Manual S Compliance Report

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	29821	Btuh	Entering coil DB:	77.9°F
Outdoor design WB:	76.0°F	Latent gain:	5917	Btuh	Entering coil WB:	63.9°F
Indoor design DB:	75.0°F	Total gain:	35738	Btuh		
Indoor RH:	50%	Estimated airflow:	1225	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Trane		Model:	4TWR5042H1+TEM6A0D48H41	
Actual airflow:	1225	cfm			
Sensible capacity:	33634	Btuh	113% of load		
Latent capacity:	6000	Btuh	101% of load		
Total capacity:	39634	Btuh	111% of load	SHR:	85%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	31472	Btuh	Entering coil DB:	66.8°F
Indoor design DB:	68.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP						
Manufacturer:	Trane		Model:	4TWR5042H1+TEM6A0D48H41			
Actual airflow:	1400	cfm					
Output capacity:	30321	Btuh	96% of load		Capacity balance:	28	°F
Supplemental heat required:	1151	Btuh			Economic balance:	-99	°F

Backup equipment type:	Elec strip						
Manufacturer:			Model:				
Actual airflow:	1400	cfm					
Output capacity:	8.9	kW	96% of load	Temp. rise:	20	°F	

Meets all requirements of ACCA Manual S.

DHW Report

Entire House

DL Williams Heating & Cooling LLC

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Plan: 2508

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Design Criteria

Occupants	
Age	Number
0-5	0
6-13	2
14-59	2
60+	0

Not occupied during the day	
Dishwasher	
Clothes washer	
Additional use (gpd)	0
Setpoint (°F)	120
Daily use (gpd)	61

Electric conventional (40 gal, 0.90 EF)

Manufacturer	
Trade name	
Model	
AHRI ref. number	
Tank size (gal)	40
Energy factor	0.90
Input (kWh)	0.0
1st hour (gal)	50
Recovery eff. (%)	98

Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

Form RPER 1 15 Mar 09

Columbia
Header Information

Contractor: DL Williams Heating & Cooling LLC
Derrick Williams
Mechanical license:

Building plan #: 2508

Home address (Street or Lot#, Block, Subdivision): , Entire House

REQUIRED ATTACHMENTS	ATTACHED
Manual J1 Form (and supporting worksheets):	Yes ☐ No ☐
or MJ1AE Form* (and supporting worksheets):	Yes ☐ No ☐
OEM performance data (heating, cooling, blower):	Yes ☐ No ☐
Manual D Friction Rate Worksheet:	Yes ☐ No ☐
Duct distribution sketch:	Yes ☐ No ☐

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature:	33	°F
Indoor temperature:	68	°F
Total heat loss:	31472	Btuh

Summer Design Conditions

Outdoor temperature:	92	°F
Indoor temperature:	75	°F
Grains difference:	45 gr/lb @ 50% RH	
Sensible heat gain:	30743	Btuh
Latent heat gain:	6100	Btuh
Total heat gain:	36843	Btuh

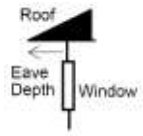
Building Construction Information

Building

Orientation: (North, East, West, South, Northeast, Northwest, Southeast, Southwest)	Front Door faces North	
Number of bedrooms:	1	
Conditioned floor area:	2506	ft²
Number of occupants:	9	

Windows

Eave overhang depth:	11.0	ft
Internal shade: (Blinds, drapes, etc.)	blinds	
Number of skylights:	0	



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: (Furnace, Heat pump, Boiler, etc.)	Split ASHP
Model:	Trane 4TWR5042H1+TEM6A0D48H41
Heating output capacity: (Heat pumps - capacity at winter design outdoor conditions)	30321 Btuh
Aux. heating output capacity:	30348 Btuh

Cooling Equipment Data

Equipment type: (Air Conditioner, Heat pump, etc.)	Split ASHP
Model:	Trane 4TWR5042H1+TEM6A0D48H41
Total cooling capacity:	39634 Btuh
Sensible cooling capacity:	33634 Btuh
Latent cooling capacity:	6000 Btuh

Blower Data

Heating cfm:	1400
Cooling cfm:	1225
Static pressure: (Fan's rated external static pressure for design airflow)	0 in H2O

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow:	1400	cfm	Longest supply duct:	182	ft	Duct Materials Used	
Equipment design ESP:	0	in H2O	Longest return duct:	61	ft	Trunk duct:	Round flex vinyl
Total device pressure losses:	0	in H2O	**Total effective length (TEL):**	243	ft		
Available static pressure (ASP):	0	in H2O	**Friction rate:** (Friction Rate = ASP ÷ (TEL x 100))	0	in/100ft	Branch duct:	Round flex vinyl

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

Reserved for County, Town Municipality or Authority having jurisdiction use.

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist

Load Short Form
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

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Lake City, FL 32024

Design Information

	Htg	Clg
Outside db (°F)	33	92
Inside db (°F)	68	75
Design TD (°F)	35	17
Daily range	-	M
Inside humidity (%)	30	50
Moisture difference (gr/lb)	8	45

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Trane
Trade	TRANE
Model	4TWR5042H1
AHRI ref	9926385

Efficiency	9.5 HSPF2	
Heating input		
Heating output	39000	Btuh @ 47°F
Temperature rise	25	°F
Actual air flow	1400	cfm
Air flow factor	0.044	cfm/Btuh
Static pressure	0	in H2O
Space thermostat		

Capacity balance point = 28 °F

Backup:
Input = 9 kW, Output = 30348 Btuh, 100 AFUE

COOLING EQUIPMENT

Make	Trane
Trade	TRANE
Cond	4TWR5042H1
Coil	TEM6A0D48H41
AHRI ref	9926385

Efficiency	12.5 EER2, 15 SEER2	
Sensible cooling	28700	Btuh
Latent cooling	12300	Btuh
Total cooling	41000	Btuh
Actual air flow	1225	cfm
Air flow factor	0.041	cfm/Btuh
Static pressure	0	in H2O
Load sensible heat ratio	0.83	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
LR	182	4717	5186	210	213
foyer	72	1672	1073	74	44
dining	182	2229	2563	99	105
utility	72	150	973	7	40
bath2	60	125	191	6	8
br2	176	2234	1109	99	46
br4	183	3596	2096	160	86
hall	24	0	0	0	0
br3	157	1878	978	84	40
bath3	92	1715	692	76	28
brkfst	84	1262	1461	56	60
kitchen	167	304	2629	14	108
family	479	3896	6240	173	256
mbath	157	1460	797	65	33

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

lav	15	23	37	1	2
wic1	40	63	100	3	4
wic2	40	960	364	43	15
mbed	252	5189	3331	231	137
hall2	60	0	0	0	0
ah	12	0	0	0	0
Entire House	2506	31472	29821	1400	1225
Other equip loads		0	0		
Equip. @ 0.97 RSM			28926		
Latent cooling			5917		
TOTALS	2506	31472	34843	1400	1225

Building Analysis
Entire House
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Project Information

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Lake City, FL 32024

Design Conditions

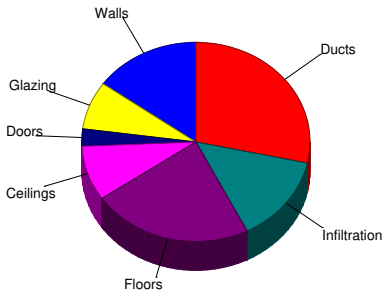
Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4
Infiltration:		
Method	Simplified	
Construction quality	Average	
Fireplaces	0	

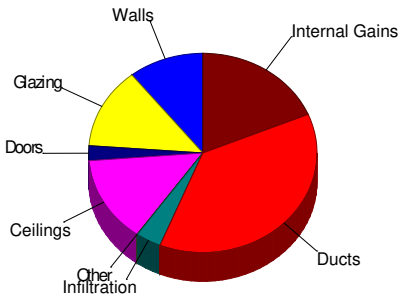
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.2	4747	15.1
Glazing	10.5	2457	7.8
Doors	21.0	882	2.8
Ceilings	1.1	2807	8.9
Floors	2.9	7173	22.8
Infiltration	2.5	4464	14.2
Ducts		8942	28.4
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	
Total		**31472**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	2.1	3187	10.7
Glazing	16.7	3919	13.1
Doors	17.1	718	2.4
Ceilings	1.7	4170	14.0
Floors	0.0	8	0.0
Infiltration	0.6	1084	3.6
Ducts		11164	37.4
Ventilation		0	0
Internal gains		5570	18.7
Blower		0	0
Adjustments		0	
Total		**29821**	**100.0**



Latent Cooling Load = 5917 Btuh
Overall U-value = 0.076 Btuh/ft²-°F, Window / Floor Area = 9.3 %

Data entries checked.

Component Constructions
Entire House

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Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	Heating	Cooling
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	Heating	Cooling
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	450	0.091	13.0	3.18	1433	2.14	962
	e	207	0.091	13.0	3.18	661	2.14	444
	s	426	0.091	13.0	3.18	1357	2.14	911
	w	391	0.091	13.0	3.18	1246	2.14	836
	nw	16	0.091	13.0	3.18	50	2.14	34
	all	1490	0.091	13.0	3.18	4747	2.14	3187
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (3 ft window ht, 1 ft sep.); 6.67 ft head ht	n	9	0.300	0	10.5	95	7.65	69
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	n	15	0.300	0	10.5	158	7.65	115
	e	30	0.300	0	10.5	315	20.0	599
	s	30	0.300	0	10.5	315	7.65	230
	w	45	0.300	0	10.5	473	20.0	898
	all	120	0.300	0	10.5	1260	15.3	1842
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (6 ft window ht, 1 ft sep.); 6.67 ft head ht	e	36	0.300	0	10.5	378	20.1	724
4B5-2fv: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 11 ft overhang (6.8 ft window ht, 1 ft sep.); 6.67 ft head ht	e	14	0.300	0	10.5	143	9.88	134
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	w	13	0.300	0	10.5	136	10.3	134
	nw	13	0.300	0	10.5	131	15.7	196
	all	25	0.300	0	10.5	267	13.0	330

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 9 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	w	30	0.300	0	10.5	315	7.65	230
Doors								
11J0: Door, mtl fbrgl type	e	21	0.600	6.3	21.0	441	17.1	359
	w	21	0.600	6.3	21.0	441	17.1	359
	all	42	0.600	6.3	21.0	882	17.1	718
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		2494	0.032	30.0	1.12	2793	1.66	4150
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins		12	0.032	30.0	1.12	13	1.66	20
Floors								
19A-19bscp: Part floor, carpet flr fnsh, r-19 ins, frm flr, 6" thkns		12	0.049	19.0	1.34	16	0.65	8
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		207	0.989	0	34.6	7157	0	0

Component Constructions

LR

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Design Conditions

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Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	115	0.091	13.0	3.18	366	2.14	246
	e	110	0.091	13.0	3.18	350	2.14	235
	s	40	0.091	13.0	3.18	127	2.14	86
	all	265	0.091	13.0	3.19	844	2.14	567
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	n	15	0.300	0	10.5	158	7.65	115
	e	30	0.300	0	10.5	315	20.0	599
	all	45	0.300	0	10.5	473	15.9	714
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		182	0.032	30.0	1.12	204	1.66	303
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		31	0.989	0	34.6	1073	0	0

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Method	Simplified
Construction quality	Average
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Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	29	0.091	13.0	3.18	94	2.14	63
Partitions								
(none)								
Windows								
4B5-2fv: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 11 ft overhang (6.8 ft window ht, 1 ft sep.); 6.67 ft head ht	e	14	0.300	0	10.5	143	9.88	134
Doors								
11J0: Door, mtl fbrgl type	e	21	0.600	6.3	21.0	441	17.1	359
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		72	0.032	30.0	1.12	81	1.66	120
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		8	0.989	0	34.6	277	0	0

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Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	8	0.091	13.0	3.18	25	2.14	17
	e	68	0.091	13.0	3.18	217	2.14	145
	all	76	0.091	13.0	3.18	242	2.14	163
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (6 ft window ht, 1 ft sep.); 6.67 ft head ht	e	36	0.300	0	10.5	378	20.1	724
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		182	0.032	30.0	1.12	204	1.66	303
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		14	0.989	0	34.6	485	0	0

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
(none)								
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		72	0.032	30.0	1.12	81	1.66	120
Floors								
(none)								

Component Constructions
bath2

DL Williams Heating & Cooling LLC

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
(none)								
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		60	0.032	30.0	1.12	67	1.66	100
Floors								
(none)								

Component Constructions

br2

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	Heating	Cooling
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	Heating	Cooling
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	s	113	0.091	13.0	3.18	360	2.14	242
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	s	15	0.300	0	10.5	158	7.65	115
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		176	0.032	30.0	1.12	197	1.66	293
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		16	0.989	0	34.6	554	0	0

Component Constructions

br4

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	s	120	0.091	13.0	3.18	382	2.14	257
	w	89	0.091	13.0	3.18	283	2.14	190
	all	209	0.091	13.0	3.18	666	2.14	447
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	w	15	0.300	0	10.5	158	20.0	299
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		183	0.032	30.0	1.12	205	1.66	305
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		28	0.989	0	34.6	969	0	0

Component Constructions

hall

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
(none)								
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		24	0.032	30.0	1.12	27	1.66	40
Floors								
(none)								

