

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:

Gainesville Regional, FL, US
Elevation: 123 ft
Latitude: 30°N

Outdoor:

Dry bulb (°F)
Daily range (°F)
Wet bulb (°F)
Wind speed (mph)

Heating

33
-
-
15.0

Cooling

92
18 (M)
76
7.5

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

68
35
30
8.2

Cooling

75
17
50
43.8

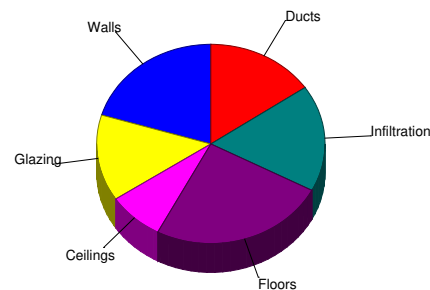
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Average
0

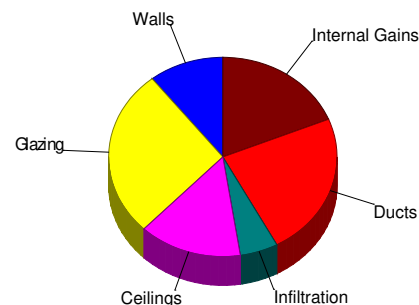
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.2	5146	20.3
Glazing	16.5	3546	14.0
Doors	0	0	0
Ceilings	1.1	2020	8.0
Floors	3.5	6330	25.0
Infiltration	2.4	4378	17.3
Ducts		3907	15.4
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		25327	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.4	2248	10.6
Glazing	26.8	5758	27.2
Doors	0	0	0
Ceilings	1.7	3088	14.6
Floors	0	0	0
Infiltration	0.6	1139	5.4
Ducts		4936	23.3
Ventilation		0	0
Internal gains		3980	18.8
Blower		0	0
Adjustments		0	0
Total		21149	100.0



Latent Cooling Load = 3943 Btuh

Overall U-value = 0.090 Btuh/ft²-°F, Window / Floor Area = 11.9 %

Data entries checked.



Component Constructions

Entire House

DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:			Indoor:		Heating	Cooling
Gainesville Regional, FL, US			Indoor temperature (°F)		68	75
Elevation: 123 ft			Design TD (°F)		35	17
Latitude: 30°N			Relative humidity (%)		30	50
			Moisture difference (gr/lb)		8.2	43.8
Outdoor:	Heating	Cooling	Infiltration:			
Drybulb (°F)	33	92	Method		Simplified	
Daily range (°F)	-	18 (M)	Construction quality		Average	
Wet bulb (°F)	-	76	Fireplaces		0	
Wind speed (mph)	15.0	7.5				

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-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	ne	584	0.091	13.0	3.17	1849	1.38	808
	se	161	0.091	13.0	3.17	510	1.38	223
	sw	529	0.091	13.0	3.17	1675	1.38	732
	nw	351	0.091	13.0	3.17	1112	1.38	486
	all	1625	0.091	13.0	3.17	5146	1.38	2248

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht	ne	36	0.470	0	16.4	589	29.0	1043
	se	21	0.490	0	17.1	358	21.7	456
	se	31	0.470	0	16.4	507	30.0	930
	sw	36	0.470	0	16.4	589	30.0	1080
	nw	48	0.470	0	16.4	785	29.0	1390
	all	172	0.470	0	16.4	2828	28.5	4898
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 5 ft overhang (7 ft window ht, 2 ft sep.); 6.67 ft head ht	se	7	0.470	0	16.4	114	16.4	115
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.31); 50% blinds 45°, light; 50% outdoor insect screen; 2 ft overhang (5 ft window ht, 2 ft sep.); 6.67 ft head ht	sw	15	0.470	0	16.4	245	20.3	304
10D-v: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.32); 8 ft overhang (7 ft window ht, 2 ft sep.); 6.67 ft head ht	nw	21	0.490	0	17.1	358	21.0	441

Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		1814	0.032	30.0	1.11	2020	1.70	3088
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...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N

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Floors

22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr frsh	184	0.989	0	34.4	6330	0	0
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Component Constructions kitchen

DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:			Indoor:		Heating	Cooling
Gainesville Regional, FL, US			Indoor temperature (°F)		68	75
Elevation: 123 ft			Design TD (°F)		35	17
Latitude: 30°N			Relative humidity (%)		30	50
			Moisture difference (gr/lb)		8.2	43.8
Outdoor:	Heating	Cooling	Infiltration:			
Dry bulb (°F)	33	92	Method		Simplified	
Daily range (°F)	-	18 (M)	Construction quality		Average	
Wet bulb (°F)	-	76	Fireplaces		0	
Wind speed (mph)	15.0	7.5				

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-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	sw	88	0.091	13.0	3.17	279	1.38	122
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht	sw	12	0.470	0	16.4	196	30.0	360
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		230	0.032	30.0	1.11	256	1.70	392
Floors								
22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		10	0.989	0	34.4	344	0	0



Right-Suite® Universal 2025 25.0.01 RSU02245

...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N

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Component Constructions
laundry
DL Williams Heating & Cooling L.L.C.

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Gainesville Regional, FL, US		Indoor temperature (°F)		68	75
Elevation: 123 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		30	50
Outdoor:		Moisture difference (gr/lb)		8.2	43.8
		Heating	Cooling		
Dry bulb (°F)		33	92		
Daily range (°F)		-	18 (M)		
Wet bulb (°F)		-	76		
Wind speed (mph)		15.0	7.5		
		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-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		36	0.032	30.0	1.11	40	1.70	61
Floors (none)								



Component Constructions
owner bath
DL Williams Heating & Cooling L.L.C.

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Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional, FL, US		Indoor temperature (°F)		68	75
Elevation: 123 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		30	50
Outdoor:		Moisture difference (gr/lb)		8.2	43.8
		Heating	Cooling		
Dry bulb (°F)		33	92		
Daily range (°F)		-	18 (M)		
Wet bulb (°F)		-	76		
Wind speed (mph)		15.0	7.5		
		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-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	sw	108	0.091	13.0	3.17	342	1.38	149
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht	sw	12	0.470	0	16.4	196	30.0	360
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		124	0.032	30.0	1.11	138	1.70	210
Floors								
22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		12	0.989	0	34.4	410	0	0



Component Constructions

wic

DL Williams Heating & Cooling L.L.C.

Job:

Date: 04/01/2025

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Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:

Gainesville Regional, FL, US

Elevation: 123 ft

Latitude: 30°N

Outdoor:

Dry bulb (°F) 33

Daily range (°F) -

Wet bulb (°F) -

Wind speed (mph) 15.0

Heating

Cooling

18 (M)

Indoor:

Indoor temperature (°F)

Design TD (°F)

Relative humidity (%)

Moisture difference (gr/lb)

Infiltration:

Method

Construction quality

Fireplaces

Heating

68

35

30

8.2

Simplified

Average

0

Cooling

75

17

50

43.8

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
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Walls

(none)

Partitions

(none)

Windows

(none)

Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil
ins, 1/2" gypsum board int fnsh

44

0.032

30.0

1.11

50

1.70

76

Floors

(none)



Component Constructions

den/br4

DL Williams Heating & Cooling L.L.C.

