

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:

Washington National AP, DC, US
Elevation: 0 ft
Latitude: 38°N

Outdoor:

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

Heating

17
-
-
15.0

Cooling

91
18 (M)
74
7.5

Indoor:

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

Heating

70
53
50
44.3

Cooling

75
16
50
34.7

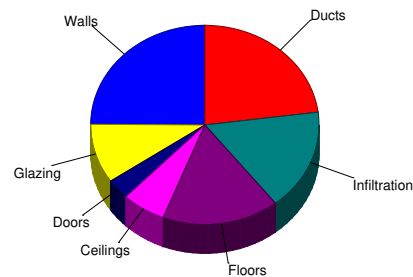
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Average
0

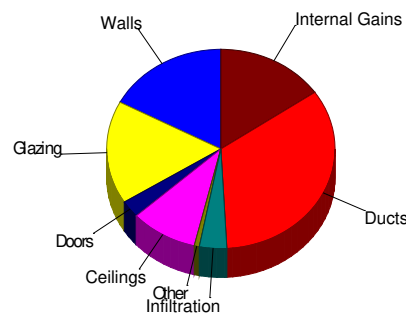
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	4.8	10056	24.9
Glazing	15.9	3896	9.6
Doors	31.8	1336	3.3
Ceilings	1.7	2513	6.2
Floors	5.8	6697	16.6
Infiltration	2.8	6642	16.4
Ducts		9273	22.9
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		40412	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	2.1	4459	17.2
Glazing	17.7	4325	16.7
Doors	17.1	718	2.8
Ceilings	1.7	2466	9.5
Floors	0.2	186	0.7
Infiltration	0.4	1002	3.9
Ducts		8740	33.8
Ventilation		0	0
Internal gains		3980	15.4
Blower		0	0
Adjustments		0	0
Total		25877	100.0



Latent Cooling Load = 3996 Btuh

Overall U-value = 0.096 Btuh/ft²-°F, Window / Floor Area = 10.1 %

Data entries checked.



Load Short Form

Entire House

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	17	91	Method	Average
Inside db (°F)	70	75	Construction quality	0
Design TD (°F)	53	16	Fireplaces	
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	44	35		

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 5TWR5036A1
AHRI ref 214074335
Efficiency 7.5 HSPF2
Heating input
Heating output 31400 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 1050 cfm
Air flow factor 0.026 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 29 °F

Backup:

Input = 11 kW, Output = 36047 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 5TWR5036A1
Coil 5TEM6D04AV31++TDR
AHRI ref 214074335
Efficiency 12.0 EER2, 15.2 SEER2
Sensible cooling 23240 Btuh
Latent cooling 9960 Btuh
Total cooling 33200 Btuh
Actual air flow 1050 cfm
Air flow factor 0.041 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.87

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
laundry	49	1099	979	29	40
kitchen	149	2356	2968	61	120
great	475	7837	5750	204	233
bath1	36	0	0	0	0
dining	210	6431	2240	167	91
stair	40	1898	1113	49	45
foyer	73	3764	1434	98	58
pantry	24	0	0	0	0
br4	143	2430	1359	63	55
br3	146	2278	1306	59	53
wic3	24	53	59	1	2
wic4	24	369	180	10	7
bath2	60	924	451	24	18
mbath	126	1247	696	32	28

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



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...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

mbed	238	3515	2828	91	115
wic	103	2503	1099	65	45
br2	170	1698	1325	44	54
loft	233	1821	1878	47	76
hall	80	189	212	5	9
AH	18	0	0	0	0
Entire House	2421	40412	25877	1050	1050
Other equip loads		0	0		
Equip. @ 0.96 RSM			24842		
Latent cooling			3996		
TOTALS	2421	40412	28838	1050	1050

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



Project Information

For: Adams preserves lot 117-2405, Adams Homes
 Columbia, FL 32669

Design Conditions

Location:			Indoor:		Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)		70	75
Elevation: 0 ft			Design TD (°F)		53	16
Latitude: 38°N			Relative humidity (%)		50	50
			Moisture difference (gr/lb)		44.3	34.7
Outdoor:	Heating	Cooling	Infiltration:			
Drybulb (°F)	17	91	Method		Simplified	
Daily range (°F)	-	18 (M)	Construction quality		Average	
Wet bulb (°F)	-	74	Fireplaces		0	
Wind speed (mph)	15.0	7.5				

Construction descriptions

Walls

12C-0sw: Frm wall, 1/2" gyp.bd 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	241	0.091	13.0	4.82	1162	2.14	515
se	718	0.091	13.0	4.82	3463	2.14	1535
sw	405	0.091	13.0	4.82	1953	2.14	866
nw	721	0.091	13.0	4.82	3477	2.14	1542
all	2085	0.091	13.0	4.82	10056	2.14	4459

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); 6 ft overhang (7 ft window ht, 0.6 ft sep.); 6.67 ft head ht

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; sw 50% outdoor insect screen; 1.8 ft overhang (5 ft window ht, 0.6 ft sep.); 6.67 ft head ht

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; nw 50% outdoor insect screen; 6.67 ft head ht

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; all 50% outdoor insect screen; 1.8 ft overhang (4 ft window ht, 0 ft sep.); 6.67 ft head ht

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; sw 50% outdoor insect screen; 7 ft overhang (5 ft window ht, 0.6 ft sep.); 6.67 ft head ht

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; all 50% outdoor insect screen; 1.8 ft overhang (4 ft window ht, 0 ft sep.); 6.67 ft head ht

Doors

11J0: Door, mtl fbrgl type

ne	14	0.300	0	15.9	223	19.3	270
ne	45	0.300	0	15.9	716	14.7	662
se	30	0.300	0	15.9	477	14.0	420
nw	45	0.300	0	15.9	716	14.7	662
all	120	0.300	0	15.9	1908	14.5	1744
se	30	0.300	0	15.9	477	17.3	520
nw	27	0.300	0	15.9	429	14.7	397
all	57	0.300	0	15.9	906	16.1	917
sw	24	0.300	0	15.9	382	11.6	279
sw	30	0.300	0	15.9	477	7.22	217
ne	21	0.600	6.3	31.8	668	17.1	359
sw	21	0.600	6.3	31.8	668	17.1	359
all	42	0.600	6.3	31.8	1336	17.1	718

Ceilings

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

1482	0.032	30.0	1.70	2513	1.66	2466
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Floors

19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh

105	0.295	0	5.87	617	1.77	186
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22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh

116	0.989	0	52.4	6080	0	0
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Component Constructions
laundry
DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	44.3	34.7
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	17	91	Method	Simplified	
Daily range (°F)	-	18 (M)	Construction quality	Average	
Wet bulb (°F)	-	74	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-0sw: Frm wall, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	se	63	0.091	13.0	4.82	304	2.14	135
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
(none)								
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		7	0.989	0	52.4	367	0	0





Component Constructions

kitchen

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
Outdoor:			Moisture difference (gr/lb)	44.3	34.7
			Infiltration:		
Heating			Method	Simplified	
Cooling			Construction quality	Average	
			Fireplaces	0	
Dry bulb (°F)					
Daily range (°F)					
Wet bulb (°F)					
Wind speed (mph)					

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, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	se	135	0.091	13.0	4.82	651	2.14	289

Partitions
(none)

Windows
(none)

Doors
(none)

Ceilings
(none)

Floors 22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh	15	0.989	0	52.4	786	0	0
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...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

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Component Constructions
great
DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	44.3	34.7
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	17	91	Method	Simplified	
Daily range (°F)	-	18 (M)	Construction quality	Average	
Wet bulb (°F)	-	74	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-0sw: Frm wall, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	sw	84	0.091	13.0	4.82	405	2.14	180
	nw	198	0.091	13.0	4.82	955	2.14	423
	all	282	0.091	13.0	4.82	1360	2.14	603
Partitions (none)								
Windows								
4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 6.67 ft head ht	nw	27	0.300	0	15.9	429	14.7	397
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; 7 ft overhang (5 ft window ht, 0.6 ft sep.); 6.67 ft head ht	sw	30	0.300	0	15.9	477	7.22	217
Doors								
11J0: Door, mtl fbrgl type	sw	21	0.600	6.3	31.8	668	17.1	359
Ceilings (none)								
Floors								
22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		40	0.989	0	52.4	2097	0	0



A MGA® / Berkshire Hathaway Company

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...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

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Component Constructions

bath 1

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:

Washington National AP, DC, US
Elevation: 0 ft
Latitude: 38°N

Outdoor:

	Heating	Cooling
Dry bulb (°F)	17	91
Daily range (°F)	-	18 (M)
Wet bulb (°F)	-	74
Wind speed (mph)	15.0	7.5

Indoor:

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

Heating

70
53
50
44.3

Cooling

75
16
50
34.7

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
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Walls
(none)

Partitions
(none)

Windows
(none)

Doors
(none)

Ceilings
(none)

Floors
(none)

Project Information

For: Adams preserves lot 117-2405, Adams Homes
 Columbia, FL 32669

Design Conditions

Location:		Indoor:		Heating	Cooling
Washington National AP, DC, US		Indoor temperature (°F)		70	75
Elevation:	0 ft	Design TD (°F)		53	16
Latitude:	38°N	Relative humidity (%)		50	50
Outdoor:		Moisture difference (gr/lb)		44.3	34.7
Heating		Infiltration:			
Drybulb (°F)	17	Method		Simplified	
Daily range (°F)	-	Construction quality		Average	
Wet bulb (°F)	-	Fireplaces		0	
Wind speed (mph)	15.0				
Cooling					
	91				
	18 (M)				
	74				
	7.5				

Construction descriptions

Walls

12C-0sw: Frm wall, 1/2" gyp.bd 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
se	96	0.091	13.0	4.82	463	2.14	205
sw	111	0.091	13.0	4.82	535	2.14	237
nw	63	0.091	13.0	4.82	304	2.14	135
all	270	0.091	13.0	4.82	1302	2.14	577

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 6.67 ft head ht
 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; 1.8 ft overhang (4 ft window ht, 0 ft sep.); 6.67 ft head ht

se	30	0.300	0	15.9	477	17.3	520
sw	24	0.300	0	15.9	382	11.6	279

Doors

(none)

Ceilings

(none)

Floors

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

	36	0.989	0	52.4	1887	0	0
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Location:		Indoor:		Heating	Cooling
Washington National AP, DC, US		Indoor temperature (°F)		70	75
Elevation:	0 ft	Design TD (°F)		53	16
Latitude:	38°N	Relative humidity (%)		50	50
Outdoor:		Moisture difference (gr/lb)		44.3	34.7
Heating		Cooling			
Dry bulb (°F)	17	91			
Daily range (°F)	-	18 (M)			
Wet bulb (°F)	-	74			
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-0sw: Frm wall, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2"	ne	57	0.091	13.0	4.82	275	2.14	122
gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	nw	72	0.091	13.0	4.82	347	2.14	154
	all	129	0.091	13.0	4.82	622	2.14	276

Partitions

(none)

Windows

4A5-2ov: 2 glazing, clr low-e outr, air gas, insulated vinyl frm mat, clr innr, 1/4" gap, 1/4" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.8 ft overhang (5 ft window ht, 0.6 ft sep.); 6.67 ft head ht	ne	15	0.300	0	15.9	239	14.7	221
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Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		117	0.032	30.0	1.70	198	1.66	195
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Floors

(none)

Project Information

For: Adams preserves lot 117-2405, Adams Homes
 Columbia, FL 32669

Design Conditions

Location:			Indoor:		Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)		70	75
Elevation: 0 ft			Design TD (°F)		53	16
Latitude: 38°N			Relative humidity (%)		50	50
			Moisture difference (gr/lb)		44.3	34.7
Outdoor:	Heating	Cooling	Infiltration:			
Drybulb (°F)	17	91	Method		Simplified	
Dailyrange (°F)	-	18 (M)	Construction quality		Average	
Wet bulb (°F)	-	74	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-0sw: Frm wall, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	ne	46	0.091	13.0	4.82	222	2.14	98
	nw	81	0.091	13.0	4.82	391	2.14	173
	all	127	0.091	13.0	4.82	613	2.14	272
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); 6 ft overhang (7 ft window ht, 0.6 ft sep.); 6.67 ft head ht	ne	14	0.300	0	15.9	223	19.3	270
Doors								
11J0: Door, mtl fbrgl type	ne	21	0.600	6.3	31.8	668	17.1	359
Ceilings								
(none)								
Floors								
22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		18	0.989	0	52.4	944	0	0



Component Constructions
pantry
DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:

Washington National AP, DC, US
Elevation: 0 ft
Latitude: 38°N

Outdoor:

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

Heating

17
-
-
15.0

Cooling

91
18 (M)
74
7.5

Indoor:

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

Heating

70
53
50
44.3

Cooling

75
16
50
34.7

Infiltration:

Method
Construction quality
Fireplaces

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
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Walls
(none)

Partitions
(none)

Windows
(none)

Doors
(none)

Ceilings
(none)

Floors
(none)





Component Constructions

br4

DL Williams Heating & Cooling LLC

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Date: 04/01/2025
By:

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Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	44.3	34.7
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	17	91	Method	Simplified	
Daily range (°F)	-	18 (M)	Construction quality	Average	
Wet bulb (°F)	-	74	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-0sw: Frm wall, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2"	ne	73	0.091	13.0	4.82	352	2.14	156
gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	se	104	0.091	13.0	4.82	502	2.14	222
	all	177	0.091	13.0	4.82	854	2.14	379

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; 1.8 ft overhang (5 ft window ht, 0.6 ft sep.); 6.67 ft head ht	ne	15	0.300	0	15.9	239	14.7	221
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Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		143	0.032	30.0	1.70	243	1.66	238
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Floors

(none)



Component Constructions

br3

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	44.3	34.7
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	17	91	Method	Simplified	
Daily range (°F)	-	18 (M)	Construction quality	Average	
Wet bulb (°F)	-	74	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-0sw: Frm wall, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	ne	65	0.091	13.0	4.82	313	2.14	139
	nw	96	0.091	13.0	4.82	463	2.14	205
	all	161	0.091	13.0	4.82	777	2.14	344

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; 1.8 ft overhang (5 ft window ht, 0.6 ft sep.); 6.67 ft head ht	ne	15	0.300	0	15.9	239	14.7	221
--	----	----	-------	---	------	-----	------	-----

Doors

(none)

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		146	0.032	30.0	1.70	248	1.66	243
---	--	-----	-------	------	------	-----	------	-----

Floors

(none)



Component Constructions

wic3

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
Outdoor:			Moisture difference (gr/lb)	44.3	34.7
Heating	Cooling		Infiltration:		
Dry bulb (°F)	17	91	Method	Simplified	
Daily range (°F)	-	18 (M)	Construction quality	Average	
Wet bulb (°F)	-	74	Fireplaces	0	
Wind speed (mph)	15.0	7.5			

Construction descriptions

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

Floors
(none)

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
	24	0.032	30.0	1.70	41	1.66	40



Right-Suite® Universal 2025 25.0.01 RSU02245

...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

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Component Constructions

wic4

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
Outdoor:			Moisture difference (gr/lb)	44.3	34.7
			Infiltration:		
Heating			Method	Simplified	
Cooling			Construction quality	Average	
			Fireplaces	0	
Dry bulb (°F)					
Daily range (°F)					
Wet bulb (°F)					
Wind speed (mph)					

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, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	se	32	0.091	13.0	4.82	154	2.14	68
Partitions								
(none)								
Windows								
(none)								
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		24	0.032	30.0	1.70	41	1.66	40
Floors								
(none)								



Component Constructions

bath2

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	44.3	34.7
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	17	91	Method	Simplified	
Daily range (°F)	-	18 (M)	Construction quality	Average	
Wet bulb (°F)	-	74	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-0sw: Frm wall, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	se	80	0.091	13.0	4.82	386	2.14	171
Partitions (none)								
Windows (none)								
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		60	0.032	30.0	1.70	102	1.66	100
Floors (none)								



Component Constructions

mbath

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
Outdoor:			Moisture difference (gr/lb)	44.3	34.7
			Infiltration:		
Heating			Method	Simplified	
Cooling			Construction quality	Average	
			Fireplaces	0	
Dry bulb (°F)					
Daily range (°F)					
Wet bulb (°F)					
Wind speed (mph)					

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, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	se	96	0.091	13.0	4.82	463	2.14	205
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		126	0.032	30.0	1.70	214	1.66	210
Floors								
(none)								



Right-Suite® Universal 2025 25.0.01 RSU02245

...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

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Component Constructions

mbed

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:		Indoor:		Heating	Cooling
Washington National AP, DC, US		Indoor temperature (°F)		70	75
Elevation: 0 ft		Design TD (°F)		53	16
Latitude: 38°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		44.3	34.7
Outdoor:		Heating	Cooling		
Dry bulb (°F)		17	91		
Daily range (°F)		-	18 (M)		
Wet bulb (°F)		-	74		
Wind speed (mph)		15.0	7.5		
		Infiltration:		Heating	Cooling
		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, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	se	112	0.091	13.0	4.82	540	2.14	240
	sw	106	0.091	13.0	4.82	511	2.14	227
	all	218	0.091	13.0	4.82	1051	2.14	466
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; 1.8 ft overhang (5 ft window ht, 0.6 ft sep.); 6.67 ft head ht	sw	30	0.300	0	15.9	477	14.0	420
Doors (none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		238	0.032	30.0	1.70	404	1.66	396
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		14	0.295	0	5.87	82	1.77	25