Component Constructions

br3

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	Heating	Cooling
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	Heating	Cooling
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	s	89	0.091	13.0	3.18	283	2.14	190
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	s	15	0.300	0	10.5	158	7.65	115
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		157	0.032	30.0	1.12	176	1.66	261
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		13	0.989	0	34.6	450	0	0

Component Constructions
bath3

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	48	0.091	13.0	3.19	153	2.14	103
	w	64	0.091	13.0	3.18	204	2.14	137
	all	112	0.091	13.0	3.18	357	2.14	240
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		92	0.032	30.0	1.12	103	1.66	153
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		14	0.989	0	34.6	485	0	0

Component Constructions

brkfst

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	Heating	Cooling
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	Heating	Cooling
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	w	27	0.091	13.0	3.18	86	2.14	58
	nw	16	0.091	13.0	3.18	50	2.14	34
	all	43	0.091	13.0	3.18	137	2.14	92
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	w	13	0.300	0	10.5	136	10.3	134
	nw	13	0.300	0	10.5	131	15.7	196
	all	25	0.300	0	10.5	267	13.0	330
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		84	0.032	30.0	1.12	94	1.66	140
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		7	0.989	0	34.6	234	0	0

Component Constructions
kitchen

DL Williams Heating & Cooling LLC

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
(none)								
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		167	0.032	30.0	1.12	187	1.66	278
Floors								
(none)								

Component Constructions
family
DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	w	129	0.091	13.0	3.18	411	2.14	276
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 9 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	w	30	0.300	0	10.5	315	7.65	230
Doors								
11J0: Door, mtl fbrgl type	w	21	0.600	6.3	21.0	441	17.1	359
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		479	0.032	30.0	1.12	536	1.66	797
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		18	0.989	0	34.6	623	0	0

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Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	71	0.091	13.0	3.18	226	2.14	152
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (3 ft window ht, 1 ft sep.); 6.67 ft head ht	n	9	0.300	0	10.5	95	7.65	69
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		157	0.032	30.0	1.12	176	1.66	261
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		10	0.989	0	34.6	346	0	0

Component Constructions

lav

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
(none)								
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		15	0.032	30.0	1.12	17	1.66	25
Floors								
(none)								

Component Constructions

wic1

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
(none)								
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		40	0.032	30.0	1.12	45	1.66	67
Floors								
(none)								

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	64	0.091	13.0	3.18	204	2.14	137
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		40	0.032	30.0	1.12	45	1.66	67
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		8	0.989	0	34.6	277	0	0

Component Constructions

mbed

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	144	0.091	13.0	3.18	459	2.14	308
	s	64	0.091	13.0	3.18	204	2.14	137
	w	82	0.091	13.0	3.18	261	2.14	175
	all	290	0.091	13.0	3.18	924	2.14	620
Partitions								
(none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	w	30	0.300	0	10.5	315	20.0	599
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		252	0.032	30.0	1.12	282	1.66	419
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		40	0.989	0	34.6	1385	0	0

Component Constructions

hall2

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	Heating	Cooling
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	Heating	Cooling
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	Or	Area ft²	U-value Btuh/ft²-°F	Insul R ft²-°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls								
(none)								
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		60	0.032	30.0	1.12	67	1.66	100
Floors								
(none)								

Component Constructions

ah

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:	
Method	Simplified
Construction quality	Average
Fireplaces	0

Construction descriptions	**Or**	**Area** ft²	**U-value** Btuh/ft²-°F	**Insul R** ft²-°F/Btuh	**Htg HTM** Btuh/ft²	**Loss** Btuh	**Clg HTM** Btuh/ft²	**Gain** Btuh
Walls								
(none)								
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins		12	0.032	30.0	1.12	13	1.66	20
Floors								
19A-19bscp: Part floor, carpet flr fnsh, r-19 ins, frm flr, 6" thkns		12	0.049	19.0	1.34	16	0.65	8

Project Summary
Entire House
DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33	°F
Inside db	68	°F
Design TD	35	°F

Summer Design Conditions

Outside db	92	°F
Inside db	75	°F
Design TD	17	°F
Daily range	M	
Relative humidity	50	%
Moisture difference	45	gr/lb

Heating Summary

Structure	22530	Btuh
Ducts (R-6.0)	8942	Btuh
Central vent (0 cfm) (none)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	31472	Btuh

Sensible Cooling Equipment Load Sizing

Structure	18656	Btuh
Ducts (R-6.0)	11164	Btuh
Central vent (0 cfm) (none)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.97	
Equipment sensible load	28926	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	2506	2506
Volume (ft³)	21872	21872
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	117	58

Latent Cooling Equipment Load Sizing

Structure	3592	Btuh
Ducts	2325	Btuh
Central vent (0 cfm) (none)	0	Btuh
Equipment latent load	5917	Btuh
Equipment Total Load (Sen+Lat)	34843	Btuh
Req. total capacity at 0.70 SHR	3.4	ton

Heating Equipment Summary

Make	Trane
Trade	TRANE
Model	4TWR5042H1
AHRI ref	9926385

Efficiency	9.5 HSPF2	
Heating input		
Heating output	39000	Btuh @ 47°F
Temperature rise	25	°F
Actual air flow	1400	cfm
Air flow factor	0.044	cfm/Btuh
Static pressure	0	in H2O
Space thermostat		

Capacity balance point = 28 °F

Backup:
Input = 9 kW, Output = 30348 Btuh, 100 AFUE

Cooling Equipment Summary

Make	Trane
Trade	TRANE
Cond	4TWR5042H1
Coil	TEM6A0D48H41
AHRI ref	9926385

Efficiency	12.5 EER2, 15 SEER2	
Sensible cooling	28700	Btuh
Latent cooling	12300	Btuh
Total cooling	41000	Btuh
Actual air flow	1225	cfm
Air flow factor	0.041	cfm/Btuh
Static pressure	0	in H2O
Load sensible heat ratio	0.83	

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

AED Assessment

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

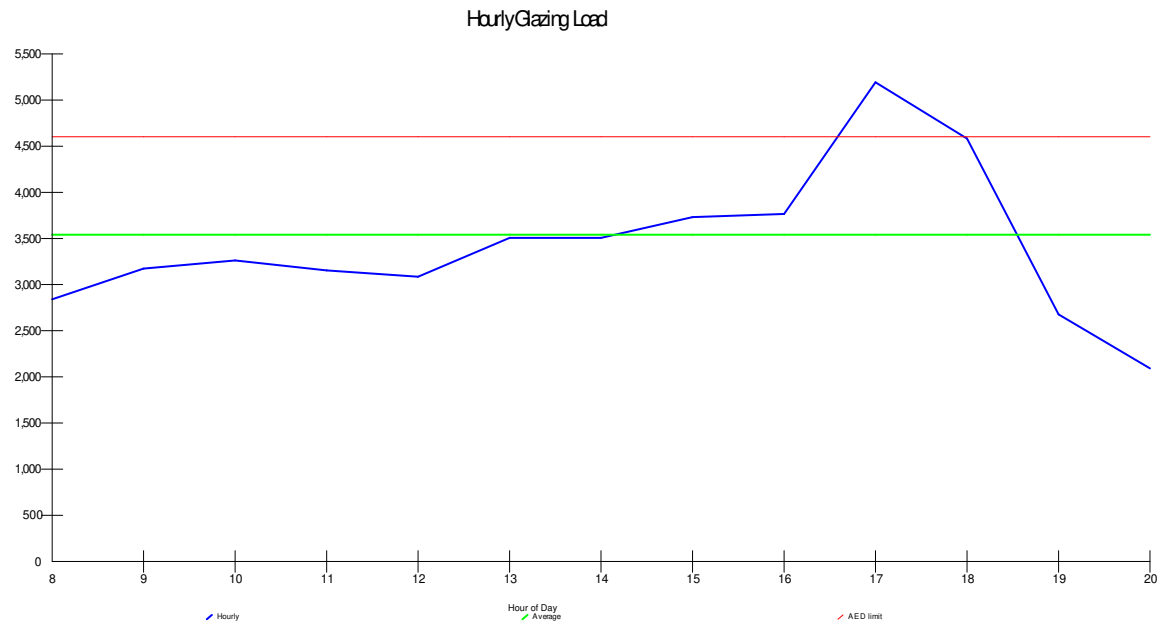
Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	Heating	Cooling
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	Heating	Cooling
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 46.7%.

House does not have adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 591 Btuh (PFG - 1.3*AFG)

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		Entire House	LR
1	Room name		
2	Exposed wall	206.8 ft	31.0 ft
3	Room height	8.7 ft	10.0 ft heat/cool
4	Room dimensions		14.0 x 13.0 ft
5	Room area	2506.0 ft²	182.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	474	450	1433	962	130	115	366	246
.	└G	4A5-2ov	0.300	n	10.50	7.65	9	0	95	69	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	15	0	158	115	15	0	158	115
.	W	12C-0sw	0.091	e	3.18	2.14	308	207	661	444	140	110	350	235
11	└G	4A5-2ov	0.300	e	10.50	19.97	30	2	315	599	30	2	315	599
	└G	4A5-2ov	0.300	e	10.50	20.11	36	2	378	724	0	0	0	0
	└G	4B5-2fv	0.300	e	10.50	9.88	14	14	143	134	0	0	0	0
	└D	11J0	0.600	e	21.00	17.10	21	21	441	359	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	456	426	1357	911	40	40	127	86
	└G	4A5-2ov	0.300	s	10.50	7.65	30	30	315	230	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	500	391	1246	836	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	19.97	45	3	473	898	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	10.34	13	10	136	134	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	7.65	30	30	315	230	0	0	0	0
	└D	11J0	0.600	w	21.00	17.10	21	21	441	359	0	0	0	0
	W	12C-0sw	0.091	nw	3.18	2.14	28	16	50	34	0	0	0	0
	└G	4A5-2ov	0.300	nw	10.50	15.69	13	0	131	196	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	2494	2494	2793	4150	182	182	204	303
	C	16B-30ad	0.032	-	1.12	1.66	12	12	13	20	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	12	12	16	8	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	2494	207	7157	0	182	31	1073	0
6	c) AED excursion									591				-119
	Envelope loss/gain								18065	12002			2593	1464
12	a) Infiltration								4464	1084			784	190
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					9			2070	3			690
		Appliances/other								3500				900
	Subtotal (lines 6 to 13)								22530	18656			3377	3245
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								22530	18656			3377	3245
15	Duct loads						40%	60%	8942	11164	40%	60%	1340	1942
	Total room load								31472	29821			4717	5186
	Air required (cfm)								1400	1225			210	213

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					foyer				dining					
2	Exposed wall					8.0 ft				14.0 ft					
3	Room height					8.0 ft			heat/cool	8.0 ft			heat/cool		
4	Room dimensions					8.0 x 9.0 ft				13.0 x 14.0 ft					
5	Room area					72.0 ft²				182.0 ft²					
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	8	8	25	17
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	64	29	94	63	104	68	217	145
11	└G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	36	2	378	724
	└G	4B5-2fv	0.300	e	10.50	9.88	14	14	143	134	0	0	0	0
	└D	11J0	0.600	e	21.00	17.10	21	21	441	359	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0
	└D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	72	72	81	120	182	182	204	303
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	72	8	277	0	182	14	485	0
6	c) AED excursion									-44				110
	Envelope loss/gain								1035	632			1309	1299
12	a) Infiltration								162	39			283	69
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	1			230
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								1197	671			1592	1598
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			4	5
14	Subtotal								1197	671			1595	1603
15	Duct loads						40%	60%	475	402	40%	60%	633	959
	Total room load								1672	1073			2229	2563
	Air required (cfm)								74	44			99	105

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		utility	bath2
1	Room name		
2	Exposed wall	0 ft	0 ft
3	Room height	8.0 ft	8.0 ft
4	Room dimensions	heat/cool	heat/cool
		1.0 x 72.0 ft	6.0 x 10.0 ft
5	Room area	72.0 ft²	60.0 ft²

	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
11	G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0
	G	4B5-2fv	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0
	D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	72	72	81	120	60	60	67	100
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	72	0	0	0	60	0	0	0

6	c) AED excursion									-38				-6
	Envelope loss/gain								81	82			67	94
12	a) Infiltration								0	0			0	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				0			0	0			0
		Appliances/other								500				0
	Subtotal (lines 6 to 13)								81	582			67	94
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								26	27			22	26
14	Subtotal								107	609			89	119
15	Duct loads						40%	60%	43	364	40%	60%	36	71
	Total room load								150	973			125	191
	Air required (cfm)								7	40			6	8

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

							br2				br4			
1	Room name													
2	Exposed wall						16.0 ft				28.0 ft			
3	Room height						8.0 ft		heat/cool		8.0 ft		heat/cool	
4	Room dimensions						11.0 x 16.0 ft				1.0 x 183.0 ft			
5	Room area						176.0 ft²				183.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
11	├G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0
	├G	4B5-2fv	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
	└D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	128	113	360	242	120	120	382	257
	└G	4A5-2ov	0.300	s	10.50	7.65	15	15	158	115	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	104	89	283	190
	├G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	15	1	158	299
	├G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0
	└D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	176	176	197	293	183	183	205	305
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	176	16	554	0	183	28	969	0
6	c) AED excursion									-45				108
	Envelope loss/gain								1268	604			1997	1159
12	a) Infiltration								324	79			566	138
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								1592	683			2564	1296
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								8	11			11	15
14	Subtotal								1600	694			2574	1311
15	Duct loads						40%	60%	635	415	40%	60%	1022	785
	Total room load								2234	1109			3596	2096
	Air required (cfm)								99	46			160	86

