Load Short Form
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	4TWR5030H1
AHRI ref	9033590

Efficiency	8.1 HSPF2	
Heating input		
Heating output	26600	Btuh @ 47°F
Temperature rise	28	°F
Actual air flow	875	cfm
Air flow factor	0.036	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

Capacity balance point = 31 °F

COOLING EQUIPMENT

Make	Trane
Trade	TRANE
Cond	4TWR5030H1
Coil	TEM6A0B30H21++TDR
AHRI ref	9033590

Efficiency	12.0 EER2,15.2 SEER2	
Sensible cooling	19180	Btuh
Latent cooling	8220	Btuh
Total cooling	27400	Btuh
Actual air flow	850	cfm
Air flow factor	0.038	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.86	

Backup:
Input = 6 kW, Output = 21717 Btuh, 100 AFUE

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
br3	176	3445	2194	124	83
br4	165	2325	1501	83	57
ah	9	0	0	0	0
foyer	59	1648	969	59	37
laundry	54	507	896	18	34
wic	72	749	352	27	13
mbath	112	1237	569	44	22
lav	18	25	39	1	1
mbed	195	3707	2596	133	99
kitchen	144	633	2607	23	99
great	330	4486	6152	161	234
br2	160	3180	1810	114	69
bath	50	619	286	22	11
hall	30	0	0	0	0

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

dining	121	1809	2417	65	92
Entire House	1694	24370	22388	875	850
Other equip loads		0	0		
Equip. @ 0.97 RSM			21716		
Latent cooling			3631		
TOTALS	1694	24370	25347	875	850

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

Building Analysis
Entire House

DL Williams Heating & Cooling LLC

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

Job: 1
Date: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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

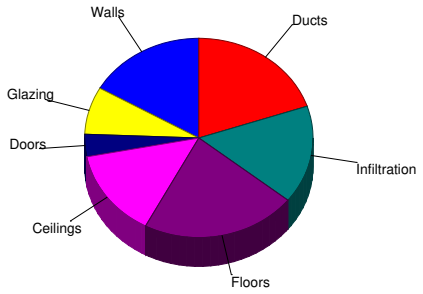
Indoor:	**Heating**	**Cooling**
Indoor temperature (°F)	68	75
Design TD (°F)	35	17
Relative humidity (%)	30	50
Moisture difference (gr/lb)	8.4	45.4

Infiltration:

Method	Simplified
Construction quality	Average
Fireplaces	0

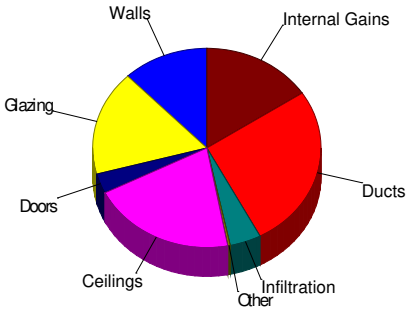
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.2	4067	16.7
Glazing	10.5	1880	7.7
Doors	21.0	882	3.6
Ceilings	2.0	3473	14.3
Floors	3.2	5355	22.0
Infiltration	2.6	3877	15.9
Ducts		4837	19.8
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	
Total		**24370**	**100.0**



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	2.1	2731	12.2
Glazing	21.3	3814	17.0
Doors	17.1	718	3.2
Ceilings	2.7	4588	20.5
Floors	0.0	79	0.4
Infiltration	0.7	991	4.4
Ducts		5947	26.6
Ventilation		0	0
Internal gains		3520	15.7
Blower		0	0
Adjustments		0	
Total		**22388**	**100.0**



Latent Cooling Load = 3631 Btuh
Overall U-value = 0.091 Btuh/ft²-°F, Window / Floor Area = 10.6 %

Data entries checked.

Component Constructions
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	354	0.091	13.0	3.18	1127	2.14	757
	e	226	0.091	13.0	3.18	720	2.14	483
	s	339	0.091	13.0	3.18	1080	2.14	725
	w	358	0.091	13.0	3.18	1140	2.14	766
	all	1277	0.091	13.0	3.19	4067	2.14	2731
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); 10 ft overhang (7 ft window ht, 1 ft sep.); 6.67 ft head ht	e	7	0.300	0	10.5	74	9.88	69
	e	7	0.300	0	10.5	74	9.88	69
	all	14	0.300	0	10.5	147	9.88	138
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	e	45	0.300	0	10.5	473	20.0	898
	s	15	0.300	0	10.5	158	7.65	115
	w	75	0.300	0	10.5	788	20.0	1497
	all	135	0.300	0	10.5	1418	18.6	2511
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; 10 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		1114	0.032	30.0	1.12	1248	1.66	1854
17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns		606	0.105	6.0	3.67	2225	4.51	2734

Floors

19A-19bscp: Part floor, carpet flr fnsh, r-19 ins, frm flr, 6" thkns	121	0.049	19.0	1.34	163	0.65	79
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh	150	0.989	0	34.6	5192	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	126	0.091	13.0	3.18	401	2.14	269
	e	87	0.091	13.0	3.18	277	2.14	186
	all	213	0.091	13.0	3.19	678	2.14	456
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	e	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		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		27	0.989	0	34.6	935	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	e	93	0.091	13.0	3.18	296	2.14	199
	s	45	0.091	13.0	3.18	143	2.14	96
	all	138	0.091	13.0	3.18	440	2.14	295
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	e	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		144	0.032	30.0	1.12	161	1.66	240
17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns		22	0.105	6.0	3.67	81	4.51	99
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		17	0.989	0	34.6	588	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	5	0.091	13.0	3.18	14	2.14	10
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns		9	0.105	6.0	3.68	35	4.51	42
Floors								
(none)								

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	e	46	0.091	13.0	3.18	147	2.14	98
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); 10 ft overhang (7 ft window ht, 1 ft sep.); 6.67 ft head ht	e	7	0.300	0	10.5	74	9.88	69
	e	7	0.300	0	10.5	74	9.88	69
	all	14	0.300	0	10.5	147	9.88	138
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		59	0.032	30.0	1.12	66	1.66	97
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		9	0.989	0	34.6	312	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	36	0.091	13.0	3.18	115	2.14	77
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		54	0.032	30.0	1.12	60	1.66	90
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		4	0.989	0	34.6	138	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	54	0.091	13.0	3.18	172	2.14	115
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								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		6	0.989	0	34.6	208	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	90	0.091	13.0	3.18	287	2.14	192
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		112	0.032	30.0	1.12	125	1.66	186
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		10	0.989	0	34.6	346	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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		18	0.032	30.0	1.12	20	1.66	30
Floors								
(none)								

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	87	0.091	13.0	3.18	277	2.14	186
	all	207	0.091	13.0	3.18	659	2.14	443
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
	w	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		195	0.032	30.0	1.12	218	1.66	324
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		28	0.989	0	34.6	969	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	14	0.091	13.0	3.18	43	2.14	29
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		45	0.032	30.0	1.12	50	1.66	74
17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns		103	0.105	6.0	3.68	380	4.51	467
Floors								
(none)								

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	26	0.091	13.0	3.18	81	2.14	55
	w	111	0.091	13.0	3.18	354	2.14	237
	all	137	0.091	13.0	3.18	435	2.14	292
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; 10 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								
17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns		345	0.105	6.0	3.67	1266	4.51	1556
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		18	0.989	0	34.6	623	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	117	0.091	13.0	3.18	373	2.14	250
	w	102	0.091	13.0	3.18	325	2.14	218
	all	219	0.091	13.0	3.19	698	2.14	468
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		160	0.032	30.0	1.12	179	1.66	266
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		26	0.989	0	34.6	900	0	0

