FORM R405-2023

ENERGY PERFORMANCE LEVEL (EPL) DISPLAY CARD

ESTIMATED ENERGY PERFORMANCE INDEX* = 92

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

1168 S.W. Cumorah Hill Street,Ft 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)		1803
Conditioned floor area below grade (ft²)		0
7. Windows**	Description	Area
a. U-Factor:	Dbl, U=0.47	256.00 ft²
SHGC:	SHGC=0.31	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		5.396 ft
Area Weighted Average SHGC:		0.310
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	1800.10 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(1903.8 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=19.0	1903.80 ft²
b. N/A		
c. N/A		
d. N/A		

11. Ceiling Types(1803.0 sqft.)	Insulation	Area
a. Roof Deck (Unvented)	R=22.7	1803.00 ft²
b. N/A		
c. N/A		

12. Roof(Metal, Unvent)	Deck R=22.7	2013 ft²
13. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Attic, AH: Mud Room	6	118
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 Lawo Date: 10/18/24

Address of New Home: 1168 S.W. Cumorah Hill Street City/FL Zip: Ft 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.

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Columbia County Building Department · Reviewed for · File Copy · Code Compliance · Plans Examiner

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

Project Name:	Marion & Julia Van Mersbergen	Builder Name:	Lanier Construction, LLC
Street:	1168 S.W. Cumorah Hill Street	Permit Office:	Columbia
City, State, Zip:	Ft White, FL, 32038	Permit Number:	
Owner:	Lanier Construction, LLC	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.

AHRI CERTIFIED®
www.ahridirectory.org

Certificate of Product Ratings

AHRI Certified Reference Number : 210720490 Date : 09-09-2024 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.

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CERTIFICATE NO.: 133703701396076652

FORM R405-2023

FLORIDA ENERGY EFFICIENCY CODE FOR BUILDING CONSTRUCTION

Florida Department of Business and Professional Regulation - Residential Performance Method

Project Name:	Marion & Julia Van Mersbergen	Builder Name:	Lanier Construction, LLC
Street:	1168 S.W. Cumorah Hill Street	Permit Office:	Columbia
City, State, Zip:	Ft White, FL, 32038	Permit Number:	
Owner:	Lanier Construction, LLC	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)	1803
Conditioned floor area below grade (ft²)	0

7. Windows(256.0 sqft.)	Description	Area
a. U-Factor:	Dbl, U=0.47	256.00 ft²
SHGC:	SHGC=0.31	
b. U-Factor:	N/A	ft²
SHGC:		
c. U-Factor:	N/A	ft²
SHGC:		
Area Weighted Average Overhang Depth:		5.396 ft
Area Weighted Average SHGC:		0.310

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	1800.10 ft²
b. N/A	R=	ft²
c. N/A	R=	ft²

10. Wall Types(1903.8 sqft.)	Insulation	Area
a. Frame - Wood, Exterior	R=19.0	1903.80 ft²
b. N/A		
c. N/A		
d. N/A		

11. Ceiling Types(1803.0 sqft.)	Insulation	Area
a. Roof Deck (Unvented)	R=22.7	1803.00 ft²
b. N/A		
c. N/A		

12. Roof(Metal, Unvent)	Deck R=22.7	2013 ft²

13. Ducts, location & insulation level	R	ft²
a. Sup: Attic, Ret: Attic, AH: Mud Room	6	118
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: 0.142

Total Proposed Modified Loads: 50.32

Total Baseline Loads: 54.42

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: 09/09/2024

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

OWNER/AGENT: James Lanier

DATE: 10/18/24

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: _____

Columbia County Building Department Reviewed for File Copy Code Compliance Plans Examiner

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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 4.95 ACH50 (R402.4.1.2).