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Lake City, FL 32055

Design Conditions

Location:

Gainesville Regional, FL, US

Elevation: 123 ft

Latitude: 30°N

Outdoor:

Dry bulb (°F) 33

Daily range (°F) -

Wet bulb (°F) -

Wind speed (mph) 15.0

Heating

Cooling

(M)

Indoor:

Indoor temperature (°F)

Design TD (°F)

Relative humidity (%)

Moisture difference (gr/lb)

Infiltration:

Method

Construction quality

Fireplaces

Heating

68

35

30

8.2

Simplified

Average

0

Cooling

75

17

50

43.8

Construction descriptions

Walls

12C-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

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
ne	130	0.091	13.0	3.17	412	1.38	180
se	106	0.091	13.0	3.17	336	1.38	147
sw	60	0.091	13.0	3.17	190	1.38	83
all	296	0.091	13.0	3.17	937	1.38	409

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht

se	24	0.470	0	16.4	393	30.0	720
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Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh

	169	0.032	30.0	1.11	188	1.70	288
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Floors

22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh

	32	0.989	0	34.4	1101	0	0
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Component Constructions
owner bed
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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Project Information

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Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional, FL, US		Indoor temperature (°F)		68	75
Elevation: 123 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		30	50
Outdoor:		Moisture difference (gr/lb)		8.2	43.8
		Heating	Cooling		
Dry bulb (°F)		33	92		
Daily range (°F)		-	18 (M)		
Wet bulb (°F)		-	76		
Wind speed (mph)		15.0	7.5		
Infiltration:				Simplified	
Method				Average	
Construction quality				0	
Fireplaces					

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-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	ne	80	0.091	13.0	3.17	253	1.38	111
	se	20	0.091	13.0	3.17	63	1.38	28
	sw	145	0.091	13.0	3.17	459	1.38	201
	nw	148	0.091	13.0	3.17	469	1.38	205
	all	393	0.091	13.0	3.17	1245	1.38	544
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht	nw	12	0.470	0	16.4	196	29.0	348
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.31); 50% blinds 45°, light; 50% outdoor insect screen; 2 ft overhang (5 ft window ht, 2 ft sep.); 6.67 ft head ht	sw	15	0.470	0	16.4	245	20.3	304
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		218	0.032	30.0	1.11	243	1.70	371
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		42	0.989	0	34.4	1446	0	0



Component Constructions
dining
DL Williams Heating & Cooling L.L.C.

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Gainesville Regional, FL, US		Indoor temperature (°F)		68	75
Elevation: 123 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		8.2	43.8
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method		
Daily range (°F)	-	18 (M)	Construction quality		
Wet bulb (°F)	-	76	Fireplaces		
Wind speed (mph)	15.0	7.5	Simplified Average 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-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	ne	86	0.091	13.0	3.17	272	1.38	119
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht	ne	24	0.470	0	16.4	393	29.0	695
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		143	0.032	30.0	1.11	159	1.70	243
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		11	0.989	0	34.4	379	0	0



Component Constructions

br3

DL Williams Heating & Cooling L.L.C.

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Plan: 1820

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Elevation: 123 ft

Latitude: 30°N

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Dry bulb (°F)

Daily range (°F)

Wet bulb (°F)

Wind speed (mph)

Heating

33

-

-

15.0

Cooling

92

18 (M)

76

7.5

Indoor:

Indoor temperature (°F)

Design TD (°F)

Relative humidity (%)

Moisture difference (gr/lb)

Infiltration:

Method

Construction quality

Fireplaces

Heating

68

35

30

8.2

Simplified

Average

0

Cooling

75

17

50

43.8

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
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Walls

12C-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

ne	118	0.091	13.0	3.17	374	1.38	163
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Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht

ne	12	0.470	0	16.4	196	29.0	348
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Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh

	169	0.032	30.0	1.11	188	1.70	288
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Floors

22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh

	13	0.989	0	34.4	447	0	0
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Right-Suite® Universal 2025 25.0.01 RSU02245

...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N

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Component Constructions

bath

DL Williams Heating & Cooling L.L.C.

Job:

Date: 04/01/2025

By: DL Williams Heating & C...

Plan: 1820

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Location:

Gainesville Regional, FL, US

Elevation: 123 ft

Latitude: 30°N

Outdoor:

Dry bulb (°F) 33

Daily range (°F) -

Wet bulb (°F) -

Wind speed (mph) 15.0

Heating

Cooling

(M)

Indoor:

Indoor temperature (°F) 68

Design TD (°F) 35

Relative humidity (%) 30

Moisture difference (gr/lb) 8.2

Heating

Cooling

75

17

50

43.8

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-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

ne	50	0.091	13.0	3.17	158	1.38	69
----	----	-------	------	------	-----	------	----

Partitions

(none)

Windows

(none)

Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh

45	0.032	30.0	1.11	50	1.70	77
----	-------	------	------	----	------	----

Floors

22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh

5	0.989	0	34.4	172	0	0
---	-------	---	------	-----	---	---



Component Constructions

br2

DL Williams Heating & Cooling L.L.C.

Job:

Date: 04/01/2025

By: DL Williams Heating & C...

Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:

Gainesville Regional, FL, US

Elevation: 123 ft

Latitude: 30°N

Outdoor:

Dry bulb (°F)

Daily range (°F)

Wet bulb (°F)

Wind speed (mph)

Heating

33

-

-

15.0

Cooling

92

18 (M)

76

7.5

Indoor:

Indoor temperature (°F)

Design TD (°F)

Relative humidity (%)

Moisture difference (gr/lb)

Infiltration:

Method

Construction quality

Fireplaces

Heating

68

35

30

8.2

Simplified

Average

0

Cooling

75

17

50

43.8

Construction descriptions

Walls

12C-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

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
ne	120	0.091	13.0	3.17	380	1.38	166
sw	80	0.091	13.0	3.17	253	1.38	111
nw	118	0.091	13.0	3.17	374	1.38	163
all	318	0.091	13.0	3.17	1007	1.38	440

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht

nw	12	0.470	0	16.4	196	29.0	348
----	----	-------	---	------	-----	------	-----

Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh

	148	0.032	30.0	1.11	165	1.70	252
--	-----	-------	------	------	-----	------	-----

Floors

22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh

	33	0.989	0	34.4	1136	0	0
--	----	-------	---	------	------	---	---



Component Constructions
living
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional, FL, US		Indoor temperature (°F)		68	75
Elevation: 123 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		8.2	43.8
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method		
Daily range (°F)	-	18 (M)	Construction quality		
Wet bulb (°F)	-	76	Fireplaces		
Wind speed (mph)	15.0	7.5	Simplified Average 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-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	nw	85	0.091	13.0	3.17	269	1.38	118
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht	nw	24	0.470	0	16.4	393	29.0	695
10D-v: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.32); 8 ft overhang (7 ft window ht, 2 ft sep.); 6.67 ft head ht	nw	21	0.490	0	17.1	358	21.0	441
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		336	0.032	30.0	1.11	374	1.70	572
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		13	0.989	0	34.4	447	0	0



Component Constructions
hall
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional, FL, US		Indoor temperature (°F)		68	75
Elevation: 123 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		30	50
Outdoor:		Moisture difference (gr/lb)		8.2	43.8
		Heating	Cooling		
Dry bulb (°F)		33	92		
Daily range (°F)		-	18 (M)		
Wet bulb (°F)		-	76		
Wind speed (mph)		15.0	7.5		
		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-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		28	0.032	30.0	1.11	31	1.70	48
Floors (none)								



Component Constructions

nook

DL Williams Heating & Cooling L.L.C.