Component Constructions
bath

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	45	0.091	13.0	3.18	143	2.14	96
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		50	0.032	30.0	1.12	56	1.66	83
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		5	0.989	0	34.6	173	0	0

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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		30	0.032	30.0	1.12	34	1.66	50
Floors								
(none)								

Component Constructions
dining

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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	17	0.091	13.0	3.18	53	2.14	35
	w	58	0.091	13.0	3.18	185	2.14	124
	all	75	0.091	13.0	3.18	237	2.14	159
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								
17B-6al: Rf/clg ceiling, asphalt shingles roof mat, wd cons, r-6 deck ins, 1" thkns		126	0.105	6.0	3.68	464	4.51	570
Floors								
19A-19bscp: Part floor, carpet flr fnsh, r-19 ins, frm flr, 6" thkns		121	0.049	19.0	1.34	163	0.65	79

Project Summary
Entire House

DL Williams Heating & Cooling LLC

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

Job: 1
Date: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33	°F
Inside db	68	°F
Design TD	35	°F
Ventilation Method	MJ8	

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	19534	Btuh
Ducts (R-6.0)	4837	Btuh
Central vent (0 cfm)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	24370	Btuh

Sensible Cooling Equipment Load Sizing

Structure	16441	Btuh
Ducts (R-6.0)	5947	Btuh
Central vent (0 cfm)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.97	
Equipment sensible load	21716	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1694	1694
Volume (ft³)	15995	15995
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	101	53

Latent Cooling Equipment Load Sizing

Structure	2438	Btuh
Ducts	1193	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	3631	Btuh
Equipment Total Load (Sen+Lat)	25347	Btuh
Req. total capacity at 0.70 SHR	2.6	ton

Heating Equipment Summary

Make	Trane
Trade	TRANE
Model	4TWR5030H1
AHRI ref	9033590

Efficiency	8.1 HSPF2	
Heating input		
Heating output	26600	Btuh @ 47°F
Temperature rise	28	°F
Actual air flow	875	cfm
Air flow factor	0.036	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

Capacity balance point = 31 °F

Backup:
Input = 6 kW, Output = 21717 Btuh, 100 AFUE

Cooling Equipment Summary

Make	Trane
Trade	TRANE
Cond	4TWR5030H1
Coil	TEM6A0B30H21++TDR
AHRI ref	9033590

Efficiency	12.0 EER2,15.2 SEER2	
Sensible cooling	19180	Btuh
Latent cooling	8220	Btuh
Total cooling	27400	Btuh
Actual air flow	850	cfm
Air flow factor	0.038	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.86	

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: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

Design Conditions

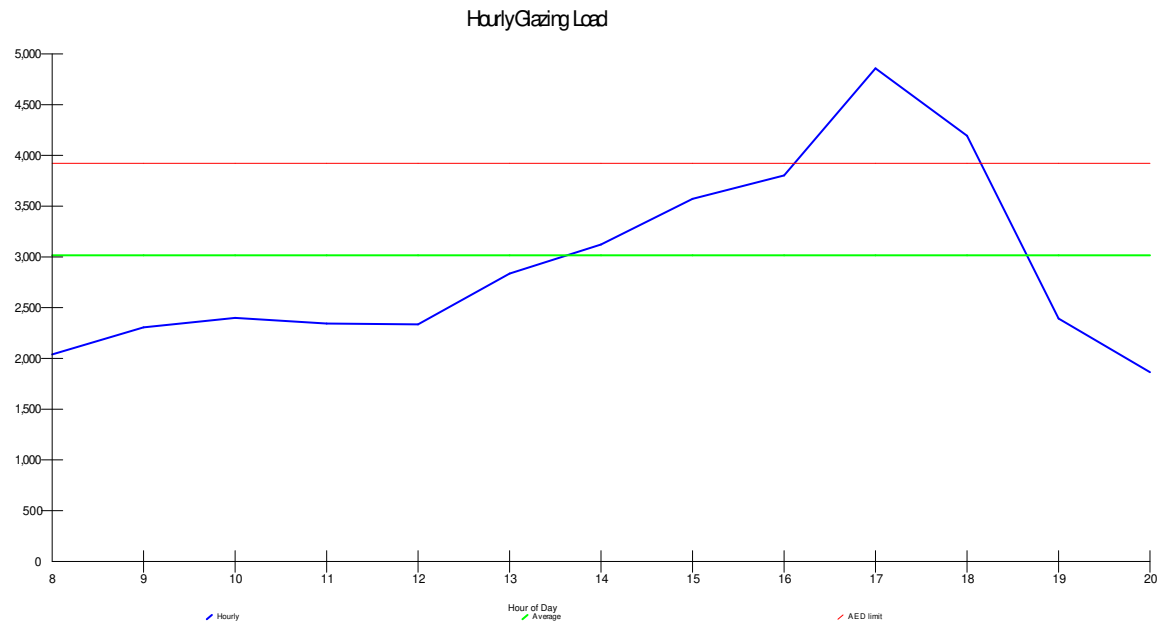
Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

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 61.0%.

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

AED excursion: 935 Btuh (PFG - 1.3*AFG)

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		Entire House	br3
1	Room name		
2	Exposed wall	161.0 ft	27.0 ft
3	Room height	9.4 ft	9.0 ft
4	Room dimensions		heat/cool
			1.0 x 176.0 ft
5	Room area	1694.0 ft²	176.0 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	354	354	1127	757	126	126	401	269
.	W	12C-0sw	0.091	e	3.18	2.14	306	226	720	483	117	87	277	186
.	G	4A5-2ov	0.300	e	10.50	9.88	7	7	74	69	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	19.97	45	3	473	898	30	2	315	599
11	G	4B5-2fv	0.300	e	10.50	9.88	7	7	74	69	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	354	339	1080	725	0	0	0	0
	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	484	358	1140	766	0	0	0	0
	G	4A5-2ov	0.300	w	10.50	19.97	75	5	788	1497	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
	C	16B-30ad	0.032	-	1.12	1.66	1114	1114	1248	1854	176	176	197	293
	C	17B-6al	0.105	-	3.67	4.51	606	606	2225	2734	0	0	0	0
	F	19A-19bscp	0.049	-	1.34	0.65	121	121	163	79	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	1573	150	5192	0	176	27	935	0
6	c) AED excursion									935				93
	Envelope loss/gain								15657	11929			2125	1440
12	a) Infiltration								3877	991			629	161
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				4			920	0			0
		Appliances/other								2600				0
	Subtotal (lines 6 to 13)								19534	16441			2754	1601
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			7	10
14	Subtotal								19534	16441			2761	1611
15	Duct loads						25%	36%	4837	5947	25%	36%	684	583
	Total room load								24370	22388			3445	2194
	Air required (cfm)								875	850			124	83

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

wrightsoft

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		br4	ah
1	Room name		
2	Exposed wall	17.0 ft	0 ft
3	Room height	9.2 ft heat/cool	10.5 ft heat/cool
4	Room dimensions	1.0 x 165.0 ft	3.0 x 3.0 ft
5	Room area	165.0 ft²	9.0 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	5	5	14	10
.	W	12C-0sw	0.091	e	3.18	2.14	108	93	296	199	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	19.97	15	1	158	299	0	0	0	0
11	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	45	45	143	96	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	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
	C	16B-30ad	0.032	-	1.12	1.66	144	144	161	240	0	0	0	0
	C	17B-6al	0.105	-	3.67	4.51	22	22	81	99	9	9	35	42
	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	165	17	588	0	9	0	0	0