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					hall						br3			
2	Exposed wall					0 ft						13.0 ft			
3	Room height					8.0 ft				heat/cool		8.0 ft			heat/cool
4	Room dimensions					6.0 x 4.0 ft						1.0 x 157.0 ft			
5	Room area					24.0 ft²						157.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
11	G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0
	G	4B5-2fv	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	104	89	283	190
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	15	15	158	115
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0
	D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	24	24	27	40	157	157	176	261
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	24	0	0	0	157	13	450	0
6	c) AED excursion									-2				-39
	Envelope loss/gain								27	37			1067	528
12	a) Infiltration								0	0			263	64
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								27	37			1330	591
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								-27	-37			15	20
14	Subtotal								0	0			1344	612
15	Duct loads						40%	60%	0	0	40%	60%	534	366
	Total room load								0	0			1878	978
	Air required (cfm)								0	0			84	40

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					bath3						brkfst			
2	Exposed wall					14.0 ft						6.8 ft			
3	Room height					8.0 ft			heat/cool			10.0 ft			heat/cool
4	Room dimensions						1.0 x 92.0 ft						1.0 x 84.0 ft		
5	Room area					92.0 ft²						84.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	48	48	153	103	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
11	└G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0
	└G	4B5-2fv	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
	└D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	64	64	204	137	40	27	86	58
	└G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0	13	10	136	134
	└G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0
	└D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0	28	16	50	34
	└G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0	13	0	131	196
	C	16B-30ad	0.032	-	1.12	1.66	92	92	103	153	84	84	94	140
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	92	14	485	0	84	7	234	0
6	c) AED excursion									-28				311
	Envelope loss/gain								944	364			731	872
12	a) Infiltration								283	69			173	42
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								1227	433			904	914
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								1227	433			904	914
15	Duct loads						40%	60%	487	259	40%	60%	359	547
	Total room load								1715	692			1262	1461
	Air required (cfm)								76	28			56	60

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name					kitchen						family			
2	Exposed wall					0 ft						18.0 ft			
3	Room height					10.0 ft			heat/cool			10.0 ft			heat/cool
4	Room dimensions					1.0	x	167.0 ft				1.0	x	479.0 ft	
5	Room area					167.0 ft²						479.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
11	G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0
	G	4B5-2fv	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
	D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	180	129	411	276
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	30	30	315	230
	D	11J0	0.600	w	21.00	17.10	0	0	0	0	21	21	441	359
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	167	167	187	278	479	479	536	797
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	167	0	0	0	479	18	623	0
6	c) AED excursion									-105				301
	Envelope loss/gain								187	173			2326	1963
12	a) Infiltration								0	0			455	110
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				1			230	4			920
		Appliances/other								1200				900
	Subtotal (lines 6 to 13)								187	1603			2781	3893
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								30	42			8	11
14	Subtotal								217	1645			2789	3904
15	Duct loads						40%	60%	86	984	40%	60%	1107	2336
	Total room load								304	2629			3896	6240
	Air required (cfm)								14	108			173	256

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name						mbath					lav			
2	Exposed wall						10.0 ft					0 ft			
3	Room height						8.0 ft			heat/cool		8.0 ft			heat/cool
4	Room dimensions						1.0	x	157.0 ft			3.0	x	5.0 ft	
5	Room area						157.0 ft²					15.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	80	71	226	152	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	9	0	95	69	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
11	├G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0
	├G	4B5-2fv	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
	└D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0
	└D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	157	157	176	261	15	15	17	25
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	157	10	346	0	15	0	0	0
6	c) AED excursion									-33				-2
	Envelope loss/gain								843	449			17	23
12	a) Infiltration								202	49			0	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								1045	498			17	23
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								1045	498			17	23
15	Duct loads						40%	60%	415	298	40%	60%	7	14
	Total room load								1460	797			23	37
	Air required (cfm)								65	33			1	2

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

							wic1				wic2			
1	Room name							0 ft				8.0 ft		
2	Exposed wall						8.0 ft		heat/cool		8.0 ft		heat/cool	
3	Room height							5.0 x 8.0 ft				5.0 x 8.0 ft		
4	Room dimensions						40.0 ft²				40.0 ft²			
5	Room area													
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	64	64	204	137
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
11	├G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0
	├G	4B5-2fv	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
	└D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0	0	0	0	0
	├G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0
	└D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	40	40	45	67	40	40	45	67
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	40	0	0	0	40	8	277	0
6	c) AED excursion									-4				-15
	Envelope loss/gain								45	62			526	188
12	a) Infiltration								0	0			162	39
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								45	62			687	228
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								45	62			687	228
15	Duct loads						40%	60%	18	37	40%	60%	273	136
	Total room load								63	100			960	364
	Air required (cfm)								3	4			43	15

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

							mbed				hall2			
1	Room name													
2	Exposed wall						40.0 ft				0 ft			
3	Room height						8.0 ft		heat/cool		8.0 ft		heat/cool	
4	Room dimensions						14.0 x 18.0 ft				15.0 x 4.0 ft			
5	Room area						252.0 ft²				60.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	144	144	459	308	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	└G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
11	└G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0	0	0	0	0
	└G	4B5-2fv	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
	└D	11J0	0.600	e	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.18	2.14	64	64	204	137	0	0	0	0
	└G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	112	82	261	175	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	19.97	30	2	315	599	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0	0	0	0	0
	└D	11J0	0.600	w	21.00	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0	0	0	0	0
	└G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	252	252	282	419	60	60	67	100
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	252	40	1385	0	60	0	0	0
6	c) AED excursion									249				-6
	Envelope loss/gain								2905	1887			67	94
12	a) Infiltration								809	196			0	0
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					0			0	0			0
		Appliances/other								0				0
	Subtotal (lines 6 to 13)								3714	2084			67	94
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			-67	-94
14	Subtotal								3714	2084			0	0
15	Duct loads						40%	60%	1474	1247	40%	60%	0	0
	Total room load								5189	3331			0	0
	Air required (cfm)								231	137			0	0

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

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Room name						ah								
2	Exposed wall						0 ft								
3	Room height						8.0 ft				heat/cool				
4	Room dimensions						3.0 x 4.0 ft								
5	Room area						12.0 ft²								
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0				
.	├──G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0				
.	└──G	4A5-2ov	0.300	n	10.50	7.65	0	0	0	0				
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0				
11	├──G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0				
	├──G	4A5-2ov	0.300	e	10.50	20.11	0	0	0	0				
	├──G	4B5-2fv	0.300	e	10.50	9.88	0	0	0	0				
	└──D	11J0	0.600	e	21.00	17.10	0	0	0	0				
	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0				
	└──G	4A5-2ov	0.300	s	10.50	7.65	0	0	0	0				
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0				
	├──G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0				
	├──G	4A5-2ov	0.300	w	10.50	10.34	0	0	0	0				
	├──G	4A5-2ov	0.300	w	10.50	7.65	0	0	0	0				
	└──D	11J0	0.600	w	21.00	17.10	0	0	0	0				
	W	12C-0sw	0.091	nw	3.18	2.14	0	0	0	0				
	└──G	4A5-2ov	0.300	nw	10.50	15.69	0	0	0	0				
	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0				
	C	16B-30ad	0.032	-	1.12	1.66	12	12	13	20				
	F	19A-19bscp	0.049	-	1.34	0.65	12	12	16	8				
	F	22A-tpl	0.989	-	34.62	0.00	0	0	0	0				
6	c) AED excursion									-2				
	Envelope loss/gain								30	26				
12	a) Infiltration								0	0				
	b) Room ventilation								0	0				
13	Internal gains:	Occupants @	230				0			0				
		Appliances/other								0				
	Subtotal (lines 6 to 13)								30	26				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								-30	-26				
14	Subtotal								0	0				
15	Duct loads						40%	60%	0	0				
	Total room load								0	0				
	Air required (cfm)								0	0				

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		Entire House	LR
1	Name of Room		
2	Running Feet of Exposed Wall	206.8 ft	31.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	8.7 ft 7465.4 ft²	10.0 ft 540.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	2506.0 ft²	14.0 x 13.0 ft 182.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 2506.0 ft²	0 ° 182.0 ft²

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	474	1433	962		130	366	246	
.	├──Glaz	4A5-2ov	n	10.50	7.65	9	95	69		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	15	158	115		15	158	115	
.	Wall	12C-0sw	e	3.18	2.14	308	661	444		140	350	235	
11	├──Glaz	4A5-2ov	e	10.50	19.97	30	315	599		30	315	599	
	├──Glaz	4A5-2ov	e	10.50	20.11	36	378	724		0	0	0	
	├──Glaz	4B5-2fv	e	10.50	9.88	14	143	134		0	0	0	
	└──Door	11J0	e	21.00	17.10	21	441	359		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	456	1357	911		40	127	86	
	└──Glaz	4A5-2ov	s	10.50	7.65	30	315	230		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	500	1246	836		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	19.97	45	473	898		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	10.34	13	136	134		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	7.65	30	315	230		0	0	0	
	└──Door	11J0	w	21.00	17.10	21	441	359		0	0	0	
	Wall	12C-0sw	nw	3.18	2.14	28	50	34		0	0	0	
	└──Glaz	4A5-2ov	nw	10.50	15.69	13	131	196		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	2494	2793	4150		182	204	303	
	Ceil	16B-30ad	-	1.12	1.66	12	13	20		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	12	16	8		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	2494	7157	0		182	1073	0	
12	Infiltration	Heating Load (Btuh)	Effect ACH		0.32	WAR 1.00	4464			WAR 0.18	784		
		Sensible Load (Btuh)			0.16			1084				190	
		Latent Load (Btuh)							1792				
13	Internal	a Occupants at 230 and 200 Btuh				9		2070	1800	3		690	600
		b Scenario number						3500				900	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					22530	18656	3592		3377	3245	
15	Duct Loads	EHLF & ESGF		0.397	0.598		8942	11164			1340	1942	
		ELG							2325				169
16	Ventilation Loads	Vent Cfm 0	E Cfm		0		0	0	0				
17	Winter Humidification Load		Gal/Day		0		0						
18	Piping Load						0						
19	Blower Heat							0					
20	AED Excursion & Latent Moisture Migration Load							591				-119	
21	Total Load	Sum lines 13 through 19					31472	29821	5917		4717	5186	

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		foyer	dining
1	Name of Room		
2	Running Feet of Exposed Wall	8.0 ft	14.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	8.0 ft 272.0 ft²	8.0 ft 432.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	8.0 x 9.0 ft 72.0 ft²	13.0 x 14.0 ft 182.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 72.0 ft²	0 ° 182.0 ft²

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	0	0	0		8	25	17	
.	├──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	Wall	12C-0sw	e	3.18	2.14	64	94	63		104	217	145	
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0		36	378	724	
	├──Glaz	4B5-2fv	e	10.50	9.88	14	143	134		0	0	0	
	└──Door	11J0	e	21.00	17.10	21	441	359		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	s	10.50	7.65	0	0	0		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0		0	0	0	
	└──Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	nw	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	72	81	120		182	204	303	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	72	277	0		182	485	0	
12	Infiltration	Heating Load (Btuh)		Effect	0.32	WAR	162			WAR	283		
		Sensible Load (Btuh)		ACH	0.16	0.04		39		0.06		69	
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh				0		0	0	1		230	200
		b Scenario number						0				0	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					1197	671			1595	1603	
15	Duct Loads	EHLF & ESGF		0.397	0.598		475	402			633	959	
		ELG							67				169
16	Ventilation Loads	Vent Cfm	0	E Cfm	0								
17	Winter Humidification Load			Gal/Day	0								
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load							-44				110	
21	Total Load	Sum lines 13 through 19					1672	1073			2229	2563	

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		utility		bath2	
1	Name of Room				
2	Running Feet of Exposed Wall	0 ft		0 ft	
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	8.0 ft	304.0 ft²	8.0 ft	256.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	1.0 x 72.0 ft	72.0 ft²	6.0 x 10.0 ft	60.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 °	72.0 ft²	0 °	60.0 ft²

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	0	0	0		0	0	0	
.	├──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0		0	0	0	
	├──Glaz	4B5-2fv	e	10.50	9.88	0	0	0		0	0	0	
	└──Door	11J0	e	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	s	10.50	7.65	0	0	0		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0		0	0	0	
	└──Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	nw	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	72	81	120		60	67	100	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	72	0	0		60	0	0	

12	Infiltration	Heating Load (Btuh)	Effect	0.32	WAR	0			WAR	0			
		Sensible Load (Btuh)	ACH	0.16	0	0			0	0			
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh			0		0	0	0		0	0	
		b Scenario number					500				0		
		c Default Adjustments											
		d Custom Appliances					0	0			0	0	
		e Plants						0				0	
14	Subtotals	Sum lines 6 through 12				107	609			89	119		
15	Duct Loads	EHLF & ESGF		0.397	0.598	43	364			36	71		
		ELG						67				56	
16	Ventilation Loads	Vent Cfm 0	E Cfm	0									
17	Winter Humidification Load	Gal/Day	0										
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load						-38				-6		
21	Total Load	Sum lines 13 through 19				150	973			125	191		

