



Project Summary

Entire House

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

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

Ventilation Method MJ8

Heating Summary

Structure	21198 Btuh
Ducts (R-6.0)	8720 Btuh
Central vent (0 cfm)	0 Btuh

Humidification	0 Btuh
Piping	0 Btuh
Equipment load	29918 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft ²)	2728	2728
Volume (ft ³)	23670	23670
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	126	63

Heating Equipment Summary

Make	Trane
Trade	TRANE
Model	5TWR5042A1
AHRI ref	215610945

Efficiency	7.8 HSPF2
Heating input	
Heating output	39000 Btuh @ 47°F
Temperature rise	28 °F
Actual air flow	1267 cfm
Air flow factor	0.042 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 27 °F	

Backup:
Input = 8 kW, Output = 28088 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	45 gr/lb

Sensible Cooling Equipment Load Sizing

Structure	16493 Btuh
Ducts (R-6.0)	10695 Btuh
Central vent (0 cfm)	0 Btuh

Blower 0 Btuh

Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	26372 Btuh

Latent Cooling Equipment Load Sizing

Structure	3739 Btuh
Ducts	2225 Btuh
Central vent (0 cfm)	0 Btuh

Equipment latent load 5963 Btuh

Equipment Total Load (Sen+Lat)	32336 Btuh
Req. total capacity at 0.70 SHR	3.1 ton

Cooling Equipment Summary

Make	Trane
Trade	TRANE
Cond	5TWR5042A1
Coil	5TEM4D04AC31++TDR+TSTAT
AHRI ref	215610945

Efficiency	12.0 EER2, 15.2 SEER2
Sensible cooling	26600 Btuh
Latent cooling	11400 Btuh
Total cooling	38000 Btuh
Actual air flow	1267 cfm
Air flow factor	0.047 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.82

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



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...ft HVAC\Trane\Adams Laurel-90- 2705 Manuals.rup Calc = MJ8 Front Door faces: N

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Loads for Multiple Orientations

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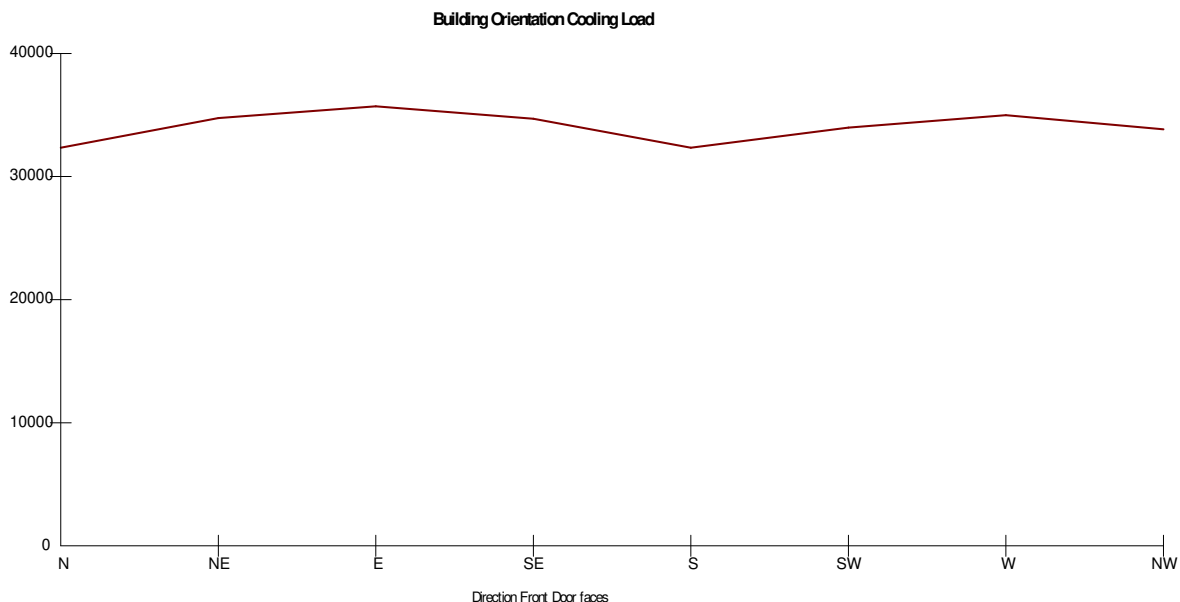
Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92			
Daily range (°F)	-	20 (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)	26372	28785	29743	28736	26372	28009	29027	27874
Latent Load (Btuh)	5963	5963	5963	5963	5963	5963	5963	5963
Total Load (Btuh)	32336	34749	35706	34699	32336	33973	34991	33837
Heating AVF (cfm)	1267	1267	1267	1267	1267	1267	1267	1267
Cooling AVF (cfm)	1267	1267	1267	1267	1267	1267	1267	1267



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

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1	Room name					Entire House					Mbath			
2	Exposed wall					293.0 ft					14.0 ft			
3	Room height					8.7 ft					9.0 ft			
4	Room dimensions					2728.0 ft²					128.0 ft x 128.0 ft			
5	Room area										128.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	680	575	1831	1230	0	0	0	0
.	G	1D-c2ow	0.300	n	10.50	7.65	105	0	1102	804	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	659	644	2051	1377	0	0	0	0
.	G	1D-c2ow	0.300	e	10.50	19.97	15	2	158	299	0	0	0	0
11	W	12C-0sw	0.091	s	3.18	2.14	482	323	1030	691	0	0	0	0
.	G	1D-c2ow	0.300	s	10.50	7.65	39	78	407	297	0	0	0	0
.	G	1D-c2ow	0.300	s	10.50	7.65	120	240	1260	918	0	0	0	0
.	W	12C-0sw	0.091	w	3.18	2.14	650	623	1984	1332	126	111	354	237
.	G	1D-c2ow	0.300	w	10.50	19.39	12	3	126	233	0	0	0	0
.	G	1D-c2ow	0.300	w	10.50	19.97	15	2	158	299	15	1	158	299
.	C	16B-30ad	0.032	-	1.12	1.66	1512	1512	1693	2516	0	0	0	0
.	C	C part ceiling.	0.221	-	7.74	11.50	22	22	170	253	0	0	0	0
.	F	22A-tpl	0.989	-	34.62	0.00	1286	127	4396	0	128	14	485	0
				</										

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1	Room name					foyer 11.0 ft					pwr 0 ft				
2	Exposed wall					9.0 ft					9.0 ft				
3	Room height					1.0					1.0				
4	Room dimensions					106.0 ft					40.0 ft				
5	Room area					106.0 ft²					40.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	e	3.18	2.14	27	27	86	58	0	0	0	0	
.	G	1D-c2ow	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	s	3.18	2.14	54	24	76	51	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	30	30	315	230	0	0	0	0	
.	W	12C-0sw	0.091	w	3.18	2.14	18	18	57	38	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.39	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0	
.	C	C part ceiling.	0.221	-	7.74	11.50	22	22	170	253	0	0	0	0	
.	F	22A-tpl	0.989	-	34.62	0.00	106	11	381	0	40	0	0	0	

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1	Room name					mbed 31.0 ft					family 15.0 ft				
2	Exposed wall					9.0 ft					9.0 ft				
3	Room height					13.0 x 18.0 ft					15.0 x 18.0 ft				
4	Room dimensions					234.0 ft²					270.0 ft²				
5	Room area														
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.18	2.14	117	87	277	186	135	120	382	257	
.	G	1D-c2ow	0.300	n	10.50	7.65	30	0	315	230	15	0	158	115	
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	w	3.18	2.14	162	162	516	346	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.39	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0	
.	C	C part ceiling.	0.221	-	7.74	11.50	0	0	0	0	0	0	0	0	
.	F	22A-tpl	0.989	-	34.62	0.00	234	31	1073	0	270	15	519	0	