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

PROJECT

Title:	Marion & Julia Van Mersbergen			Address type:	Street Address
Building Type:	User	Bedrooms:	3	Lot #:	---
Owner:	Lanier Construction, LLC	Conditioned Area:	1803	Block/SubDivision:	---
Builder Home ID:		Total Stories:	1	PlatBook:	---
Builder Name:	Lanier Construction, LLC	Worst Case:	No	Street:	1168 S.W. Cumorah Hill Street
Permit Office:	Columbia	Rotate Angle:	0	County:	Columbia
Jurisdiction:	221000	Cross Ventilation:	No	City, State, Zip:	Ft 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	1803	20386 cu ft

SPACES

✓ Number	Name	Area	Volume	Kitchen	Occupants	Bedrooms	Finished	Cooled	Heated
___ 1	Tlt	23	207	No	0		Yes	Yes	Yes
___ 2	Mstr Bathrm	154	1386	No	0		Yes	Yes	Yes
___ 3	WIC Hers	28	252	No	0		Yes	Yes	Yes
___ 4	WIC His	25	225	No	0		No	Yes	Yes
___ 5	Mstr Bedroom	203	1827	No	2	1	Yes	Yes	Yes
___ 6	Bedroom #2	143	1287	No	1	1	Yes	Yes	Yes
___ 7	Vanity #2	53	477	No	0		No	Yes	Yes
___ 8	Bathrm	53	473	No	0		No	Yes	Yes
___ 9	Bedroom #3	150	1350	No	1	1	Yes	Yes	Yes
___ 10	Vanity #3	53	477	No	0		Yes	Yes	Yes
___ 11	Pwdr	24	216	No	0		No	Yes	Yes
___ 12	Mud Room	150	1350	No	0		Yes	Yes	Yes
___ 13	Great Rm/Kitchen	717	10612	Yes	0		Yes	Yes	Yes
___ 14	Pantry	27	243	No	0		Yes	Yes	Yes

FLOORS (Total Exposed Area = 1800 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	Tlt	10.5	22.9 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 2	Slab-On-Grade Edge Ins	Mstr Bathrm	14.5	154.4 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 3	Slab-On-Grade Edge Ins	WIC Hers	5.5	27.5 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 4	Slab-On-Grade Edge Ins	WIC His	1	24.8 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 5	Slab-On-Grade Edge Ins	Mstr Bedroom	15	202.5 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 6	Slab-On-Grade Edge Ins	Bedroom #2	11	143 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 7	Slab-On-Grade Edge Ins	Vanity #2	1	52.5 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 8	Slab-On-Grade Edge Ins	Bathrm	1	52.5 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 9	Slab-On-Grade Edge Ins	Bedroom #3	24.5	149.5 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 10	Slab-On-Grade Edge Ins	Vanity #3	7	52.5 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___ 11	Slab-On-Grade Edge Ins	Pwdr	1	24 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

FLOORS(Continued)

✓	#	Floor Type	Space	Exposed Perim(ft)	Area	R-Value Perim.	R-Value Joist	U-Factor	Slab Insul. Vert/Horiz	Tile	Wood	Carpet
___	12	Slab-On-Grade Edge Ins	Mud Room	12	150 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	13	Slab-On-Grade Edge Ins	Great Rm/Kitchen	60.9	716.9 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00
___	14	Slab-On-Grade Edge Ins	Pantry	11	27.1 sqft	0.0	---	0.473	2 (ft)/0 (ft)	0.00	1.00	0.00

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	2013 ft²	450 ft²	0.00	Unfinished, Galvalum	N	0.9	No	0.4	No	22.7	26.57

ATTIC

✓	#	Type	Ventilation	Vent Ratio (1 in)	Area	RBS	IRCC
___	1	Full attic	Unvented	0	1800 ft²	N	N

CEILING (Total Exposed Area = 1803 sq.ft.)