Job:

Date: 04/01/2025

By: DL Williams Heating & C...

Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:

Gainesville Regional, FL, US

Elevation: 123 ft

Latitude: 30°N

Outdoor:

Dry bulb (°F) 33

Daily range (°F) -

Wet bulb (°F) -

Wind speed (mph) 15.0

Heating

Cooling

(M)

Indoor:

Indoor temperature (°F)

Design TD (°F)

Relative humidity (%)

Moisture difference (gr/lb)

Infiltration:

Method

Construction quality

Fireplaces

Heating

68

35

30

8.2

Simplified

Average

0

Cooling

75

17

50

43.8

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-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud

sw	48	0.091	13.0	3.17	152	1.38	66
----	----	-------	------	------	-----	------	----

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht

sw	12	0.470	0	16.4	196	30.0	360
----	----	-------	---	------	-----	------	-----

Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh

	54	0.032	30.0	1.11	60	1.70	92
--	----	-------	------	------	----	------	----

Floors

22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh

	6	0.989	0	34.4	207	0	0
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Component Constructions
foyer
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional, FL, US			Indoor temperature (°F)	68	75
Elevation: 123 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	30	50
			Moisture difference (gr/lb)	8.2	43.8
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	18 (M)	Construction quality	Average	
Wet bulb (°F)	-	76	Fireplaces	0	
Wind speed (mph)	15.0	7.5			

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-0bw: Frm wall, brk 4" ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	se	35	0.091	13.0	3.17	111	1.38	48
Partitions (none)								
Windows								
10D-v: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 6.67 ft head ht	se	21	0.490	0	17.1	358	21.7	456
	se	7	0.470	0	16.4	114	30.0	210
	all	28	0.470	0	16.9	473	23.8	666
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/8" thk; 5 ft overhang (7 ft window ht, 2 ft sep.); 6.67 ft head ht	se	7	0.470	0	16.4	114	16.4	115
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-2 roof ins, r-30 ceil ins, 1/2" gypsum board int fnsh		70	0.032	30.0	1.11	78	1.70	119
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		7	0.989	0	34.4	241	0	0



Load Short Form

Entire House

DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	33	92	Method	Average
Inside db (°F)	68	75	Construction quality	0
Design TD (°F)	35	17	Fireplaces	
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	8	44		

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 5TWR5030A1
AHRI ref 214077725
Efficiency 7.7 HSPF2
Heating input
Heating output 25000 Btuh @ 47°F
Temperature rise 33 °F
Actual air flow 700 cfm
Air flow factor 0.028 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 33 °F

Backup:
Input = 8 kW, Output = 26399 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 5TWR5030A1
Coil 5Tem6B03AV21S
AHRI ref 214077725
Efficiency 11.5 EER2, 14.3 SEER2
Sensible cooling 17920 Btuh
Latent cooling 7680 Btuh
Total cooling 25600 Btuh
Actual air flow 700 cfm
Air flow factor 0.033 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.84

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
kitchen	230	1553	3008	43	100
laundry	36	47	679	1	22
owner bath	124	1622	1108	45	37
wic	44	59	92	2	3
den/br4	169	3998	2304	110	76
owner bed	218	5172	2523	143	83
dining	143	1732	1640	48	54
br3	169	1798	1074	50	36
bath	45	599	227	17	8
br2	148	3899	1666	108	55
living	336	2555	4765	71	158
hall	28	0	0	0	0
nook	54	896	819	25	27
foyer	70	1399	1245	39	41

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



Entire House	1814	25327	21149	700	700
Other equip loads		0	0		
Equip. @ 0.97 RSM			20557		
Latent cooling			3943		
TOTALS	1814	25327	24500	700	700

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



Project Summary

Entire House

DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Notes:

Design Information

Weather: Gainesville Regional, FL, US

Winter Design Conditions

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

Ventilation Method MJ8

Heating Summary

Structure	21420 Btuh
Ducts (R-6.0)	3907 Btuh
Central vent (0 cfm)	0 Btuh

Humidification	0 Btuh
Piping	0 Btuh
Equipment load	25327 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft ²)	1814	1814
Volume (ft ³)	18140	18140
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	115	60

Heating Equipment Summary

Make	Trane
Trade	TRANE
Model	5TWR5030A1
AHRI ref	214077725

Efficiency	7.7 HSPF2
Heating input	
Heating output	25000 Btuh @ 47°F
Temperature rise	33 °F
Actual air flow	700 cfm
Air flow factor	0.028 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 33 °F	

Backup:
Input = 8 kW, Output = 26399 Btuh, 100 AFUE

Summer Design Conditions

Outside db	92 °F
Inside db	75 °F
Design TD	17 °F
Daily range	M
Relative humidity	50 %
Moisture difference	44 gr/lb

Sensible Cooling Equipment Load Sizing

Structure	16213 Btuh
Ducts (R-6.0)	4936 Btuh
Central vent (0 cfm)	0 Btuh

Blower 0 Btuh

Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	20557 Btuh

Latent Cooling Equipment Load Sizing

Structure	2993 Btuh
Ducts	950 Btuh
Central vent (0 cfm)	0 Btuh

Equipment latent load 3943 Btuh

Equipment Total Load (Sen+Lat)	24500 Btuh
Req. total capacity at 0.70 SHR	2.4 ton

Cooling Equipment Summary

Make	Trane
Trade	TRANE
Cond	5TWR5030A1
Coil	5Tem6B03AV21S
AHRI ref	214077725

Efficiency	11.5 EER2, 14.3 SEER2
Sensible cooling	17920 Btuh
Latent cooling	7680 Btuh
Total cooling	25600 Btuh
Actual air flow	700 cfm
Air flow factor	0.033 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.84

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



Right-Suite® Universal 2025 25.0.01 RSU02245

...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N

2025-Apr-01 10:05:33

Page 1



AED Assessment
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:

Gainesville Regional, FL, US
Elevation: 123 ft
Latitude: 30°N

Indoor:

Indoor temperature (°F)
Design TD (°F)
Relative humidity (%)
Moisture difference (gr/lb)

Heating

68
35
30
8.2

Cooling

75
17
50
43.8

Outdoor:

Dry bulb (°F)
Daily range (°F)
Wet bulb (°F)
Wind speed (mph)

Heating

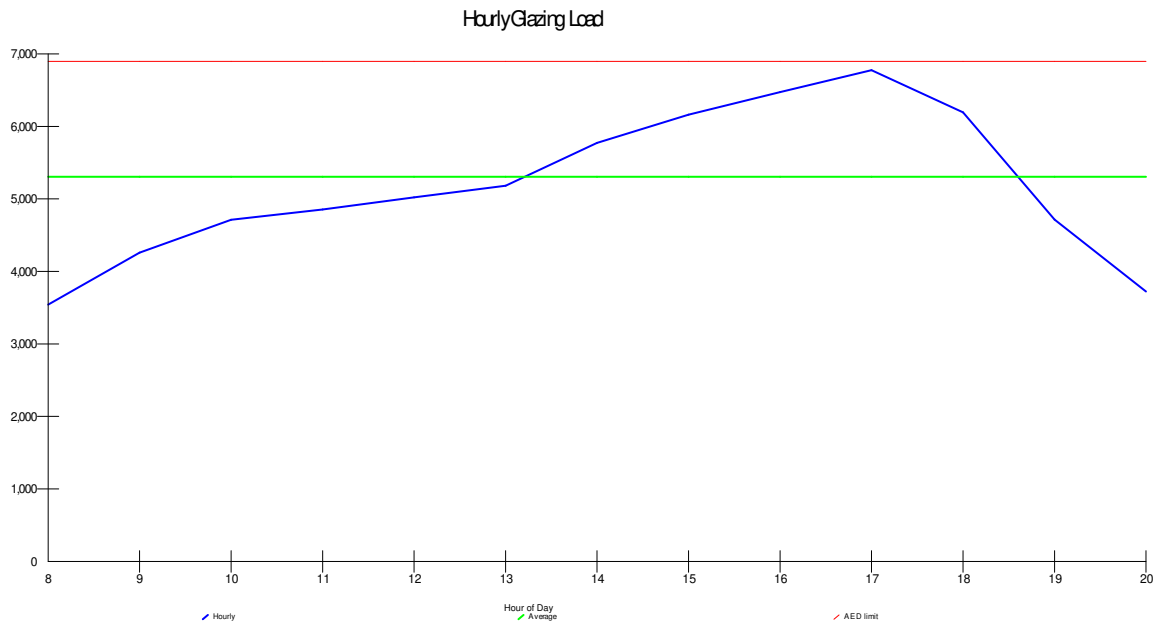
33
-
-
15.0

Cooling

92
18 (M)
76
7.5

Infiltration:

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 27.7%.

House has adequate exposure diversity (AED), based on AED limit of 30%.

AED excursion: 0 Btuh



Right-J® Worksheet
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & Cooling
Plan: 1820

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

1	Room name					Entire House				kitchen				
2	Exposed wall					183.9 ft				10.0 ft				
3	Room height					10.0 ft				10.0 ft				
4	Room dimensions					10.0 ft				1.0 x 230.0 ft				
5	Room area					1814.0 ft²				230.0 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-0bw	0.091	ne	3.17	1.38	620	584	1849	808	0	0	0	0
.	G	4A5-2ov	0.470	ne	16.36	28.96	36	0	589	1043	0	0	0	0
.	W	12C-0bw	0.091	se	3.17	1.38	220	161	510	223	0	0	0	0
.	G	10D-v	0.490	se	17.05	21.73	21	0	358	456	0	0	0	0
11	G	4A5-2ov	0.470	se	16.36	29.99	31	0	507	930	0	0	0	0
.	G	4A5-2ov	0.470	se	16.36	16.41	7	6	114	115	0	0	0	0
.	W	12C-0bw	0.091	sw	3.17	1.38	580	529	1675	732	100	88	279	122
.	G	4A5-2ov	0.470	sw	16.36	29.99	36	0	589	1080	12	0	196	360
.	G	4A5-2ov	0.470	sw	16.36	20.29	15	4	245	304	0	0	0	0
.	W	12C-0bw	0.091	nw	3.17	1.38	420	351	1112	486	0	0	0	0
.	G	10D-v	0.490	nw	17.05	20.98	21	0	358	441	0	0	0	0
.	G	4A5-2ov	0.470	nw	16.36	28.96	48	0	785	1390	0	0	0	0
.	C	16B-30ad	0.032	-	1.11	1.70	1814	1814	2020	3088	230	230	256	392
.	F	22A-tol	0.989	-	34.42	0.00	1814	184	6330	0	230	10	344	0

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



Right-Suite® Universal 2025 25.0.01 RSU02245

2025-Apr-01 10:05:33

Page 1

...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N



Right-J® Worksheet
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & Cooling
Plan: 1820

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

1	Room name					laundry				owner bath				
2	Exposed wall					0 ft				11.9 ft				
3	Room height					10.0 ft				10.0 ft				
4	Room dimensions					6.0 x 6.0 ft				1.0 x 123.5 ft				
5	Room area					36.0 ft²				123.5 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-0bw	0.091	ne	3.17	1.38	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	ne	16.36	28.96	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	se	3.17	1.38	0	0	0	0	0	0	0	0
.	G	10D-v	0.490	se	17.05	21.73	0	0	0	0	0	0	0	0
11	G	4A5-2ov	0.470	se	16.36	29.99	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	se	16.36	16.41	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	sw	3.17	1.38	0	0	0	0	120	108	342	149
.	G	4A5-2ov	0.470	sw	16.36	29.99	0	0	0	0	12	0	196	360
.	G	4A5-2ov	0.470	sw	16.36	20.29	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	nw	3.17	1.38	0	0	0	0	0	0	0	0
.	G	10D-v	0.490	nw	17.05	20.98	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	nw	16.36	28.96	0	0	0	0	0	0	0	0
.	C	16B-30ad	0.032	-	1.11	1.70	36	36	40	61	124	124	138	210
.	F	22A-tol	0.989	-	34.42	0.00	36	0	0	0	124	12	410	0
										</				

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...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N



Right-J® Worksheet
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & Cooling
Plan: 1820