6	c) AED excursion									33				-3
	Envelope loss/gain								1427	966			49	49
12	a) Infiltration								396	101			12	3
	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)								1823	1068			61	52
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								40	35			-61	-52
14	Subtotal								1864	1103			0	0
15	Duct loads						25%	36%	461	399	25%	36%	0	0
	Total room load								2325	1501			0	0
	Air required (cfm)								83	57			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: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

1	Room name					foyer				laundry					
2	Exposed wall					9.0 ft				4.0 ft					
3	Room height					9.0 ft			heat/cool	9.0 ft			heat/cool		
4	Room dimensions						1.0	x	58.5 ft		9.0	x	6.0 ft		
5	Room area					58.5 ft²				54.0 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	36	36	115	77
.	W	12C-0sw	0.091	e	3.18	2.14	81	46	147	98	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	9.88	7	7	74	69	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
11	G	4B5-2fv	0.300	e	10.50	9.88	7	7	74	69	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	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
	C	16B-30ad	0.032	-	1.12	1.66	59	59	66	97	54	54	60	90
	C	17B-6al	0.105	-	3.67	4.51	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	59	9	312	0	54	4	138	0
6	c) AED excursion									-35				-32
	Envelope loss/gain								1112	658			314	134
12	a) Infiltration								210	54			93	24
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @	230				0			0	0			0
		Appliances/other								0				500
	Subtotal (lines 6 to 13)								1321	712			407	658
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								1321	712			407	658
15	Duct loads						25%	36%	327	257	25%	36%	101	238
	Total room load								1648	969			507	896
	Air required (cfm)								59	37			18	34

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

wrightsoft

Right-J® Worksheet
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		wic	mbath
1	Room name		
2	Exposed wall	6.0 ft	10.0 ft
3	Room height	9.0 ft heat/cool	9.0 ft heat/cool
4	Room dimensions	12.0 x 6.0 ft	1.0 x 112.0 ft
5	Room area	72.0 ft²	112.0 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
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
11	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	54	54	172	115	90	90	287	192
	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	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
	C	16B-30ad	0.032	-	1.12	1.66	72	72	81	120	112	112	125	186
	C	17B-6al	0.105	-	3.67	4.51	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	6	208	0	112	10	346	0

6	c) AED excursion									-13				-21
	Envelope loss/gain								460	223			758	358
12	a) Infiltration								140	36			233	60
	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)								600	258			991	418
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								600	258			991	418
15	Duct loads						25%	36%	149	93	25%	36%	245	151
	Total room load								749	352			1237	569
	Air required (cfm)								27	13			44	22

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: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		lav	mbed
1	Room name		
2	Exposed wall	0 ft	28.0 ft
3	Room height	9.0 ft heat/cool	9.0 ft heat/cool
4	Room dimensions	6.0 x 3.0 ft	13.0 x 15.0 ft
5	Room area	18.0 ft²	195.0 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
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
11	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	135	120	382	257
	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	117	87	277	186
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	30	2	315	599
	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
	C	16B-30ad	0.032	-	1.12	1.66	18	18	20	30	195	195	218	324
	C	17B-6al	0.105	-	3.67	4.51	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	18	0	0	0	195	28	969	0

6	c) AED excursion									-1				258
	Envelope loss/gain								20	29			2319	1739
12	a) Infiltration								0	0			652	167
	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)								20	29			2972	1906
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								20	29			2972	1906
15	Duct loads						25%	36%	5	10	25%	36%	736	690
	Total room load								25	39			3707	2596
	Air required (cfm)								1	1			133	99

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

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

1	Room name					kitchen				great				
2	Exposed wall					0 ft				18.0 ft				
3	Room height					10.0 ft		heat/cool		10.5 ft		heat/cool		
4	Room dimensions					1.0 x 143.5 ft				1.0 x 330.0 ft				
5	Room area					143.5 ft²				330.0 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	26	26	81	55
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
.	├─G	4A5-2ov	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
.	├─G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
11	├─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	14	14	43	29	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	162	111	354	237
	├─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	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
	C	16B-30ad	0.032	-	1.12	1.66	45	45	50	74	0	0	0	0
	C	17B-6al	0.105	-	3.67	4.51	103	103	380	467	345	345	1266	1556
	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	144	0	0	0	330	18	623	0
6	c) AED excursion									-94				336
	Envelope loss/gain								473	475			3080	2772
12	a) Infiltration								35	9			485	124
	b) Room ventilation								0	0			0	0
13	Internal gains:	Occupants @ 230					1			230	3			690
		Appliances/other								1200				900
	Subtotal (lines 6 to 13)								508	1914			3565	4486
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			30	32
14	Subtotal								508	1914			3596	4518
15	Duct loads						25%	36%	126	692	25%	36%	890	1634
	Total room load								633	2607			4486	6152
	Air required (cfm)								23	99			161	234

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: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		br2	bath
1	Room name		
2	Exposed wall	26.0 ft	5.0 ft
3	Room height	9.0 ft heat/cool	9.0 ft heat/cool
4	Room dimensions	1.0 x 160.0 ft	10.0 x 5.0 ft
5	Room area	160.0 ft²	50.0 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	117	117	373	250	45	45	143	96
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
.	└G	4A5-2ov	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
.	├G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
11	├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	117	102	325	218	0	0	0	0
	├G	4A5-2ov	0.300	w	10.50	19.97	15	1	158	299	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
	C	16B-30ad	0.032	-	1.12	1.66	160	160	179	266	50	50	56	83
	C	17B-6al	0.105	-	3.67	4.51	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	160	26	900	0	50	5	173	0

6	c) AED excursion									128				-10
	Envelope loss/gain								1934	1162			372	170
12	a) Infiltration								606	155			116	30
	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)								2540	1317			489	199
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								9	12			7	10
14	Subtotal								2549	1329			496	210
15	Duct loads						25%	36%	631	481	25%	36%	123	76
	Total room load								3180	1810			619	286
	Air required (cfm)								114	69			22	11

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: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

1	Room name					hall				dining					
2	Exposed wall					0 ft				11.0 ft					
3	Room height					9.0 ft			heat/cool	9.5 ft			heat/cool		
4	Room dimensions					3.0	x	10.0 ft		11.0	x	11.0 ft			
5	Room area					30.0 ft²				121.0 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
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	9.88	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
11	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	17	17	53	35
	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	88	58	185	124
	G	4A5-2ov	0.300	w	10.50	19.97	0	0	0	0	30	2	315	599
	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
	C	16B-30ad	0.032	-	1.12	1.66	30	30	34	50	0	0	0	0
	C	17B-6al	0.105	-	3.67	4.51	0	0	0	0	126	126	464	570
	F	19A-19bscp	0.049	-	1.34	0.65	0	0	0	0	121	121	163	79
	F	22A-tpl	0.989	-	34.62	0.00	30	0	0	0	0	0	0	0
6	c) AED excursion									-2				298
	Envelope loss/gain								34	48			1179	1706
12	a) Infiltration								0	0			270	69
	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)								34	48			1450	1775
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								-34	-48			0	0
14	Subtotal								0	0			1450	1775
15	Duct loads						25%	36%	0	0	25%	36%	359	642
	Total room load								0	0			1809	2417
	Air required (cfm)								0	0			65	92