Component Constructions

wic

DL Williams Heating & Cooling LLC

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Date: 04/01/2025
By:

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Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	44.3	34.7
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	17	91	Method	Simplified	
Daily range (°F)	-	18 (M)	Construction quality	Average	
Wet bulb (°F)	-	74	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-0sw: Frm wall, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	sw	104	0.091	13.0	4.82	502	2.14	222
	nw	56	0.091	13.0	4.82	270	2.14	120
	all	160	0.091	13.0	4.82	772	2.14	342
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		103	0.032	30.0	1.70	175	1.66	171
Floors								
19A-0bscp: Part floor, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		91	0.295	0	5.87	534	1.77	161



Component Constructions

br2

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Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	44.3	34.7
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	17	91	Method	Simplified	
Daily range (°F)	-	18 (M)	Construction quality	Average	
Wet bulb (°F)	-	74	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-0sw: Frm wall, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	nw	97	0.091	13.0	4.82	468	2.14	207
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; 1.8 ft overhang (5 ft window ht, 0.6 ft sep.); 6.67 ft head ht	nw	15	0.300	0	15.9	239	14.7	221
Doors								
(none)								
Ceilings								
16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		170	0.032	30.0	1.70	288	1.66	283
Floors								
(none)								



Component Constructions

loft

DL Williams Heating & Cooling LLC

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By:

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Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:		Indoor:		Heating	Cooling
Washington National AP, DC, US		Indoor temperature (°F)		70	75
Elevation: 0 ft		Design TD (°F)		53	16
Latitude: 38°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		44.3	34.7
Outdoor:		Heating	Cooling		
Drybulb (°F)		17	91		
Daily range (°F)		-	18 (M)		
Wet bulb (°F)		-	74		
Wind speed (mph)		15.0	7.5		
		Infiltration:		Heating	Cooling
		Method		Simplified	
		Construction quality		Average	
		Fireplaces		0	

Construction descriptions

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, 1/2" gyp.bd ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	nw	58	0.091	13.0	4.82	280	2.14	124
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; 1.8 ft overhang (5 ft window ht, 0.6 ft sep.); 6.67 ft head ht	nw	30	0.300	0	15.9	477	14.7	441
Doors (none)								
Ceilings 16B-30ad: Attic ceiling, asphalt shingles roof mat, r-30 ceil ins, 1/2" gypsum board int fnsh		233	0.032	30.0	1.70	395	1.66	388
Floors (none)								



AIAAIA® / Building Research Company

Right-Suite® Universal 2025 25.0.01 RSU02245

...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

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Component Constructions

hall

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:			Indoor:	Heating	Cooling
Washington National AP, DC, US			Indoor temperature (°F)	70	75
Elevation: 0 ft			Design TD (°F)	53	16
Latitude: 38°N			Relative humidity (%)	50	50
Outdoor:			Moisture difference (gr/lb)	44.3	34.7
			Infiltration:		
Heating			Method	Simplified	
Cooling			Construction quality	Average	
			Fireplaces	0	
Dry bulb (°F)	17	91			
Daily range (°F)	-	18 (M)			
Wet bulb (°F)	-	74			
Wind speed (mph)	15.0	7.5			

Construction descriptions

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

Floors
(none)

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
	80	0.032	30.0	1.70	136	1.66	133



Right-Suite® Universal 2025 25.0.01 RSU02245

...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

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Component Constructions

AH

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:

Washington National AP, DC, US
Elevation: 0 ft
Latitude: 38°N

Outdoor:

	Heating	Cooling
Dry bulb (°F)	17	91
Daily range (°F)	-	18 (M)
Wet bulb (°F)	-	74
Wind speed (mph)	15.0	7.5

Indoor:

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

Heating

70
53
50
44.3

Cooling

75
16
50
34.7

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
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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	1.70	31	1.66	30
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Floors
(none)



Right-Suite® Universal 2025 25.0.01 RSU02245

...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

2025-Apr-01 08:57:33

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Project Information

For: Adams preserves lot 117-2405, Adams Homes
 Columbia, FL 32669

Notes:

Design Information

Weather: Washington National AP, DC, US

Winter Design Conditions

Outside db 17 °F
 Inside db 70 °F
 Design TD 53 °F

Ventilation Method MJ8

Heating Summary

Structure 31139 Btuh
 Ducts (R-6.0) 9273 Btuh
 Central vent (0 cfm) 0 Btuh

Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 40412 Btuh

Infiltration

Method Simplified
 Construction quality Average
 Fireplaces 0

	Heating	Cooling
Area (ft ²)	2421	2421
Volume (ft ³)	21360	21360
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	114	57

Heating Equipment Summary

Make Trane
 Trade TRANE
 Model 5TWR5036A1
 AHRI ref 214074335

Efficiency 7.5 HSPF2
 Heating input
 Heating output 31400 Btuh @ 47°F
 Temperature rise 27 °F
 Actual air flow 1050 cfm
 Air flow factor 0.026 cfm/Btuh
 Static pressure 0.50 in H2O
 Space thermostat
 Capacity balance point = 29 °F

Backup:
 Input = 11 kW, Output = 36047 Btuh, 100 AFUE

Summer Design Conditions

Outside db 91 °F
 Inside db 75 °F
 Design TD 16 °F
 Daily range M
 Relative humidity 50 %
 Moisture difference 35 gr/lb

Sensible Cooling Equipment Load Sizing

Structure 17137 Btuh
 Ducts (R-6.0) 8740 Btuh
 Central vent (0 cfm) 0 Btuh

Blower 0 Btuh

Use manufacturer's data n
 Rate/swing multiplier 0.96
 Equipment sensible load 24842 Btuh

Latent Cooling Equipment Load Sizing

Structure 2542 Btuh
 Ducts 1454 Btuh
 Central vent (0 cfm) 0 Btuh

Equipment latent load 3996 Btuh

Equipment Total Load (Sen+Lat) 28838 Btuh
 Req. total capacity at 0.70 SHR 3.0 ton

Cooling Equipment Summary

Make Trane
 Trade TRANE
 Cond 5TWR5036A1
 Coil 5TEM6D04AV31++TDR
 AHRI ref 214074335
 Efficiency 12.0 EER2, 15.2 SEER2
 Sensible cooling 23240 Btuh
 Latent cooling 9960 Btuh
 Total cooling 33200 Btuh
 Actual air flow 1050 cfm
 Air flow factor 0.041 cfm/Btuh
 Static pressure 0.50 in H2O
 Load sensible heat ratio 0.87

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

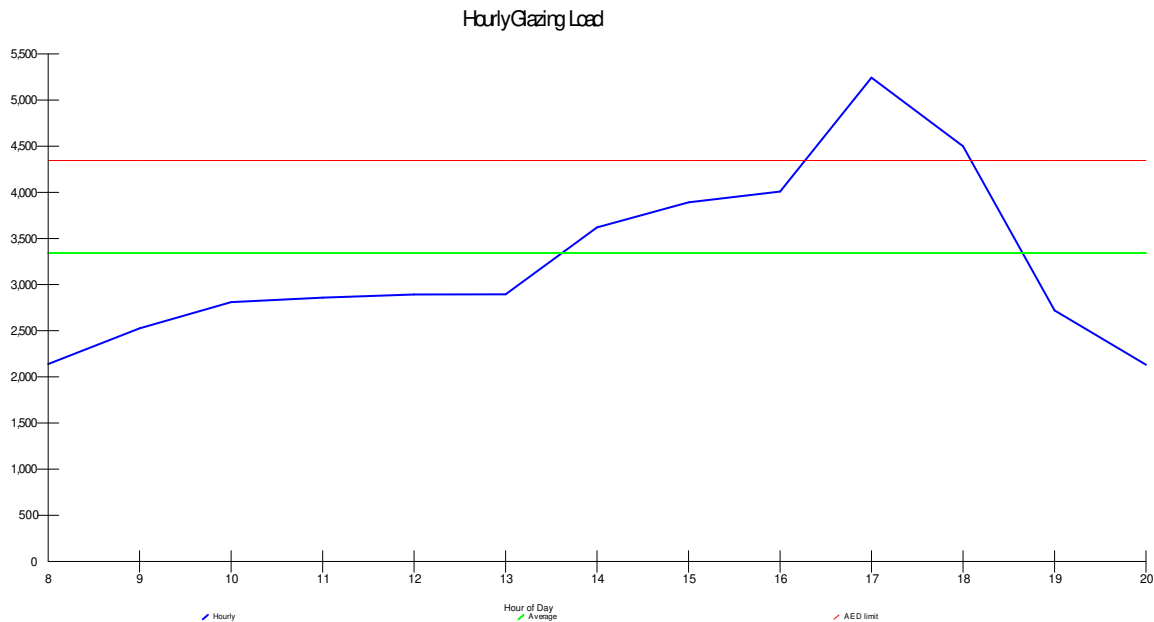
Project Information

For: Adams preserves lot 117-2405, Adams Homes
 Columbia, FL 32669

Design Conditions

Location:		Indoor:		Heating	Cooling
Washington National AP, DC, US		Indoor temperature (°F)		70	75
Elevation: 0 ft		Design TD (°F)		53	16
Latitude: 38°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		44.3	34.7
Outdoor:		Heating	Cooling	Infiltration:	
Dry bulb (°F)	17	91			
Daily range (°F)	-	18 (M)			
Wet bulb (°F)	-	74			
Wind speed (mph)	15.0	7.5			

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 56.9%.