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		br2	br4
1	Name of Room		
2	Running Feet of Exposed Wall	16.0 ft	28.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	8.0 ft 432.0 ft²	8.0 ft 448.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	11.0 x 16.0 ft 176.0 ft²	1.0 x 183.0 ft 183.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 176.0 ft²	0 ° 183.0 ft²

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	0	0	0		0	0	0	
.	├──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0		0	0	0	
	├──Glaz	4B5-2fv	e	10.50	9.88	0	0	0		0	0	0	
	└──Door	11J0	e	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	128	360	242		120	382	257	
	└──Glaz	4A5-2ov	s	10.50	7.65	15	158	115		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	0	0	0		104	283	190	
	├──Glaz	4A5-2ov	w	10.50	19.97	0	0	0		15	158	299	
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0		0	0	0	
	└──Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	nw	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	176	197	293		183	205	305	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	176	554	0		183	969	0	
12	Infiltration	Heating Load (Btuh)	Effect		0.32	WAR	324			WAR	566		
		Sensible Load (Btuh)	ACH		0.16	0.07		79		0.13		138	
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh				0		0	0	0		0	0
		b Scenario number						0				0	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					1600	694			2574	1311	
15	Duct Loads	EHLF & ESGF		0.397	0.598		635	415			1022	785	
		ELG							163				170
16	Ventilation Loads	Vent Cfm	0	E Cfm	0								
17	Winter Humidification Load			Gal/Day	0								
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load							-45				108	
21	Total Load	Sum lines 13 through 19					2234	1109			3596	2096	

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		hall			br3		
1	Name of Room						
2	Running Feet of Exposed Wall	0 ft			13.0 ft		
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	8.0 ft	160.0 ft²		8.0 ft	416.0 ft²	
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	6.0 x 4.0 ft	24.0 ft²		1.0 x 157.0 ft	157.0 ft²	
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 °	24.0 ft²		0 °	157.0 ft²	

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	0	0	0		0	0	0	
.	├──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0		0	0	0	
	├──Glaz	4B5-2fv	e	10.50	9.88	0	0	0		0	0	0	
	└──Door	11J0	e	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	0	0	0		104	283	190	
	└──Glaz	4A5-2ov	s	10.50	7.65	0	0	0		15	158	115	
	Wall	12C-0sw	w	3.18	2.14	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0		0	0	0	
	└──Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	nw	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	24	27	40		157	176	261	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	24	0	0		157	450	0	

12	Infiltration	Heating Load (Btuh)	Effect		0.32	WAR	0			WAR	263		
		Sensible Load (Btuh)	ACH		0.16	0		0		0.06		64	
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh				0		0	0	0		0	0
		b Scenario number						0				0	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					0	0			1344	612	
15	Duct Loads	EHLF & ESGF		0.397	0.598		0	0			534	366	
		ELG							22				146
16	Ventilation Loads	Vent Cfm	0	E Cfm	0								
17	Winter Humidification Load			Gal/Day	0								
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load							-2				-39	
21	Total Load	Sum lines 13 through 19					0	0			1878	978	

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		bath3	brkfst
1	Name of Room		
2	Running Feet of Exposed Wall	14.0 ft	6.8 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	8.0 ft 326.6 ft²	10.0 ft 355.8 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	1.0 x 92.0 ft 92.0 ft²	1.0 x 84.0 ft 84.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 92.0 ft²	0 ° 84.0 ft²

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	48	153	103		0	0	0	
.	├──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0		0	0	0	
	├──Glaz	4B5-2fv	e	10.50	9.88	0	0	0		0	0	0	
	└──Door	11J0	e	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	s	10.50	7.65	0	0	0		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	64	204	137		40	86	58	
	├──Glaz	4A5-2ov	w	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0		13	136	134	
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0		0	0	0	
	└──Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	nw	3.18	2.14	0	0	0		28	50	34	
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0		13	131	196	
	Ceil	16B-30ad	-	1.12	1.66	92	103	153		84	94	140	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	92	485	0		84	234	0	
12	Infiltration	Heating Load (Btuh)	Effect		0.32	WAR	283			WAR	173		
		Sensible Load (Btuh)	ACH		0.16	0.06		69		0.04		42	
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh				0		0	0	0		0	0
		b Scenario number						0				0	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					1227	433			904	914	
15	Duct Loads	EHLF & ESGF		0.397	0.598		487	259			359	547	
		ELG							85				78
16	Ventilation Loads	Vent Cfm	0	E Cfm	0								
17	Winter Humidification Load			Gal/Day	0								
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load							-28				311	
21	Total Load	Sum lines 13 through 19					1715	692			1262	1461	

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		kitchen			family		
1	Name of Room		0 ft			18.0 ft	
2	Running Feet of Exposed Wall						
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	10.0 ft		560.0 ft²	10.0 ft		940.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	1.0 x 167.0 ft		167.0 ft²	1.0 x 479.0 ft		479.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 °		167.0 ft²	0 °		479.0 ft²

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	0	0	0		0	0	0	
.	├──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0		0	0	0	
	├──Glaz	4B5-2fv	e	10.50	9.88	0	0	0		0	0	0	
	└──Door	11J0	e	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	s	10.50	7.65	0	0	0		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	0	0	0		180	411	276	
	├──Glaz	4A5-2ov	w	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0		30	315	230	
	└──Door	11J0	w	21.00	17.10	0	0	0		21	441	359	
	Wall	12C-0sw	nw	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	167	187	278		479	536	797	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	167	0	0		479	623	0	

	Infiltration	Heating Load (Btuh)	Effect	0.32	WAR	0			WAR	455		
12		Sensible Load (Btuh)	ACH	0.16	0		0		0.10		110	
		Latent Load (Btuh)										
	Internal	a Occupants at 230 and 200 Btuh			1		230	200	4		920	800
		b Scenario number					1200				900	
13		c Default Adjustments										
		d Custom Appliances					0	0			0	0
		e Plants						0				0
14	Subtotals	Sum lines 6 through 12				217	1645			2789	3904	
	Duct Loads	EHLF & ESGF		0.397	0.598		86	984			1107	2336	
15		ELG							155				444
16	Ventilation Loads	Vent Cfm	0	E Cfm	0								
17	Winter Humidification Load			Gal/Day	0								
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load							-105				301	
21	Total Load	Sum lines 13 through 19				304	2629			3896	6240		

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		mbath	lav
1	Name of Room		
2	Running Feet of Exposed Wall	10.0 ft	0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	8.0 ft 512.0 ft²	8.0 ft 128.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	1.0 x 157.0 ft 157.0 ft²	3.0 x 5.0 ft 15.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 157.0 ft²	0 ° 15.0 ft²

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	80	226	152		0	0	0	
.	├──Glaz	4A5-2ov	n	10.50	7.65	9	95	69		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0		0	0	0	
	├──Glaz	4B5-2fv	e	10.50	9.88	0	0	0		0	0	0	
	└──Door	11J0	e	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	s	10.50	7.65	0	0	0		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0		0	0	0	
	└──Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	nw	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	157	176	261		15	17	25	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	157	346	0		15	0	0	

12	Infiltration	Heating Load (Btuh)	Effect	0.32	WAR	202			WAR	0			
		Sensible Load (Btuh)	ACH	0.16	0.05		49		0		0		
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh			0		0	0	0		0	0	
		b Scenario number					0				0		
		c Default Adjustments											
		d Custom Appliances					0	0			0	0	
		e Plants						0				0	
14	Subtotals	Sum lines 6 through 12				1045	498			17	23		
15	Duct Loads	EHLF & ESGF		0.397	0.598	415	298			7	14		
		ELG						146				14	
16	Ventilation Loads	Vent Cfm 0	E Cfm	0									
17	Winter Humidification Load		Gal/Day	0									
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load						-33				-2		
21	Total Load	Sum lines 13 through 19				1460	797			23	37		

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		wic1	wic2
1	Name of Room		
2	Running Feet of Exposed Wall	0 ft	8.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	8.0 ft 208.0 ft²	8.0 ft 208.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	5.0 x 8.0 ft 40.0 ft²	5.0 x 8.0 ft 40.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 40.0 ft²	0 ° 40.0 ft²

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	wic1 Area or Length	wic1 Btuh Heating	wic1 Btuh S-Clg	wic1 Btuh L-Clg	wic2 Area or Length	wic2 Btuh Heating	wic2 Btuh S-Clg	wic2 Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	0	0	0		64	204	137	
.	├──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0		0	0	0	
	├──Glaz	4B5-2fv	e	10.50	9.88	0	0	0		0	0	0	
	└──Door	11J0	e	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	s	10.50	7.65	0	0	0		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0		0	0	0	
	└──Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	nw	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	40	45	67		40	45	67	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	40	0	0		40	277	0	
12	Infiltration	Heating Load (Btuh)	Effect		0.32	WAR	0			WAR	162		
		Sensible Load (Btuh)	ACH		0.16	0		0		0.04		39	
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh				0		0	0	0		0	0
		b Scenario number						0				0	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					45	62			687	228	
15	Duct Loads	EHLF & ESGF		0.397	0.598		18	37			273	136	
		ELG							37				37
16	Ventilation Loads	Vent Cfm	0	E Cfm	0								
17	Winter Humidification Load			Gal/Day	0								
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load							-4				-15	
21	Total Load	Sum lines 13 through 19					63	100			960	364	

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

		mbed	hall2
1	Name of Room		
2	Running Feet of Exposed Wall	40.0 ft	0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	8.0 ft 512.0 ft²	8.0 ft 304.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	14.0 x 18.0 ft 252.0 ft²	15.0 x 4.0 ft 60.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 252.0 ft²	0 ° 60.0 ft²

	Type of Exposure	Const., Number	Panel Faces	HTM Htg.	HTM Clg.	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg	Area or Length	Btuh Heating	Btuh S-Clg	Btuh L-Clg
6	Wall	12C-0sw	n	3.18	2.14	144	459	308		0	0	0	
.	├──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0		0	0	0	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0		0	0	0	
	├──Glaz	4B5-2fv	e	10.50	9.88	0	0	0		0	0	0	
	└──Door	11J0	e	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	64	204	137		0	0	0	
	└──Glaz	4A5-2ov	s	10.50	7.65	0	0	0		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	112	261	175		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	19.97	30	315	599		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0		0	0	0	
	└──Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Wall	12C-0sw	nw	3.18	2.14	0	0	0		0	0	0	
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	252	282	419		60	67	100	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	252	1385	0		60	0	0	
	Infiltration	Heating Load (Btuh)		Effect	0.32	WAR	809			WAR	0		
12		Sensible Load (Btuh)		ACH		0.18		196		0		0	
		Latent Load (Btuh)			0.16								
13	Internal	a Occupants at 230 and 200 Btuh				0		0	0	0		0	0
		b Scenario number						0				0	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					3714	2084			0	0	
15	Duct Loads	EHLF & ESGF		0.397	0.598		1474	1247			0	0	
		ELG							234				56
16	Ventilation Loads	Vent Cfm	0	E Cfm	0								
17	Winter Humidification Load			Gal/Day	0								
18	Piping Load												
19	Blower Heat												
20	AED Excursion & Latent Moisture Migration Load							249				-6	
21	Total Load	Sum lines 13 through 19					5189	3331			0	0	

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

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & Cooli...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

1	Name of Room						ah							
2	Running Feet of Exposed Wall						0 ft							
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)						8.0 ft			112.0 ft²				
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)						3.0 x 4.0 ft			12.0 ft²				
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)						0 °			12.0 ft²				
	Type of Exposure	Const., Number	Panel Faces	HTM		Area or Length	Btuh			Area or Length	Btuh			
				Htg.	Clg.		Heating	S-Clg	L-Clg		Heating	S-Clg	L-Clg	
6	Wall	12C-0sw	n	3.18	2.14	0	0	0						
.	├──Glaz	4A5-2ov	n	10.50	7.65	0	0	0						
.	└──Glaz	4A5-2ov	n	10.50	7.65	0	0	0						
.	Wall	12C-0sw	e	3.18	2.14	0	0	0						
11	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0						
	├──Glaz	4A5-2ov	e	10.50	20.11	0	0	0						
	├──Glaz	4B5-2fv	e	10.50	9.88	0	0	0						
	└──Door	11J0	e	21.00	17.10	0	0	0						
	Wall	12C-0sw	s	3.18	2.14	0	0	0						
	└──Glaz	4A5-2ov	s	10.50	7.65	0	0	0						
	Wall	12C-0sw	w	3.18	2.14	0	0	0						
	├──Glaz	4A5-2ov	w	10.50	19.97	0	0	0						
	├──Glaz	4A5-2ov	w	10.50	10.34	0	0	0						
	├──Glaz	4A5-2ov	w	10.50	7.65	0	0	0						
	└──Door	11J0	w	21.00	17.10	0	0	0						
	Wall	12C-0sw	nw	3.18	2.14	0	0	0						
	└──Glaz	4A5-2ov	nw	10.50	15.69	0	0	0						
	Ceil	16B-30ad	-	1.12	1.66	0	0	0						
	Ceil	16B-30ad	-	1.12	1.66	12	13	20						
	Flor	19A-19bscp	-	1.34	0.65	12	16	8						
	Flor	22A-tpl	-	34.62	0.00	0	0	0						
12	Infiltration	Heating Load (Btuh)		Effect	0.32	WAR	0							
		Sensible Load (Btuh)		ACH	0.16	0		0						
		Latent Load (Btuh)												
13	Internal	a Occupants at 230 and 200 Btuh				0		0	0					
		b Scenario number						0						
		c Default Adjustments												
		d Custom Appliances						0	0					
		e Plants							0					
14	Subtotals	Sum lines 6 through 12					0	0						
15	Duct Loads	EHLF & ESGF		0.397	0.598		0	0						
		ELG							11					
16	Ventilation Loads	Vent Cfm	0	E Cfm	0									
17	Winter Humidification Load			Gal/Day	0									
18	Piping Load													
19	Blower Heat													
20	AED Excursion & Latent Moisture Migration Load							-2						
21	Total Load	Sum lines 13 through 19					0	0						