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

wrightsoft

Right-J8® Form J1
Entire House
DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		Entire House	br3
1	Name of Room		
2	Running Feet of Exposed Wall	161.0 ft	27.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	9.4 ft 5514.6 ft²	9.0 ft 486.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	1694.0 ft²	1.0 x 176.0 ft 176.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	16.7 ° 1719.5 ft²	0 ° 176.0 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	354	1127	757		126	401	269	
.	Wall	12C-0sw	e	3.18	2.14	306	720	483		117	277	186	
.	├─Glaz	4A5-2ov	e	10.50	9.88	7	74	69		0	0	0	
.	├─Glaz	4A5-2ov	e	10.50	19.97	45	473	898		30	315	599	
11	├─Glaz	4B5-2fv	e	10.50	9.88	7	74	69		0	0	0	
	└─Door	11J0	e	21.00	17.10	21	441	359		0	0	0	
	Wall	12C-0sw	s	3.18	2.14	354	1080	725		0	0	0	
	└─Glaz	4A5-2ov	s	10.50	7.65	15	158	115		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	484	1140	766		0	0	0	
	├─Glaz	4A5-2ov	w	10.50	19.97	75	788	1497		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	
	Ceil	16B-30ad	-	1.12	1.66	1114	1248	1854		176	197	293	
	Ceil	17B-6al	-	3.67	4.51	606	2225	2734		0	0	0	
	Flor	19A-19bscp	-	1.34	0.65	121	163	79		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	1573	5192	0		176	935	0	
12	Infiltration	Heating Load (Btuh)		Effect	0.38	WAR	3877			WAR	629		
		Sensible Load (Btuh)		ACH	0.20	1.00		991		0.16		161	
		Latent Load (Btuh)							1638				
13	Internal	a Occupants at 230 and 200 Btuh				4		920	800	0		0	0
		b Scenario number						2600				0	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					19534	16441	2438		2761	1611	
15	Duct Loads	EHLF & ESGF		0.248	0.362		4837	5947			684	583	
		ELG							1193				124
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							935				93	
21	Total Load	Sum lines 13 through 19					24370	22388	3631		3445	2194	

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

wrightsoft

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		br4	ah
1	Name of Room		
2	Running Feet of Exposed Wall	17.0 ft	0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	9.2 ft 471.2 ft²	10.5 ft 108.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	1.0 x 165.0 ft 165.0 ft²	3.0 x 3.0 ft 9.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	16.7 ° 165.9 ft²	16.7 ° 9.4 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		5	14	10	
.	Wall	12C-0sw	e	3.18	2.14	108	296	199		0	0	0	
.	├──Glaz	4A5-2ov	e	10.50	9.88	0	0	0		0	0	0	
.	├──Glaz	4A5-2ov	e	10.50	19.97	15	158	299		0	0	0	
11	├──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	45	143	96		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	7.65	0	0	0		0	0	0	
	└──Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	144	161	240		0	0	0	
	Ceil	17B-6al	-	3.67	4.51	22	81	99		9	35	42	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	165	588	0		9	0	0	
12	Infiltration	Heating Load (Btuh)		Effect	0.38	WAR	396			WAR	12		
		Sensible Load (Btuh)		ACH	0.20	0.10		101		0.00		3	
		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					1864	1103			0	0	
15	Duct Loads	EHLF & ESGF		0.248	0.362		461	399			0	0	
		ELG							116				6
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				-3	
21	Total Load	Sum lines 13 through 19					2325	1501			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: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		foyer	laundry
1	Name of Room		
2	Running Feet of Exposed Wall	9.0 ft	4.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	9.0 ft 272.2 ft²	9.0 ft 270.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	1.0 x 58.5 ft 58.5 ft²	9.0 x 6.0 ft 54.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 58.5 ft²	0 ° 54.0 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		36	115	77	
.	Wall	12C-0sw	e	3.18	2.14	81	147	98		0	0	0	
.	├─Glaz	4A5-2ov	e	10.50	9.88	7	74	69		0	0	0	
.	├─Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
11	├─Glaz	4B5-2fv	e	10.50	9.88	7	74	69		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	7.65	0	0	0		0	0	0	
	└─Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	59	66	97		54	60	90	
	Ceil	17B-6al	-	3.67	4.51	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	59	312	0		54	138	0	
12	Infiltration	Heating Load (Btuh)		Effect	0.38	WAR	210			WAR	93		
		Sensible Load (Btuh)		ACH	0.20	0.05		54		0.02		24	
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh				0		0	0	0		0	0
		b Scenario number						0				500	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					1321	712			407	658	
15	Duct Loads	EHLF & ESGF		0.248	0.362		327	257			101	238	
		ELG							41				38
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							-35				-32	
21	Total Load	Sum lines 13 through 19					1648	969			507	896	

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

wrightsoft

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		wic	mbath
1	Name of Room		
2	Running Feet of Exposed Wall	6.0 ft	10.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	9.0 ft 324.0 ft²	9.0 ft 414.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	12.0 x 6.0 ft 72.0 ft²	1.0 x 112.0 ft 112.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 72.0 ft²	0 ° 112.0 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	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
.	├─Glaz	4A5-2ov	e	10.50	9.88	0	0	0		0	0	0	
.	├─Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
11	├─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	54	172	115		90	287	192	
	└─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	7.65	0	0	0		0	0	0	
	└─Door	11J0	w	21.00	17.10	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	72	81	120		112	125	186	
	Ceil	17B-6al	-	3.67	4.51	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	208	0		112	346	0	
	Infiltration	Heating Load (Btuh)		Effect	0.38	WAR	140			WAR	233		
12		Sensible Load (Btuh)		ACH	0.20	0.04		36		0.06		60	
		Latent Load (Btuh)											
	Internal	a Occupants at 230 and 200 Btuh				0		0	0	0		0	0
		b Scenario number						0				0	
13		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					600	258			991	418	
15	Duct Loads	EHLF & ESGF		0.248	0.362		149	93			245	151	
		ELG							51				79
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							-13				-21	
21	Total Load	Sum lines 13 through 19					749	352			1237	569	

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

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

		lav	mbed
1	Name of Room		
2	Running Feet of Exposed Wall	0 ft	28.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	9.0 ft 162.0 ft²	9.0 ft 504.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	6.0 x 3.0 ft 18.0 ft²	13.0 x 15.0 ft 195.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 18.0 ft²	0 ° 195.0 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	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
.	├─Glaz	4A5-2ov	e	10.50	9.88	0	0	0		0	0	0	
.	├─Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
11	├─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		135	382	257	
	└─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		117	277	186	
	├─Glaz	4A5-2ov	w	10.50	19.97	0	0	0		30	315	599	
	├─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	
	Ceil	16B-30ad	-	1.12	1.66	18	20	30		195	218	324	
	Ceil	17B-6al	-	3.67	4.51	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	18	0	0		195	969	0	
	Infiltration	Heating Load (Btuh)		Effect	0.38	WAR	0			WAR	652		
12		Sensible Load (Btuh)		ACH	0.20	0		0		0.17		167	
		Latent Load (Btuh)											
	Internal	a Occupants at 230 and 200 Btuh				0		0	0	0		0	0
		b Scenario number						0				0	
13		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					20	29			2972	1906	
15	Duct Loads	EHLF & ESGF		0.248	0.362		5	10			736	690	
		ELG							13				137
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							-1				258	
21	Total Load	Sum lines 13 through 19					25	39			3707	2596	