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

AED excursion: 899 Btuh (PFG - 1.3*AFG)



Right-J® Worksheet
Entire House
DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

1	Room name					Entire House					laundry				
2	Exposed wall					264.0 ft					7.0 ft				
3	Room height					8.8 ft					9.0 ft				
4	Room dimensions					2421.0 ft²					7.0 x 7.0 ft				
5	Room area					2421.0 ft²					49.0 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	ne	4.82	2.14	321	241	1162	515	0	0	0	0	
	G	4A5-2ov	0.300	ne	15.90	19.25	14	0	223	270	0	0	0	0	
	G	4A5-2ov	0.300	ne	15.90	14.71	45	0	716	662	0	0	0	0	
	D	11J0	0.600	ne	31.80	17.10	21	21	668	359	0	0	0	0	
11	W	12C-0sw	0.091	se	4.82	2.14	748	718	3463	1535	63	63	304	135	
	G	4A5-2ov	0.300	se	15.90	17.32	30	0	477	520	0	0	0	0	
	W	12C-0sw	0.091	sw	4.82	2.14	510	405	1953	866	0	0	0	0	
	G	4A5-2ov	0.300	sw	15.90	11.64	24	14	382	279	0	0	0	0	
	G	4A5-2ov	0.300	sw	15.90	13.99	30	10	477	420	0	0	0	0	
	G	4A5-2ov	0.300	sw	15.90	7.22	30	30	477	217	0	0	0	0	
	D	11J0	0.600	sw	31.80	17.10	21	21	668	359	0	0	0	0	
	W	12C-0sw	0.091	nw	4.82	2.14	793	721	3477	1542	0	0	0	0	
	G	4A5-2ov	0.300	nw	15.90	14.71	27	0	429	397	0	0	0	0	
	G	4A5-2ov	0.300	nw	15.90	14.71	45	0	716	662	0	0	0	0	
	C	16B-30ad	0.032	-	1.70	1.66	1482	1482	2513	2466	0	0	0	0	
	F	19A-0bscp	0.295	-	5.87	1.77	105	105	617	186	0	0	0	0	
	F	22A-tpl	0.989	-	52.42	0.00	1056	116	6080	0	49	7	367	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:
Date: 04/01/2025
By:

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

1	Room name					kitchen				great				
2	Exposed wall					15.0 ft				40.0 ft				
3	Room height					9.0 ft				9.0 ft				
4	Room dimensions					1.0 x 149.0 ft				1.0 x 475.0 ft				
5	Room area					149.0 ft²				475.0 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	ne	4.82	2.14	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	ne	15.90	14.71	0	0	0	0	0	0	0	0
.	D	11J0	0.600	ne	31.80	17.10	0	0	0	0	0	0	0	0
11	W	12C-0sw	0.091	se	4.82	2.14	135	135	651	289	0	0	0	0
.	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	sw	4.82	2.14	0	0	0	0	135	84	405	180
.	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0	30	30	477	217
.	D	11J0	0.600	sw	31.80	17.10	0	0	0	0	21	21	668	359
.	W	12C-0sw	0.091	nw	4.82	2.14	0	0	0	0	225	198	955	423
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	27	0	429	397
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0
.	C	16B-30ad	0.032	-	1.70	1.66	0	0	0	0	0	0	0	0
.	F	19A-0bscp	0.295	-	5.87	1.77	0	0	0	0	0	0	0	0
.	F	22A-tpl	0.989	-	52.42	0.00	149	15	786	0	475	40	2097	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:
Date: 04/01/2025
By:

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

1	Room name					bath1					dining				
2	Exposed wall					0 ft					36.0 ft				
3	Room height					9.0 ft					9.0 ft				
4	Room dimensions					9.0 ft x 4.0 ft					9.0 ft x 14.0 ft				
5	Room area					36.0 ft²					210.0 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	ne	4.82	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	ne	15.90	14.71	0	0	0	0	0	0	0	0	
	D	11J0	0.600	ne	31.80	17.10	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	se	4.82	2.14	0	0	0	0	126	96	463	205	
	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0	30	0	477	520	
	W	12C-0sw	0.091	sw	4.82	2.14	0	0	0	0	135	111	535	237	
	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0	24	14	382	279	
	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0	0	0	0	0	
	D	11J0	0.600	sw	31.80	17.10	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	nw	4.82	2.14	0	0	0	0	63	63	304	135	
	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
	C	16B-30ad	0.032	-	1.70	1.66	0	0	0	0	0	0	0	0	
	F	19A-0bscp	0.295	-	5.87	1.77	0	0	0	0	0	0	0	0	
	F	22A-tpl	0.989	-	52.42	0.00	36	0	0	0	210	36	1887	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:
Date: 04/01/2025
By:

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

1	Room name					stair 0 ft				foyer 18.0 ft				
2	Exposed wall					32.4 ft				9.0 ft				
3	Room height					10.0 x 4.0 ft				1.0 x 73.0 ft				
4	Room dimensions					40.0 ft²				73.0 ft²				
5	Room area													
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	ne	4.82	2.14	72	57	275	122	81	46	222	98
.	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0	14	0	223	270
.	G	4A5-2ov	0.300	ne	15.90	14.71	15	0	239	221	0	0	0	0
.	D	11J0	0.600	ne	31.80	17.10	0	0	0	0	21	21	668	359
11	W	12C-0sw	0.091	se	4.82	2.14	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	sw	4.82	2.14	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0	0	0	0	0
	D	11J0	0.600	sw	31.80	17.10	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	nw	4.82	2.14	72	72	347	154	81	81	391	173
	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0
	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.70	1.66	117	117	198	195	0	0	0	0
F	19A-0bscp	0.295	-	5.87	1.77	0	0	0	0	0	0	0	0	
F	22A-tpl	0.989	-	52.42	0.00	40	0	0	0	73	18	944	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:
Date: 04/01/2025
By:

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

1	Room name					pantry 0 ft					br4 24.0 ft				
2	Exposed wall					9.0 ft					8.0 ft				
3	Room height					6.0 x 4.0 ft					11.0 x 13.0 ft				
4	Room dimensions					24.0 ft²					143.0 ft²				
5	Room area														
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	ne	4.82	2.14	0	0	0	0	88	73	352	156	
	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	ne	15.90	14.71	0	0	0	0	15	0	239	221	
	D	11J0	0.600	ne	31.80	17.10	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	se	4.82	2.14	0	0	0	0	104	104	502	222	
	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	sw	4.82	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0	0	0	0	0	
	D	11J0	0.600	sw	31.80	17.10	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	nw	4.82	2.14	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
	C	16B-30ad	0.032	-	1.70	1.66	0	0	0	0	143	143	243	238	
	F	19A-0bscp	0.295	-	5.87	1.77	0	0	0	0	0	0	0	0	
	F	22A-tpl	0.989	-	52.42	0.00	24	0	0	0	0	0	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:
Date: 04/01/2025
By:

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

1	Room name					br3 22.0 ft					wic3 0 ft				
2	Exposed wall														
3	Room height														
4	Room dimensions					8.0 ft 1.0 x 146.0 ft heat/cool					8.0 ft 6.0 x 4.0 ft heat/cool				
5	Room area					146.0 ft²					24.0 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	ne	4.82	2.14	80	65	313	139	0	0	0	0	
.	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	ne	15.90	14.71	15	0	239	221	0	0	0	0	
.	D	11J0	0.600	ne	31.80	17.10	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	se	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	sw	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	sw	31.80	17.10	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	nw	4.82	2.14	96	96	463	205	0	0	0	0	
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
C		16B-30ad	0.032	-	1.70	1.66	146	146	248	243	24	24	41	40	
F		19A-0bscp	0.295	-	5.87	1.77	0	0	0	0	0	0	0	0	
F		22A-tpl	0.989	-	52.42	0.00	0	0	0	0	0	0	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:
Date: 04/01/2025
By:

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

1	Room name					wic4 4.0 ft					bath2 10.0 ft				
2	Exposed wall														
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					6.0 x 4.0 ft					6.0 x 10.0 ft				
5	Room area					24.0 ft²					60.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	ne	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	ne	15.90	14.71	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	ne	31.80	17.10	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	se	4.82	2.14	32	32	154	68	80	80	386	171	
.	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	sw	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	sw	31.80	17.10	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	nw	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
C		16B-30ad	0.032	-	1.70	1.66	24	24	41	40	60	60	102	100	
F		19A-0bscp	0.295	-	5.87	1.77	0	0	0	0	0	0	0	0	
F		22A-tpl	0.989	-	52.42	0.00	0	0	0	0	0	0	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:
Date: 04/01/2025
By:

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

1	Room name					mbath 12.0 ft				mbed 31.0 ft				
2	Exposed wall					8.0 ft				8.0 ft				
3	Room height					1.0				17.0				
4	Room dimensions					126.0 ft				238.0 ft				
5	Room area					126.0 ft²				238.0 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	ne	4.82	2.14	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	ne	15.90	14.71	0	0	0	0	0	0	0	0
.	D	11J0	0.600	ne	31.80	17.10	0	0	0	0	0	0	0	0
11	W	12C-0sw	0.091	se	4.82	2.14	96	96	463	205	112	112	540	240
.	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	sw	4.82	2.14	0	0	0	0	136	106	511	227
.	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0	30	10	477	420
.	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0	0	0	0	0
.	D	11J0	0.600	sw	31.80	17.10	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	nw	4.82	2.14	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0
C		16B-30ad	0.032	-	1.70	1.66	126	126	214	210	238	238	404	396
F		19A-0bscp	0.295	-	5.87	1.77	0	0	0	0	14	14	82	25
F		22A-tpl	0.989	-	52.42	0.00	0	0	0	0	0	0	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:
Date: 04/01/2025
By:

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

1	Room name					wic 20.0 ft					br2 14.0 ft				
2	Exposed wall					8.0 ft 1.0 x 103.0 ft heat/cool					8.0 ft 1.0 x 170.0 ft heat/cool				
3	Room height														
4	Room dimensions														
5	Room area					103.0 ft²					170.0 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	ne	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	ne	15.90	14.71	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	ne	31.80	17.10	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	se	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	sw	4.82	2.14	104	104	502	222	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	sw	31.80	17.10	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	nw	4.82	2.14	56	56	270	120	112	97	468	207	
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	15	0	239	221	
C		16B-30ad	0.032	-	1.70	1.66	103	103	175	171	170	170	288	283	
F		19A-0bscp	0.295	-	5.87	1.77	91	91	534	161	0	0	0	0	
F		22A-tpl	0.989	-	52.42	0.00	0	0	0	0	0	0	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:
Date: 04/01/2025
By:

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

1	Room name					loft					hall				
2	Exposed wall					11.0 ft					0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					1.0 x 233.0 ft					1.0 x 80.0 ft				
5	Room area					233.0 ft²					80.0 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	ne	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	ne	15.90	14.71	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	ne	31.80	17.10	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	se	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	sw	4.82	2.14	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0	0	0	0	0	
.	D	11J0	0.600	sw	31.80	17.10	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	nw	4.82	2.14	88	58	280	124	0	0	0	0	
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0	0	0	0	0	
.	G	4A5-2ov	0.300	nw	15.90	14.71	30	0	477	441	0	0	0	0	
C		16B-30ad	0.032	-	1.70	1.66	233	233	395	388	80	80	136	133	
F		19A-0bscp	0.295	-	5.87	1.77	0	0	0	0	0	0	0	0	
F		22A-tpl	0.989	-	52.42	0.00	0	0	0	0	0	0	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:
Date: 04/01/2025
By:

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

1	Room name					AH								
2	Exposed wall					0 ft								
3	Room height					8.0 ft					heat/cool			
4	Room dimensions					6.0 x 3.0 ft								
5	Room area					18.0 ft²								
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	ne	4.82	2.14	0	0	0	0				
.	G	4A5-2ov	0.300	ne	15.90	19.25	0	0	0	0				
.	G	4A5-2ov	0.300	ne	15.90	14.71	0	0	0	0				
.	D	11J0	0.600	ne	31.80	17.10	0	0	0	0				
11	W	12C-0sw	0.091	se	4.82	2.14	0	0	0	0				
.	G	4A5-2ov	0.300	se	15.90	17.32	0	0	0	0				
.	W	12C-0sw	0.091	sw	4.82	2.14	0	0	0	0				
.	G	4A5-2ov	0.300	sw	15.90	11.64	0	0	0	0				
.	G	4A5-2ov	0.300	sw	15.90	13.99	0	0	0	0				
.	G	4A5-2ov	0.300	sw	15.90	7.22	0	0	0	0				
.	D	11J0	0.600	sw	31.80	17.10	0	0	0	0				
.	W	12C-0sw	0.091	nw	4.82	2.14	0	0	0	0				
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0				
.	G	4A5-2ov	0.300	nw	15.90	14.71	0	0	0	0				
C		16B-30ad	0.032	-	1.70	1.66	18	18	31	30				
F		19A-0bscp	0.295	-	5.87	1.77	0	0	0	0				
F		22A-tpl	0.989	-	52.42	0.00	0	0	0	0				

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



A McClellan® / International Refrigeration Company

Right-Suite® Universal 2025 25.0.01 RSU02245

...Trane/Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

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

Job:
Date: 04/01/2025
By:

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

1	Name of Room				bath1 0 ft				dining 36.0 ft			
2	Running Feet of Exposed Wall				9.0 ft				9.0 ft			
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)				234.0 ft²				522.0 ft²			
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)				9.0 x 4.0 ft 36.0 ft²				15.0 x 14.0 ft 210.0 ft²			
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)				0 ° 36.0 ft²				0 ° 210.0 ft²			
Type of Exposure	Const., Number	Panel Faces	HTM		Area or Length	Btuh			Area or Length	Btuh		
			Htg.	Clg.		Heating	S-Clg	L-Clg		Heating	S-Clg	L-Clg
6	Wall	12C-0sw	ne	4.82	2.14	0	0	0	0	0	0	0
.	Glaz	4A5-2ov	ne	15.90	19.25	0	0	0	0	0	0	0
.	Glaz	4A5-2ov	ne	15.90	14.71	0	0	0	0	0	0	0
.	Door	11J0	ne	31.80	17.10	0	0	0	0	0	0	0
11	Wall	12C-0sw	se	4.82	2.14	0	0	0	126	463	205	
.	Glaz	4A5-2ov	se	15.90	17.32	0	0	0	30	477	520	
.	Wall	12C-0sw	sw	4.82	2.14	0	0	0	135	535	237	
.	Glaz	4A5-2ov	sw	15.90	11.64	0	0	0	24	382	279	
.	Glaz	4A5-2ov	sw	15.90	13.99	0	0	0	0	0	0	
.	Glaz	4A5-2ov	sw	15.90	7.22	0	0	0	0	0	0	
.	Door	11J0	sw	31.80	17.10	0	0	0	0	0	0	
.	Wall	12C-0sw	nw	4.82	2.14	0	0	0	63	304	135	
.	Glaz	4A5-2ov	nw	15.90	14.71	0	0	0	0	0	0	
.	Glaz	4A5-2ov	nw	15.90	14.71	0	0	0	0	0	0	
.	Ceil	16B-30ad	-	1.70	1.66	0	0	0	0	0	0	
.	Flor	19A-0bscp	-	5.87	1.77	0	0	0	0	0	0	
.	Flor	22A-tpl	-	52.42	0.00	36	0	0	210	1887	0	

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

[illegible]

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

[illegible]

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

[illegible]

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:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Design Conditions

Location:

Washington National AP, DC, US
Elevation: 0 ft
Latitude: 38°N

Indoor:

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

Heating

70
53
50
44.3

Cooling

75
16
50
34.7

Outdoor:

Heating

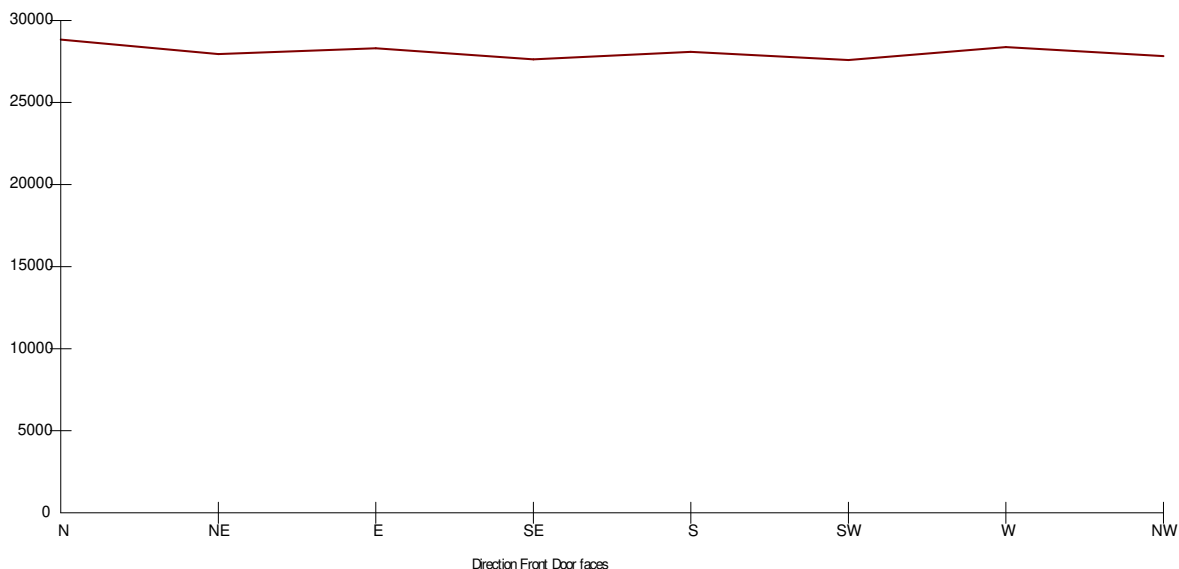
Cooling

Dry bulb (°F) 17 91
Daily range (°F) - 18 (M)
Wet bulb (°F) - 74
Wind speed (mph) 15.0 7.5

Infiltration:

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	24842	23952	24303	23632	24085	23595	24377	23827
Latent Load (Btuh)	3996	3996	3996	3996	3996	3996	3996	3996
Total Load (Btuh)	28838	27948	28299	27628	28081	27591	28373	27823
Heating AVF (cfm)	1050	1050	1050	1050	1050	1050	1050	1050
Cooling AVF (cfm)	1050	1050	1050	1050	1050	1050	1050	1050

Building Orientation Cooling Load



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.



Right-Suite® Universal 2025 25.0.01 RSU02245

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...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N



J1 Form - Worksheet A
Entire House
DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Supporting Detail	
Project Name: Adams Preserve lot-117 - 2405 manuals	Date: 04/01/2025
Address: Columbia, FL 32669	
Phone:	Job ID:

Worksheet A Location and Design Conditions			
Weather Location: Washington National AP, DC, US	Elevation = 0	Latitude = 38	
Indoor Conditions, Heating: DB = 70 °F RH = 50 %	Indoor Conditions, Cooling: DB = 75 °F RH = 50 %		
Table 1 Conditions 99% DB = 17 °F 1% DB = 91 °F	Grains Difference = 35 gr/lb	Daily Range = M	
Design Temperature Differences	HTD = 53 °F	CTD = 16 °F	

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



Right-Suite® Universal 2025 25.0.01 RSU02245

...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

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Duct System Summary

Entire House

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

	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	0.376 / 0.124 in H2O	0.376 / 0.124 in H2O
Lowest friction rate	0.194 in/100ft	0.194 in/100ft
Actual air flow	1050 cfm	1050 cfm
Total effective length (TEL)	257 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
bath1-A	c 0	0	0	0.225	0	0x0	VIFx	22.2	145.0	st5
bath2	h 924	24	18	0.340	4.0	0x0	VIFx	5.4	105.0	
br2	c 1325	44	54	0.289	5.0	0x0	VIFx	14.8	115.0	st1
br3	h 2278	59	53	0.283	5.0	0x0	VIFx	17.7	115.0	st2
br4	h 2430	63	55	0.288	5.0	0x0	VIFx	15.3	115.0	st2
dining	h 6431	167	91	0.194	7.0	0x0	VIFx	28.5	165.0	st6
foyer	h 3764	98	58	0.213	6.0	0x0	VIFx	31.6	145.0	st5
great	c 1917	68	78	0.215	6.0	0x0	VIFx	29.6	145.0	st5
great-A	c 1917	68	78	0.219	6.0	0x0	VIFx	26.6	145.0	st5
great-B	c 1917	68	78	0.201	6.0	0x0	VIFx	22.0	165.0	st6
hall	c 212	5	9	0.293	4.0	0x0	VIFx	13.2	115.0	st2
kitchen	c 2968	61	120	0.203	7.0	0x0	VIFx	20.5	165.0	st6
laundry	c 979	29	40	0.258	4.0	0x0	VIFx	20.4	125.0	st3
loft	c 1878	47	76	0.291	5.0	0x0	VIFx	14.0	115.0	st2
mbath	h 1247	32	28	0.379	4.0	0x0	VIFx	4.1	95.0	
mbed	c 1414	46	57	0.285	5.0	0x0	VIFx	16.6	115.0	st1
mbed-A	c 1414	46	57	0.295	5.0	0x0	VIFx	12.3	115.0	st1
stair	h 1898	49	45	0.218	5.0	0x0	VIFx	27.2	145.0	st5
wic	h 2503	65	45	0.273	5.0	0x0	VIFx	22.9	115.0	st1
wic3	c 59	1	2	0.283	4.0	0x0	VIFx	17.6	115.0	st2
wic4	h 369	10	7	0.294	4.0	0x0	VIFx	12.7	115.0	st2



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...Trane\Adams Preserve lot-117 - 2405 manuals.rup Calc = MJ8 Front Door faces: N

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Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st5	Peak AVF	283	259	0.213	640	9.0	0 x 0	VinIFlx	st3
st3	Peak AVF	608	588	0.194	774	12.0	0 x 0	VinIFlx	
st1	Peak AVF	200	213	0.273	611	8.0	0 x 0	VinIFlx	
st2	Peak AVF	186	203	0.283	758	7.0	0 x 0	VinIFlx	
st6	Peak AVF	296	289	0.194	670	9.0	0 x 0	VinIFlx	

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb2	0x 0	1050	1050	64.0	0.194	675	12.9	16x 14		RtFg	



Duct system multi orientation report

Entire House

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Group 1: (N) Group 2: (NE) Group 3: (E) Group 4: (SE) Group 5: (S) Group 6: (SW) Group 7: (W) Group 8: (NW)

Duct Name	(N)			(NE)			(E)			(SE)		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches												
bath1-A	0 c	12x12	0	0 c	12x12	0	0 c	12x12	0	0 c	12x12	0
bath2	24 h	12x12	4	24 h	12x12	4	24 h	12x12	4	24 h	12x12	4
br2	56 c	12x12	5	46 c	12x12	4	44 h	12x12	4	54 c	12x12	5
br3	59 h	12x12	5	60 c	12x12	5	62 c	12x12	5	59 h	12x12	5
br4	63 h	12x12	5	63 h	12x12	5	64 c	12x12	5	63 h	12x12	5
dining	167 h	12x12	7	167 h	12x12	7	167 h	12x12	7	167 h	12x12	7
foyer	98 h	12x12	6	98 h	12x12	6	98 h	12x12	6	98 h	12x12	6
great	75 c	12x12	5	73 c	12x12	5	74 c	12x12	5	78 c	12x12	6
great-A	75 c	12x12	5	73 c	12x12	5	74 c	12x12	5	78 c	12x12	6
great-B	75 c	12x12	6	73 c	12x12	5	74 c	12x12	6	78 c	12x12	6
hall	9 c	12x12	4	9 c	12x12	4	9 c	12x12	4	9 c	12x12	4
kitchen	128 c	12x12	7	120 c	12x12	7	124 c	12x12	7	120 c	12x12	7
laundry	42 c	12x12	4	40 c	12x12	4	41 c	12x12	4	40 c	12x12	4
loft	78 c	12x12	5	60 c	12x12	5	48 c	12x12	4	76 c	12x12	5
mbath	32 h	12x12	4	32 h	12x12	4	32 h	12x12	4	32 h	12x12	4
mbed	46 c	12x12	4	58 c	12x12	5	67 c	12x12	5	57 c	12x12	5
mbed-A	46 c	12x12	4	58 c	12x12	5	67 c	12x12	5	57 c	12x12	5
stair	49 h	12x12	5	52 c	12x12	5	54 c	12x12	5	49 h	12x12	5
wic	65 h	12x12	5	65 h	12x12	5	65 h	12x12	5	65 h	12x12	5
wic3	3 c	12x12	4	2 c	12x12	4	2 c	12x12	4	2 c	12x12	4
wic4	10 h	12x12	4	10 h	12x12	4	10 h	12x12	4	10 h	12x12	4
Supply Trunks												
st5	283 h		9	283 h		9	283 h		9	283 h		9
st3	608 h		12	608 h		12	608 h		12	608 h		12
st1	200 h		7	206 c		7	219 c		8	213 c		8
st2	202 c		7	200 c		7	192 c		7	203 c		7
st6	318 c		9	311 c		9	296 h		9	296 h		9
Return Branches												
rb2	1050 c	18x18	14x16	1050 c	18x18	14x16	1050 c	18x18	14x16	1050 c	18x18	14x16
Friction Rates												
Heating FR	0.194			0.194			0.194			0.194		
Cooling FR	0.194			0.194			0.194			0.194		