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1	Room name						kitchen 28.0 ft				dining 28.0 ft			
2	Exposed wall						9.0 ft				9.0 ft			
3	Room height						12.0				12.0			
4	Room dimensions						16.0 ft				16.0 ft			
5	Room area						192.0 ft²				192.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	108	78	248	167
.	G	1D-c2ow	0.300	n	10.50	7.65	0	0	0	0	30	0	315	230
.	W	12C-0sw	0.091	e	3.18	2.14	144	144	459	308	144	144	459	308
.	G	1D-c2ow	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
11	W	12C-0sw	0.091	s	3.18	2.14	108	78	248	167	0	0	0	0
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
.	G	1D-c2ow	0.300	s	10.50	7.65	30	30	315	230	0	0	0	0
.	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
C		16B-30ad	0.032	-	1.12	1.66	0	0	0	0	0	0	0	0
C		C part ceiling.	0.221	-	7.74	11.50	0	0	0	0	0	0	0	0
F		22A-tpl	0.989	-	34.62	0.00	192	28	969	0	192	28	969	0
6	c) AED excursion									-47				-27
	Envelope loss/gain								1991	657			1991	677
12	a) Infiltration								493	120			493	120
	b) Room ventilation								0	0			0	0
13	Internal gains: Occupants @ 230 Appliances/other						1			230 1200	2			460 0
	Subtotal (lines 6 to 13)								2484	2207			2484	1257
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								2484	2207			2484	1257
15	Duct loads						41%	65%	1022	1431	41%	65%	1022	815
	Total room load								3506	3638			3506	2072
	Air required (cfm)								148	170			148	97

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1	Room name					game rm 38.0 ft				storage 18.0 ft			
2	Exposed wall					8.0 ft				8.0 ft			
3	Room height					18.0 x 20.0 ft				6.0 x 12.0 ft			
4	Room dimensions					360.0 ft²				72.0 ft²			
5	Room area												
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)	Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	48	48	153	103
	G	1D-c2ow	0.300	n	10.50	7.65	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	3.18	2.14	160	145	462	96	96	306	205
	G	1D-c2ow	0.300	e	10.50	19.97	15	1	158	0	0	0	0
11	W	12C-0sw	0.091	s	3.18	2.14	144	105	335	0	0	0	0
	G	1D-c2ow	0.300	s	10.50	7.65	39	39	407	0	0	0	0
	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0
	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0
	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.12	1.66	360	360	403	72	72	81	120
	C	C part ceiling.	0.221	-	7.74	11.50	0	0	0	0	0	0	0
	F	22A-tpl	0.989	-	34.62	0.00	0	0	0	0	0	0	0
6	c) AED excursion								-68				-10
	Envelope loss/gain							1765	1662			539	417
12	a)	Infiltration						594	144			282	68
	b)	Room ventilation						0	0			0	0
13	Internal gains:		Occupants @	230		2			460	0			0
			Appliances/other						900				0
	Subtotal (lines 6 to 13)							2359	3167			821	486
	Less external load							0	0			0	0
	Less transfer							0	0			0	0
	Redistribution							3	5			7	10
14	Subtotal							2362	3172			828	495
15	Duct loads					41%	65%	972	2057	41%	65%	340	321
	Total room load							3334	5228			1168	817
	Air required (cfm)							141	244			49	38

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1	Room name					br5					bath3			
2	Exposed wall					14.0 ft					0 ft			
3	Room height					8.0 ft					8.0 ft			
4	Room dimensions					1.0 x 150.0 ft					5.0 x 5.0 ft			
5	Room area					150.0 ft²					25.0 ft²			
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12C-0sw	0.091	n	3.18	2.14	112	97	309	207	0	0	0	0
.	G	1D-c2ow	0.300	n	10.50	7.65	15	0	158	115	0	0	0	0
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0
.	G	1D-c2ow	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0
11	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0
.	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0
.	G	1D-c2ow	0.300	w	10.50	19.39	0	0	0	0	0	0	0	0
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0
.	C	16B-30ad	0.032	-	1.12	1.66	150	150	168	250	25	25	28	42
.	C	C part ceiling.	0.221	-	7.74	11.50	0	0	0	0	0	0	0	0
.	F	22A-tpl	0.989	-	34.62	0.00	0	0	0	0	0	0	0	0
			</											

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1	Room name					show/tub 5.0 ft					br4 27.0 ft				
2	Exposed wall					8.0 ft					8.0 ft				
3	Room height					5.0					15.0				
4	Room dimensions					x					x				
5	Room area					35.0 ft²					180.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.18	2.14	40	40	127	86	120	105	334	225	
.	G	1D-c2ow	0.300	n	10.50	7.65	0	0	0	0	15	0	158	115	
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	96	96	306	205	
.	G	1D-c2ow	0.300	w	10.50	19.39	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	35	35	39	58	180	180	202	300	
.	C	C part ceiling.	0.221	-	7.74	11.50	0	0	0	0	0	0	0	0	
.	F	22A-tpl	0.989	-	34.62	0.00	0	0	0	0	0	0	0	0	

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



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...ft HVAC\Trane\Adams Laurel-90- 2705 Manuals.rup Calc = MJ8 Front Door faces: N



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

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

1	Room name					laundry					bath2				
2	Exposed wall					6.0 ft					5.0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					9.0 x 6.0 ft					9.0 x 5.0 ft				
5	Room area					54.0 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-0sw	0.091	n	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	w	3.18	2.14	48	36	115	77	40	40	127	86	
.	G	1D-c2ow	0.300	w	10.50	19.39	12	1	126	233	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	54	54	60	90	45	45	50	75	
.	C	C part ceiling.	0.221	-	7.74	11.50	0	0	0	0	0	0	0	0	
.	F	22A-tpl	0.989	-	34.62	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 and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

1	Room name					br3 24.0 ft 8.0 ft 12.0 x 15.0 ft heat/cool 180.0 ft²					br2 29.0 ft 8.0 ft 1.0 x 184.0 ft heat/cool 184.0 ft²				
2	Exposed wall														
3	Room height														
4	Room dimensions														
5	Room area														
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	e	3.18	2.14	88	88	280	188	0	0	0	0	
.	G	1D-c2ow	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	s	3.18	2.14	96	66	210	141	80	50	159	107	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	30	30	315	230	30	30	315	230	
.	W	12C-0sw	0.091	w	3.18	2.14	8	8	25	17	152	152	484	325	
.	G	1D-c2ow	0.300	w	10.50	19.39	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	180	180	202	300	184	184	206	306	
.	C	C part ceiling.	0.221	-	7.74	11.50	0	0	0	0	0	0	0	0	
.	F	22A-tpl	0.989	-	34.62	0.00	0	0	0	0	0	0	0	0	
									</						

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



A Wrightsoft® / Accurate Heating & Cooling Company

Right-Suite® Universal 2025 25.0.01 RSU02245

...ft HVAC\Trane\Adams Laurel-90- 2705 Manuals.rup Calc = MJ8 Front Door faces: N

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

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

1	Room name					hall					ah				
2	Exposed wall					0 ft					0 ft				
3	Room height					8.0 ft					8.0 ft				
4	Room dimensions					1.0 x 139.0 ft					3.0 x 6.0 ft				
5	Room area					139.0 ft²					18.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.39	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	139	139	156	231	18	18	20	30	
.	C	C part ceiling.	0.221	-	7.74	11.50	0	0	0	0	0	0	0	0	
.	F	22A-tpl	0.989	-	34.62	0.00	0	0	0	0	0	0	0	0	

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



Right-Suite® Universal 2025 25.0.01 RSU02245

...ft HVAC\Trane\Adams Laurel-90- 2705 Manuals.rup Calc = MJ8 Front Door faces: N