✓	#	Ceiling Type	Space	R-Value	Ins. Type	Area	U-Factor	Framing Frac.	Truss Type
___	1	Flat ceiling under attic(Unvented)	Tlt	0.0	Blown	23.0ft²	0.057	0.00	Wood
___	2	Flat ceiling under attic(Unvented)	Mstr Bathrm	0.0	Blown	154.0ft²	0.057	0.00	Wood
___	3	Flat ceiling under attic(Unvented)	WIC Hers	0.0	Blown	28.0ft²	0.057	0.00	Wood
___	4	Flat ceiling under attic(Unvented)	WIC His	0.0	Blown	25.0ft²	0.057	0.00	Wood
___	5	Flat ceiling under attic(Unvented)	Mstr Bedroom	0.0	Blown	203.0ft²	0.057	0.00	Wood
___	6	Flat ceiling under attic(Unvented)	Bedroom #2	0.0	Blown	143.0ft²	0.057	0.00	Wood
___	7	Flat ceiling under attic(Unvented)	Vanity #2	0.0	Blown	53.0ft²	0.057	0.00	Wood
___	8	Flat ceiling under attic(Unvented)	Bathrm	0.0	Blown	53.0ft²	0.057	0.00	Wood
___	9	Flat ceiling under attic(Unvented)	Bedroom #3	0.0	Blown	150.0ft²	0.057	0.00	Wood
___	10	Flat ceiling under attic(Unvented)	Vanity #3	0.0	Blown	53.0ft²	0.057	0.00	Wood
___	11	Flat ceiling under attic(Unvented)	Pwdr	0.0	Blown	24.0ft²	0.057	0.00	Wood
___	12	Flat ceiling under attic(Unvented)	Mud Room	0.0	Blown	150.0ft²	0.057	0.00	Wood
___	13	Flat ceiling under attic(Unvented)	Great Rm/Kitchen	0.0	Blown	717.0ft²	0.057	0.00	Wood
___	14	Flat ceiling under attic(Unvented)	Pantry	0.0	Blown	27.0ft²	0.057	0.00	Wood

WALLS (Total Exposed Area = 1904 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	Tlt	19.0	4.0	0	9.0	0	36.0	0.072	0	0.25	0.23	0 %
___	2	W	Exterior	Frame - Wood	Tlt	19.0	6.0	6	9.0	0	58.5	0.072	0	0.25	0.23	0 %
___	3	N	Exterior	Frame - Wood	Mstr Bathrm	19.0	9.0	6	9.0	0	85.5	0.072	0	0.25	0.23	0 %
___	4	W	Exterior	Frame - Wood	Mstr Bathrm	19.0	5.0	0	9.0	0	45.0	0.072	0	0.25	0.23	0 %
___	5	W	Exterior	Frame - Wood	WIC Hers	19.0	5.0	6	9.0	0	49.5	0.072	0	0.25	0.23	0 %
___	6	W	Exterior	Frame - Wood	Mstr Bedroom	19.0	15.0	0	9.0	0	135.0	0.072	0	0.25	0.23	0 %
___	7	N	Exterior	Frame - Wood	Bedroom #2	19.0	11.0	0	9.0	0	99.0	0.072	0	0.25	0.23	0 %
___	8	N	Exterior	Frame - Wood	Bedroom #3	19.0	11.0	6	9.0	0	103.5	0.072	0	0.25	0.23	0 %
___	9	E	Exterior	Frame - Wood	Bedroom #3	19.0	13.0	0	9.0	0	117.0	0.072	0	0.25	0.23	0 %
___	10	E	Exterior	Frame - Wood	Vanity #3	19.0	7.0	0	9.0	0	63.0	0.072	0	0.25	0.23	0 %
___	11	E	Exterior	Frame - Wood	Mud Room	19.0	12.0	0	9.0	0	108.0	0.072	0	0.25	0.23	0 %
___	12	E	Exterior	Frame - Wood	Great Rm/Kitchen	19.0	12.0	6	14.0	10	185.4	0.072	0	0.25	0.23	0 %
___	13	S	Exterior	Frame - Wood	Great Rm/Kitchen	19.0	30.0	6	14.0	10	452.4	0.072	0	0.25	0.23	0 %
___	14	W	Exterior	Frame - Wood	Great Rm/Kitchen	19.0	18.0	0	14.0	10	267.0	0.072	0	0.25	0.23	0 %
___	15	E	Exterior	Frame - Wood	Pantry	19.0	5.0	6	9.0	0	49.5	0.072	0	0.25	0.23	0 %

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INPUT SUMMARY CHECKLIST REPORT

WALLS(Continued)

