMENT

Make	Trane
Trade	TRANE
Cond	4TWR5030N1
Coil	TAMXB0A24V21++TSTAT
AHRI ref	210720490

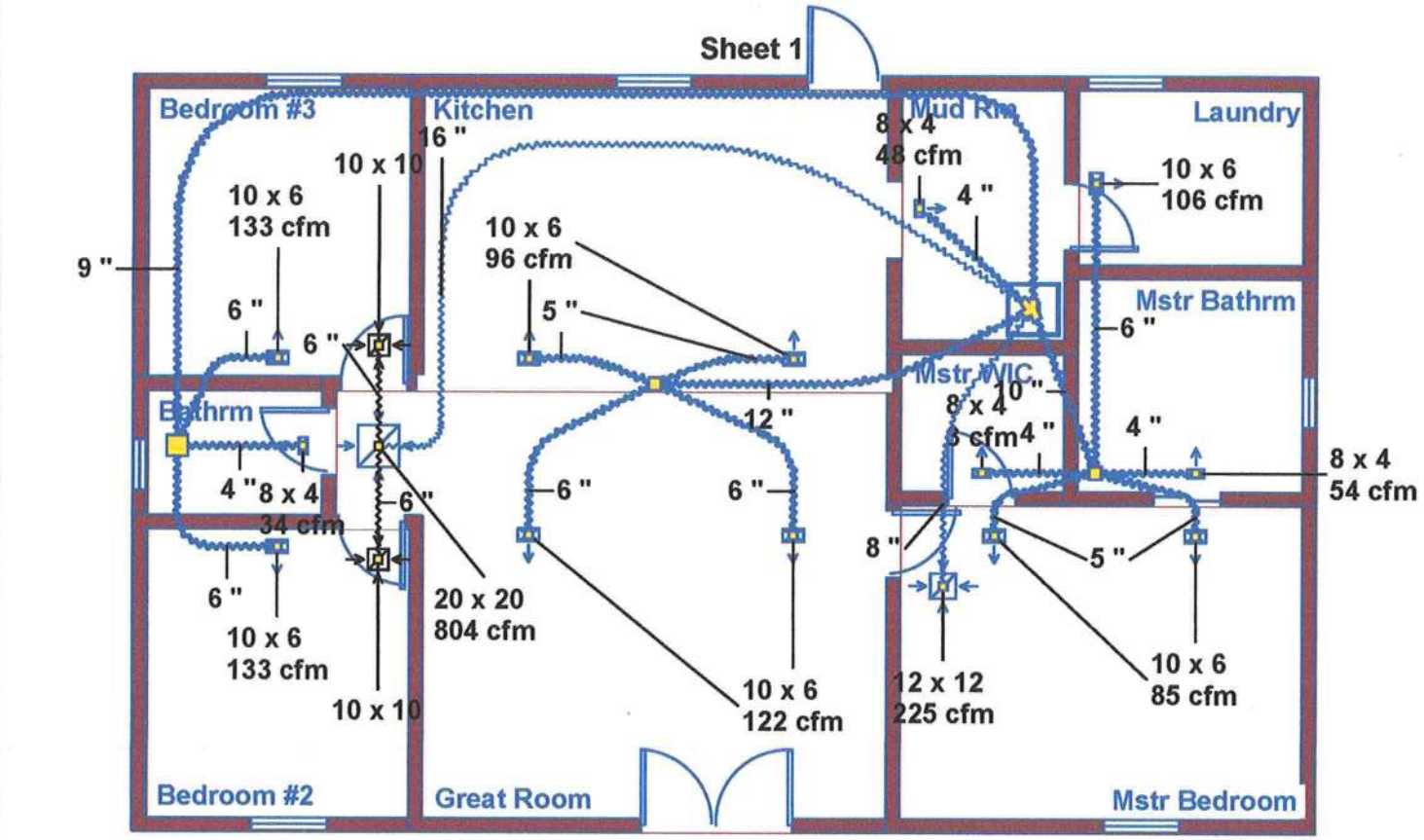
Efficiency	12.0 EER2,15.2 SEER2	
Sensible cooling	19600	Btuh
Latent cooling	8400	Btuh
Total cooling	28000	Btuh
Actual air flow	1000	cfm
Air flow factor	0.046	cfm/Btuh
Static pressure	0.51	in H2O
Load sensible heat ratio	0.84	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Bedroom #3	132	3139	2074	133	95
Bathrm	41	802	342	34	16
Bedroom #2	132	3139	2284	133	104
Kitchen	228	3849	4217	163	192
Great Room	352	4190	5330	177	243
Mstr Bedroom	215	4008	3632	170	166
Mstr WIC	42	48	77	2	3
Mstr Bathrm	86	1269	597	54	27
Mud Rm	74	918	1043	39	48
Laundry	71	2256	2325	96	106