2025-Feb-17 10:44:12

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

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

1	Room name					WIC					stair2				
2	Exposed wall					0 ft					0 ft				
3	Room height					9.0 ft					17.0 ft				
4	Room dimensions					1.0 x 54.0 ft					7.0 x 10.0 ft				
5	Room area					54.0 ft²					70.0 ft²				
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12C-0sw	0.091	n	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	n	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	e	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	e	10.50	19.97	0	0	0	0	0	0	0	0	
11	W	12C-0sw	0.091	s	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	s	10.50	7.65	0	0	0	0	0	0	0	0	
.	W	12C-0sw	0.091	w	3.18	2.14	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.39	0	0	0	0	0	0	0	0	
.	G	1D-c2ow	0.300	w	10.50	19.97	0	0	0	0	0	0	0	0	
.	C	16B-30ad	0.032	-	1.12	1.66	0	0	0	0	70	70	78	116	
.	C	C part ceiling.	0.221	-	7.74	11.50	0	0	0	0	0	0	0	0	
.	F	22A-tpl	0.989	-	34.62	0.00	54	0	0	0	70	0	0	0	
					</										

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





J1 Form - Worksheet A

Entire House

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

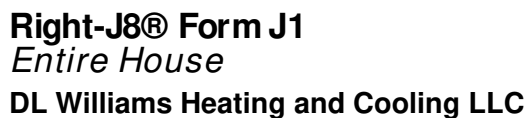
PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Supporting Detail	
Project Name: Adams Laurel-90- 2705 Manuals	Date: Feb 13, 2025
Address: 761 SW Rosemary DR, Lake City, FL 32024	
Phone:	Job ID:

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

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





Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 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: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

1	Name of Room					kitchen				dining			
2	Running Feet of Exposed Wall					28.0 ft				28.0 ft			
3	Ceiling Ht (Ft) and Gross Wall Area (SqFt)					9.0 ft 504.0 ft²				9.0 ft 504.0 ft²			
4	Room Dimensions (Ft) and Floor Plan Area (SqFt)					12.0 x 16.0 ft 192.0 ft²				12.0 x 16.0 ft 192.0 ft²			
5	Ceiling Slope (Deg.) and Gross Ceiling Area (SqFt)					0 ° 192.0 ft²				0 ° 192.0 ft²			
Type of Exposure		Const., Number	Panel Faces	HTM		Area or Length	Btuh			Area or Length	Btuh		
				Htg.	Clg.		Heating	S-Clg	L-Clg		Heating	S-Clg	L-Clg
6	Wall	12C-0sw	n	3.18	2.14	0	0	0		108	248	167	
.	Glaz	1D-c2ow	n	10.50	7.65	0	0	0		30	315	230	
.	Wall	12C-0sw	e	3.18	2.14	144	459	308		144	459	308	
.	Glaz	1D-c2ow	e	10.50	19.97	0	0	0		0	0	0	
11	Wall	12C-0sw	s	3.18	2.14	108	248	167		0	0	0	
	Glaz	1D-c2ow	s	10.50	7.65	0	0	0		0	0	0	
	Glaz	1D-c2ow	s	10.50	7.65	30	315	230		0	0	0	
	Wall	12C-0sw	w	3.18	2.14	0	0	0		0	0	0	
	Glaz	1D-c2ow	w	10.50	19.39	0	0	0		0	0	0	
	Glaz	1D-c2ow	w	10.50	19.97	0	0	0		0	0	0	
	Ceil	16B-30ad	-	1.12	1.66	0	0	0		0	0	0	
	Ceil	C oart ceiling.	-	7.74	11.50	0	0	0		0	0	0	
	Flor	22A-tpl	-	34.62	0.00	192	969	0		192	969	0	

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

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

[illegible]

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



AED Assessment
Entire House
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:

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

Indoor:

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

Heating

68
35
50
29.0

Cooling

75
17
50
45.4

Outdoor:

Drybulb (°F)
Daily range (°F)
Wetbulb (°F)
Wind speed (mph)

Heating

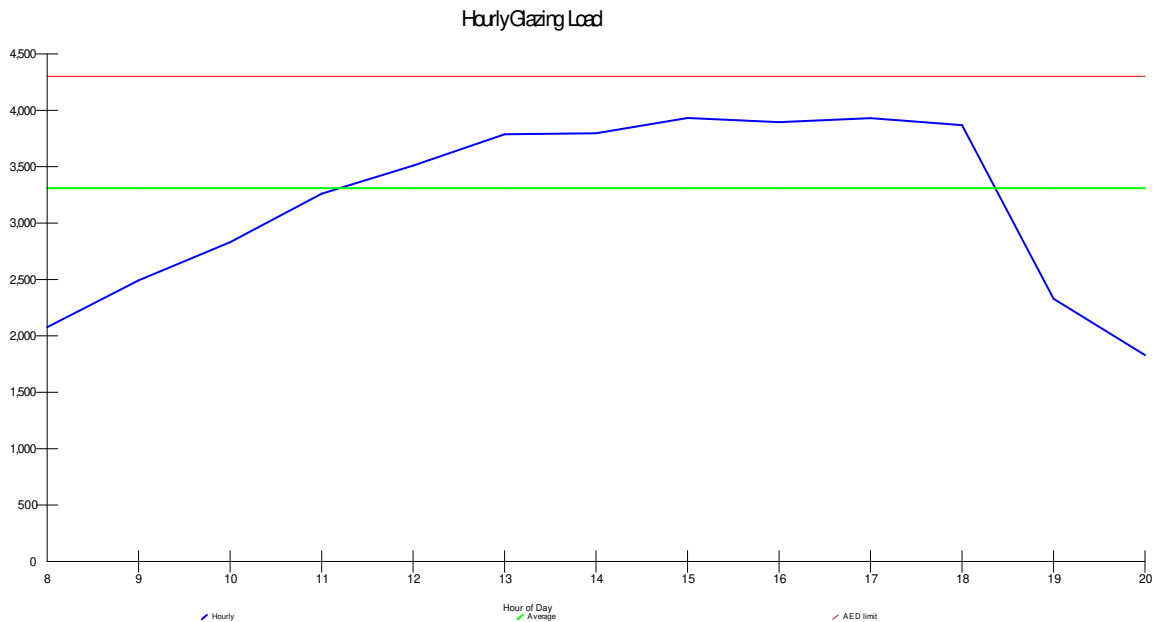
33
-
-
15.0

Cooling

92
20 (M)
76
7.5

Infiltration:

Test for Adequate Exposure Diversity



Maximum hourly glazing load exceeds average by 18.8%.

