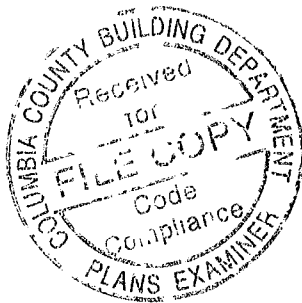


CARLOS HECHAUARRIA HVAC LOAD ANALYSIS

697-7194

for

CARLOS HECHAUARRIA
289 HIGHFIELD TERR.
LAKE CITY, FL 32024



Prepared By
DAVID HALL
DAVID HALL'S INC.
PO BOX 244
LAKE CITY, FL 32056
386-755-9792
9/26/17

Project Summary

Project:	CARLOS HECHAUARRIA	Company:	DAVID HALL'S INC.
Client:	CARLOS HECHAUARRIA	Representative:	DAVID HALL
Address:	289 HIGHFIELD TERR.	Address:	PO BOX 244
City:	LAKE CITY, FL 32024	City:	LAKE CITY, FL 32056
Phone:		Phone:	386-755-9792
Fax:		Fax:	386-755-9100
		Comment:	

Design Data

Project Name: CARLOS HECHAUARRIA
 Reference City: Jacksonville, Florida
 Daily Temperature Range: Medium
 Latitude: 30 Degrees
 Elevation: 26 Feet
 Elevation Sensible Adj. Factor: 1.000
 Elevation Total Adj. Factor: 1.000

	<u>Outdoor</u> <u>Dry Bulb</u>	<u>Outdoor</u> <u>Wet Bulb</u>	<u>Indoor</u> <u>Rel.Hum.</u>	<u>Indoor</u> <u>Dry Bulb</u>	<u>Grains</u> <u>Difference</u>
Winter:	27	N/A	N/A	72	N/A
Summer:	98	78	50%	75	48

Check Figures

Total Building Supply CFM:	556	CFM per square foot:	0.702
Square feet of room area:	792	Square feet per ton:	598.127

Building Loads

Total heating required with outside air:	15,791 Btuh	15.791 MBH
Total sensible gain:	12,235 Btuh	82 %
Total latent gain:	2,736 Btuh	18 %
Total cooling required with outside air:	14,971 Btuh	1.248 Tons (based on sensible + latent)
		1.324 Tons (based on 77% sensible capacity)

Notes

Calculations are based on 7th edition of ACCA Manual J.
 All computed results are estimates as building use and weather may vary.
 Be sure to select a unit that meets both sensible and latent loads.

Miscellaneous Project Data

Project File Name: UNTITLED

System Input Data

---System 1---	Outdoor Dry Bulb	Outdoor Wet Bulb	Indoor Rel.Hum.	Indoor Dry Bulb	Grains Difference
Winter:	27	N/A	N/A	72	N/A
Summer:	98	78	50%	75	48

External Overhangs

No.	Projection	Offset	No.	Projection	Offset
1	3	1	6	0	0
2	5	0	7	0	0
3	4	0.5	8	0	0
4	0	0	9	0	0
5	0	0	10	0	0

Duct Sizing Inputs

	<u>Runouts</u>	<u>Main Trunk</u>
Duct Material:	Flexible Duct	Fiberglass Duct Board
Roughness Factor:	0.010000	0.003000
Pressure Drop:	0.1000 In.wg/100 Ft.	0.1000 In.wg/100 Ft.
Minimum Velocity:	450.0 Ft./Minute	650.0 Ft./Minute
Maximum Velocity:	750.0 Ft./Minute	900.0 Ft./Minute
Minimum Height:	0 Inches	0 Inches
Maximum Height:	0 Inches	0 Inches

Outside Air Data

	<u>Winter</u>	<u>Summer</u>
Infiltration:	0.900 AC/Hr	0.400 AC/Hr
Volume of Conditioned Space:	X 6645 Cu.Ft.	X 6645 Cu.Ft.
	5,981 Cu.Ft./Hr	2,658 Cu.Ft./Hr
	X 0.0167	X 0.0167
Total Building Infiltration:	99.675 CFM	44.3 CFM
Total Building Ventilation:	0 CFM	0 CFM
---System 1---		
Infiltration & Ventilation Sensible Gain Multiplier:	25.30 = (1.10 X 23.00 Summer Temp Difference)	
Infiltration & Ventilation Latent Gain Multiplier:	32.64 = (0.68 X 48.00 Grains Difference)	
Infiltration & Ventilation Sensible Loss Multiplier:	49.50 = (1.10 X 45.00 Winter Temp. Difference)	

Total Building Summary Loads

Component Description	Area Quan	Sen. Loss	Lat. Gain	Sen. Gain	Total Gain
3B Window Double Pane Clear Glass TIM Frame	60	1,644	0	2,568	2,568
11A Door Metal Fiberglass Core	42	558	0	284	284
13N Part 8" or 12" Block + R-5	817	2,647	0	1,353	1,353
16G Ceiling R-30 Insulation	791	1,175	0	1,227	1,227
22A Slab on Grade No Edge Insulation	112	4,083	0	0	0
Subtotals for structure:	1,822	10,107	0	5,432	5,432
Active People:	3	0	690	900	1,590
Inactive People:	0	0	0	0	0
Appliances:	0	0	600	600	1,200
Lighting:	0	0	0	3,069	3,069
Ductwork:	0	751	0	1,113	1,113
Infiltration: Winter CFM: 99.7, Summer CFM: 44.3	102	4,933	1,446	1,121	2,567
Ventilation: Winter CFM: 0.0, Summer CFM: 0.0	0	0	0	0	0
Sensible Gain Total:				12,235	
Temperature Swing Multiplier:				X1.00	
Building Load Totals:		15,791	2,736	12,235	14,971

Check Figures

Total Building Supply CFM: 556	CFM per square foot: 0.702
Square feet of room area: 792	Square feet per ton: 598.127

Building Loads

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		1.324 Tons (based on 77% sensible capacity)

Notes

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 Be sure to select a unit that meets both sensible and latent loads.

Room Load Summary Reports

System #1 Room Load Summary

No	Room Name	Area SF	Htg Sens Btuh	Htg Nom CFM	Run Duct Size	Run Duct Vel	Clg Sens Btuh	Clg Lat Btuh	Clg Nom CFM	Zone Adj Fact	Clg Adj CFM	Air Sys CFM
---Zone 1---												
1	Great Room/ Kitchen	352	7,296	95	2-8	487	6,390	1,911	290	1.17	340	290
2	Utility Room	113	1,644	21	1-4	666	1,278	0	58	1.00	58	58
3	Bath	76	1,099	14	1-4	439	843	85	38	1.00	38	38
4	Closet	60	1,161	15	1-3	669	722	0	33	1.00	33	33
5	Bedroom	191	4,591	60	1-8	465	3,002	740	136	1.19	162	136
System 1 Totals		792	15,791	205			12,235	2,736	556		632	556
												Main Trunk Size: 12x10 in.

System #1 Cooling System Summary

	Cooling Tons	Sensible/Latent Split	Sensible Btuh	Latent Btuh	Total Btuh
Net Required:	1.248	82%/18%	12,235	2,736	14,971
Recommended:	1.324	77%/23%	12,235	3,655	15,890