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

Entire House	1372	23617	21921	1000	1000
Other equip loads		0	1707		
Equip. @ 0.97 RSM			22919		
Latent cooling			4416		
TOTALS	1372	23617	27335	1000	1000

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



Job #: Maura Hill
Performed by John Pirkl for:
Lanier Construction, LLC
8538 N.W. County Road 225
Branford, FL 32008
Phone: (352) 316 - 2389
terryagaines@gmail.com

New Age Dimensions, LLC.
14080 S.E. 122nd Lane Road
Ocklawaha, FL 32179
Phone: (352) 288 - 0686 Fax: (352) 288 - 0684
john.newage@gmail.com

Scale: 1 : 89
Page 1
Right-Suite® Universal 2024
24.0.02 RSU02050
2024-Sep-12 13:47:50
...ruction\Maura Hill Residence.rup

Manual S Compliance Report
Entire House

New Age Dimensions, LLC.

Job: Maura Hill
Date: 09/12/2024
By: John Pirkl
Plan: Manual J and D

14080 S.E. 122nd Lane Road, Ocklawaha, FL 32179 Phone: (352) 288 - 0686 Fax: (352) 288 - 0684 Email: john.newage@gmail.com

Project Information

For: Lanier Construction, LLC
8538 N.W. County Road 225, Branford, FL 32008
Phone: (352) 316 - 2389
Email: terryagaines@gmail.com

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	23628	Btuh	Entering coil DB:	78.7°F
Outdoor design WB:	76.3°F	Latent gain:	4416	Btuh	Entering coil WB:	64.1°F
Indoor design DB:	75.0°F	Total gain:	28044	Btuh		
Indoor RH:	50%	Estimated airflow:	1000	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Trane		Model:	4TWR5030N1+TAMXB0A24V21++TSTAT	
Actual airflow:	1000	cfm			
Sensible capacity:	23617	Btuh	100% of load		
Latent capacity:	3972	Btuh	90% of load		
Total capacity:	27589	Btuh	98% of load	SHR:	86%

Heating Equipment

Design Conditions

Outdoor design DB:	33.4°F	Heat loss:	23617	Btuh	Entering coil DB:	67.1°F
Indoor design DB:	68.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP					
Manufacturer:	Trane		Model:	4TWR5030N1+TAMXB0A24V21++TSTAT		
Actual airflow:	1000	cfm				
Output capacity:	20491	Btuh	87% of load		Capacity balance:	31 °F
Supplemental heat required:	3126	Btuh			Economic balance:	-99 °F

Backup equipment type:	Elec strip					
Manufacturer:			Model:			
Actual airflow:	1000	cfm				
Output capacity:	8.0	kW	116% of load	Temp. rise:	25	°F

Meets all requirements of ACCA Manual S.

wrightsoft

Duct System Summary
Entire House
New Age Dimensions, LLC.

Job: Maura Hill
Date: 09/12/2024
By: John Pirkl
Plan: Manual J and D

14080 S.E. 122nd Lane Road, Ocklawaha, FL 32179 Phone: (352) 288 - 0686 Fax: (352) 288 - 0684 Email: john.newage@gmail.com

Project Information

For: Lanier Construction, LLC
8538 N.W. County Road 225, Branford, FL 32008
Phone: (352) 316 - 2389
Email: terryagaines@gmail.com