___ 16	S	Exterior	Frame - Wood	Pantry	19.0	5.0	6	9.0	0	49.5	0.072	0	0.25	0.23	0 %

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

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

WINDOWS (Total Exposed Area = 256 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	N	3	Vinyl	Low-E Double	Y	0.47	0.31	N	N	9.0	1	3.00	3.00	1.3	8.0	Drapes/blinds	Ex. 50%
___ 2	W	6	Vinyl	Low-E Double	Y	0.47	0.31	N	N	30.0	2	3.00	5.00	1.3	4.0	Drapes/blinds	Ex. 50%
___ 3	N	7	Vinyl	Low-E Double	Y	0.47	0.31	N	N	15.0	1	3.00	5.00	1.3	12.0	Drapes/blinds	Ex. 50%
___ 4	N	8	Vinyl	Low-E Double	Y	0.47	0.31	N	N	15.0	1	3.00	5.00	1.3	8.0	Drapes/blinds	Ex. 50%
___ 5	E	11	Vinyl	Low-E Double	Y	0.47	0.31	N	N	20.0	1	3.00	6.67	10.0	4.0	None	None
___ 6	E	12	Vinyl	Low-E Double	Y	0.47	0.31	N	N	9.0	1	3.00	3.00	1.3	4.0	Drapes/blinds	Ex. 50%
___ 7	S	13	Vinyl	Low-E Double	Y	0.47	0.31	N	N	40.0	1	6.00	6.67	10.0	1.3	None	None
___ 8	S	13	Vinyl	Low-E Double	Y	0.47	0.31	N	N	60.0	4	3.00	5.00	10.0	1.5	Drapes/blinds	Ex. 50%
___ 9	S	13	Vinyl	Low-E Double	Y	0.47	0.31	N	N	28.0	2	6.00	2.33	1.3	1.3	None	None
___ 10	W	14	Vinyl	Low-E Double	Y	0.47	0.31	N	N	30.0	2	3.00	5.00	1.3	4.0	Drapes/blinds	Ex. 50%

INFILTRATION

√ #	Scope	Method	SLA	CFM50	ELA	EqLA	ACH	ACH50	Space(s)	Infiltration Test Volume
___ 1	Wholehouse	Proposed ACH(50)	0.00036	1681	92.25	173.19	0.1114	4.9	All	20382 cu ft

MASS

√ #	Mass Type	Area	Thickness	Furniture Fraction	Space
___ 1	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Tlt
___ 2	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Mstr Bathrm
___ 3	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	WIC Hers
___ 4	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	WIC His
___ 5	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Mstr Bedroom
___ 6	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Bedroom #2
___ 7	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Vanity #2
___ 8	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Bathrm
___ 9	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Bedroom #3
___ 10	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Vanity #3
___ 11	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Pwdr
___ 12	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Mud Room
___ 13	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Great Rm/Kitchen
___ 14	Default(8 lbs/sq.ft.)	0 ft²	0 ft	0.30	Pantry

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

FORM R405-2023

INPUT SUMMARY CHECKLIST REPORT

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	Mud Room	0.94 (0.93)	50.0 gal	62 gal	120 deg	Low	Yes	None	95

		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	AHU Location	CFM 25 TOT|OUT	QN OUT	AHU SEALED	RLF	HVAC # Heat	HVAC # Cool
___	1	Attic	6.0	118 ft²	Attic	6.0	47 ft²	Default Leakage	Mud Room	(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

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Load Short Form
Entire House
New Age Dimensions, LLC.

Job: Marion & Julia Van Mer...
Date: 09/09/2024
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	Semi-tight
Fireplaces	1 (Semi-tight)

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	0.044 cfm/Btuh
Static pressure	0.51 in H2O
Space thermostat	
Capacity balance point = 33 °F	

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	0.054 cfm/Btuh
Static pressure	0.51 in H2O
Load sensible heat ratio	0.77