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

Loads for Multiple Orientations

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Design Conditions

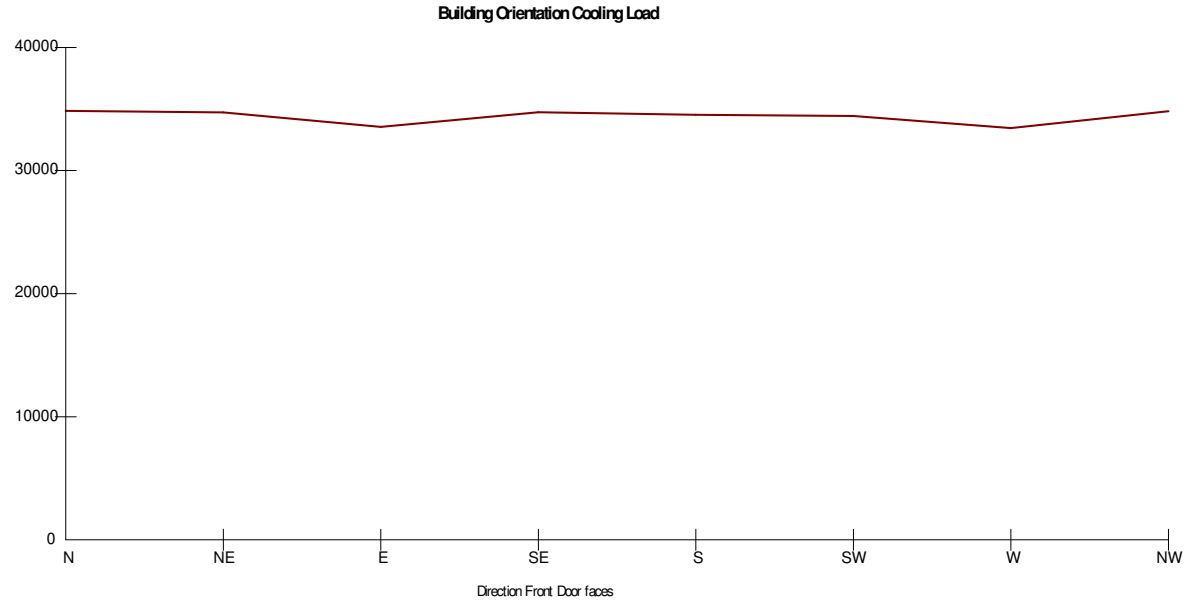
Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

Outdoor:	**Heating**	**Cooling**
Dry bulb (°F)	33	92
Daily range (°F)	-	20 (M)
Wet bulb (°F)	-	76
Wind speed (mph)	15.0	7.5

Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	28926	28801	27628	28824	28609	28516	27531	28905
Latent Load (Btuh)	5917	5917	5917	5917	5917	5917	5917	5917
Total Load (Btuh)	34843	34718	33545	34741	34526	34433	33448	34822
Heating AVF (cfm)	1400	1400	1400	1400	1400	1400	1400	1400
Cooling AVF (cfm)	1225	1225	1225	1225	1225	1225	1225	1225



Current Orientation: Front Door faces North
Highest Cooling Load: Front Door faces North

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

J1 Form - Worksheet A

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

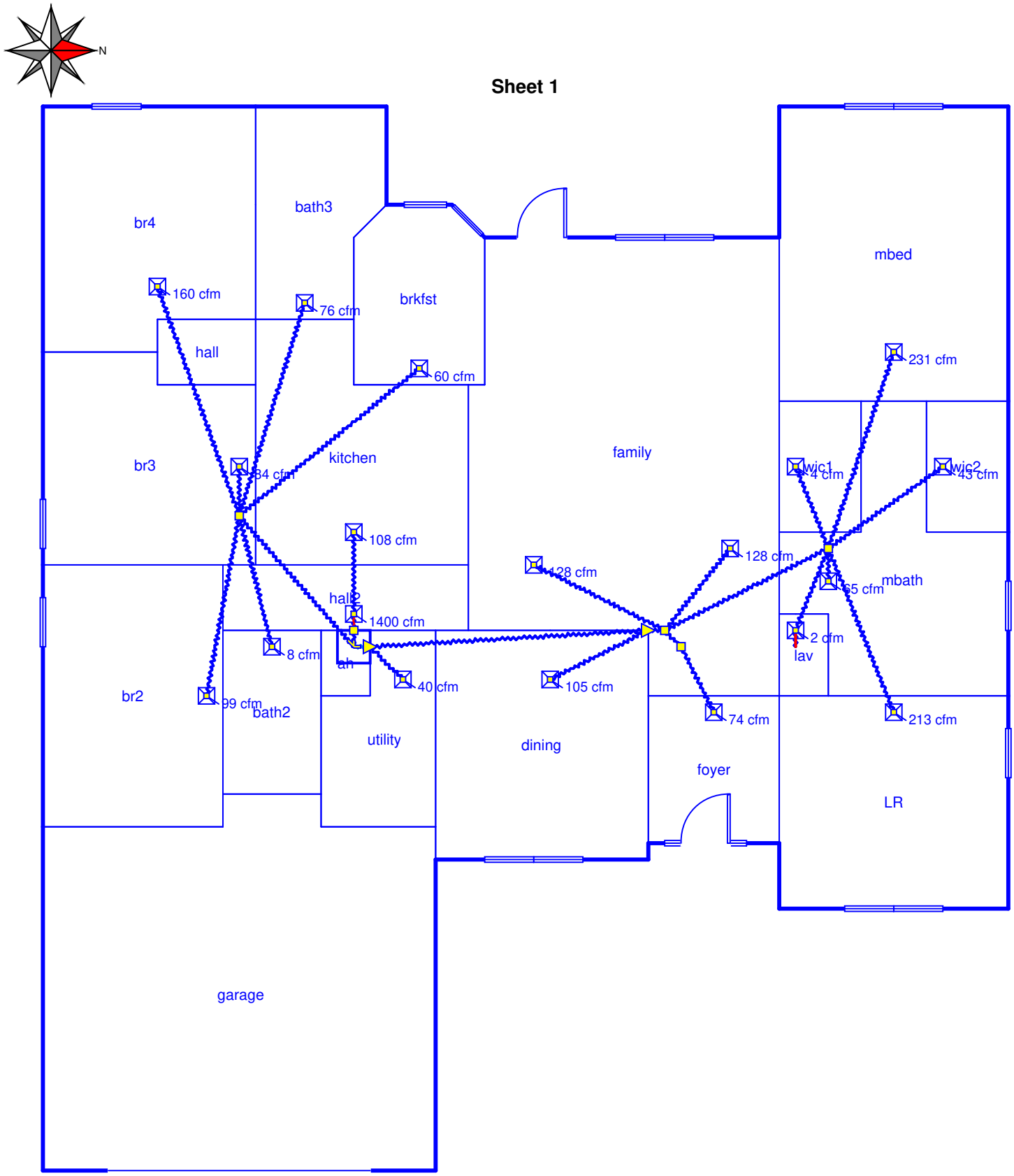
Supporting Detail			
Project Name:	Adams Homes Preserve at Laurel Lake lot 142 plan 2508	Date:	Jul 29, 2024
Address:	Lake City, FL 32024		
Phone:		Job ID:	1

Worksheet A
Location and Design Conditions

Weather Location:	Gainesville Regional AP, FL, US	Elevation =	164	Latitude =	30
Indoor Conditions, Heating:	DB = 68 °F RH = 30 %	Indoor Conditions, Cooling:	DB = 75 °F RH = 50 %		
Table 1 Conditions	99% DB = 33 °F 1% DB = 92 °F	Grains Difference =	45 gr/lb	Daily Range =	M
Design Temperature Differences		HTD =	35 °F	CTD =	17 °F

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

Sheet 1



Job #: 1 **Performed by DL Williams Heating & Co..** Adams Homes Preserve at Laurel Lake lot 142 plan 2508 Lake City, FL 32024	**DL Williams Heating & Cooling LLC** PO Box 2156 Lake City, FL 32056 Phone: 386-754-1987 Office@DLWilliamsHeatingandCooling.com	Scale: 1 : 98 Page 1 Right-Suite® Universal 2023 23.0.05 RSU02245 2024-Jul-31 10:30:06 ...aurel Lake lot 142 plan 2508.rup

Duct System Summary

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

	Heating	Cooling
External static pressure	0 in H2O	0 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0 in H2O	0 in H2O
Supply / return available pressure	0.000 / 0.000 in H2O	0.000 / 0.000 in H2O
Lowest friction rate	0 in/100ft	0 in/100ft
Actual air flow	1400 cfm	1225 cfm
Total effective length (TEL)	243 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
LR	c	5186	210	213	0	0	0x 0	VIFx	40.0	140.0	st6
bath2	c	191	6	8	0	0	0x 0	VIFx	18.9	115.0	st3
bath3	h	692	76	28	0	0	0x 0	VIFx	24.2	115.0	st3
br2	h	1109	99	46	0	0	0x 0	VIFx	21.8	115.0	st3
br3	h	978	84	40	0	0	0x 0	VIFx	13.6	115.0	st3
br4	h	2096	160	86	0	0	0x 0	VIFx	25.5	115.0	st3
brkfst	c	1461	56	60	0	0	0x 0	VIFx	24.8	115.0	st3
dining	c	2563	99	105	0	0	0x 0	VIFx	23.7	100.0	st1
family	c	3120	87	128	0	0	0x 0	VIFx	27.0	120.0	st4
family-A	c	3120	87	128	0	0	0x 0	VIFx	24.4	120.0	st4
foyer	h	1073	74	44	0	0	0x 0	VIFx	23.9	140.0	st4
kitchen	c	2629	14	108	0	0	0x 0	VIFx	7.0	95.0	
lav	c	37	1	2	0	0	0x 0	VIFx	36.6	100.0	st8
mbath	h	797	65	33	0	0	0x 0	VIFx	31.2	140.0	st6
mbed	h	3331	231	137	0	0	0x 0	VIFx	41.9	140.0	st6
utility	c	973	7	40	0	0	0x 0	VIFx	2.8	80.0	
wic1	c	100	3	4	0	0	0x 0	VIFx	34.6	140.0	st6
wic2	h	364	43	15	0	0	0x 0	VIFx	37.8	140.0	st6

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st7	Peak AVF	1	2	0	0	0	0 x 0	VinlFlx	st6
st8	Peak AVF	1	2	0	0	0	0 x 0	VinlFlx	st7
st1	Peak AVF	899	809	0	0	0	0 x 0	VinlFlx	
st4	Peak AVF	800	704	0	0	0	0 x 0	VinlFlx	st1
st6	Peak AVF	552	403	0	0	0	0 x 0	VinlFlx	st4
st3	Peak AVF	481	268	0	0	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	0x 0	1400	1225	61.0	0	0	0	0x 0		VlFx	

Duct system multi orientation report

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Group 1: (N, NE, E, SE, S, SW, W, NW)