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

wrightsoft

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		kitchen		great	
1	Name of Room				
2	Running Feet of Exposed Wall	0 ft		18.0 ft	
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	10.0 ft	434.2 ft²	10.5 ft	693.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	1.0 x 143.5 ft	143.5 ft²	1.0 x 330.0 ft	330.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	16.7 °	147.9 ft²	16.7 °	344.5 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		26	81	55	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
.	├──Glaz	4A5-2ov	e	10.50	9.88	0	0	0		0	0	0	
.	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
11	├──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	14	43	29		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		162	354	237	
	├──Glaz	4A5-2ov	w	10.50	19.97	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	
	Ceil	16B-30ad	-	1.12	1.66	45	50	74		0	0	0	
	Ceil	17B-6al	-	3.67	4.51	103	380	467		345	1266	1556	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	144	0	0		330	623	0	
12	Infiltration	Heating Load (Btuh)	Effect		0.38	WAR	35			WAR	485		
		Sensible Load (Btuh)	ACH		0.20	0.01		9		0.13		124	
		Latent Load (Btuh)											
13	Internal	a Occupants at 230 and 200 Btuh				1		230	200	3		690	600
		b Scenario number						1200				900	
		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					508	1914			3596	4518	
15	Duct Loads	EHLF & ESGF		0.248	0.362		126	692			890	1634	
		ELG							101				232
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							-94				336	
21	Total Load	Sum lines 13 through 19					633	2607			4486	6152	

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

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

		br2	bath
1	Name of Room		
2	Running Feet of Exposed Wall	26.0 ft	5.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	9.0 ft 468.0 ft²	9.0 ft 270.0 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	1.0 x 160.0 ft 160.0 ft²	10.0 x 5.0 ft 50.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 160.0 ft²	0 ° 50.0 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	117	373	250		45	143	96	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
.	├──Glaz	4A5-2ov	e	10.50	9.88	0	0	0		0	0	0	
.	├──Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
11	├──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	117	325	218		0	0	0	
	├──Glaz	4A5-2ov	w	10.50	19.97	15	158	299		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	
	Ceil	16B-30ad	-	1.12	1.66	160	179	266		50	56	83	
	Ceil	17B-6al	-	3.67	4.51	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	160	900	0		50	173	0	
	Infiltration	Heating Load (Btuh)		Effect	0.38	WAR	606			WAR	116		
12		Sensible Load (Btuh)		ACH	0.20	0.16		155		0.03		30	
		Latent Load (Btuh)											
	Internal	a Occupants at 230 and 200 Btuh				0		0	0	0		0	0
		b Scenario number						0				0	
13		c Default Adjustments											
		d Custom Appliances						0	0			0	0
		e Plants							0				0
14	Subtotals	Sum lines 6 through 12					2549	1329			496	210	
	Duct Loads	EHLF & ESGF		0.248	0.362		631	481			123	76	
15		ELG							113				35
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							128				-10	
21	Total Load	Sum lines 13 through 19					3180	1810			619	286	

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

wrightsoft

Right-J8® Form J1
Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & Cooli...
Plan: 1755

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

		hall	dining
1	Name of Room		
2	Running Feet of Exposed Wall	0 ft	11.0 ft
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)	9.0 ft 234.0 ft²	9.5 ft 368.5 ft²
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)	3.0 x 10.0 ft 30.0 ft²	11.0 x 11.0 ft 121.0 ft²
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)	0 ° 30.0 ft²	16.7 ° 126.3 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	
.	Wall	12C-0sw	e	3.18	2.14	0	0	0		0	0	0	
.	├─Glaz	4A5-2ov	e	10.50	9.88	0	0	0		0	0	0	
.	├─Glaz	4A5-2ov	e	10.50	19.97	0	0	0		0	0	0	
11	├─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		17	53	35	
	└─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		88	185	124	
	├─Glaz	4A5-2ov	w	10.50	19.97	0	0	0		30	315	599	
	├─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	
	Ceil	16B-30ad	-	1.12	1.66	30	34	50		0	0	0	
	Ceil	17B-6al	-	3.67	4.51	0	0	0		126	464	570	
	Flor	19A-19bscp	-	1.34	0.65	0	0	0		121	163	79	
	Flor	22A-tpl	-	34.62	0.00	30	0	0		0	0	0	
12	Infiltration	Heating Load (Btuh)		Effect	0.38	WAR	0			WAR	270		
		Sensible Load (Btuh)		ACH	0.20	0		0		0.07		69	
		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			1450	1775	
15	Duct Loads	EHLF & ESGF		0.248	0.362		0	0			359	642	
		ELG							21				85
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				298	
21	Total Load	Sum lines 13 through 19					0	0			1809	2417	

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: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

Design Conditions

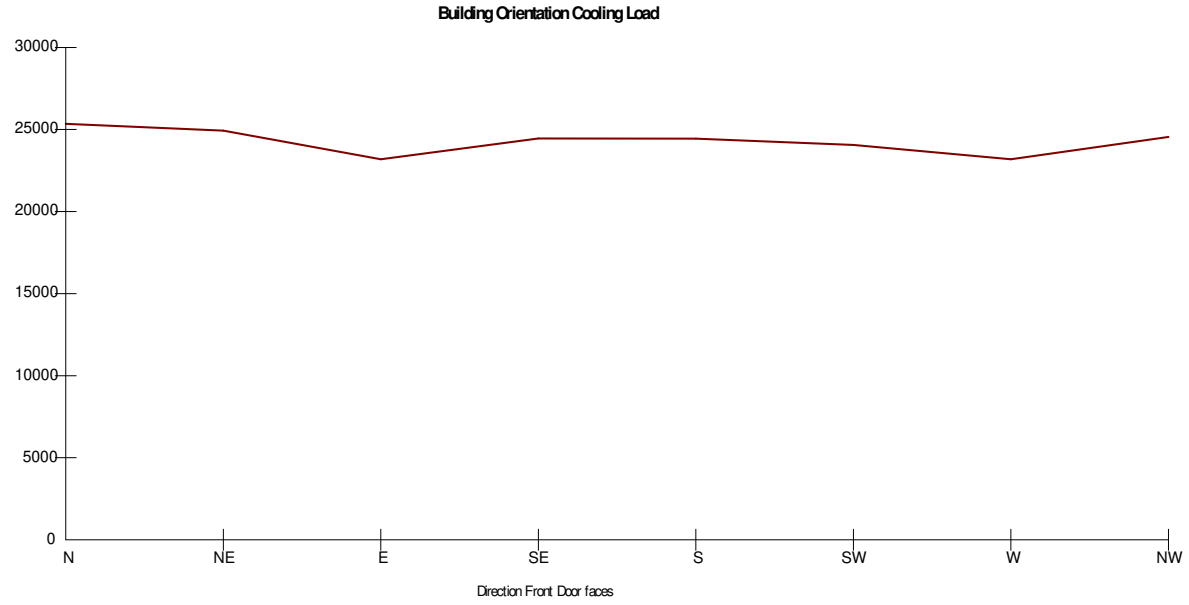
Location:
Gainesville Regional AP, FL, US
Elevation: 164 ft
Latitude: 30°N

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)	21716	21298	19555	20825	20809	20426	19555	20915
Latent Load (Btuh)	3631	3631	3631	3631	3631	3631	3631	3631
Total Load (Btuh)	25347	24929	23186	24456	24440	24057	23186	24546
Heating AVF (cfm)	875	875	875	875	875	875	875	875
Cooling AVF (cfm)	850	850	850	850	850	850	850	850



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: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

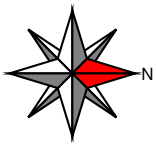
PO Box 2156, Lake City, FL 32056 Phone: 386-754-1987 Email: Office@DLWilliamsHeatingandCooling.com