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

1	Room name					wic 0 ft				den/br4 32.0 ft				
2	Exposed wall					10.0 ft				10.0 ft				
3	Room height					1.0				13.0				
4	Room dimensions					44.5 ft				169.0 ft²				
5	Room area					44.5 ft²				169.0 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-0bw	0.091	ne	3.17	1.38	0	0	0	0	130	130	412	180
.	G	4A5-2ov	0.470	ne	16.36	28.96	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	se	3.17	1.38	0	0	0	0	130	106	336	147
.	G	10D-v	0.490	se	17.05	21.73	0	0	0	0	0	0	0	0
11	G	4A5-2ov	0.470	se	16.36	29.99	0	0	0	0	24	0	393	720
.	G	4A5-2ov	0.470	se	16.36	16.41	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	sw	3.17	1.38	0	0	0	0	60	60	190	83
.	G	4A5-2ov	0.470	sw	16.36	29.99	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	sw	16.36	20.29	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	nw	3.17	1.38	0	0	0	0	0	0	0	0
.	G	10D-v	0.490	nw	17.05	20.98	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	nw	16.36	28.96	0	0	0	0	0	0	0	0
.	C	16B-30ad	0.032	-	1.11	1.70	44	44	50	76	169	169	188	288
.	F	22A-tol	0.989	-	34.42	0.00	44	0	0	0	169	32	1101	0

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...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N



Right-J® Worksheet
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & Cooling
Plan: 1820

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

1	Room name					owner bed				dining				
2	Exposed wall					42.0 ft				11.0 ft				
3	Room height					10.0 ft				10.0 ft				
4	Room dimensions					1.0 x 218.0 ft				13.0 x 11.0 ft				
5	Room area					218.0 ft²				143.0 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-0bw	0.091	ne	3.17	1.38	80	80	253	111	110	86	272	119
.	G	4A5-2ov	0.470	ne	16.36	28.96	0	0	0	0	24	0	393	695
.	W	12C-0bw	0.091	se	3.17	1.38	20	20	63	28	0	0	0	0
.	G	10D-v	0.490	se	17.05	21.73	0	0	0	0	0	0	0	0
11	G	4A5-2ov	0.470	se	16.36	29.99	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	se	16.36	16.41	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	sw	3.17	1.38	160	145	459	201	0	0	0	0
.	G	4A5-2ov	0.470	sw	16.36	29.99	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	sw	16.36	20.29	15	4	245	304	0	0	0	0
.	W	12C-0bw	0.091	nw	3.17	1.38	160	148	469	205	0	0	0	0
.	G	10D-v	0.490	nw	17.05	20.98	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	nw	16.36	28.96	12	0	196	348	0	0	0	0
.	C	16B-30ad	0.032	-	1.11	1.70	218	218	243	371	143	143	159	243
.	F	22A-tpl	0.989	-	34.42	0.00	218	42	1446	0	143	11	379	0

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...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N



Right-J® Worksheet
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & Cooling
Plan: 1820

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

1	Room name					br3					bath				
2	Exposed wall					13.0 ft					5.0 ft				
3	Room height					10.0 ft					10.0 ft				
4	Room dimensions					13.0 x 13.0 ft					9.0 x 5.0 ft				
5	Room area					169.0 ft²					45.0 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-0bw	0.091	ne	3.17	1.38	130	118	374	163	50	50	158	69	
.	G	4A5-2ov	0.470	ne	16.36	28.96	12	0	196	348	0	0	0	0	
.	W	12C-0bw	0.091	se	3.17	1.38	0	0	0	0	0	0	0	0	
.	G	10D-v	0.490	se	17.05	21.73	0	0	0	0	0	0	0	0	
11	G	4A5-2ov	0.470	se	16.36	29.99	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.470	se	16.36	16.41	0	0	0	0	0	0	0	0	
.	W	12C-0bw	0.091	sw	3.17	1.38	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.470	sw	16.36	29.99	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.470	sw	16.36	20.29	0	0	0	0	0	0	0	0	
.	W	12C-0bw	0.091	nw	3.17	1.38	0	0	0	0	0	0	0	0	
.	G	10D-v	0.490	nw	17.05	20.98	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.470	nw	16.36	28.96	0	0	0	0	0	0	0	0	
C		16B-30ad	0.032	-	1.11	1.70	169	169	188	288	45	45	50	77	
F		22A-tpl	0.989	-	34.42	0.00	169	13	447	0	45	5	172	0	

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...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N



Right-J® Worksheet
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & Cooling
Plan: 1820

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

1	Room name					br2				living				
2	Exposed wall					33.0 ft				13.0 ft				
3	Room height					10.0 ft				10.0 ft				
4	Room dimensions					1.0 x 148.0 ft				1.0 x 336.0 ft				
5	Room area					148.0 ft²				336.0 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-0bw	0.091	ne	3.17	1.38	120	120	380	166	0	0	0	0
.	G	4A5-2ov	0.470	ne	16.36	28.96	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	se	3.17	1.38	0	0	0	0	0	0	0	0
.	G	10D-v	0.490	se	17.05	21.73	0	0	0	0	0	0	0	0
11	G	4A5-2ov	0.470	se	16.36	29.99	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	se	16.36	16.41	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	sw	3.17	1.38	80	80	253	111	0	0	0	0
.	G	4A5-2ov	0.470	sw	16.36	29.99	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.470	sw	16.36	20.29	0	0	0	0	0	0	0	0
.	W	12C-0bw	0.091	nw	3.17	1.38	130	118	374	163	130	85	269	118
.	G	10D-v	0.490	nw	17.05	20.98	0	0	0	0	21	0	358	441
.	G	4A5-2ov	0.470	nw	16.36	28.96	12	0	196	348	24	0	393	695
.	C	16B-30ad	0.032	-	1.11	1.70	148	148	165	252	336	336	374	572
.	F	22A-tpl	0.989	-	34.42	0.00	148	33	1136	0	336	13	447	0
								</						

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...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N



Right-J® Worksheet
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & Cooling
Plan: 1820

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

1	Room name					hall					nook				
2	Exposed wall					0 ft					6.0 ft				
3	Room height					10.0 ft					10.0 ft				
4	Room dimensions					4.0 x 7.0 ft					9.0 x 6.0 ft				
5	Room area					28.0 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-0bw	0.091	ne	3.17	1.38	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.470	ne	16.36	28.96	0	0	0	0	0	0	0	0	
.	W	12C-0bw	0.091	se	3.17	1.38	0	0	0	0	0	0	0	0	
.	G	10D-v	0.490	se	17.05	21.73	0	0	0	0	0	0	0	0	
11	G	4A5-2ov	0.470	se	16.36	29.99	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.470	se	16.36	16.41	0	0	0	0	0	0	0	0	
.	W	12C-0bw	0.091	sw	3.17	1.38	0	0	0	0	60	48	152	66	
.	G	4A5-2ov	0.470	sw	16.36	29.99	0	0	0	0	12	0	196	360	
.	G	4A5-2ov	0.470	sw	16.36	20.29	0	0	0	0	0	0	0	0	
.	W	12C-0bw	0.091	nw	3.17	1.38	0	0	0	0	0	0	0	0	
.	G	10D-v	0.490	nw	17.05	20.98	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.470	nw	16.36	28.96	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.11	1.70	28	28	31	48	54	54	60	92	
.	F	22A-tol	0.989	-	34.42	0.00	28	0	0	0	54	6	207	0	

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...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N



Right-J® Worksheet
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & Cooling
Plan: 1820