Duct Name	(N)			(NE)			(E)			(SE)		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches												
LR	219 c	12x12	0	218 c	12x12	0	213 c	12x12	0	213 c	12x12	0
bath2	9 c	12x12	0	8 c	12x12	0	8 c	12x12	0	8 c	12x12	0
bath3	76 h	12x12	0	76 h	12x12	0	76 h	12x12	0	76 h	12x12	0
br2	99 h	12x12	0	99 h	12x12	0	99 h	12x12	0	99 h	12x12	0
br3	84 h	12x12	0	84 h	12x12	0	84 h	12x12	0	84 h	12x12	0
br4	160 h	12x12	0	160 h	12x12	0	160 h	12x12	0	160 h	12x12	0
brkfst	56 h	12x12	0	56 h	12x12	0	60 c	12x12	0	57 c	12x12	0
dining	99 h	12x12	0	99 h	12x12	0	105 c	12x12	0	99 h	12x12	0
family	124 c	12x12	0	130 c	12x12	0	128 c	12x12	0	124 c	12x12	0
family-A	124 c	12x12	0	130 c	12x12	0	128 c	12x12	0	124 c	12x12	0
foyer	74 h	12x12	0	74 h	12x12	0	74 h	12x12	0	74 h	12x12	0
kitchen	121 c	12x12	0	109 c	12x12	0	108 c	12x12	0	111 c	12x12	0
lav	2 c	12x12	0	2 c	12x12	0	2 c	12x12	0	2 c	12x12	0
mbath	65 h	12x12	0	65 h	12x12	0	65 h	12x12	0	65 h	12x12	0
mbed	231 h	12x12	0	231 h	12x12	0	231 h	12x12	0	231 h	12x12	0
utility	45 c	12x12	0	41 c	12x12	0	40 c	12x12	0	41 c	12x12	0
wic1	5 c	12x12	0	4 c	12x12	0	4 c	12x12	0	4 c	12x12	0
wic2	43 h	12x12	0	43 h	12x12	0	43 h	12x12	0	43 h	12x12	0
Supply Trunks												
st7	2 c		0	2 c		0	2 c		0	2 c		0
st8	2 c		0	2 c		0	2 c		0	2 c		0
st1	899 h		0	899 h		0	899 h		0	899 h		0
st4	800 h		0	800 h		0	800 h		0	800 h		0
st6	552 h		0	552 h		0	552 h		0	552 h		0
st3	481 h		0	481 h		0	481 h		0	481 h		0
Return Branches												
rb1	1400 h	12x12	0	1400 h	12x12	0	1400 h	12x12	0	1400 h	12x12	0
Friction Rates												
Heating FR	0.000			0.000			0.000			0.000		
Cooling FR	0.000			0.000			0.000			0.000		

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Duct Name	(S)			(SW)			(W)			(NW)		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches												
LR	229 c	12x12	0	238 c	12x12	0	236 c	12x12	0	219 c	12x12	0
bath2	9 c	12x12	0	8 c	12x12	0	8 c	12x12	0	8 c	12x12	0
bath3	76 h	12x12	0	76 h	12x12	0	76 h	12x12	0	76 h	12x12	0
br2	99 h	12x12	0	99 h	12x12	0	99 h	12x12	0	99 h	12x12	0
br3	84 h	12x12	0	84 h	12x12	0	84 h	12x12	0	84 h	12x12	0
br4	160 h	12x12	0	160 h	12x12	0	160 h	12x12	0	160 h	12x12	0
brkfst	56 h	12x12	0	56 h	12x12	0	56 h	12x12	0	56 h	12x12	0
dining	99 h	12x12	0	106 c	12x12	0	124 c	12x12	0	100 c	12x12	0
family	124 c	12x12	0	115 c	12x12	0	114 c	12x12	0	124 c	12x12	0
family-A	124 c	12x12	0	115 c	12x12	0	114 c	12x12	0	124 c	12x12	0
foyer	74 h	12x12	0	74 h	12x12	0	74 h	12x12	0	74 h	12x12	0
kitchen	121 c	12x12	0	112 c	12x12	0	111 c	12x12	0	113 c	12x12	0
lav	2 c	12x12	0	2 c	12x12	0	2 c	12x12	0	2 c	12x12	0
mbath	65 h	12x12	0	65 h	12x12	0	65 h	12x12	0	65 h	12x12	0
mbed	231 h	12x12	0	231 h	12x12	0	231 h	12x12	0	231 h	12x12	0
utility	45 c	12x12	0	42 c	12x12	0	41 c	12x12	0	42 c	12x12	0
wic1	5 c	12x12	0	4 c	12x12	0	4 c	12x12	0	4 c	12x12	0
wic2	43 h	12x12	0	43 h	12x12	0	43 h	12x12	0	43 h	12x12	0
Supply Trunks												
st7	2 c		0	2 c		0	2 c		0	2 c		0
st8	2 c		0	2 c		0	2 c		0	2 c		0
st1	899 h		0	899 h		0	899 h		0	899 h		0
st4	800 h		0	800 h		0	800 h		0	800 h		0
st6	552 h		0	552 h		0	552 h		0	552 h		0
st3	481 h		0	481 h		0	481 h		0	481 h		0
Return Branches												
rb1	1400 h	12x12	0	1400 h	12x12	0	1400 h	12x12	0	1400 h	12x12	0
Friction Rates												
Heating FR	0.000			0.000			0.000			0.000		
Cooling FR	0.000			0.000			0.000			0.000		

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Duct Name	Largest			Smalest		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches						
LR	238 c	12x12	0	213 c	12x12	0
bath2	9 c	12x12	0	8 c	12x12	0
bath3	76 h	12x12	0	76 h	12x12	0
br2	99 h	12x12	0	99 h	12x12	0
br3	84 h	12x12	0	84 h	12x12	0
br4	160 h	12x12	0	160 h	12x12	0
brkfst	60 c	12x12	0	56 h	12x12	0
dining	124 c	12x12	0	99 h	12x12	0
family	130 c	12x12	0	114 c	12x12	0
family-A	130 c	12x12	0	114 c	12x12	0
foyer	74 h	12x12	0	74 h	12x12	0
kitchen	121 c	12x12	0	108 c	12x12	0
lav	2 c	12x12	0	2 c	12x12	0
mbath	65 h	12x12	0	65 h	12x12	0
mbed	231 h	12x12	0	231 h	12x12	0
utility	45 c	12x12	0	40 c	12x12	0
wic1	5 c	12x12	0	4 c	12x12	0
wic2	43 h	12x12	0	43 h	12x12	0
Supply Trunks						
st7	2 c		0	2 c		0
st8	2 c		0	2 c		0
st1	899 h		0	899 h		0
st4	800 h		0	800 h		0
st6	552 h		0	552 h		0
st3	481 h		0	481 h		0
Return Branches						
rb1	1400 h	12x12	0	1400 h	12x12	0
Friction Rates						
Heating FR	0.000			0.000		
Cooling FR	0.000			0.000		

Background Color Legend

Yellow background

Duct Size - duct size is smaller than the largest duct size in the row
Reg Size - register size is smaller than the largest register size in the row
Reg CFM - register design cfm is larger than 150 CFM
Friction Rate - friction rate is outside ACCA Manual-D recommended range (0.06 - 0.18)

Pink background column header

Largest coolling load orientation

Static Pressure and Friction Rate

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: Jul 29, 2024
By: DL Williams Heating & C...
Plan: 2508

PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Project Information

For: Adams Homes Preserve at Laurel Lake lot 142 plan 2508, Adams Homes
Lake City, FL 32024

Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0	0
Pressure losses		
Coil	0	0
Heat exchanger	0	0
Supply diffusers	0	0
Return grilles	0	0
Filter	0	0
Humidifier	0	0
Balancing damper	0	0
Other device	0	0
Available static pressure	0	0

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	13	1
Measured length of trunk	29	0
Equivalent length of fittings	140	60
Total length	182	61
Total effective length		243

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0	< 0.06	0	< 0.06
Return Ducts	0	< 0.06	0	< 0.06

Fitting Equivalent Length Details

Supply 4AD=60, 11A=20, 11A=20, 11M=20, 11M=20: TotalEL=140

Return 6M=20, 5D=40: TotalEL=60

ENERGY STAR Single-Family New Homes
National HVAC Design Report, Version 3 / 3.1 /3.2 (Rev. 12)

HVAC Designer Responsibilities:
- Complete one National HVAC Design Report for each system design for a house plan, created for either the specific plan configuration (i.e., elevation, option, orientation, & county) of the home to be certified or for a plan that is intended to be built with different configurations (i.e., different elevations, options, and/or orientations). Visit www.energystar.gov/newhomeshvacdesign and see Footnote 2 for more information.
- Obtain efficiency features (e.g., window performance, insulation levels, and infiltration rate) from the builder or Rater. [3]
- Provide the completed National HVAC Design Report to the builder or credentialed HVAC contractor and to the Rater.

1. Design Overview

1.1 Designer name: Derrick Williams Designer company: DL Williams Heating & Cooling LLC Date: Jul 29, 2024
1.2 Select which party you are providing these design services to: ■ Builder or ☐ Credentialed HVAC contractor
1.3 Name of company you are providing these design services to (if different than Item 1.1): Adams Homes
1.4 Area that system serves: ■ Whole-house ☐ Upper-level ☐ Lower-level ☐ Other
1.5 Is cooling system for a temporary occupant load? ☐ Yes ■ No
1.6 House plan: 2508 Check box to indicate whether the system design is site-specific or part of a group:
■ Site-specific design. Option(s) & elevation(s) modeled:
☐ Group design. Group #: 0 out of 0 total groups for this house plan. Configuration modeled:

2. Dwelling Unit Mechanical Ventilation System Design ("Vent System") & Inlets in Return Duct	Designer Verified
Airflow:	
2.1 Ventilation airflow design rate & run-time meet the requirements of ASHRAE 62.2-2010 or later	☐
2.2 Ventilation airflow rate required by 62.2 for a continuous system: 0 CFM	-
2.3 Design for this system: Vent. airflow rate: CFM Run-time per cycle: 0 minutes Cycle time: 0 minutes	-
System Type & Controls:	
2.4 Specified system type: ☐ Supply ☐ Exhaust ■ Balanced	-
2.5 Specified control location: (e.g., Master bath, utility room)	-
2.6 Specified controls allow the system to operate automatically, without occupant intervention.	☐
2.7 Specified controls include a readily-accessible ventilation override and a label has also been specified if its function is not obvious (e.g., a label is required for a toggle wall switch, but not for a switch that's on the ventilation equipment).	☐
2.8 For any outdoor air inlet designed to connect to a ducted return of the HVAC system, specified controls automatically restrict airflow using a motorized damper during ventilation off-cycle and occupant override.	☐
Sound: 2.9 The fan of the specified system is rated ≤ 3 sones if intermittent and ≤ 1 sone if continuous, or exempted	☐
Efficiency:	
2.10 If Vent System controller operates the HVAC fan, then HVAC fan operation is intermittent and either the fan type in Item 4.7 is ECM / ICM or the controls will reduce the run-time by accounting for HVAC system heating or cooling hours.	☐
2.11 If bathroom fans are specified as part of the system, then they are ENERGY STAR certified	☐
Air Inlet Location: (Complete this section if system has a specified air inlet location; otherwise check "N/A")	☐ N/A
2.12 Inlet pulls ventilation air directly from outdoors and not from attic, crawlspace, garage, or adjacent dwelling unit	☐
2.13 Inlet is ≥ 2 ft. above grade or roof deck; ≥ 10 ft. of stretched-string distance from known contamination sources (e.g., stack, vent, exhaust, vehicles) not exiting the roof, and ≥ 3 ft. from known sources exiting the roof	☐

3. Room-by-Room Heating & Cooling Loads

3.1 Room-by-room loads calculated using: ■ Unabridged ACCA Manual J v8 ☐ 2013 ASHRAE Fundamentals ☐ Other per AHJ	-
3.2 Indoor design temperatures used in loads are 70°F for heating and 75°F for cooling	☐
3.3 Outdoor design temperatures used in loads: (See Footnote 17 and energystar.gov/hvacdesigntemps) County & State, or US Territory, selected: Union, FL Cooling season: 92 °F Heating season: 33 °F	-
3.4 Number of occupants used in loads: 9	-
3.5 Conditioned floor area used in loads: 2506 Sq. Ft.	-
3.6 Window area used in loads: 234 Sq. Ft.	-
3.7 Predominant window SHGC used in loads: 0.23	-
3.8 Infiltration rate used in loads: Summer: 0.16 Winter: 0.32	-
3.9 Mechanical ventilation rate used in loads: 0 CFM	-

Loads At Design Conditions (kBtuh)		N	NE	E	SE	S	SW	W	NW	
Cooling	3.10 Sensible heat gain (By orientation)	28.9	28.8	27.6	28.8	28.6	28.5	27.5	28.9	-
	3.11 Latent heat gain (Not by orientation)	5.9								-
	3.12 Total heat gain (By orientation)	34.8	34.7	33.5	34.7	34.5	34.4	33.4	34.8	-
	3.13 Maximum – minimum total heat gain (Item 3.12) across orientations = 1.4 kBtuh						Variation is ≤ 6 kBtuh			■
Heating	3.14 Total heat loss (Not by orientation)	31.5								-

ENERGY STAR Single-Family New Homes
National HVAC Design Report, Version 3 / 3.1 / 3.2 (Rev. 12)

4. Heating & Cooling Equipment Selection	**Designer Verified**
4.1 Equipment selected per ACCA Manual S (see Footnote 25 & 26).	☐
Air Conditioner / Heat Pump (Complete if air conditioner or heat pump will be installed; otherwise check "N/A")	☐ N/A
4.2 Equipment type: ☐ Cooling-only air conditioner or ■ Cooling & heating heat pump	-
4.3 Condenser manufacturer & model: Trane 4TWR5042H1	-
4.4 Evaporator / fan coil manufacturer & model: Trane TEM6A0D48H41	-
4.5 AHRI reference #: 9926385	-
4.6 AHRI listed efficiency: 12.5 / 15 EER / SEER Air-source heat pump: 9.5 HSPF Ground-source heat pump: COP	-
4.7 Evaporator fan type: ☐ PSC ☐ ECM / ICM ■ Other:	-
4.8 Compressor type: ■ Single-speed ☐ Two-speed ☐ Variable-speed	-
4.9 Latent capacity at design conditions, from OEM expanded performance data: 6.0 kBtuh	-
4.10 Sensible capacity at design conditions, from OEM expanded performance data: 33.6 kBtuh	-
4.11 Total capacity at design conditions, from OEM expanded performance data: 39.6 kBtuh	-
4.12 Air-source heat pump capacity: At 17°F: 25.2 kBtuh At 47°F: 39.0 kBtuh ☐ N/A	-
4.13 Cooling sizing % = Total capacity (Item 4.11) divided by maximum total heat gain (Item 3.12): 114 %	-
4.14 Complete this Item if Condition B Climate will be used to select sizing limit in Item 4.15. Otherwise, check "N/A": ■ N/A	-
4.14.1 Load sensible heat ratio = Max. sensible heat gain (Item 3.10) / Max. total heat gain (Item 3.12) = 83%	-
4.14.2 HDD / CDD ratio (Visit energystar.gov/hvacdesigntemps to determine this value for the design location) 0.2	-
4.15 Check box of applicable cooling sizing limit from chart below:	-