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

AED excursion: 0 Btuh



Component Constructions

Entire House

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	575	0.091	13.0	3.18	1831	2.14	1230
	e	644	0.091	13.0	3.18	2051	2.14	1377
	s	323	0.091	13.0	3.18	1030	2.14	691
	w	623	0.091	13.0	3.18	1984	2.14	1332
	all	2165	0.091	13.0	3.18	6896	2.14	4630

Partitions

(none)

Windows

1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	n	105	0.300	0	10.5	1102	7.65	804
	e	15	0.300	0	10.5	158	20.0	299
	s	39	0.300	0	10.5	407	7.65	297
	s	120	0.300	0	10.5	1260	7.65	918
	w	15	0.300	0	10.5	158	20.0	299
	all	294	0.300	0	10.5	3084	8.91	2617
1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (3 ft window ht, 1 ft sep.); 6.67 ft head ht	w	12	0.300	0	10.5	126	19.4	233

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		1512	0.032	30.0	1.12	1693	1.66	2516
C part ceiling, C part ceiling, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		22	0.221	1.0	7.74	170	11.5	253

Floors

22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		127	0.989	0	34.6	4396	0	0
--	--	-----	-------	---	------	------	---	---





Component Constructions

Mbath

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	w	111	0.091	13.0	3.18	354	2.14	237
Partitions								
(none)								
Windows								
1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	w	15	0.300	0	10.5	158	20.0	299
Doors								
(none)								
Ceilings								
(none)								
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		14	0.989	0	34.6	485	0	0





Component Constructions
pwdr
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	33	92	Method		
Daily range (°F)	-	20 (M)	Construction quality		
Wet bulb (°F)	-	76	Simplified		
Wind speed (mph)	15.0	7.5	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 (none)								
Floors (none)								





Component Constructions
oyer
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method		
Daily range (°F)	-	20 (M)	Construction quality		
Wet bulb (°F)	-	76	Simplified		
Wind speed (mph)	15.0	7.5	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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	27	0.091	13.0	3.18	86	2.14	58
	s	24	0.091	13.0	3.19	76	2.14	51
	w	18	0.091	13.0	3.18	57	2.14	38
	all	69	0.091	13.0	3.18	220	2.14	148
Partitions (none)								
Windows								
1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" s thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht		30	0.300	0	10.5	315	7.65	230
Doors (none)								
Ceilings								
C part ceiling, C part ceiling, carpet flr fnsh, frm flr, 12" thkns, 1/2" gypsum board int fnsh		22	0.221	1.0	7.74	170	11.5	253
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		11	0.989	0	34.6	381	0	0



Component Constructions
mbed
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:		Heating	Cooling		
Dry bulb (°F)		33	92		
Daily range (°F)		-	20 (M)		
Wet bulb (°F)		-	76		
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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	87	0.091	13.0	3.18	277	2.14	186
	w	162	0.091	13.0	3.18	516	2.14	346
	all	249	0.091	13.0	3.18	793	2.14	532

Partitions (none)

Windows

1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" n thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	30	0.300	0	10.5	315	7.65	230
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Doors (none)

Ceilings (none)

Floors

22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh	31	0.989	0	34.6	1073	0	0
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Component Constructions
family
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	120	0.091	13.0	3.18	382	2.14	257
Partitions (none)								
Windows								
1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	n	15	0.300	0	10.5	158	7.65	115
Doors (none)								
Ceilings (none)								
Floors								
22A-tpl: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh		15	0.989	0	34.6	519	0	0



Component Constructions

kitchen

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method		
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	144	0.091	13.0	3.18	459	2.14	308
	s	78	0.091	13.0	3.18	248	2.14	167
	all	222	0.091	13.0	3.18	707	2.14	475

Partitions

(none)

Windows

1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" s thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	30	0.300	0	10.5	315	7.65	230
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Doors

(none)

Ceilings

(none)

Floors

22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh	28	0.989	0	34.6	969	0	0
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Component Constructions
dining
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:		Heating	Cooling		
Dry bulb (°F)		33	92		
Daily range (°F)		-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	78	0.091	13.0	3.18	248	2.14	167
	e	144	0.091	13.0	3.18	459	2.14	308
	all	222	0.091	13.0	3.18	707	2.14	475

Partitions (none)

Windows

1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" n thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	30	0.300	0	10.5	315	7.65	230
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Doors (none)

Ceilings (none)

Floors

22A-tp1: Bg floor, light dry soil, on grade depth, carp 80% flr fnsh	28	0.989	0	34.6	969	0	0
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Component Constructions
game rm
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method		
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	145	0.091	13.0	3.18	462	2.14	310
	s	105	0.091	13.0	3.18	335	2.14	225
	all	250	0.091	13.0	3.18	797	2.14	535

Partitions

(none)

Windows

1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	e	15	0.300	0	10.5	158	20.0	299
	s	39	0.300	0	10.5	407	7.65	297
	all	54	0.300	0	10.5	564	11.1	596

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		360	0.032	30.0	1.12	403	1.66	599
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Floors

(none)



Component Constructions
storage
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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
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Walls							
12C-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2"	n	48	0.091	13.0	3.19	153	103
gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	96	0.091	13.0	3.19	306	205
	all	144	0.091	13.0	3.19	459	308

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	72	0.032	30.0	1.12	81	1.66	120

Floors
(none)



Project Information

For: Adams Laurel-93- 2705
 761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	97	0.091	13.0	3.19	309	2.14	207
Partitions								
(none)								
Windows								
1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" n thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	n	15	0.300	0	10.5	158	7.65	115
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		150	0.032	30.0	1.12	168	1.66	250
Floors								
(none)								



Component Constructions
bath3
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
Outdoor:			Moisture difference (gr/lb)	29.0	45.4
			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								
(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		25	0.032	30.0	1.12	28	1.66	42
Floors								
(none)								



Component Constructions
show/tub
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
Outdoor:			Moisture difference (gr/lb)	29.0	45.4
Heating	Cooling		Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	40	0.091	13.0	3.18	127	2.14	86
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		35	0.032	30.0	1.12	39	1.66	58
Floors (none)								



Component Constructions

br4

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Drybulb (°F)	33	92	Method		
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	105	0.091	13.0	3.18	334	2.14	225
	w	96	0.091	13.0	3.19	306	2.14	205
	all	201	0.091	13.0	3.18	640	2.14	430

Partitions (none)

Windows

1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" n thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	15	0.300	0	10.5	158	7.65	115
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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	180	0.032	30.0	1.12	202	1.66	300
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Floors (none)



Component Constructions
laundry
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	w	36	0.091	13.0	3.18	115	2.14	77
Partitions (none)								
Windows								
1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (3 ft window ht, 1 ft sep.); 6.67 ft head ht	w	12	0.300	0	10.5	126	19.4	233
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	1.12	60	1.66	90
Floors (none)								



Component Constructions
bath2
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
Outdoor:			Moisture difference (gr/lb)	29.0	45.4
			Infiltration:		
Heating			Method	Simplified	
Cooling			Construction quality	Average	
Dry bulb (°F)	33	92	Fireplaces	0	
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	76			
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, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	w	40	0.091	13.0	3.18	127	2.14	86
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	1.12	50	1.66	75
Floors (none)								

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	e	88	0.091	13.0	3.18	280	2.14	188
	s	66	0.091	13.0	3.18	210	2.14	141
	w	8	0.091	13.0	3.18	25	2.14	17
	all	162	0.091	13.0	3.18	516	2.14	346

Partitions

(none)

Windows

1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" s thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	s	30	0.300	0	10.5	315	7.65	230
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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		180	0.032	30.0	1.12	202	1.66	300
---	--	-----	-------	------	------	-----	------	-----

Floors

(none)



Component Constructions
br2
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:		Indoor:		Heating	Cooling
Gainesville Regional AP, FL, US		Indoor temperature (°F)		68	75
Elevation: 164 ft		Design TD (°F)		35	17
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method		
Daily range (°F)	-	20 (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-0sw: Frm wall, stucco ext, 3/8" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	s	50	0.091	13.0	3.18	159	2.14	107
	w	152	0.091	13.0	3.18	484	2.14	325
	all	202	0.091	13.0	3.18	643	2.14	432

Partitions

(none)

Windows

1D-c2ow: 2 glazing, clr outr, air gas, wd frm mat, clr innr, 1/4" gap, 1/8" s thk; NFRC rated (SHGC=0.23); 50% blinds 45°, light; 50% outdoor insect screen; 1.6 ft overhang (5 ft window ht, 1 ft sep.); 6.67 ft head ht	30	0.300	0	10.5	315	7.65	230
---	----	-------	---	------	-----	------	-----

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	184	0.032	30.0	1.12	206	1.66	306
---	-----	-------	------	------	-----	------	-----

Floors

(none)



Component Constructions
hall
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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 (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								
		139	0.032	30.0	1.12	156	1.66	231
Floors (none)								