Supporting Detail			
Project Name:	Adams Homes Preserve at Laurel lot 85 plan 1755	Date:	09/25/2024
Address:	Lake City, FL 32055		
Phone:		Job ID:	1

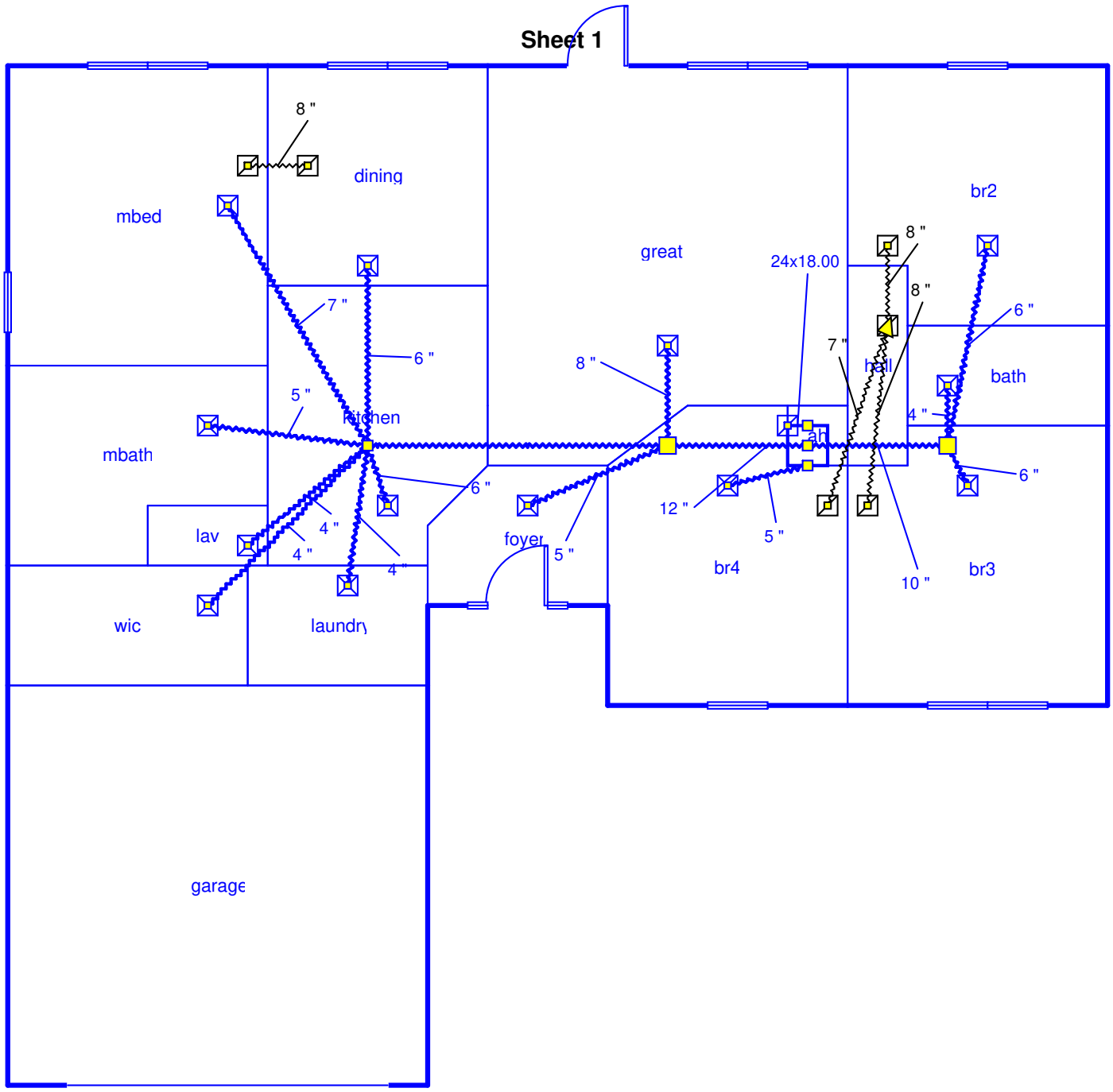
Worksheet A
Location and Design Conditions

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 & Coo** Preserve at Laurel lot 85 plan 1755 Lake City, FL 32055	**DL Williams Heating & Cooling LLC** PO Box 2156 Lake City, FL 32056 Phone: 386-754-1987 Office@DLWilliamsHeatingandCooling.com	Scale: 1 : 92 Page 1 Right-Suite® Universal 2024 24.0.03 RSU02245 2024-Nov-05 10:40:04 ...e at Laurel lot 85 plan 1755.rup

Duct System Summary

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0 in H2O	0 in H2O
Available static pressure	0.50 in H2O	0.50 in H2O
Supply / return available pressure	0.383 / 0.117 in H2O	0.383 / 0.117 in H2O
Lowest friction rate	0.192 in/100ft	0.192 in/100ft
Actual air flow	875 cfm	850 cfm
Total effective length (TEL)	261 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
bath	h	619	22	11	0.307	4.0	0x 0	VlFx	10.0	115.0	st1
br2	h	3180	114	69	0.290	6.0	0x 0	VlFx	17.2	115.0	st1
br3	h	3445	124	83	0.308	6.0	0x 0	VlFx	9.2	115.0	st1
br4	h	2325	83	57	0.387	5.0	0x 0	VlFx	4.1	95.0	
dining	c	2417	65	92	0.231	6.0	0x 0	VlFx	31.0	135.0	st2
foyer	h	1648	59	37	0.296	5.0	0x 0	VlFx	14.6	115.0	st2
great	c	6152	161	234	0.302	8.0	0x 0	VlFx	12.0	115.0	st2
kitchen	c	2607	23	99	0.239	6.0	0x 0	VlFx	25.2	135.0	st2
laundry	c	896	18	34	0.234	4.0	0x 0	VlFx	29.1	135.0	st2
lav	c	39	1	1	0.232	4.0	0x 0	VlFx	29.8	135.0	st2
mbath	h	1237	44	22	0.192	5.0	0x 0	VlFx	30.1	170.0	st2
mbed	h	3707	133	99	0.224	7.0	0x 0	VlFx	35.9	135.0	st2
wic	h	749	27	13	0.228	4.0	0x 0	VlFx	33.3	135.0	st2

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st2	Peak AVF	531	630	0.192	802	12.0	0 x 0	VinlFlx	
st1	Peak AVF	260	163	0.290	477	10.0	0 x 0	VinlFlx	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x 0	875	850	61.0	0.192	292	10.6	18.00x24	10x86	SJSp	

Duct system multi orientation report

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

Group 1: (N, S, NW) Group 2: (NE, E, SE) Group 3: (SW, W)