Equipment Type (Per Item 4.2) & Climate Condition (Per Item 4.14)	Compressor Type (Per Item 4.8)		
	Single-Speed	Two-Speed	Variable-Speed
For Cooling-Only Equipment or For Cooling Mode of Heat Pump in Condition A Climate	■ Recommended: 90 – 115% Allowed: 90 – 130%	☐ Recommended: 90 – 120% Allowed: 90 – 140%	☐ Recommended: 90 – 130% Allowed: 90 – 160%
For Cooling Mode of Heat Pump in Condition B Climate	☐ 90% - 100%, plus 15 kBtuh	☐ 90% - 100%, plus 15 kBtuh	☐ 90% - 100%, plus 15 kBtuh

4.16 Cooling sizing % (4.13) is within cooling sizing limit (4.15)	■
Furnace (Complete if furnace will be installed; otherwise check "N/A")	■ N/A
4.17 Furnace manufacturer & model:	-
4.18 Listed efficiency: AFUE	-
4.19 Total capacity: kBtuh	-
4.20 Heating sizing % = Total capacity (Item 4.19) divided by total heat loss (Item 3.14): 0%	-
4.21 Check box of applicable heating sizing limit from chart below:	-

When Used for Heating Only	When Paired With Cooling
☐ 100 - 140%	☐ Recommended: 100 – 140% Allowed: 100 – 400%
4.22 Heating sizing % (4.20) is within heating sizing limit (4.21)	☐
5. Duct Design (Complete if heating or cooling equipment will be installed with ducts; otherwise check "N/A")	☐ N/A
5.1 Duct system designed for the equipment selected in Section 4, per ACCA Manual D	■
5.2 Design HVAC fan airflow: Cooling mode 1225 CFM Heating mode 1400 CFM	-
5.3 Design HVAC fan speed setting (e.g., low, medium, high): Cooling mode Medium Heating mode Medium	-
5.4 Design total external static pressure (corresponding to the mode with the higher airflow in Item 5.2): 0 IWC	-
5.5 Room-by-room design airflows documented below (which must sum to the mode with the higher airflow in Item 5.2)	-

	Room Name	Design Airflow (CFM)		Room Name	Design Airflow (CFM)		Room Name	Design Airflow (CFM)
1	ah	0	12	hall2	0	23		
2	bath2	6	13	kitchen	14	24		
3	bath3	76	14	lav	1	25		
4	br2	99	15	LR	210	26		
5	br3	84	16	mbath	65	27		
6	br4	160	17	mbed	231	28		
7	brkfst	56	18	utility	7	29		
8	dining	99	19	wic1	3	30		
9	family	173	20	wic2	43	31		
10	foyer	74	21			32		
11	hall	0	22				Total for all rooms	1400

ENERGY STAR Single-Family New Homes, All Versions (Rev. 11)
ENERGY STAR Multifamily New Construction, All Versions (Rev. 02)
National HVAC Design Supplement to Std. 310 for Dwellings & Units

1. Design Basis					
1.1 Design description (optional):					
1.2 Designer company:	DL Williams Heating & Cooling LLC	Designer name:	Derrick Williams	Date:	Jul 29, 2024

2. Dwelling Unit Mechanical Ventilation System Design ("Vent System") Inlets in Return Duct	Verified	N/A
Airflow:		
2.1 Ventilation airflow design rate & run-time for each Vent System meets ASHRAE 62.2-2010 or later edition.	☐	
2.2 Access point is specified for Rater to measure ventilation airflow rate and inspect any motorized / shutoff dampers.	☐	
System Controls:		
2.3 Specified controls for each Vent System allow it to operate automatically, without occupant intervention.	☐	
2.4 Specified controls for each Vent System include a readily-accessible override & a label has also been specified if its function is not obvious (e.g., a label is required for a toggle wall switch, but not for a switch that's on the vent. equip.).	☐	
2.5 For any outdoor air inlet designed to connect to a ducted return of the HVAC system, specified controls automatically restrict airflow using a motorized damper during ventilation off-cycle and occupant override.	☐	☐
Sound: 2.6 Specified fan of each Vent System is rated ≤ 3 sones if intermittent and ≤ 1 sone if continuous, or exempted.	☐	
Efficiency: (Complete if Vent System controller operates HVAC fan or Vent System uses bath fans; otherwise, check "N/A")		☐
2.7 If Vent System controller operates the HVAC fan, then HVAC fan operation is intermittent and either fan type in HVAC design report is ECM or controls will reduce the run-time by accounting for HVAC system heating or cooling hours.	☐	☐
2.8 If bathroom fans are specified as part of any Vent System, then they are ENERGY STAR certified.	☐	☐
2.9 MFNC Only: If central exhaust fans are specified as part of the Vent System, then if ≤ 1 HP, they are direct - drive, ECM, with variable speed controllers; and if > 1 HP, they are specified with NEMA PremiumTM Motors or equivalent.	☐	☐
Air Inlet Location: (Complete this section if system has a specified air inlet location; otherwise check "N/A")		☐
2.10 Inlet(s) pull ventilation air directly from outdoors and not from attic, crawlspace, garage, or adjacent dwelling unit.	☐	
2.11 Inlet(s) are ≥ 2 ft. above grade or roof deck; ≥ 10 ft. of stretched-string distance from known contamination sources (e.g., stack, vent, exhaust, vehicles) not exiting the roof, and ≥ 3 ft. from know n sources exiting the roof.	☐	
2.12 Inlet(s) are provided with rodent / insect screen with ≤ 0.5 inch mesh.	☐	

3. Dwelling Unit Local Mechanical Exhaust Design							
3.1 System(s) are designed that mechanically exhaust air from each dwelling unit kitchen and bathroom directly to the outdoors or to ventilation risers and meet the requirements in Table 1.						☐	
Kitchens:	Runtime:	■ Continuous	☐ Intermitten	Dwelling Units Served by Fan:	■ Single Unit	☐ Multiple Units	
Bathrooms:	Runtime:	■ Continuous	☐ Intermitten	Dwelling Units Served by Fan:	■ Single Unit	☐ Multiple Units	

4. Heating Equipment, Cooling Equipment, & Equipment Controls Selection												
4.1 MFNC Only: If using Prescriptive Path, equipment serving dwelling units meet the efficiency levels specified in Exhibit X of the National Rater Field Checklist, have programmable thermostatic controls, & do not use electric resistance heating.										☐		☐
4.2 MFNC Only: Thermostatic controls for systems serving a dwelling unit are within the unit and not located on exterior walls. If more than one system provides heating or cooling to the same space, controls prevent simultaneous operation.										☐		☐
Air Conditioners & Heat Pumps	If none will be installed, check N/A ☐	1			2			3				
4.3 Unique name or ID for each system:		Entire House										
4.4 Maximum sensible and total heat gain load of zone served (kBtuh):		28.9	34.8									
4.5 Sensible, latent, & total cooling capacity at design conditions (kBtuh):		33.6	6.0	39.6								
4.6 If HP, heating capacity at 17°F and at 47°F (kBtuh):		25.2	39.0	N/A ☐			N/A ☐				N/A ☐	
4.7 Compressor speed type:		Single										
4.8 Cooling sizing % & applicable sizing limit key from Table 2:		113.8	C1									
4.9 If C2 chosen in Item 4.8, load sensible heat ratio & HDD / CDD ratio:				N/A ■			N/A ■				N/A ■	
4.10 Affirm that cooling sizing % is within cooling sizing limit (4.8):		■			☐			☐				
Furnaces	If none will be installed, check N/A ☐	1			2			3				
4.11 Unique name or ID for each system:		Entire House										
4.12 Total heat loss load of zone served (kBtuh):												
4.13 Total heating capacity (kBtuh):												
4.14 Heating sizing % & applicable sizing limit key from Table 3:												
4.15 Affirm that heating sizing % is within heating sizing limit (4.14):		☐			☐			☐				

5. Duct Design	5.1 All duct requirements in Table 4 have been included in the design, where applicable.	☐	☐

ANSI / RESNET / ACCA 310 HVAC Design Report (1,2)

1. Design Basis & Architectural Scope					
1.1 Design description (optional):					
1.2 Design company:	DL Williams Heating & Cooling LLC	Designer name:	Derrick Williams	Date:	Jul 29, 2024
1.3 Software name and version used to complete design:		Right-Suite® Universal 2023 23.0.05 RSU02245		N/A ☐	
For a Dwelling,Townhouse, or Dwelling / Sleeping Unit Within (i.e. duplex):					
1.4 Architectural plan name or address of property:					
1.5 Architectural options used in the design(3):					
1.6 Other architectural options that the design can be used with:(4)					
For a Dwelling / Sleeping Unit Not Within a Dwelling or Townhouse (e.g. condo, apartment):					
1.7 Unique ID for bldg. that the dwelling / sleeping unit is in:(5)					
1.8 Architectural plan used in design (e.g. dwelling unit model):					
1.9 Other architectural plans that the design can be used with:(6)					
1.10 Architectural options used in the design:(3)					
1.11 Other architectural options that the design can be used with:(4)					
1.12 Dwelling / sleeping unit location used in design:(7)					

2. Dwelling-Unit Mechanical Ventilation System Design			
Ventilation System Type & Control Location:	System 1	System 2	System 2
2.1 Unique name or ID for each system:(8)			
2.2 Vent. equipment manufacturer & model #:(9)			
2.3 Specified system type:(10)	Balanced w/o Recovery		
2.4 Specified control location:(11)			
2.5 Ventilation zone name(s) served by system:(12)	Entire House		
Ventilation Zone Served by Ventilation System:	Zone 1	Zone 2	Zone 3
2.6 Ventilation zone name:(12)	Entire House		
2.7 Design basis:(13)	Other		
2.8 Floor area (sq. ft.) and # bedrooms in vent. zone:	2506 1		
2.9 Ventilation design airflow rate (CFM):(14)			
2.10 Vent. runtime per cycle & cycle time (mins):	0 of every 0		
2.11 Time-averaged mechanical vent. rate (CFM):(15)			

3. Heat Gain & Heat Loss Loads					
3.1 Design basis for the loads:(16)	ACCA Manual J v8 2016	3.2 Load methodology:(17)		Room-by-Room	
3.3 Indoor design temperatures used in loads (°F):		Heating Season:	68	Cooling Season:	75
3.4 Outdoor design temperatures used in loads (°F):(18)		Heating Season:	33	Cooling Season:	92
3.5 Outdoor design temperature location & data source:(19)		Union, FL		Data Source:	ACCA std.