Component Constructions
ah
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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 (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		18	0.032	30.0	1.12	20	1.66	30
Floors (none)								



Component Constructions
WIC
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
			Moisture difference (gr/lb)	29.0	45.4
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (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
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Walls
(none)

Partitions
(none)

Windows
(none)

Doors
(none)

Ceilings
(none)

Floors
(none)



Component Constructions
stair2
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:			Indoor:	Heating	Cooling
Gainesville Regional AP, FL, US			Indoor temperature (°F)	68	75
Elevation: 164 ft			Design TD (°F)	35	17
Latitude: 30°N			Relative humidity (%)	50	50
Outdoor:			Moisture difference (gr/lb)	29.0	45.4
Heating	Cooling		Infiltration:		
Dry bulb (°F)	33	92	Method	Simplified	
Daily range (°F)	-	20 (M)	Construction quality	Average	
Wet bulb (°F)	-	76	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-2 roof ins, 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
	70	0.032	30.0	1.12	78	1.66	116





Load Short Form

Entire House

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

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 (%)	50	50		
Moisture difference (gr/lb)	29	45		

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 5TWR5042A1
AHRI ref 215610945
Efficiency 7.8 HSPF2
Heating input
Heating output 39000 Btuh @ 47°F
Temperature rise 28 °F
Actual air flow 1267 cfm
Air flow factor 0.042 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 27 °F

Backup:
Input = 8 kW, Output = 28088 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 5TWR5042A1
Coil 5TEM4D04AC31++TDR+TSTAT
AHRI ref 215610945
Efficiency 12.0 EER2, 15.2 SEER2
Sensible cooling 26600 Btuh
Latent cooling 11400 Btuh
Total cooling 38000 Btuh
Actual air flow 1267 cfm
Air flow factor 0.047 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.82

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Mbath	128	1753	1274	74	59
foyer	106	1806	1093	76	51
pwdr	40	0	0	0	0
mbed	234	3848	1444	163	67
family	270	1867	3640	79	170
kitchen	192	3506	3638	148	170
dining	192	3506	2072	148	97
game rm	360	3334	5228	141	244
storage	72	1168	817	49	38
br5	150	1219	1033	52	48
bath3	25	40	67	2	3
show/tub	35	346	263	15	12
br4	180	2006	1528	85	71
laundry	54	557	941	24	44

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



bath2	45	361	290	15	13
br3	180	1987	1560	84	73
br2	184	2284	1740	97	81
hall	139	220	373	9	17
ah	18	0	0	0	0
WIC	54	0	0	0	0
stair2	70	111	188	5	9
Entire House	2728	29918	27188	1267	1267
Other equip loads		0	0		
Equip. @ 0.97 RSM			26372		
Latent cooling			5963		
TOTALS	2728	29918	32336	1267	1267

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



Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Design Conditions

Location:

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

Outdoor:

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

Heating

33
-
-
15.0

Cooling

92
20 (M)
76
7.5

Indoor:

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

Heating

68
35
50
29.0

Cooling

75
17
50
45.4

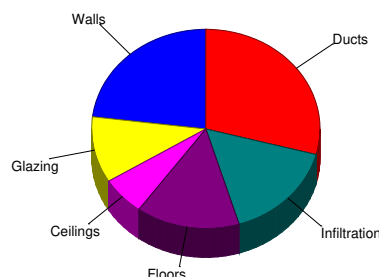
Infiltration:

Method
Construction quality
Fireplaces

Simplified
Average
0

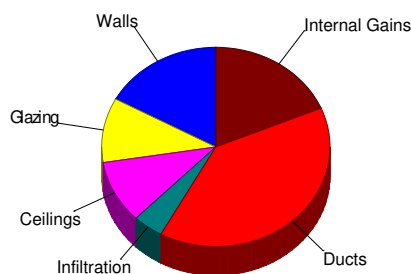
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.2	6896	23.1
Glazing	10.5	3210	10.7
Doors	0	0	0
Ceilings	1.2	1864	6.2
Floors	3.4	4396	14.7
Infiltration	2.0	4832	16.1
Ducts		8720	29.1
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		29918	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	2.1	4630	17.0
Glazing	9.3	2850	10.5
Doors	0	0	0
Ceilings	1.8	2769	10.2
Floors	0	0	0
Infiltration	0.5	1173	4.3
Ducts		10695	39.3
Ventilation		0	0
Internal gains		5070	18.6
Blower		0	0
Adjustments		0	0
Total		27188	100.0



Latent Cooling Load = 5963 Btuh

Overall U-value = 0.088 Btuh/ft²-°F, Window / Floor Area = 11.2 %

Data entries checked.



Duct system multi orientation report

Entire House

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Group 1: (N, S) Group 2: (NE, E, SE) Group 3: (SW, W) Group 4: (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												
Mbath	74 h	12x12	6	74 h	12x12	6	74 h	12x12	6	74 h	12x12	6
WIC	0 c	12x12	4	0 c	12x12	4	0 c	12x12	4	0 c	12x12	4
bath2	15 h	12x12	4	15 h	12x12	4	15 h	12x12	4	15 h	12x12	4
bath3	3 c	12x12	0	3 c	12x12	0	2 c	12x12	0	3 c	12x12	0
br2	97 h	12x12	6	97 h	12x12	6	97 h	12x12	6	97 h	12x12	6
br3	84 h	12x12	6	86 c	12x12	6	89 c	12x12	6	84 h	12x12	6
br4	85 h	12x12	6	85 h	12x12	6	85 h	12x12	6	85 h	12x12	6
br5	52 h	12x12	4	56 c	12x12	5	60 c	12x12	5	56 c	12x12	5
dining	148 h	12x12	7	148 h	12x12	7	148 h	12x12	7	148 h	12x12	7
family	170 c	12x12	7	156 c	12x12	7	156 c	12x12	7	163 c	12x12	7
foyer	76 h	12x12	5	76 h	12x12	5	76 h	12x12	5	76 h	12x12	5
game rm	122 c	12x12	6	114 c	12x12	6	109 c	12x12	6	115 c	12x12	6
game rm-A	122 c	12x12	6	114 c	12x12	6	109 c	12x12	6	115 c	12x12	6
hall	17 c	12x12	4	14 c	12x12	4	14 c	12x12	4	15 c	12x12	4
kitchen	170 c	12x12	7	166 c	12x12	7	165 c	12x12	7	165 c	12x12	7
laundry	44 c	12x12	5	27 c	12x12	4	24 h	12x12	4	27 c	12x12	4
mbed	163 h	12x12	8	163 h	12x12	8	163 h	12x12	8	163 h	12x12	8
pwdr-A	0 c	12x12	4	0 c	12x12	4	0 c	12x12	4	0 c	12x12	4
show/tub	15 h	12x12	4	15 h	12x12	4	15 h	12x12	4	15 h	12x12	4
stair2	9 c	12x12	0	7 c	12x12	0	7 c	12x12	0	8 c	12x12	0
storage	49 h	12x12	5	49 h	12x12	5	49 h	12x12	5	49 h	12x12	5
Supply Trunks												
st7	237 h		10	237 h		10	237 h		10	237 h		10
st6	237 h		10	237 h		10	237 h		10	237 h		10
st1A	49 h		5	49 h		5	49 h		5	49 h		5
st1	160 c		7	145 c		7	139 c		7	149 c		7
st2	482 c		12	485 c		12	483 c		12	479 c		12
st2A	230 h		10	230 h		10	230 h		10	230 h		10
st2B	97 h		6	97 h		6	97 h		6	97 h		6
st3	690 h		14	690 h		14	690 h		14	690 h		14
st4	297 h		10	297 h		10	297 h		10	297 h		10
st5	393 h		12	393 h		12	393 h		12	393 h		12
st8	237 h		10	237 h		10	237 h		10	237 h		10
st8A	74 h		6	74 h		6	74 h		6	74 h		6
Return Branches												
rb2	898 c	16x16	0x0	909 c	16x16	0x0	918 c	16x16	0x0	908 c	16x16	0x0
rb1	483 h	24x16	0x0	483 h	24x16	0x0	483 h	24x16	0x0	483 h	24x16	0x0
Friction Rates												
Heating FR	0.130			0.130			0.130			0.130		
Cooling FR	0.130			0.130			0.130			0.130		



Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Duct Name	(S)			(SW)			(W)			(NW)		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches												
Mbath	74 h	12x12	6	74 h	12x12	6	74 h	12x12	6	74 h	12x12	6
WIC	0 c	12x12	4	0 c	12x12	4	0 c	12x12	4	0 c	12x12	4
bath2	15 h	12x12	4	15 h	12x12	4	15 h	12x12	4	15 h	12x12	4
bath3	3 c	12x12	0	3 c	12x12	0	2 c	12x12	0	3 c	12x12	0
br2	97 h	12x12	6	98 c	12x12	7	106 c	12x12	7	97 c	12x12	6
br3	84 h	12x12	6	91 c	12x12	6	100 c	12x12	6	90 c	12x12	6
br4	85 h	12x12	6	85 h	12x12	6	85 h	12x12	6	85 h	12x12	6
br5	52 h	12x12	4	52 c	12x12	4	53 c	12x12	4	52 h	12x12	4
dining	148 h	12x12	7	148 h	12x12	7	148 h	12x12	7	148 h	12x12	7
family	171 c	12x12	7	151 c	12x12	7	147 c	12x12	7	155 c	12x12	7
foyer	76 h	12x12	5	76 h	12x12	5	83 c	12x12	5	76 h	12x12	5
game rm	127 c	12x12	6	121 c	12x12	6	116 c	12x12	6	116 c	12x12	6
game rm-A	127 c	12x12	6	121 c	12x12	6	116 c	12x12	6	116 c	12x12	6
hall	17 c	12x12	4	14 c	12x12	4	13 c	12x12	4	15 c	12x12	4
kitchen	170 c	12x12	7	170 c	12x12	7	175 c	12x12	7	174 c	12x12	7
laundry	36 c	12x12	5	24 h	12x12	4	24 h	12x12	4	32 c	12x12	4
mbed	163 h	12x12	8	163 h	12x12	8	163 h	12x12	8	163 h	12x12	8
powdr-A	0 c	12x12	4	0 c	12x12	4	0 c	12x12	4	0 c	12x12	4
show/tub	15 h	12x12	4	15 h	12x12	4	15 h	12x12	4	15 h	12x12	4
stair2	9 c	12x12	0	7 c	12x12	0	7 c	12x12	0	8 c	12x12	0
storage	49 h	12x12	5	49 h	12x12	5	49 h	12x12	5	49 h	12x12	5
Supply Trunks												
st7	237 h		10	237 h		10	237 h		10	237 h		10
st6	237 h		10	237 h		10	237 h		10	237 h		10
st1A	49 h		5	49 h		5	49 h		5	49 h		5
st1	165 c		7	152 c		7	145 c		7	149 c		7
st2	481 c		12	492 c		12	495 c		12	492 c		12
st2A	230 h		10	230 h		10	230 h		10	230 h		10
st2B	97 h		6	98 c		7	106 c		7	97 c		6
st3	690 h		14	690 h		14	690 h		14	690 h		14
st4	297 h		10	297 h		10	297 h		10	297 h		10
st5	393 h		12	393 h		12	393 h		12	393 h		12
st8	237 h		10	237 h		10	237 h		10	237 h		10
st8A	74 h		6	74 h		6	74 h		6	74 h		6
Return Branches												
rb2	912 c	16x16	0x0	923 c	16x16	0x0	931 c	16x16	0x0	911 c	16x16	0x0
rb1	483 h	24x16	0x0	483 h	24x16	0x0	483 h	24x16	0x0	483 h	24x16	0x0
Friction Rates												
Heating FR	0.130			0.130			0.130			0.130		
Cooling FR	0.130			0.130			0.130			0.130		

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Duct Name	Largest			Smallest		
	Reg CFM	Reg Size	Duct Size	Reg CFM	Reg Size	Duct Size
Supply Branches						
Mbath	74 h	12x12	6	74 h	12x12	6
WIC	0 c	12x12	4	0 c	12x12	4
bath2	15 h	12x12	4	15 h	12x12	4
bath3	3 c	12x12	0	2 c	12x12	0
br2	106 c	12x12	7	97 h	12x12	6
br3	100 c	12x12	6	84 h	12x12	6
br4	85 h	12x12	6	85 h	12x12	6
br5	60 c	12x12	5	52 h	12x12	4
dining	148 h	12x12	7	148 h	12x12	7
family	171 c	12x12	7	147 c	12x12	7
foyer	83 c	12x12	5	76 h	12x12	5
game rm	127 c	12x12	6	109 c	12x12	6
game rm-A	127 c	12x12	6	109 c	12x12	6
hall	17 c	12x12	4	13 c	12x12	4
kitchen	175 c	12x12	7	165 c	12x12	7
laundry	44 c	12x12	5	24 h	12x12	4
mbed	163 h	12x12	8	163 h	12x12	8
powdr-A	0 c	12x12	4	0 c	12x12	4
show/tub	15 h	12x12	4	15 h	12x12	4
stair2	9 c	12x12	0	7 c	12x12	0
storage	49 h	12x12	5	49 h	12x12	5
Supply Trunks						
st7	237 h		10	237 h		10
st6	237 h		10	237 h		10
st1A	49 h		5	49 h		5
st1	165 c		7	139 c		7
st2	495 c		12	479 c		12
st2A	230 h		10	230 h		10
st2B	106 c		7	97 h		6
st3	690 h		14	690 h		14
st4	297 h		10	297 h		10
st5	393 h		12	393 h		12
st8	237 h		10	237 h		10
st8A	74 h		6	74 h		6
Return Branches						
rb2	931 c	16x16	0x0	898 c	16x16	0x0
rb1	483 h	24x16	0x0	483 h	24x16	0x0
Friction Rates						
Heating FR	0.130			0.130		
Cooling FR	0.130			0.130		

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





Duct System Summary

Entire House

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

	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	0.419 / 0.081 in H ₂ O	0.419 / 0.081 in H ₂ O
Lowest friction rate	0.130 in/100ft	0.130 in/100ft
Actual air flow	1267 cfm	1267 cfm
Total effective length (TEL)	384 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
Mbath	h 1753	74	59	0.130	6.0	0x0	VIFx	37.1	285.0	st8A
WIC	c 0	0	0	0.152	4.0	0x0	VIFx	30.1	245.0	st8
bath2	h 361	15	13	0.156	4.0	0x0	VIFx	34.0	235.0	st2A
bath3	c 67	2	3	0	0	0x0	VIFx	0	0	
br2	h 2284	97	81	0.141	6.0	0x0	VIFx	42.0	255.0	st2B
br3	h 1987	84	73	0.191	6.0	0x0	VIFx	35.0	185.0	st2
br4	h 2006	85	71	0.161	6.0	0x0	VIFx	26.0	235.0	st2A
br5	h 1219	52	48	0.318	4.0	0x0	VIFx	7.0	125.0	st2
dining	h 3506	148	97	0.280	7.0	0x0	VIFx	5.0	145.0	st4
family	c 3640	79	170	0.232	7.0	0x0	VIFx	16.0	165.0	st5
foyer	h 1806	76	51	0.260	5.0	0x0	VIFx	16.0	145.0	st5
game rm	c 2614	71	122	0.269	6.0	0x0	VIFx	11.0	145.0	st2
game rm-A	c 2614	71	122	0.297	6.0	0x0	VIFx	16.0	125.0	st1
hall	c 373	9	17	0.176	4.0	0x0	VIFx	23.0	215.0	st2A
kitchen	c 3638	148	170	0.254	7.0	0x0	VIFx	10.0	155.0	st4
laundry	c 941	24	44	0.141	5.0	0x0	VIFx	28.0	270.0	st2A
mbed	h 3848	163	67	0.143	8.0	0x0	VIFx	29.1	265.0	st8
pwdr-A	c 0	0	0	0.161	4.0	0x0	VIFx	35.1	225.0	st7
show/tub	h 346	15	12	0.225	4.0	0x0	VIFx	21.0	165.0	st2
stair2	c 188	5	9	0	0	0x0	VIFx	0	0	
storage	h 1168	49	38	0.215	5.0	0x0	VIFx	15.0	180.0	st1A