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												
bath	22 h	12x12	4	22 h	12x12	4	22 h	12x12	4	22 h	12x12	4
br2	114 h	12x12	6	114 h	12x12	6	114 h	12x12	6	114 h	12x12	6
br3	124 h	12x12	6	124 h	12x12	6	124 h	12x12	6	124 h	12x12	6
br4	83 h	12x12	5	83 h	12x12	5	83 h	12x12	5	83 h	12x12	5
dining	66 c	12x12	5	83 c	12x12	6	92 c	12x12	6	82 c	12x12	6
foyer	59 h	12x12	5	59 h	12x12	5	59 h	12x12	5	59 h	12x12	5
great	248 c	12x12	8	241 c	12x12	8	234 c	12x12	8	240 c	12x12	8
kitchen	119 c	12x12	6	102 c	12x12	6	99 c	12x12	6	108 c	12x12	6
laundry	41 c	12x12	4	35 c	12x12	4	34 c	12x12	4	37 c	12x12	4
lav	2 c	12x12	4	2 c	12x12	4	1 c	12x12	4	2 c	12x12	4
mbath	44 h	12x12	5	44 h	12x12	5	44 h	12x12	5	44 h	12x12	5
mbed	133 h	12x12	7	133 h	12x12	7	133 h	12x12	7	133 h	12x12	7
wic	27 h	12x12	4	27 h	12x12	4	27 h	12x12	4	27 h	12x12	4
Supply Trunks												
st2	656 c		12	639 c		12	630 c		12	644 c		12
st1	260 h		10	260 h		10	260 h		10	260 h		10
Return Branches												
rb1	875 h	12x12	0x0	875 h	12x12	0x0	875 h	12x12	0x0	875 h	12x12	0x0
Friction Rates												
Heating FR	0.192			0.192			0.192			0.192		
Cooling FR	0.192			0.192			0.192			0.192		

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

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												
bath	22 h	12x12	4	22 h	12x12	4	22 h	12x12	4	22 h	12x12	4
br2	114 h	12x12	6	114 h	12x12	6	114 h	12x12	6	114 h	12x12	6
br3	124 h	12x12	6	124 h	12x12	6	124 h	12x12	6	124 h	12x12	6
br4	83 h	12x12	5	83 h	12x12	5	83 h	12x12	5	83 h	12x12	5
dining	66 c	12x12	5	80 c	12x12	6	84 c	12x12	6	73 c	12x12	5
foyer	59 h	12x12	5	59 h	12x12	5	59 h	12x12	5	59 h	12x12	5
great	250 c	12x12	8	219 c	12x12	7	213 c	12x12	7	238 c	12x12	8
kitchen	120 c	12x12	6	105 c	12x12	6	102 c	12x12	6	108 c	12x12	6
laundry	41 c	12x12	4	36 c	12x12	4	35 c	12x12	4	37 c	12x12	4
lav	2 c	12x12	4	2 c	12x12	4	2 c	12x12	4	2 c	12x12	4
mbath	44 h	12x12	5	44 h	12x12	5	44 h	12x12	5	44 h	12x12	5
mbed	133 h	12x12	7	133 h	12x12	7	133 h	12x12	7	133 h	12x12	7
wic	27 h	12x12	4	27 h	12x12	4	27 h	12x12	4	27 h	12x12	4
Supply Trunks												
st2	654 c		12	627 c		12	612 c		12	634 c		12
st1	260 h		10	260 h		10	260 h		10	260 h		10
Return Branches												
rb1	875 h	12x12	0x0	875 h	12x12	0x0	875 h	12x12	0x0	875 h	12x12	0x0
Friction Rates												
Heating FR	0.192			0.192			0.192			0.192		
Cooling FR	0.192			0.192			0.192			0.192		

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

Duct Name	Largest			Smalest		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches						
bath	22 h	12x12	4	22 h	12x12	4
br2	114 h	12x12	6	114 h	12x12	6
br3	124 h	12x12	6	124 h	12x12	6
br4	83 h	12x12	5	83 h	12x12	5
dining	92 c	12x12	6	66 c	12x12	5
foyer	59 h	12x12	5	59 h	12x12	5
great	250 c	12x12	8	213 c	12x12	7
kitchen	120 c	12x12	6	99 c	12x12	6
laundry	41 c	12x12	4	34 c	12x12	4
lav	2 c	12x12	4	1 c	12x12	4
mbath	44 h	12x12	5	44 h	12x12	5
mbed	133 h	12x12	7	133 h	12x12	7
wic	27 h	12x12	4	27 h	12x12	4
Supply Trunks						
st2	656 c		12	612 c		12
st1	260 h		10	260 h		10
Return Branches						
rb1	875 h	12x12	0x0	875 h	12x12	0x0
Friction Rates						
Heating FR	0.192			0.192		
Cooling FR	0.192			0.192		

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: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.50	0.50
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	0.50	0.50

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	8	1
Measured length of trunk	22	0
Equivalent length of fittings	170	60
Total length	200	61
Total effective length		261

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0.192	> 0.18	0.192	> 0.18
Return Ducts	0.192	> 0.18	0.192	> 0.18

Fitting Equivalent Length Details

Supply 4AD=60, 2A0=35, 11A=20, 11A=20, 1A=35: TotalEL=170

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

Manual S Compliance Report

Entire House

DL Williams Heating & Cooling LLC

Job: 1
Date: 09/25/2024
By: DL Williams Heating & C...
Plan: 1755

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

Project Information

For: Preserve at Laurel lot 85 plan 1755, Adams Homes
Lake City, FL 32055

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	22388	Btuh	Entering coil DB:	77.1°F
Outdoor design WB:	76.0°F	Latent gain:	3631	Btuh	Entering coil WB:	63.5°F
Indoor design DB:	75.0°F	Total gain:	26019	Btuh		
Indoor RH:	50%	Estimated airflow:	850	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Trane Model: 4TWR5030H1+TEM6A0B30H21++TDR

Actual airflow:	850	cfm		
Sensible capacity:	22057	Btuh	99% of load	
Latent capacity:	4413	Btuh	122% of load	
Total capacity:	26470	Btuh	102% of load	SHR: 83%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	24370	Btuh	Entering coil DB:	67.1°F
Indoor design DB:	68.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type: Split ASHP
Manufacturer: Trane Model: 4TWR5030H1+TEM6A0B30H21++TDR

Actual airflow:	875	cfm			
Output capacity:	20618	Btuh	85% of load	Capacity balance:	31 °F
Supplemental heat required:	3753	Btuh		Economic balance:	-99 °F

Backup equipment type: Elec strip
Manufacturer: Model:

Actual airflow:	875	cfm			
Output capacity:	6.4	kW	89% of load	Temp. rise:	50 °F

Meets all requirements of ACCA Manual S.

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

Form RPER 2.0

Columbia
Header Information

Contractor: DL Williams Heating & Cooling LLC
Derrick Williams
Mechanical license#: _____
Building plan #: 1755

Applicable Attachments

Manual J1 Form and Worksheet A:	☐ Yes	☐ No
OEM performance data (heating, cooling, blower):	☐ Yes	☐ No
Duct distribution sketch:	☐ Yes	☐ No
IRC Table R301.2 (climate & geographic design criteria)	☐ Yes	☐ No

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

HVAC LOAD CALCULATION (IRC M1401.3

Manual J Design Criteria and Loads

Location

Elevation	164	ft
Altitude Correction Factor	0.99	
Latitude	30	°N

Winter Design Conditions

Outdoor Winter Temp	33	°F
Indoor Winter Temp	68	°F
Heating Temp Diff	35	°F

Summer Design Conditions

Outdoor Cooling Temp	92	°F
Indoor Cooling Temp	75	°F
Cooling Temp Diff	17	°F
Indoor Summer Design RH	50	%
Coincident Wet Bulb Temp	76	°F

Manual J Loads

Total Heat Loss	24370	Btuh
Sensible Heat Gain	22388	Btuh
Latent Head Gain	3631	Btuh
Total Heat Gain	26019	Btuh