	Heating	Cooling
External static pressure	0.51 in H2O	0.51 in H2O
Pressure losses	0.18 in H2O	0.18 in H2O
Available static pressure	0.33 in H2O	0.33 in H2O
Supply / return available pressure	0.215 / 0.115 in H2O	0.215 / 0.115 in H2O
Lowest friction rate	0.880 in/100ft	0.880 in/100ft
Actual air flow	1000 cfm	1000 cfm
Total effective length (TEL)	359 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
Bathrm	h 802	34	16	0.880	4.0	0x 0	VlFx	61.5	165.0	st1
Bedroom #2	h 3139	133	104	0.880	6.0	0x 0	VlFx	64.5	170.0	st1
Bedroom #3	h 3139	133	95	0.880	6.0	0x 0	VlFx	62.8	170.0	st1
Great Room	c 2665	89	122	0.880	6.0	0x 0	VlFx	24.8	165.0	st2
Great Room-A	c 2665	89	122	0.880	6.0	0x 0	VlFx	25.2	165.0	st2
Kitchen	c 2109	82	96	0.880	5.0	0x 0	VlFx	20.9	165.0	st2
Kitchen-A	c 2109	81	96	0.880	5.0	0x 0	VlFx	21.4	165.0	st2
Laundry	c 2325	96	106	0.880	6.0	0x 0	VlFx	18.5	155.0	st3
Mstr Bathrm	h 1269	54	27	0.880	4.0	0x 0	VlFx	11.0	155.0	st3
Mstr Bedroom	h 2004	85	83	0.880	5.0	0x 0	VlFx	12.6	160.0	st3
Mstr Bedroom-A	h 2004	85	83	0.880	5.0	0x 0	VlFx	12.6	160.0	st3
Mstr WIC	c 77	2	3	0.880	4.0	0x 0	VlFx	11.5	155.0	st3
Mud Rm	c 1043	39	48	0.880	4.0	0x 0	VlFx	6.0	95.0	

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	300	214	0.880	679	9.0	0 x 0	VinlFlx	
st2	Peak AVF	340	436	0.880	555	12.0	0 x 0	VinlFlx	
st3	Peak AVF	321	302	0.880	588	10.0	0 x 0	VinlFlx	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb2	12x 9	225	196	77.2	0.880	646	8.0	0x 0		VlFx	
rb1	20x 19	775	804	124.9	0.880	576	16.0	0x 0		VlFx	rst2

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst2	Peak AVF	775	804	0.880	576	16.0	0 x 0	VinlFlx	

Certificate of Product Ratings

AHRI Certified Reference Number : 210720490 Date : 09-12-2024 Model Status : Active

AHRI Type : HRCU-A-CB (Split System: Heat Pump with Remote Outdoor Unit-Air-Source)

Outdoor Unit Brand Name : TRANE

Outdoor Unit Model Number (Condenser or Single Package) : 4TWR5030N1

Indoor Unit Model Number (Evaporator and/or Air Handler) : TAMXB0A24V21+TSTAT

The manufacturer of this TRANE product is responsible for the rating of this system combination.

Rated as follows in accordance with the latest edition of AHRI 210/240 – 2024, Performance Rating of Unitary Air-Conditioning & Air-Source Heat Pump Equipment and subject to rating accuracy by AHRI-sponsored, independent, third party testing:

Cooling Capacity (A_{Full}) – Single or High Stage (95F), btuh : 28000

SEER2 : 15.20

EER2 (A_{Full}) – Single or High Stage (95F) : 12.00

Heating Capacity ($H1_{Full}$) – Single or High Stage (47F), btuh : 26000

HSPF2 (Region IV) : 7.50

†"Active" Model Status are those that an AHRI Certification Program Participant is currently producing AND selling or offering for sale; OR new models that are being marketed but are not yet being produced."Production Stopped" Model Status are those that an AHRI Certification Program Participant is no longer producing BUT is still selling or offering for sale.

Ratings that are accompanied by WAS indicate an involuntary re-rate. The new published rating is shown along with the previous (i.e. WAS) rating.

The Department of Energy has published updated energy efficiency metrics for central air conditioners and heat pumps. This publication reflects both the 1987 metric (SEER) and the 2023 metric (SEER2). Efficiency requirements are published at 10 C.F.R. 430.32(c). Please refer to www.AHRInet.org for more information about updated energy efficiency metrics.

AIR-CONDITIONING, HEATING, & REFRIGERATION INSTITUTE

we make life better™

CERTIFICATE NO.: 133706353779809225

FORM R405-2023

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 95

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

PID 02-7S-16-04111-121,Fort White,FL,32038

1. New construction or existing		New (From Plans)
2. Single family or multiple family		Detached
3. Number of units, if multiple family		1
4. Number of Bedrooms		3
5. Is this a worst case?		No
6. Conditioned floor area above grade (ft²)		1373
Conditioned floor area below grade (ft²)		0

7. Windows**	Description	Area
a. U-Factor:	Dbl, U=0.47	75.00 ft²
SHGC:	SHGC=0.31	
b. U-Factor:	Dbl, U=0.49	60.00 ft²
SHGC:	SHGC=0.32	
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		4.474 ft
Area Weighted Average SHGC:		0.314

8. Skylights	Description	Area
U-Factor:(AVG)	N/A	N/A ft²
SHGC(AVG):	N/A	

9. Floor Types	Insulation	Area
a. Slab-On-Grade Edge Insulation	R= 0.0	1371.90 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(1589.7 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=13.0	1589.70 ft²
b. N/A		
c. N/A		
d. N/A		

11. Ceiling Types(1373.0 sqft.)	Insulation	Area
a. Flat ceiling under att (Vented)	R=38.0	1373.00 ft²
b. N/A		
c. N/A		

12. Roof(Metal, Vented)	Deck R=0.0	1534 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Attic, AH: Mud Rm	6	547
b.		
c.		