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

1	Room name					foyer								
2	Exposed wall					7.0 ft								
3	Room height					10.0 ft					heat/cool			
4	Room dimensions					7.0 x 10.0 ft								
5	Room area					70.0 ft²								
	Ty	Construction number	U-value (Bt uh/ft²·°F)	Or	HTM (Bt uh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0bw	0.091	ne	3.17	1.38	0	0	0	0				
.	G	4A5-2ov	0.470	ne	16.36	28.96	0	0	0	0				
.	W	12C-0bw	0.091	se	3.17	1.38	70	35	111	48				
.	G	10D-v	0.490	se	17.05	21.73	21	0	358	456				
11	G	4A5-2ov	0.470	se	16.36	29.99	7	0	114	210				
.	G	4A5-2ov	0.470	se	16.36	16.41	7	6	114	115				
.	W	12C-0bw	0.091	sw	3.17	1.38	0	0	0	0				
.	G	4A5-2ov	0.470	sw	16.36	29.99	0	0	0	0				
.	G	4A5-2ov	0.470	sw	16.36	20.29	0	0	0	0				
.	W	12C-0bw	0.091	nw	3.17	1.38	0	0	0	0				
.	G	10D-v	0.490	nw	17.05	20.98	0	0	0	0				
.	G	4A5-2ov	0.470	nw	16.36	28.96	0	0	0	0				
C		16B-30ad	0.032	-	1.11	1.70	70	70	78	119				
F		22A-tpi	0.989	-	34.42	0.00	70	7	241	0				

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Loads for Multiple Orientations

Entire House

DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

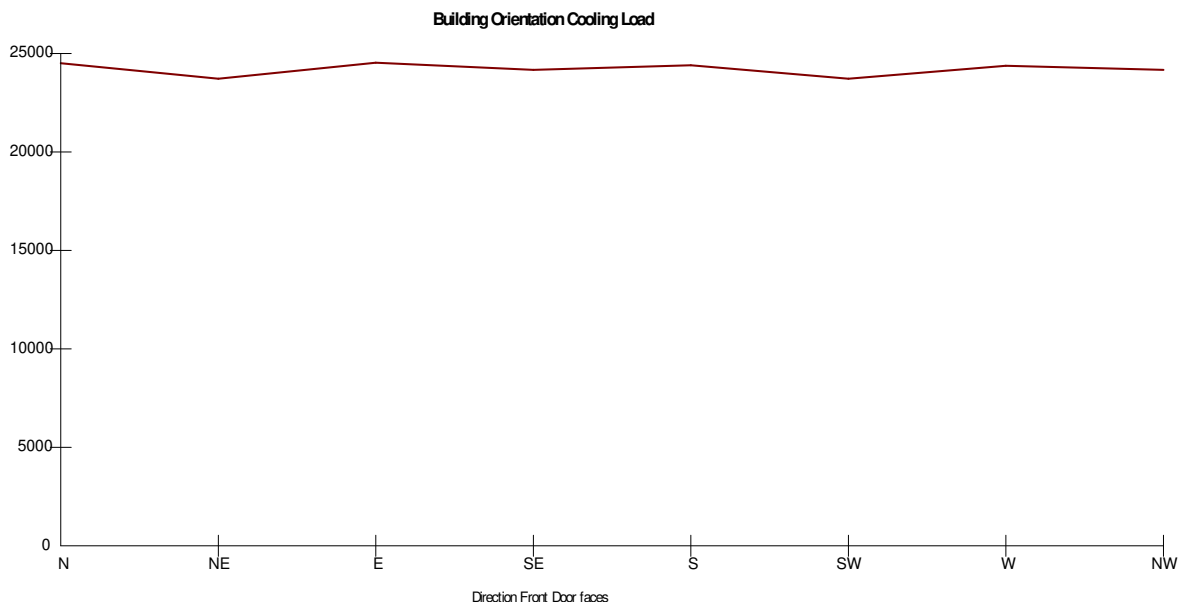
Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional, FL, US		Indoor temperature (°F)		68	75
Elevation: 123 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		8.2	43.8
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92			
Daily range (°F)	-	18 (M)			
Wet bulb (°F)	-	76			
Wind speed (mph)	15.0	7.5			

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	20557	19771	20586	20220	20461	19775	20431	20220
Latent Load (Btuh)	3943	3943	3943	3943	3943	3943	3943	3943
Total Load (Btuh)	24500	23714	24529	24163	24403	23718	24374	24163
Heating AVF (cfm)	700	700	700	700	700	700	700	700
Cooling AVF (cfm)	700	700	700	700	700	700	700	700



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

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



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J1 Form - Worksheet A
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Supporting Detail	
Project Name: Adams Preserve lot 139-1820 manual	Date: 04/01/2025
Address: Lake City, FL 32055	
Phone:	Job ID:

Worksheet A Location and Design Conditions	
Weather Location: Gainesville Regional, FL, US	Elevation = 123 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 = 44 gr/lb Daily Range = M	
Design Temperature Differences	HTD = 35 °F CTD = 17 °F

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Duct System Summary

Entire House

DL Williams Heating & Cooling L.L.C.

Job:

Date: 04/01/2025

By: DL Williams Heating & C...

Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

	Heating	Cooling
External static pressure	0.50 in H ₂ O	0.50 in H ₂ O
Pressure losses	0 in H ₂ O	0 in H ₂ O
Available static pressure	0.50 in H ₂ O	0.50 in H ₂ O
Supply / return available pressure	0.360 / 0.140 in H ₂ O	0.360 / 0.140 in H ₂ O
Lowest friction rate	0.229 in/100ft	0.229 in/100ft
Actual air flow	700 cfm	700 cfm
Total effective length (TEL)	218 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 599	17	8	0.333	4.0	0x0	VIFx	13.0	95.0	
br2	h 3899	108	55	0.322	6.0	0x0	VIFx	16.8	95.0	
br3	h 1798	50	36	0.364	4.0	0x0	VIFx	4.0	95.0	
den/br4	h 3998	110	76	0.332	6.0	0x0	VIFx	13.6	95.0	
dining	c 1640	48	54	0.356	6.0	0x0	VIFx	6.1	95.0	
foyer	c 1245	39	41	0.338	4.0	0x0	VIFx	11.7	95.0	
kitchen	c 3008	43	100	0.266	6.0	0x0	VIFx	20.4	115.0	st2
laundry	c 679	1	22	0.258	4.0	0x0	VIFx	24.3	115.0	st2
living	c 4765	71	158	0.348	6.0	0x0	VIFx	8.5	95.0	
nook	c 819	25	27	0.254	4.0	0x0	VIFx	26.6	115.0	st2
owner bath	h 1622	45	37	0.233	4.0	0x0	VIFx	24.5	130.0	st1
owner bed	h 5172	143	83	0.229	7.0	0x0	VIFx	27.1	130.0	st1
wic	c 92	2	3	0.240	4.0	0x0	VIFx	19.8	130.0	st1