Bold/italic values have been manually overridden



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...ft HVAC\Trane\Adams Laurel-90- 2705 Manuals.rup Calc = MJ8 Front Door faces: N

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st7	Peak AVF	237	127	0.130	435	10.0	0 x 0	VinIFlx	st6
st6	Peak AVF	237	127	0.130	435	10.0	0 x 0	VinIFlx	st5
st1A	Peak AVF	49	38	0.215	363	5.0	0 x 0	VinIFlx	st1
st1	Peak AVF	120	160	0.215	598	7.0	0 x 0	VinIFlx	
st2	Peak AVF	451	482	0.141	614	12.0	0 x 0	VinIFlx	
st2A	Peak AVF	230	227	0.141	422	10.0	0 x 0	VinIFlx	st2
st2B	Peak AVF	97	81	0.141	493	6.0	0 x 0	VinIFlx	st2A
st3	Peak AVF	690	613	0.130	645	14.0	0 x 0	VinIFlx	
st4	Peak AVF	297	266	0.254	544	10.0	0 x 0	VinIFlx	st3
st5	Peak AVF	393	347	0.130	500	12.0	0 x 0	VinIFlx	st3
st8	Peak AVF	237	127	0.130	435	10.0	0 x 0	VinIFlx	st7
st8A	Peak AVF	74	59	0.130	378	6.0	0 x 0	VinIFlx	st8

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	784	898	61.0	0.132	505	12.5	16.00x16	10x51	SJSp	
rb1	0x 0	483	369	62.0	0.130	161	9.9	18.00x24	10x86	SJSp	





Static Pressure and Friction Rate
Entire House
DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Available Static Pressure

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.50	0.50
Pressure losses		
Coil	0	0
Heat exchanger	0	0
Supply diffusers	0	0
Return grilles	0	0
Filter	0	0
Humidifier	0	0
Balancing damper	0	0
Other device	0	0
Available static pressure	0.50	0.50

Total Effective Length

	Supply (ft)	Return (ft)
Measured length of run-out	8	2
Measured length of trunk	29	0
Equivalent length of fittings	285	60
Total length	322	62
Total effective length		384

Friction Rate

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0.130	OK	0.130	OK
Return Ducts	0.130	OK	0.130	OK

Fitting Equivalent Length Details

Supply	4AD=60, 11I=10, 11M=20, 12J1=10, 11M=20, 11M=20, 11A=20, 11M=20, 11A=20, 11M=20, 11M=20, 1A=35, USR1=10: TotalEL=285
Return	6M=20, 5D=40: TotalEL=60



DHW Report

Entire House

DL Williams Heating and Cooling LLC

Job:

Date: Feb 13, 2025

By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

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

Gas conventional (40 gal, 0.60 EF)

Manufacturer	Tank size (gal)	40
Trade name	Energy factor	0.60
Model	Input (MBtuh)	0.0
AHRI ref. number	1st hour (gal)	60
	Recovery eff. (%)	77



Manual S Compliance Report

Entire House

DL Williams Heating and Cooling LLC

Job:
Date: Feb 13, 2025
By:

PO Box 2156, Lake City, FL 32056 Phone: 1-386-754-1987 Email: office@dlwilliamsheatingandcooling.com

Project Information

For: Adams Laurel-93- 2705
761 SW Rosemary DR, Lake City, FL 32024

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	27188	Btuh	Entering coil DB:	77.5°F
Outdoor design WB:	76.0°F	Latent gain:	5963	Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	33151	Btuh		
Indoor RH:	50%	Estimated airflow:	1267	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP			
Manufacturer:	Trane	Model:	5TWR5042A1+5TEM4D04AC31++TDR+TSTAT	
Actual airflow:	1267	cfm		
Sensible capacity:	26600	Btuh	98% of load	
Latent capacity:	11400	Btuh	191% of load	
Total capacity:	38000	Btuh	115% of load	SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	33.0°F	Heat loss:	29918	Btuh	Entering coil DB:	66.9°F
Indoor design DB:	68.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Trane	Model:	5TWR5042A1+5TEM4D04AC31++TDR+TSTAT		
Actual airflow:	1267	cfm			
Output capacity:	39000	Btuh	130% of load	Capacity balance:	27 °F
Supplemental heat required:	0	Btuh		Economic balance:	-99 °F

Backup equipment type:	Elec strip				
Manufacturer:		Model:			
Actual airflow:	1267	cfm			
Output capacity:	8.2	kW	94% of load	Temp. rise:	50 °F

Meets all requirements of ACCA Manual S.





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

Form
RPER 2.0

Header Information

Contractor DL Williams Heating and Cooling LLC
Mechanical license# _____
Building plan # _____
Home address (Street or Lot#, Block, Subdivision) 761 SW Rosemary DR, 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 164 ft
Altitude Correction Factor 0.99
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 29918 Btuh
Sensible Heat Gain 27188 Btuh
Latent Heat Gain 5963 Btuh
Total Heat Gain 33151 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 39000 Btuh Sizing Value 29918 Btuh
Supplemental Heat 0 Btuh Sizing Limit 175.0 %
Load: Capacity 93.9 %

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

Model 5TWR5042A1
Sensible 26600 Btuh Sizing Value 33151 Btuh
Latent 11400 Btuh Sizing Limit 115.0 %
Total 38000 Btuh Load: Capacity 114.6 %

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

HVAC DUCT DISTRIBUTION DESIGN

(IRC M1601.1)

Design airflow 1267 cfm Longest Supply Duct 322 ft Duct Materials Used
External Static Pressure (ESP) 0.50 in H2O Longest Return Duct 62.0 ft Trunk Duct: ☐ Duct Board ☐ Sheet Metal
Component Pressure Loss (CPL) 0 in H2O Total Effective Length (TEL) 384 ft ☒ Flex ☐ Lined Sheet Metal ☐ Other
Available static pressure (ASP) 0.50 in H2O Friction Rate 0.13 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 ☐