14. Cooling Systems	kBtu/hr	Efficiency
a. Central Unit	28.0	SEER2:15.20

15. Heating Systems	kBtu/hr	Efficiency
a. Electric Heat Pump	28.0	HSPF2:7.50

16. Hot Water Systems	
a. Electric	Cap: 50 gallons
	EF: 0.945
b. Conservation features	None
17. Credits	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: James Lewis Date: 9-25-24

Address of New Home: PID 02-7S-16-04111-121 City/FL Zip: Fort White,FL,32038

*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.

2023 - AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA-TABLE 402.4.1.1[a]

Project Name:	Maura Hill Residence	Builder Name:	Lanier Construction, LLC
Street:	PID 02-7S-16-04111-121	Permit Office:	Columbia
City, State, Zip:	Fort White, FL, 32038	Permit Number:	
Owner:	Maura Hill	Jurisdiction:	221000
Design Location:	FL, Gainesville	County:	Columbia(Florida Climate Zone 2)

COMPONENT	AIR BARRIER CRITERIA	INSULATION INSTALLATION CRITERIA	CHECK
General requirements	A continuous air barrier shall be installed in the building envelope. The exterior thermal envelope contains a continuous air barrier. Breaks or joints in the air barrier shall be sealed.	Air-permeable insulation shall not be used as a sealing material.	
Ceiling/attic	The air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed. Access openings, drop down stairs or knee wall doors to unconditioned attic spaces shall be sealed.	The insulation in any dropped ceiling/soffit shall be aligned with the air barrier.	
Walls	The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top of exterior walls shall be sealed. Knee walls shall be sealed.	Cavities within corners and headers of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of R-3 per inch minimum Exterior thermal envelope insulation for framed walls shall be installed in substantial contact and continuous alignment with the air barrier.	
Windows, skylights and doors	The space between window/door jambs and framing, and skylights and framing shall be sealed.		
Rim joists	Rim joists shall include the air barrier.	Rim joists shall be insulated.	
Floors (including above-garage and cantilevered floors)	The air barrier shall be installed at any exposed edge of insulation.	Floor framing cavity insulation shall be installed to maintain permanent contact with the underside of subfloor decking, or floor framing cavity insulation shall be permitted to be in contact with the top side of sheathing, or continuous insulation installed on the underside of floor framing and extends from the bottom to the top of all perimeter floor framing members.	
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.	Where provided instead of floor insulation, insulation shall be permanently attached to the crawlspace walls.	
Shafts, penetrations	Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.		
Narrow cavities		Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity spaces.	
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.		
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.	Recessed light fixtures installed in the building thermal envelope shall be air tight and IC rated.	
Plumbing and wiring		Batt insulation shall be cut neatly to fit around wiring and plumbing in exterior walls, or insulation that on installation readily conforms to available space shall extend behind piping and wiring.	
Shower/tub on exterior wall	The air barrier installed at exterior walls adjacent to showers and tubs shall separate them from the showers and tubs.	Exterior walls adjacent to showers and tubs shall be insulated.	
Electrical, communication, and other equipment boxes, housings, and enclosures	Boxes, housings, and enclosures that penetrate the air barrier shall be caulked, taped, gasketed, or otherwise sealed to the air barrier element being penetrated. All concealed openings into the box, housing, or enclosure shall be sealed. The continuity of the air barrier shall be maintained around boxes, housings, and enclosures that penetrate the air barrier. Alternatively, air-sealed boxes shall be installed in accordance with R402.4.6	Boxes, housings, and enclosures shall be buried in or surrounded by tightly fitted insulation.	
HVAC register boots	HVAC supply and return register boots that penetrate building thermal envelope shall be sealed to the sub-floor, wall covering or ceiling penetrated by the boot.		
Concealed sprinklers	When required to be sealed, concealed fire sprinklers shall only be sealed in a manner that is recommended by the manufacturer. Caulking or other adhesive sealants shall not be used to fill voids voids between fire sprinkler cover plates and walls or ceilings.		

a. In addition, inspection of log walls shall be in accordance with the provisions of ICC-400.