Zone-Specific Inputs & Loads at Design Conditions		Zone 1			Zone 2			Zone 3		
3.6 Name of heated or cooled zone:(20)		Entire House								
3.7 Occupants & total occup. internal gains (Btuh):(21)		9 2070								
3.8 Total non-occupant internal gains (Btuh):		3500								
3.9 Conditioned floor area (sq. ft.):(22)		2506								
3.10 Window area (sq. ft.):(23)		234								
3.11 Predominant window SHGC:(24)		0.23								
3.12 Predominant insulation nominal R-value:(24,25)		Wall: 13.0 Ceiling:30.0			Wall: Ceiling:			Wall: Ceiling:		
3.13 Infiltration rate (Qualitative or ACH50):(26)		Average								
3.14 Time-averaged mechanical vent. rate (CFM):		0								
3.15 Heat gain (kBtuh):(27)		Sensible	Latent	Total	Sensible	Latent	Total	Sensible	Latent	Total
	N	28.9	5.9	34.8						
	NE	28.8	5.9	34.7						
	E	27.6	5.9	33.5						
	SE	28.8	5.9	34.7						
	S	28.6	5.9	34.5						
	SW	28.5	5.9	34.4						
	W	27.5	5.9	33.4						
	NW	28.9	5.9	34.8						
3.16 Maximum – minimum total heat gain (kBtuh):(28)				1.4						
3.17 Total heat loss (kBtuh):		31.5								

ANSI / RESNET / ACCA 310 HVAC Design Report (1,2)

4. Heating & Cooling Equipment Selection	1	2	3
Air Conditioners, Heat Pumps, & Other Cooling Equipment (If none of these will be installed, check "N/A")			N/A ☐
4.1 Unique name or ID for each system:	Entire House		
4.2 Zone that system serves (See Item 3.6):	Entire House		
4.3 Equipment type:(29)	HP		
4.4 Evaporator / fan coil mfr. & model #:(30)	TRAN TEM6A0D48H41		
4.5 Condenser mfr. & model #:(30)	TRAN 4TWR5042H1 N/A ☐	N/A ■	N/A ■
4.6 AHRI ref. #, or check box for alt. OEM doc.:(31)	9926385 OEM ☐	OEM ■	OEM ■
4.7 If AC / HP, rated cooling efficiency:(32)	15 SEER2 N/A ☐	N/A ■	N/A ■
4.8 If HP, rated heating efficiency:(33)	9.5 HSPF2 N/A ☐	N/A ■	N/A ■
4.9 If HP, ratio of max. to min. rated capacity:	1.5 N/A ☐	N/A ■	N/A ■
4.10 If AC / HP, blower fan motor & speed type:(34)	Other Single N/A ☐	N/A ■	N/A ■
4.11 If AC / HP, compressor speed type:(35)	Single N/A ☐	N/A ■	N/A ■
4.12 If AC / HP, meter device type:(36)	N/A ☐	N/A ■	N/A ■
4.13 If TXV or EEV, OEM subcooling target (°F):(37)	0.0 N/A ☐	N/A ■	N/A ■
4.14 Filter performance metric and rating:(38)	N/A ■	N/A ■	N/A ■
Furnaces, Boilers, & Other Heating Equipment (If none of these will be installed, check "N/A")			N/A ☐
4.15 Unique name or ID for each system:			
4.16 Zone that system serves (See Item 3.6):			
4.17 Equipment type:(39)			
4.18 Equipment manufacturer & model #:			
4.19 AHRI ref. #, or check box for alt. OEM doc.:(31)	OEM ■	OEM ■	OEM ■
4.20 If furnace or boiler, rated heating efficiency:	N/A ■	N/A ■	N/A ■
4.21 If furnace, blower fan motor & speed type:(34)	N/A ■	N/A ■	N/A ■
4.22 If furnace or boiler, heating capacity type:(40)	N/A ■	N/A ■	N/A ■
4.23 If furnace or boiler, venting type:(41)	N/A ■	N/A ■	N/A ■
4.24 Filter performance metric and rating:(38)	N/A ■	N/A ■	N/A ■
5. Duct Design (Complete if duct system will be installed; otherwise check "N/A")			N/A ☐
5.1 Unique name or ID for each system:	Entire House		
5.2 Zone that system serves (See Item 3.6):	Entire House		

Design Values for Cooling and Heating Mode	Cooling	Heating	Cooling	Heating	Cooling	Heating
5.3 Design blower fan airflow (CFM):(42)	1225	1400				
5.4 Design blower fan speed setting:(43)	Medium	Medium				
5.5 Design external static pressure (IWC):(44)	0					

5.6 Room-by-room design airflows (CFM):	Room Name	Airflow	Room Name	Airflow	Room Name	Airflow
Total Design Airflow:	[All rooms]	1400	[All rooms]		[All rooms]	
1.	ah	0				
2.	bath2	6				
3.	bath3	76				
4.	br2	99				
5.	br3	84				
6.	br4	160				
7.	brkfst	56				
8.	dining	99				
9.	family	173				
10.	foyer	74				
11.	hall	0				
12.	hall2	0				
13.	kitchen	14				
14.	lav	1				
15.	LR	210				
16.	mbath	65				
17.	mbed	231				
18.	utility	7				
19.	wic1	3				
20.	wic2	43				

5.6 Room-by-room design airflows (Continued):	Room Name	Airflow	Room Name	Airflow	Room Name	Airflow
21.						
22.						
23.						
24.						
25.						
26.						
27.						
28.						
29.						
30.						
31.						
32.						
33.						
34.						
35.						

Footnotes

1. The purpose of this report is to document the design information required by ANSI / RESNET / ACCA 310 – a standard for grading the installation of HVAC systems - for a dwelling, townhouse, or dwelling / sleeping unit.The HVAC designer should complete one reportper dwelling, townhouse, or dwelling / sleeping unit that encompasses all HVAC systems(e.g., for a dwelling with two zones, the HVAC system for each zone should be documented in the same report).
2. Note that this report will be reviewed by users of the standard (e.g., a rater) to ensure that the design meets the tolerances defined in Section 4.3 of ANSI / RESNET / ACCA 310. The HVAC systems will not be eligible to earn recognition for proper installation unless alltolerances are met.
3. If the HVAC design documented in this report incorporated one or more options (e.g., media room option), then list those options.
4. If this same HVAC design could be used with other options (e.g., bonus room, balcony with sliding glass door), then list those option(s).
5. For example, the name of the development or the building's address.
6. If this same HVAC design could be used with other plans (e.g., other dwelling unit models) in the building, then list those plan(s).
7. Because the loads are dependent on the dwelling / sleeping unit's location in the building, indicate whether the design is for the TopFloor, a Mid-Level-Floor, or the Bottom-Floor of the building; and either a Corner Unit or Middle Unit that is between two other units.
8. For example, the unique ID might be "Powder Bath Fan" or "Whole-House ERV".
9. The ventilation equipment manufacturer and model number are required to be reported for dwelling / sleeping units not within a dwelling or townhouse;and are optional for dwellings, townhouses, and sleeping / dwelling units within(i.e., duplex).
10. Ventilation system types are: Supply - a supply-only system, Exhaust - an exhaust-only system, Balanced w/o Recov. - a balanced system without energy or heat recovery, ERV - an energy recovery ventilator, HRV - a heat recovery ventilator, Vent.Dehumidifier - a ventilation system with integrated dehumidifier, or Other - any other system type.
11. For example, common ventilation control locations include a bathroom or utility room.
12. For example, the ventilation zone name may be "Whole Dwelling", "Upper Level", "Lower Level", or "Basement".
13. Design basis options are: 62.2-2010 - ASHRAE 62.2-2010, 62.2-2013 - ASHRAE 62.2-2013, 62.2-2016 - ASHRAE 62.2-2016, 62.2-2019 - ASHRAE 62.2 - 2019, or Other - any other ventilation standard.
14. Enter the airflow rate of the ventilation system when operating (e.g., a 50 CFM cycled bath fan has a ventilation airflow rate of 50 CFM).
15. The following formula shall be used to determine the time-averaged ventilation airflow rate: Time Averaged Vent Rate = Vent Rate * Runtime Per Cycle / Cycle Time Where : • Time Averaged Vent Rate = The time - averaged ventilation airflow rate. • Vent Rate = The design's ventilation airflow rate reported in Item 2.9. • Runtime Per Cycle = The runtime per cycle reported in Item 2.10. • Cycle Time = The cycle time reported in Item 2.10.
16. Design basis options for the heat gain and heat loss loads are: ACCA Manual J v8 2013 - ACCA Manual J v8, 2013 edition; ACCA Manual J v8 2016 - ACCA Manual J v8, 2016 edition; 2017 ASHRAE Fund. - 2017 ASHRAE Fundamentals; or Per AHJ - a design basis prescribed by the Authority Having Jurisdiction.
17. Load methodology options are: Room-by-Room or Single Block. Note that for dwellings, townhouses, and dwelling / sleeping units within(i.e., duplex), the room - by - room load methodology must be used.See Fn. 2 for details.
18. Note that the outdoor design temperatures must meet the limits defined in ANSI / RESNET / ACCA 310 Appendix A for the county or U.S.Territory where the project will be constructed.See Fn. 2 for details.
19. The location shall include the city or weather station and the state. The data source options are: ACCA - ACCA Manual J, ASHRAE - ASHRAE Handbook of Fundamentals, or AHJ - design conditions prescribed by the Authority Having Jurisdiction.
20. For example, the heated or cooled zone name may be "Upper Level", "Master Suite", or "Basement".

21. To determine the number of occupants, calculate the number of bedrooms in the zone and add one. ANSI / RESNET / ACCA 310 defines a “bedroom” for one - and two - family dwellings and townhouses as a room or space 70 square feet of floor area or greater, with egress window or skylight, and doorway to the main body of the dwelling unit, that can be used for sleeping.For all other Dwelling Units, a room or space that can be used for sleeping.For all dwelling or sleeping units, the number of bedrooms shall not be less than one.ANSI / RESNET / ACCA 310 defines an “egress window” as an operable window that provides for a means of escapeand access for rescue in the event of an emergencyand with the following attributes : • Has a sill height of not more than 44 inches above the floor;and, • Has a minimum net clear opening of 5.7 sq.ft., opening height of 24 in., and opening width of 20 in.;and, • Is operational from the inside of the room without the use of keys, tools or special knowledge. The number of occupants must fall within the tolerance specified in ANSI / RESNET / ACCA 310. See Fn. 2 for details.
22. The difference between the Conditioned Floor Area (CFA) used in the design and the actual dwelling, townhouse, or dwelling / sleeping unit must fall within the tolerance specified in ANSI / RESNET / ACCA 310. See Fn. 2 for details.Be advised, the CFA will be evaluated using the definition in ANSI / RESNET / ACCA 310, which defines this value, in part, as the floor area of the Conditioned Space Volume within a building or dwelling unit, not including the floor area of attics, crawlspaces, and basements below air sealed and insulated floors.
23. The difference between the window area used in the design and the actual dwelling, townhouse, or dwelling / sleeping unit must fall within the tolerance specified in ANSI / RESNET / ACCA 310. See Fn. 2 for details.Be advised, the window area will be evaluated by calculating it using the on - site inspection protocol provided in Normative Appendix B of ANSI / RESNET / ICC 301, which instructs the user to measure the widthand height of the rough opening for the windowand round to the nearest inch, and then to use these measurements to calculate window area, rounding to the nearest tenth of a square foot.See https ://codes.iccsafe.org/content/chapter/16191/ for the complete protocol.
24. “Predominant” is defined as the SHGC or R-value used in the greatest amount of window, wall, or ceiling area in the zone.
25. If both cavity and continuous insulation are used, report the sum of the nominal R-value of the cavity and continuous insulation.
26. The infiltration rate shall be reported using a qualitative input (i.e., Tight, Semi-Tight, Average, Semi-Leaky, Leaky) or in units of ACH50.
27. Provide loads for the orientation(s) that the design is intended to be used in (e.g., N, S, E, W), where orientation is defined as the direction that the front door of the dwelling is facing.For example, if a site - specific design has been completed for a single project, only the loads for the single orientation of that project need to be provided.
28. If the heat gain has been provided for multiple orientations, then the difference between the max. and min. total heat gain across the orientations specified must be reported and fall within the tolerance specified in ANSI / RESNET / ACCA 310. See Fn. 2 for details.
29. Equipment type options are: AC - Air Conditioner, HP - Heat Pump, MNAC - Mini-Split Air Conditioner, MNHP - Mini-Split Heat Pump, MTAC - Multi - Split Air Conditioner, MTHP - Multi - Split Heat Pump, and Other - any other cooling equipment type.
30. For single-package systems or systems without a condenser (e.g., evaporative cooler), provide manufacturer and model number in Item 4.4 and select “N / A” for Item 4.5.
31. If an AHRI Reference Number is not available, OEM-provided documentation shall be collected with the rated efficiency of the equipment.If the equipment contains multiple components, the rated efficiency shall reflect the specific combination of indoorand outdoor components, along with confirmation from the OEM that the two components are designed to be used together.
32. For example, if the metric for the rated efficiency of the equipment is SEER, then its SEER rating shall be reported; if the metric is EER, then its EER rating shall be reported; if both SEERand EEER, then both rated values shall be reported.
33. For example, if the metric for the rated efficiency of the equipment is HSPF, then its HSPF rating shall be reported; if the metric is COP, then its COP rating shall be reported; if both HSPFand COP, then both rated values shall be reported.
34. Blower fan motor type options are: PSC - Permanent Split Capacitor, ECM - Electronically Commutated Motor, or Other - any other motor type.For blower fan speed type, while equipment typically has multiple speed settings to select from during installation, this parameter is related to the number of operational speeds that the blower fan is capable of : Single - a system that operates at no more than one speed setting each for heating modeand cooling mode, Two - a system that can operate at no more than two speeds each for heating modeand cooling mode, Variable - a system that can operate at more than two speeds.
35. The compressor speed type is related to the number of operational speeds that the compressor is capable of: Single - a system that operates at no more than one speed setting each for heating modeand cooling mode, Two - a system that can operate at no more than two speeds each for heating modeand cooling mode, Variable - a system that can operate at more than two speeds.
36. Meter device type options are: Piston/Cap - piston / capillary tube, TXV - thermal expansion valve, or EEV - electronic expansion valve.
37. If the meter device type is TXV or EEV, then provide then the OEM-specified subcooling target at the service valve.
38. For example, MERV or FPR.
39. Equipment type options are: Furnace, Boiler, or Other - any other heating equipment type.
40. Heating capacity type options are: Single-Stage, Two-Stage, or Modulating.
41. Vent. type options are: Natural Draft - natural draft system, Mech. Draft - mechanical draft system, or Direct Vent - direct-vent appliance.
42. Provide design airflow in cubic feet per minute of air with a density of 0.075 pounds per cubic feet. Airflow at this air density is often referred to as Standard CFM(SCFM) and represents air at 68 °F, 50 % relative humidity, and at a barometric pressure of 29.92" Hg.
43. This is the OEM setting that corresponds with the design blower fan airflow. Common examples include low, medium-low, medium, medium - high, and high, but also may be defined in terms of dip - switch settings or other classifications