The heat loss/gain was calculated in accordance with ACCA Manual J? Y■ N☐

HVAC EQUIPMENT SELECTION (IRC M1401.3

Heating Equipment

☐ Furnace ☐ Boiler ■ Electric Heat
☐ Single Speed ☐ Multi Stage ☐ Modulating

Model: _____

Output	20618	Btuh	Sizing Value	24370	Btuh
Supplemental Heat	3753	Btuh	Sizing Limit	175.0	%
			Load: Capacity	89.1	%

Size Factor is within Manual S Size Limit? Y☐ N■

Cooling Equipment

☐ Air Conditioner ■ Heat Pump
■ Air-to-Air ☐ Geothermal Open Loop ☐ Geothermal Closed Loop
■ Single Speed ☐ Multi Stage ☐ Variable Speed

Model: 4TWR5030H1+TEM6A0B30H21++TDR

Sensible	22057	Btuh	Sizing Value	26019	Btuh
Latent	4413	Btuh	Sizing Limit	115.0	%
Total	26470	Btuh	Load: Capacity	101.7	%

Size Factor is within Manual S Size Limit? Y■ N☐

HVAC DUCT DISTRIBUTION DESIGN (IRC M1601.1

Design airflow	875	cfm	Longest Supply Duct	200	ft
External Static Pressure (ESP)	0.50	in H2O	Longest Return Duct	61.0	ft
Component Pressure Loss (CPL)	0	in H2O	Total Effective Length (TEL)	261	ft
Available static pressure (ASP)	0.50	in H2O	Friction Rate	0.19	in/100ft
ESP – CPL = ASP			(ASP x 100) / TEL = Friction Rate		

Duct Materials Used
Trunk Duct: ☐ Duct Board ☐ Sheet Metal ■ Flex ☐ Lined Sheet Metal ☐ Other
Branch Duct: ☐ Duct Board ☐ Sheet Metal ■ Flex ☐ Lined Sheet Metal ☐ Other

Ducts are sized per Manual D? Y■ N☐

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

Contractor's printed name: _____

Contractor's signature: _____ Date: _____

ENERGY STAR Single-Family New Homes
National HVAC Design Report, Version 3 / 3.1 /3.2 (Rev. 13)

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: 09/25/2024
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: 1755 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 18 and www.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: 4	-
3.5 Conditioned floor area used in loads: 1694 Sq. Ft.	-
3.6 Window area used in loads: 179 Sq. Ft.	-
3.7 Predominant window SHGC used in loads: 0.23	-
3.8 Infiltration rate used in loads: Summer: 0.20 Winter: 0.38	-
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)	21.7	21.3	19.6	20.8	20.8	20.4	19.6	20.9	-
	3.11 Latent heat gain (Not by orientation)	3.6								-
	3.12 Total heat gain (By orientation)	25.3	24.9	23.2	24.5	24.4	24.1	23.2	24.5	-
	3.13 Maximum – minimum total heat gain (Item 3.12) across orientations = 2.2 kBtuh						Variation is ≤ 6 kBtuh			■
Heating	3.14 Total heat loss (Not by orientation)	24.4								-

ENERGY STAR Single-Family New Homes
National HVAC Design Report, Version 3 / 3.1 / 3.2 (Rev. 13)

4. Heating & Cooling Equipment Selection	**Designer Verified**
4.1 Equipment selected per ACCA Manual S (see Footnote 26 & 27).	☐
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 4TWR5030H1	-
4.4 Evaporator / fan coil manufacturer & model: Trane TEM6A0B30H21++TDR	-
4.5 AHRI reference #: 9033590	-
4.6 Rated cooling efficiency: 12.0 EER2/15.2 SEER2 Rated heating efficiency: 8.1 HSPF2	
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: 4.4 kBtuh	-
4.10 Sensible capacity at design conditions, from OEM expanded performance data: 22.1 kBtuh	-
4.11 Total capacity at design conditions, from OEM expanded performance data: 26.5 kBtuh	-
4.12 Air-source heat pump capacity: At 17°F: 17.5 kBtuh At 47°F: 26.6 kBtuh ☐ N/A	-
4.13 Cooling sizing % = Total capacity (Item 4.11) divided by maximum total heat gain (Item 3.12): 104 %	-
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) = 86%	-
4.14.2 HDD / CDD ratio (Visit www.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 Rated heating 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 850 CFM Heating mode 875 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): 0.5 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	lav	1	23		
2	bath	22	13	mbath	44	24		
3	br2	114	14	mbed	133	25		
4	br3	124	15	wic	27	26		
5	br4	83	16			27		
6	dining	65	17			28		
7	foyer	59	18			29		
8	great	161	19			30		
9	hall	0	20			31		
10	kitchen	23	21			32		
11	laundry	18	22				Total for all rooms	875

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:	09/25/2024

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 known 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	☐ Intermittent	Dwelling Units Served by Fan:	■ Single Unit	☐ Multiple Units
Bathrooms:	Runtime:	■ Continuous	☐ Intermittent	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):	21.7 / 25.3		
4.5 Sensible, latent, & total cooling capacity at design conditions (kBtuh):	22.1 / 4.4 / 26.5		
4.6 If HP, heating capacity at 17°F and at 47°F (kBtuh):	17.5 / 26.6 / N/A ☐	N/A ☐	N/A ☐
4.7 Compressor speed type:	Single		
4.8 Cooling sizing % & applicable sizing limit key from Table 2:	104.4 / 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:	09/25/2024
1.3 Software name and version used to complete design:		Right-Suite® Universal 2024 24.0.03 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 3
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:	1694 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)		4 920								
3.8 Total non-occupant internal gains (Btuh):		2600								
3.9 Conditioned floor area (sq. ft.):(22)		1694								
3.10 Window area (sq. ft.):(23)		179								
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	21.7	3.6	25.3						
	NE	21.3	3.6	24.9						
	E	19.6	3.6	23.2						
	SE	20.8	3.6	24.5						
	S	20.8	3.6	24.4						
	SW	20.4	3.6	24.1						
	W	19.6	3.6	23.2						
	NW	20.9	3.6	24.5						
3.16 Maximum – minimum total heat gain (kBtuh):(28)				2.2						
3.17 Total heat loss (kBtuh):		24.4								

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(s) that system serves (See Item 3.6):	Entire House		
4.3 Equipment type:(29)	HP		
4.4 Evaporator / fan coil mfr. & model #:(30)	TRAN TEM6A0B30H21		
4.5 Condenser mfr. & model #:(30)	TRAN 4TWR5030H1 N/A ☐	N/A ■	N/A ■
4.6 AHRI ref. #, or check box for alt. OEM doc.:(31)	9033590 OEM ☐	OEM ■	OEM ■
4.7 If AC / HP, rated cooling efficiency:(32)	15.2 SEER2 N/A ☐	N/A ■	N/A ■
4.8 If HP, rated heating efficiency:(33)	8.1 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(s) 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(s) 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)	850	875				
5.4 Design blower fan speed setting:(43)	Medium	Medium				
5.5 Design external static pressure (IWC):(44)	0.5					

5.6 Room-by-room design airflows (CFM):	Room Name	Airflow	Room Name	Airflow	Room Name	Airflow
Total Design Airflow:	[All rooms]	875	[All rooms]		[All rooms]	
1.	ah	0				
2.	bath	22				
3.	br2	114				
4.	br3	124				
5.	br4	83				
6.	dining	65				
7.	foyer	59				
8.	great	161				
9.	hall	0				
10.	kitchen	23				
11.	laundry	18				
12.	lav	1				
13.	mbath	44				
14.	mbed	133				
15.	wic	27				
16.						
17.						
18.						
19.						

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