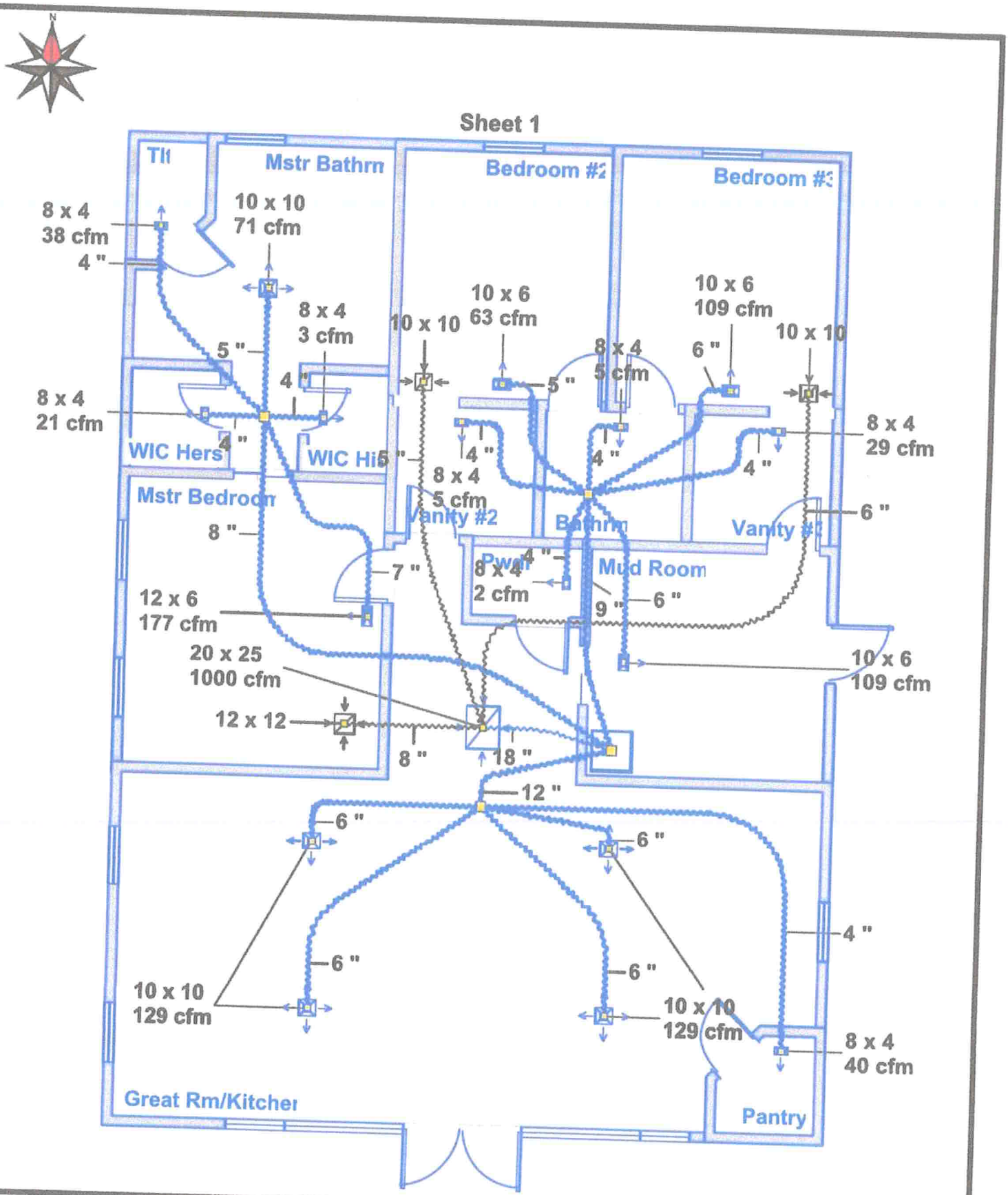
Backup:
Input = 8 kW, Output = 27297 Btuh, 100 AFUE

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Tlt	23	864	225	38	12
Mstr Bathrm	154	1635	622	71	34
WIC Hers	28	489	144	21	8
WIC His	25	59	42	3	2
Mstr Bedroom	203	2141	3279	94	177
Bedroom #2	143	1439	866	63	47
Vanity #2	53	124	89	5	5
Bathrm	53	124	89	5	5
Bedroom #3	150	2496	1117	109	60
Vanity #3	53	664	213	29	11
Pwdr	24	57	41	2	2
Mud Room	150	1617	2020	71	109
Great Rm/Kitchen	717	10274	9583	449	516
Pantry	27	913	241	40	13

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

Entire House	1800	22896	18574	1000	1000
Other equip loads		3027	3194		
Equip. @ 0.97 RSM			21114		
Latent cooling			6552		
TOTALS	1800	25922	27666	1000	1000

Sheet 1



Job #: Marion & Julia Van Mersbergen
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.
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Scale: 1 : 77

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wrightsoft

Manual S Compliance Report
Entire House
New Age Dimensions, LLC.