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	189	123	0.229	709	7.0	0 x 0	ShtMetl	
st2	Peak AVF	69	149	0.254	558	7.0	0 x 0	VinIFlx	

Bold/italic values have been manually overridden



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...AC\Trane\Adams Preserve lot 139-1820 manual.rup Calc = MJ8 Front Door faces: N

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	371	270	61.0	0.229	680	10.0	0x 0		VIFx	
rb6	0x 0	329	430	0	0	0	0	0x 0		VIFx	





Duct system multi orientation report

Entire House

DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Group 1: (N) Group 2: (NE, SE, S, SW, NW) Group 3: (E) Group 4: (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	17 h	12x6	4	17 h	12x6	4	17 h	12x6	4	17 h	12x6	4
br2	108 h	12x6	6	108 h	12x6	6	108 h	12x6	6	108 h	12x6	6
br3	50 h	12x6	4	50 h	12x6	4	50 h	12x6	4	50 h	12x6	4
den/br4	110 h	12x6	6	110 h	12x6	6	110 h	12x6	6	110 h	12x6	6
dining	71 c	12x6	6	54 c	12x6	6	48 h	12x6	6	65 c	12x6	6
foyer	39 h	12x6	4	41 c	12x6	4	55 c	12x6	4	43 c	12x6	4
kitchen	113 c	12x6	6	100 c	12x6	6	90 c	12x6	6	98 c	12x6	6
laundry	24 c	12x6	4	22 c	12x6	4	23 c	12x6	4	23 c	12x6	4
living	125 c	12x6	6	158 c	12x6	6	178 c	12x6	7	157 c	12x6	6
nook	36 c	12x6	4	27 c	12x6	4	25 h	12x6	4	25 h	12x6	4
owner bath	46 c	12x6	5	45 h	12x6	4	45 h	12x6	4	45 h	12x6	4
owner bed	143 h	12x6	7	143 h	12x6	7	143 h	12x6	7	143 h	12x6	7
wic	3 c	12x6	4	3 c	12x6	4	3 c	12x6	4	3 c	12x6	4
Supply Trunks												
st1	189 h		7	189 h		7	189 h		7	189 h		7
st2	173 c		7	149 c		7	130 c		6	144 c		7
Return Branches												
rb1	371 h	24x20	10	371 h	24x20	10	371 h	24x20	10	371 h	24x20	10
rb6	432 c	12x12	0	430 c	12x12	0	418 c	12x12	0	413 c	12x12	0
Friction Rates												
Heating FR	0.229			0.229			0.229			0.229		
Cooling FR	0.229			0.229			0.229			0.229		

Project Information

For: Preserve lot 77 plan 1820, 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	17 h	12x6	4	17 h	12x6	4	17 h	12x6	4	17 h	12x6	4
br2	108 h	12x6	6	108 h	12x6	6	108 h	12x6	6	108 h	12x6	6
br3	52 c	12x6	4	50 h	12x6	4	50 h	12x6	4	50 h	12x6	4
den/br4	110 h	12x6	6	110 h	12x6	6	110 h	12x6	6	110 h	12x6	6
dining	85 c	12x6	6	67 c	12x6	6	48 h	12x6	6	58 c	12x6	6
foyer	39 h	12x6	4	56 c	12x6	4	74 c	12x6	4	53 c	12x6	4
kitchen	108 c	12x6	6	97 c	12x6	6	90 c	12x6	6	100 c	12x6	6
laundry	24 c	12x6	4	23 c	12x6	4	23 c	12x6	4	23 c	12x6	4
living	130 c	12x6	6	136 c	12x6	6	150 c	12x6	6	142 c	12x6	6
nook	30 c	12x6	4	25 h	12x6	4	25 h	12x6	4	27 c	12x6	4
owner bath	45 h	12x6	4	45 h	12x6	4	45 h	12x6	4	45 h	12x6	4
owner bed	143 h	12x6	7	143 h	12x6	7	143 h	12x6	7	143 h	12x6	7
wic	3 c	12x6	4	3 c	12x6	4	3 c	12x6	4	3 c	12x6	4
Supply Trunks												
st1	189 h		7	189 h		7	189 h		7	189 h		7
st2	163 c		7	142 c		7	128 c		6	150 c		7
Return Branches												
rb1	371 h	24x20	10	371 h	24x20	10	371 h	24x20	10	371 h	24x20	10
rb6	415 c	12x12	0	390 c	12x12	0	381 c	12x12	0	408 c	12x12	0
Friction Rates												
Heating FR	0.229			0.229			0.229			0.229		
Cooling FR	0.229			0.229			0.229			0.229		

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Duct Name	Largest			Smallest		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches						
bath	17 h	12x6	4	17 h	12x6	4
br2	108 h	12x6	6	108 h	12x6	6
br3	52 c	12x6	4	50 h	12x6	4
den/br4	110 h	12x6	6	110 h	12x6	6
dining	85 c	12x6	6	48 h	12x6	6
foyer	74 c	12x6	4	39 h	12x6	4
kitchen	113 c	12x6	6	90 c	12x6	6
laundry	24 c	12x6	4	22 c	12x6	4
living	178 c	12x6	7	125 c	12x6	6
nook	36 c	12x6	4	25 h	12x6	4
owner bath	46 c	12x6	5	45 h	12x6	4
owner bed	143 h	12x6	7	143 h	12x6	7
wic	3 c	12x6	4	3 c	12x6	4
Supply Trunks						
st1	189 h		7	189 h		7
st2	173 c		7	128 c		6
Return Branches						
rb1	371 h	24x20	10	371 h	24x20	10
rb6	432 c	12x12	0	381 c	12x12	0
Friction Rates						
Heating FR	0.229			0.229		
Cooling FR	0.229			0.229		

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 cooling load orientation





Static Pressure and Friction Rate

Entire House

DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, 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	10	1
Measured length of trunk	17	0
Equivalent length of fittings	130	60
Total length	157	61
Total effective length		218

Friction Rate

	Heating (in/100ft)	Cooling (in/100ft)
Supply Ducts	0.229 > 0.18	0.229 > 0.18
Return Ducts	0.229 > 0.18	0.229 > 0.18

Fitting Equivalent Length Details

Supply	4AD=60, 2A0=35, 1A=35: TotalEL=130
Return	6M=20, 5D=40: TotalEL=60



Manual S Compliance Report

Entire House

DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	21149 Btuh	Entering coil DB:	77.3°F
Outdoor design WB:	75.8°F	Latent gain:	3943 Btuh	Entering coil WB:	63.6°F
Indoor design DB:	75.0°F	Total gain:	25092 Btuh		
Indoor RH:	50%	Estimated airflow:	700 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	5TWR5030A1+5Tem6B03AV21S
Actual airflow:	700 cfm		
Sensible capacity:	19114 Btuh	90% of load	
Latent capacity:	4520 Btuh	115% of load	
Total capacity:	23634 Btuh	94% of load	SHR: 81%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	25327 Btuh	Entering coil DB:	67.0°F
Indoor design DB:	68.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	5TWR5030A1+5Tem6B03AV21S
Actual airflow:	700 cfm		
Output capacity:	19036 Btuh	75% of load	
Supplemental heat required:	6291 Btuh		
		Capacity balance:	33 °F
		Economic balance:	-99 °F