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

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												
bath1-A	0 c	12x12	0	0 c	12x12	0	0 c	12x12	0	0 c	12x12	0
bath2	24 h	12x12	4	24 h	12x12	4	24 h	12x12	4	24 h	12x12	4
br2	63 c	12x12	5	52 c	12x12	5	44 h	12x12	4	52 c	12x12	5
br3	59 h	12x12	5	61 c	12x12	5	70 c	12x12	5	60 c	12x12	5
br4	63 h	12x12	5	63 h	12x12	5	73 c	12x12	5	63 h	12x12	5
dining	167 h	12x12	7	167 h	12x12	7	167 h	12x12	7	167 h	12x12	7
foyer	98 h	12x12	6	98 h	12x12	6	98 h	12x12	6	98 h	12x12	6
great	77 c	12x12	6	70 c	12x12	5	68 h	12x12	5	73 c	12x12	5
great-A	77 c	12x12	5	70 c	12x12	5	68 h	12x12	5	73 c	12x12	5
great-B	77 c	12x12	6	70 c	12x12	5	68 h	12x12	5	73 c	12x12	5
hall	9 c	12x12	4	8 c	12x12	4	9 c	12x12	4	9 c	12x12	4
kitchen	125 c	12x12	7	119 c	12x12	7	124 c	12x12	7	120 c	12x12	7
laundry	41 c	12x12	4	39 c	12x12	4	41 c	12x12	4	40 c	12x12	4
loft	93 c	12x12	6	74 c	12x12	5	52 c	12x12	5	73 c	12x12	5
mbath	32 h	12x12	4	32 h	12x12	4	32 h	12x12	4	32 h	12x12	4
mbed	47 c	12x12	4	56 c	12x12	5	59 c	12x12	5	50 c	12x12	4
mbed-A	47 c	12x12	4	56 c	12x12	5	59 c	12x12	5	50 c	12x12	4
stair	49 h	12x12	5	53 c	12x12	5	62 c	12x12	5	53 c	12x12	5
wic	65 h	12x12	5	65 h	12x12	5	65 h	12x12	5	65 h	12x12	5
wic3	2 c	12x12	4	2 c	12x12	4	2 c	12x12	4	2 c	12x12	4
wic4	10 h	12x12	4	10 h	12x12	4	10 h	12x12	4	10 h	12x12	4
Supply Trunks												
st5	283 h		9	283 h		9	283 h		9	283 h		9
st3	608 h		12	608 h		12	608 h		12	608 h		12
st1	202 c		7	208 c		8	206 c		7	200 h		7
st2	210 c		7	215 c		8	213 c		8	214 c		8
st6	302 c		9	296 h		9	296 h		9	296 h		9
Return Branches												
rb2	1050 c	18x18	14x16	1050 c	18x18	14x16	1050 c	18x18	14x16	1050 c	18x18	14x16
Friction Rates												
Heating FR	0.194			0.194			0.194			0.194		
Cooling FR	0.194			0.194			0.194			0.194		



Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Duct Name	Largest			Smalest		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches						
bath1-A	0 c	12x12	0	0 c	12x12	0
bath2	24 h	12x12	4	24 h	12x12	4
br2	63 c	12x12	5	44 h	12x12	4
br3	70 c	12x12	5	59 h	12x12	5
br4	73 c	12x12	5	63 h	12x12	5
dining	167 h	12x12	7	167 h	12x12	7
foyer	98 h	12x12	6	98 h	12x12	6
great	78 c	12x12	6	68 h	12x12	5
great-A	78 c	12x12	6	68 h	12x12	5
great-B	78 c	12x12	6	68 h	12x12	5
hall	9 c	12x12	4	8 c	12x12	4
kitchen	128 c	12x12	7	119 c	12x12	7
laundry	42 c	12x12	4	39 c	12x12	4
loft	93 c	12x12	6	48 c	12x12	4
mbath	32 h	12x12	4	32 h	12x12	4
mbed	67 c	12x12	5	46 c	12x12	4
mbed-A	67 c	12x12	5	46 c	12x12	4
stair	62 c	12x12	5	49 h	12x12	5
wic	65 h	12x12	5	65 h	12x12	5
wic3	3 c	12x12	4	2 c	12x12	4
wic4	10 h	12x12	4	10 h	12x12	4
Supply Trunks						
st5	283 h		9	283 h		9
st3	608 h		12	608 h		12
st1	219 c		8	200 h		7
st2	215 c		8	192 c		7
st6	318 c		9	296 h		9
Return Branches						
rb2	1050 c	18x18	14x16	1050 c	18x18	14x16
Friction Rates						
Heating FR	0.194			0.194		
Cooling FR	0.194			0.194		



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 LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

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	14	4
Measured length of trunk	14	0
Equivalent length of fittings	165	60
Total length	193	64
Total effective length		257

Friction Rate

	Heating (in/100ft)	Cooling (in/100ft)
Supply Ducts	0.194 > 0.18	0.194 > 0.18
Return Ducts	0.194 > 0.18	0.194 > 0.18

Fitting Equivalent Length Details

Supply	4AD=60, 11A=20, 11A=20, 11A=20, 1A=35, 11I=10: TotalEL=165
Return	6M=20, 5D=40: TotalEL=60



Manual S Compliance Report

Entire House

DL Williams Heating & Cooling LLC

Job:
Date: 04/01/2025
By:

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

Project Information

For: Adams preserves lot 117-2405, Adams Homes
Columbia, FL 32669

Cooling Equipment

Design Conditions

Outdoor design DB:	91.0°F	Sensible gain:	25877	Btuh	Entering coil DB:	77.6°F
Outdoor design WB:	74.0°F	Latent gain:	3996	Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	29873	Btuh		
Indoor RH:	50%	Estimated airflow:	1050	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	5TWR5036A1+5TEM6D04AV31++TDR
Actual airflow:	1050	cfm	
Sensible capacity:	28185	Btuh	109% of load
Latent capacity:	4036	Btuh	101% of load
Total capacity:	32221	Btuh	108% of load SHR: 87%

Heating Equipment

Design Conditions

Outdoor design DB:	17.0°F	Heat loss:	40412	Btuh	Entering coil DB:	67.9°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	5TWR5036A1+5TEM6D04AV31++TDR
Actual airflow:	1050	cfm	
Output capacity:	20873	Btuh	52% of load
Supplemental heat required:	19539	Btuh	
			Capacity balance: 29 °F
			Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:		Model:	
Actual airflow:	1050	cfm	
Output capacity:	10.6	kW	89% of load Temp. rise: 28 °F

Meets all requirements of ACCA Manual S.



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Page 1



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

Form
RPER 2.0

Header Information

Contractor DL Williams Heating & Cooling LLC
Mechanical license# Derrick Williams
Building plan #
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 0 ft
Altitude Correction Factor 1.00
Latitude 38 °N

Summer Design Conditions

Outdoor Cooling Temp 91 °F
Indoor Cooling Temp 75 °F
Cooling Temp Diff 16 °F
Indoor Summer Design RH 50 %
Coincident Wet Bulb Temp 74 °F

Manual J Loads

Total Heat Loss 40412 Btuh
Sensible Heat Gain 25877 Btuh
Latent Heat Gain 3996 Btuh
Total Heat Gain 29873 Btuh

Winter Design Conditions

Outdoor Winter Temp 17 °F
Indoor Winter Temp 70 °F
Heating Temp Diff 53 °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 20873 Btuh Sizing Value 40412 Btuh
Supplemental 19539 Btuh Sizing Limit 175.0 %
Heat Load: Capacity 89.2 %

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

5TWR5036A1+5TEM6D04AV31++TDR
Sensible 28185 Btuh Sizing Value 29873 Btuh
Latent 4036 Btuh Sizing Limit 115.0 %
Total 32221 Btuh Load: Capacity 107.9 %

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

HVAC DUCT DISTRIBUTION DESIGN

(IRC M1601.1)