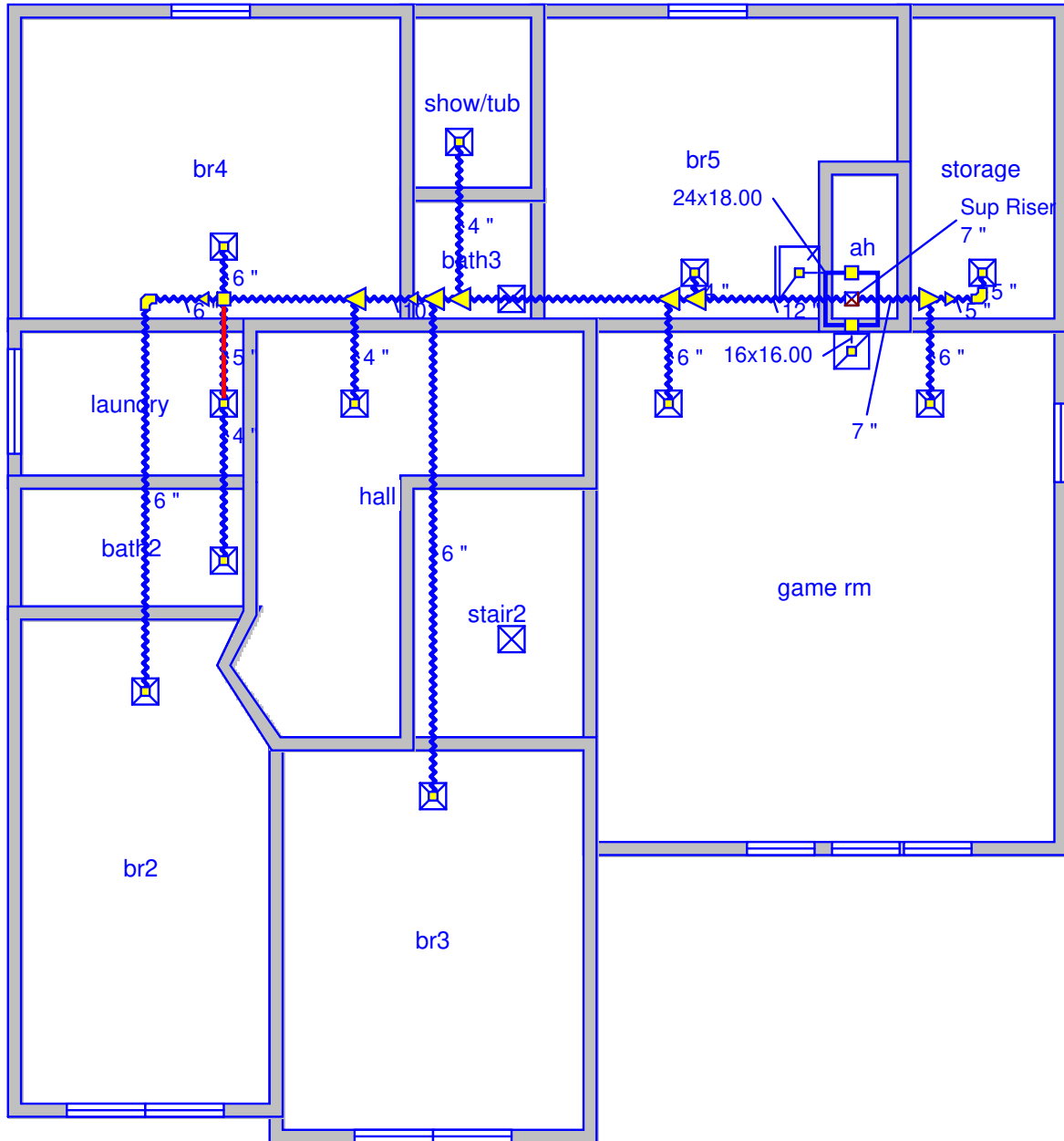
I declare the load calculation, equipment selection, and duct system design were rigorously performed based on the building plan listed above and understand the claims made on these forms may be subject to review and verification.

Contractor's printed name: _____

Contractor's signature: _____ Date: _____



Level 2



Job #:
Performed for:
Adams Laurel-93- 2705
761 SW Rosemary DR
Lake City, FL 32024

DL Williams Heating and Cooling LLC

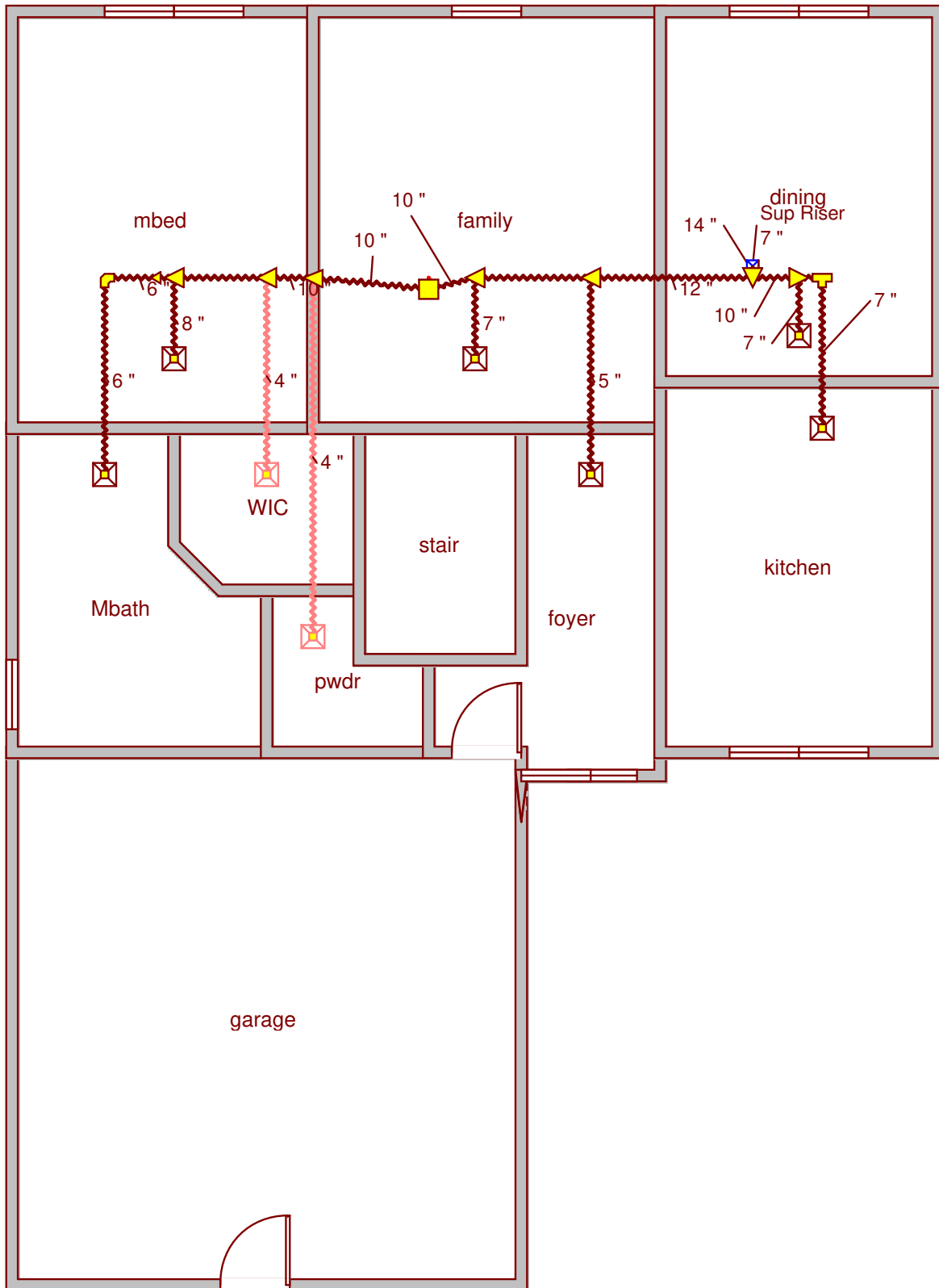
PO Box 2156
Lake City, FL 32056
Phone: 1-386-754-1987
office@dlwilliamsheatingandcooling.com

Scale: 1 : 80

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Level 1



Job #:
Performed for:
Adams Laurel-93- 2705
761 SW Rosemary DR
Lake City, FL 32024

DL Williams Heating and Cooling LLC

PO Box 2156
Lake City, FL 32056
Phone: 1-386-754-1987
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