Backup equipment type:	Elec strip		
Manufacturer:		Model:	
Actual airflow:	700 cfm		
Output capacity:	7.7 kW	104% of load	Temp. rise: 51 °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 L.L.C.
Mechanical license# Derrick Williams
Building plan # 1820
Home address (Street or Lot#, Block, Subdivision) , Entire House

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

HVAC LOAD CALCULATION

(IRC M1401.3)

Manual J Design Criteria and Loads

Location

Elevation 123 ft
Altitude Correction Factor 1.00
Latitude 30 °N

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 25327 Btuh
Sensible Heat Gain 21149 Btuh
Latent Heat Gain 3943 Btuh
Total Heat Gain 25092 Btuh

Winter Design Conditions

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

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 19036 Btuh Sizing Value 25327 Btuh
Supplemental 6291 Btuh Sizing Limit 175.0 %
Heat Load: Capacity 104.2 %

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

5TWR5030A1+5Tem6B03AV21S
Sensible 19114 Btuh Sizing Value 25092 Btuh
Latent 4520 Btuh Sizing Limit 115.0 %
Total 23634 Btuh Load: Capacity 94.2 %

Size Factor is within Manual S Size Limit?

Y ☒ N ☐

HVAC DUCT DISTRIBUTION DESIGN

(IRC M1601.1)

Design airflow 700 cfm Longest Supply Duct 157 ft Duct Materials Used
External Static Pressure (ESP) 0.50 in H2O Longest Return Duct 61.0 ft Trunk Duct: ☐ Duct Board ☒ Sheet Metal
Component Pressure Loss (CPL) 0 in H2O Total Effective Length (TEL) 218 ft ☒ Flex ☐ Lined Sheet Metal ☐ Other
Available static pressure (ASP) 0.50 in H2O Friction Rate 0.23 in/100ft Branch Duct: ☐ Duct Board ☐ Sheet Metal
ESP - CPL = ASP (ASP x 100) / TEL = Friction Rate ☒ 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:



DHW Report
Entire House
DL Williams Heating & Cooling L.L.C.

Job:
Date: 04/01/2025
By: DL Williams Heating & C...
Plan: 1820

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

Project Information

For: Preserve lot 77 plan 1820, Adams Homes
Lake City, FL 32055

Design Criteria

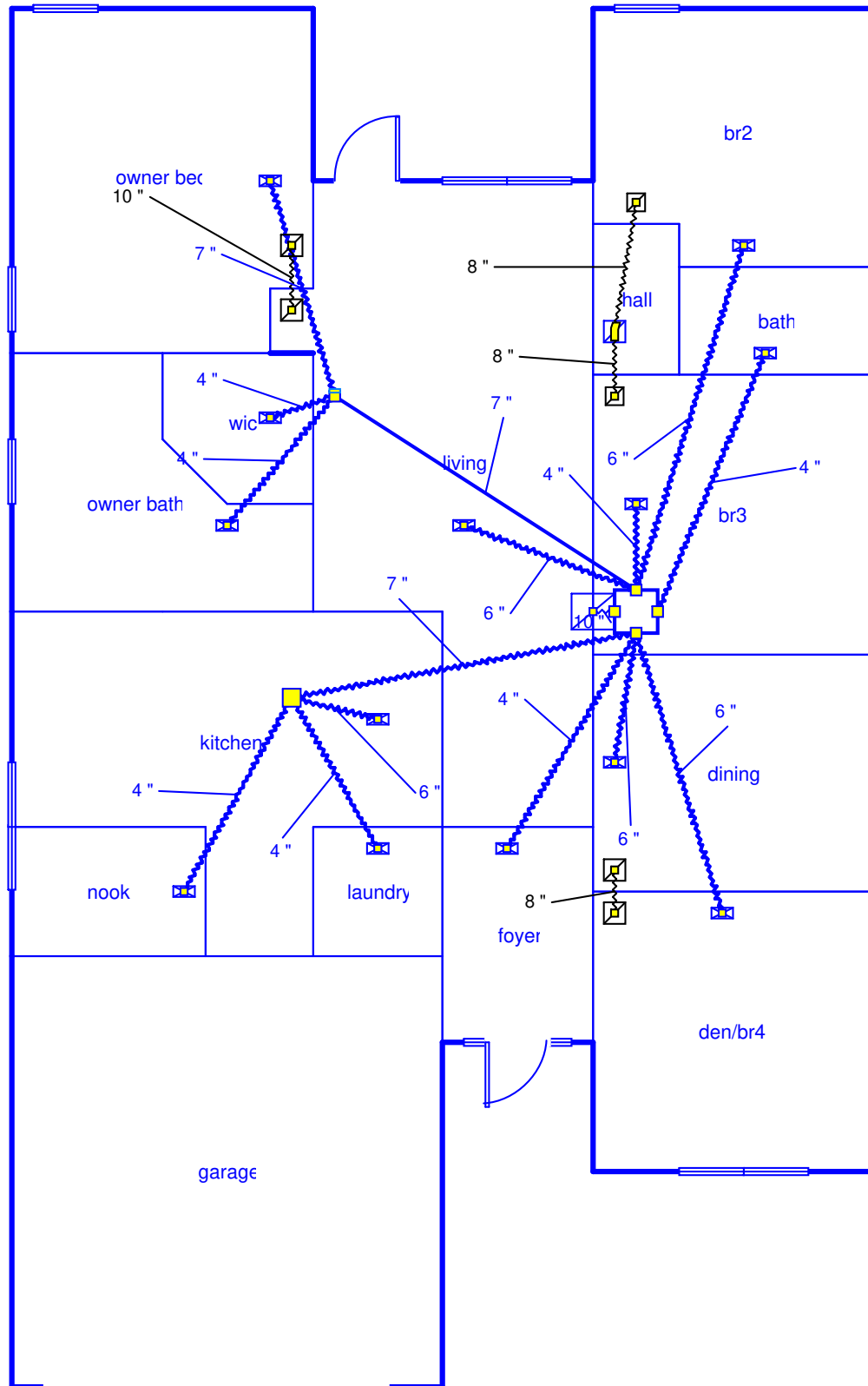
Occupants		Not occupied during the day	
Age	Number	Dishwasher	
0-5	0	Clothes washer	
6-13	2	Additional use (gpd)	0
14-59	2	Setpoint (°F)	120
60+	0	Daily use (gpd)	61

Electric conventional (40 gal, 0.90 EF)

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



Main



Job #:
Performed by DL Williams Heating & Cooling
Preserve lot 77 plan 1820
Lake City, FL 32055

DL Williams Heating & Cooling L.L.C

PO Box 2156
Lake City, FL 32056
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