Job: Marion & Julia Van Mer...
Date: 09/09/2024
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:	21767	Btuh	Entering coil DB:	78.2°F
Outdoor design WB:	76.3°F	Latent gain:	6552	Btuh	Entering coil WB:	64.7°F
Indoor design DB:	75.0°F	Total gain:	28319	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:	22420	Btuh	103% of load	
Latent capacity:	5203	Btuh	79% of load	
Total capacity:	27623	Btuh	98% of load	SHR: 81%

Heating Equipment

Design Conditions

Outdoor design DB:	33.4°F	Heat loss:	25922	Btuh	Entering coil DB:	65.0°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:	20438	Btuh	79% of load			
Supplemental heat required:	5485	Btuh			Capacity balance:	33 °F
					Economic balance:	-99 °F

Backup equipment type:	Elec strip				
Manufacturer:			Model:		
Actual airflow:	1000	cfm			
Output capacity:	8.0	kW	105% of load	Temp. rise:	25 °F

Meets all requirements of ACCA Manual S.

wrightsoft

Duct System Summary
Entire House
New Age Dimensions, LLC.

Job: Marion & Julia Van Mer...
Date: 09/09/2024
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	0.235 / 0.095 in H2O	0.235 / 0.095 in H2O
Lowest friction rate	0.880 in/100ft	0.880 in/100ft
Actual air flow	1000 cfm	1000 cfm
Total effective length (TEL)	282 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	124	5	5	0.880	4.0	0x 0	VIFx	18.2	165.0	st2
Bedroom #2	h	1439	63	47	0.880	5.0	0x 0	VIFx	21.8	170.0	st2
Bedroom #3	h	2496	109	60	0.880	6.0	0x 0	VIFx	23.3	170.0	st2
Great Rm/Kitchen	c	2396	112	129	0.880	6.0	0x 0	VIFx	18.7	165.0	st3
Great Rm/Kitchen-A	c	2396	112	129	0.880	6.0	0x 0	VIFx	23.1	165.0	st3
Great Rm/Kitchen-B	c	2396	112	129	0.880	6.0	0x 0	VIFx	15.7	165.0	st3
Great Rm/Kitchen-C	c	2396	112	129	0.880	6.0	0x 0	VIFx	21.5	165.0	st3
Mstr Bathrm	h	1635	71	34	0.880	5.0	0x 0	VIFx	37.8	125.0	st1
Mstr Bedroom	c	3279	94	177	0.880	7.0	0x 0	VIFx	44.9	135.0	st1
Mud Room	c	2020	71	109	0.880	6.0	0x 0	VIFx	22.6	165.0	st2
Pantry	h	913	40	13	0.880	4.0	0x 0	VIFx	35.7	165.0	st3
Pwdr	h	57	2	2	0.880	4.0	0x 0	VIFx	18.0	165.0	st2
Tlt	h	864	38	12	0.880	4.0	0x 0	VIFx	43.1	130.0	st1
Vanity #2	h	124	5	5	0.880	4.0	0x 0	VIFx	22.8	170.0	st2
Vanity #3	h	664	29	11	0.880	4.0	0x 0	VIFx	24.9	170.0	st2
WIC Hers	h	489	21	8	0.880	4.0	0x 0	VIFx	34.3	125.0	st1
WIC His	h	59	3	2	0.880	4.0	0x 0	VIFx	34.3	125.0	st1

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	227	232	0.880	665	8.0	0 x 0	VinlFlx	
st2	Peak AVF	285	239	0.880	645	9.0	0 x 0	VinlFlx	
st3	Peak AVF	489	529	0.880	674	12.0	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
rb1	20x 23	1000	1000	81.6	0.880	566	18.0	0x 0		VlFx	rst3

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst3	Peak AVF	1000	1000	0.880	566	18.0	0 x 0	VinlFlx	