Design airflow 1050 cfm Longest Supply Duct 193 ft Duct Materials Used
External Static Pressure (ESP) 0.50 in H2O Longest Return Duct 64.0 ft Trunk Duct: ☐ Duct Board ☐ Sheet Metal
Component Pressure Loss (CPL) 0 in H2O Total Effective Length (TEL) 257 ft ☒ Flex ☐ Lined Sheet Metal ☐ Other
Available static pressure (ASP) 0.50 in H2O Friction Rate 0.19 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 ☐

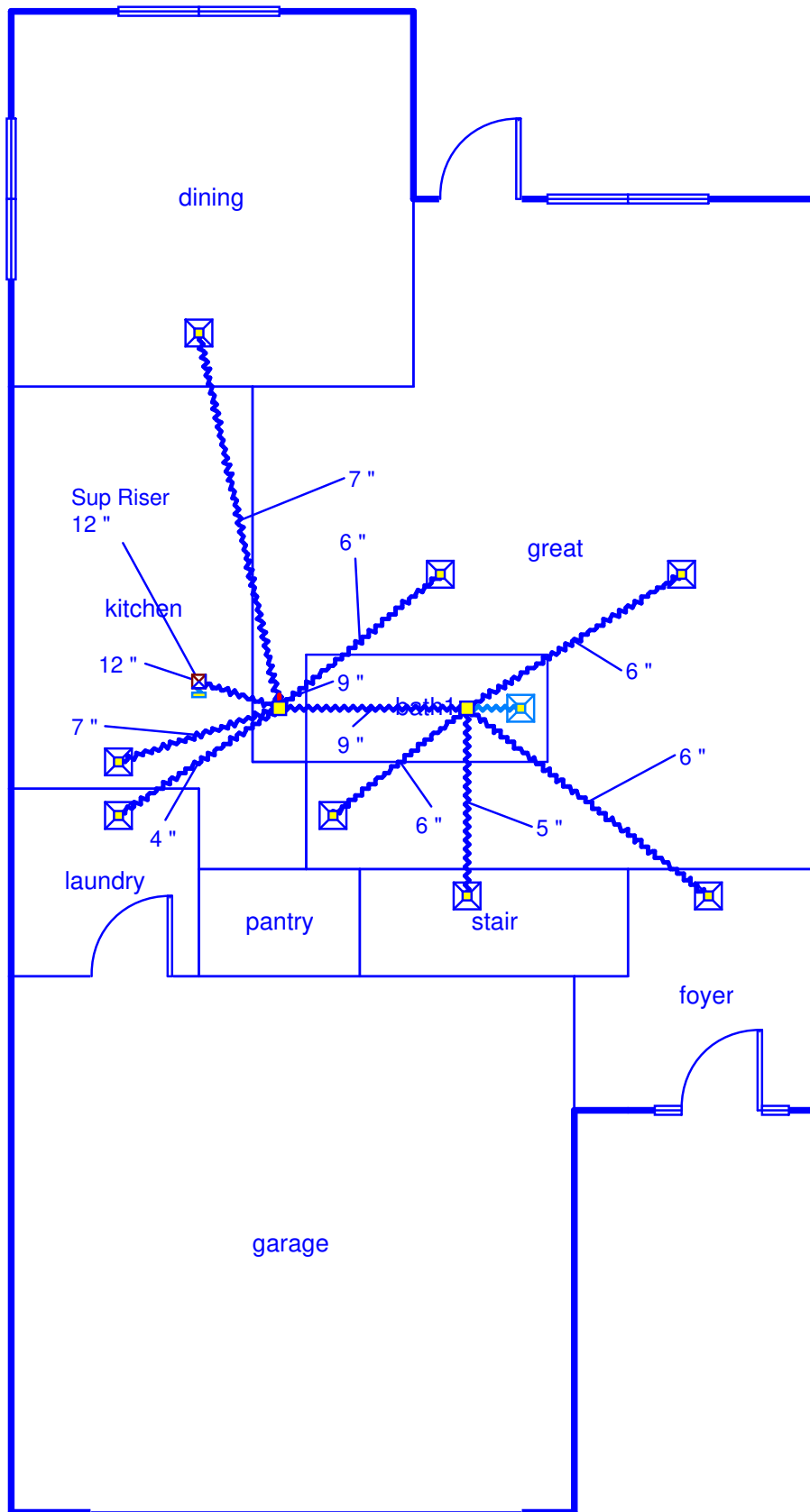
I declare the load calculation, equipment selection, and duct system design were rigorously performed based on the building plan listed above and understand the claims made on these forms may be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____



Sheet 1



Job #:
Performed for:

Adams preserves lot 117-2405

Columbia, FL 32669

DL Williams Heating & Cooling LLC

PO Box 2156
Lake City, FL 32056
Phone: 386-754-1987

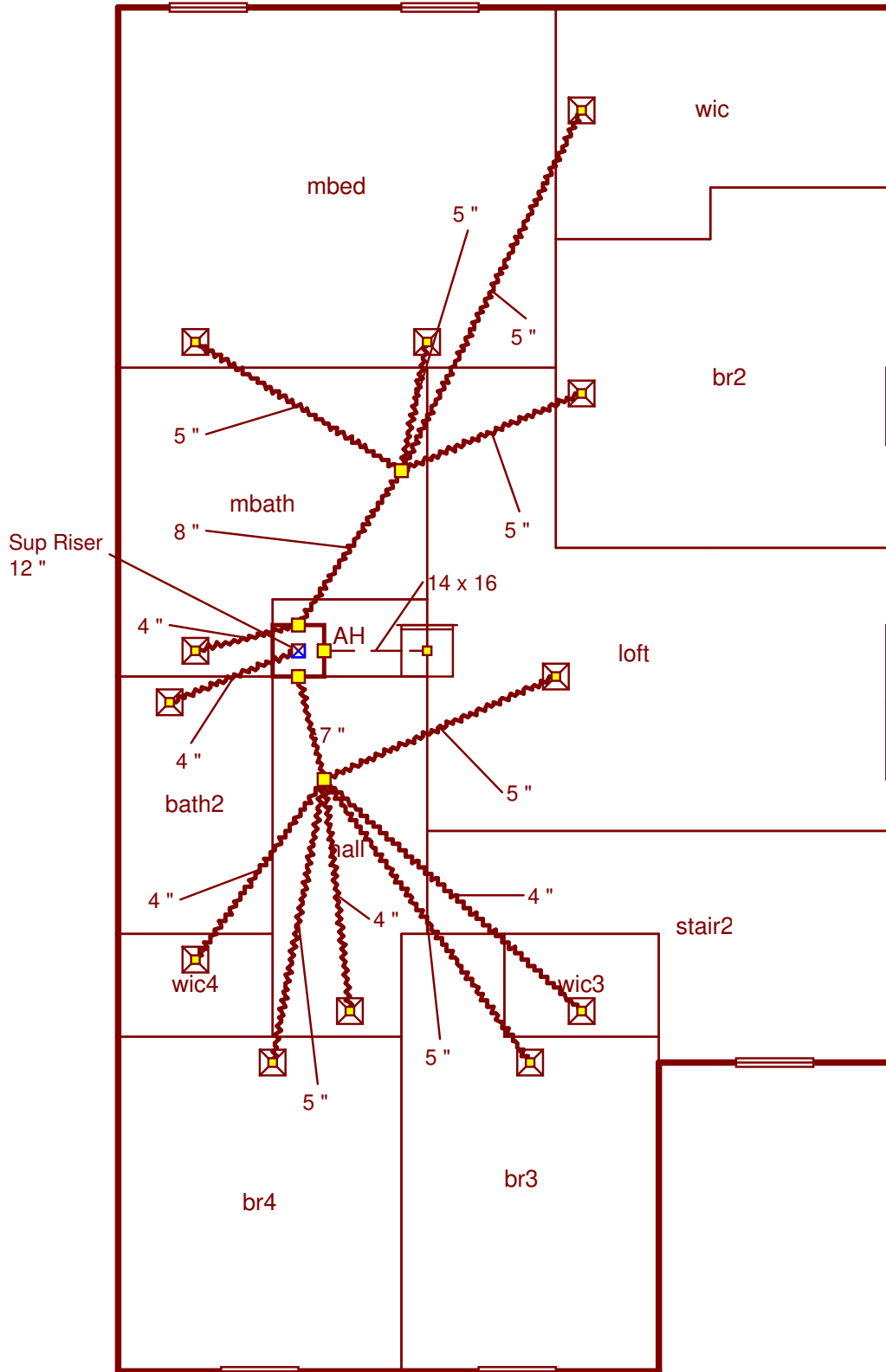
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floor 2



Job #:
Performed for:

Adams preserves lot 117-2405

Columbia, FL 32669

DL Williams Heating & Cooling LLC

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Lake City, FL 32056
Phone: 386-754-1987

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