



Load Short Form
Entire House
Bounds Heating and Air

Job:
Date: Apr 17, 2024
By:

Email: jlegler@boundshvac.com

Project Information

For: Depree, Amira

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	68	75	Construction quality	Average
Design TD (°F)	35	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	29	44		

HEATING EQUIPMENT

Make	Carrier
Trade	15 SEER2 HP
Model	GH5SAN43000AA0
AHRI ref	210998680
Efficiency	7.5 HSPF2
Heating input	
Heating output	28600 Btuh @ 47°F
Temperature rise	28 °F
Actual air flow	947 cfm
Air flow factor	0.049 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 24 °F	

Backup: n/a n/a
Input = 0 kW, Output = 0 Btuh, 100 AFUE

COOLING EQUIPMENT

Make	Carrier
Trade	15 SEER2 HP
Cond	GH5SAN43000AA0
Coil	FJ4DNXB30L
AHRI ref	210998680
Efficiency	12.0 EER2, 14.3 SEER2
Sensible cooling	19880 Btuh
Latent cooling	8520 Btuh
Total cooling	28400 Btuh
Actual air flow	947 cfm
Air flow factor	0.047 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)
bedroom 2	164	2506	2618	123	123
master bedroom	205	2848	2944	140	139
wic 2	35	389	216	19	10
laundry	49	208	815	10	38
bath	68	993	578	49	27
ah	21	0	0	0	0
wic	44	188	144	9	7
master bath	102	1233	713	61	34
pantry	41	174	134	9	6
hall	146	1319	869	65	41
kitchen/living	661	9419	11060	463	521

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



Entire House	1536	19278	20093	947	947
Other equip loads		0	0		
Equip. @ 0.97 RSM			19530		
Latent cooling			3097		
TOTALS	1536	19278	22627	947	947

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



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Project Summary

Entire House

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Job:
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Project Information

For: Depree, Amira

Notes:

Design Information

Weather: Gainesville Regional, FL, US

Winter Design Conditions

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

Summer Design Conditions

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

Heating Summary

Structure	14600 Btuh
Ducts (R-6.0)	4678 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	19278 Btuh

Sensible Cooling Equipment Load Sizing

Structure	14245 Btuh
Ducts (R-6.0)	5848 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	19530 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

Latent Cooling Equipment Load Sizing

Structure	1966 Btuh
Ducts	1130 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Equipment latent load	3097 Btuh

	Heating	Cooling
Area (ft ²)	1536	1536
Volume (ft ³)	13824	13824
Air changes/hour	0.38	0.20
Equiv. AVF (cfm)	88	46

Equipment Total Load (Sen+Lat)	22627 Btuh
Req. total capacity at 0.70 SHR	2.3 ton

Heating Equipment Summary

Make	Carrier
Trade	15 SEER2 HP
Model	GH5SAN43000AA0
AHRI ref	210998680
Efficiency	7.5 HSPF2
Heating input	
Heating output	28600 Btuh @ 47°F
Temperature rise	28 °F
Actual air flow	947 cfm
Air flow factor	0.049 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 24 °F	
Backup: n/a n/a	
Input = 0 kW, Output = 0 Btuh, 100 AFUE	

Cooling Equipment Summary

Make	Carrier
Trade	15 SEER2 HP
Cond	GH5SAN43000AA0
Coil	FJ4DNXB30L
AHRI ref	210998680
Efficiency	12.0 EER2, 14.3 SEER2
Sensible cooling	19880 Btuh
Latent cooling	8520 Btuh
Total cooling	28400 Btuh
Actual air flow	947 cfm
Air flow factor	0.047 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.87

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Duct System Summary

Entire House

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By:

Email: jlegler@boundshvac.com

Project Information

For: Depree, Amira

	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	0.365 / 0.135 in H ₂ O	0.365 / 0.135 in H ₂ O
Lowest friction rate	0.317 in/100ft	0.317 in/100ft
Actual air flow	947 cfm	947 cfm
Total effective length (TEL)	158 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg.Eqv Ln (ft)	Trunk
bath	h 993	49	27	0.343	4.0	0x0	VIFx	16.5	90.0	st1
bedroom 2	c 2618	123	123	0.317	7.0	0x0	VIFx	20.1	95.0	st1
hall	h 1319	65	41	0.330	4.0	0x0	VIFx	20.5	90.0	st1
kitchen/living	c 2765	116	130	0.344	7.0	0x0	VIFx	15.9	90.0	st2
kitchen/living-A	c 2765	116	130	0.366	7.0	0x0	VIFx	9.6	90.0	st2
kitchen/living-B	c 2765	116	130	0.334	7.0	0x0	VIFx	19.1	90.0	st2
kitchen/living-C	c 2765	116	130	0.361	7.0	0x0	VIFx	11.1	90.0	st2
laundry	c 815	10	38	0.363	4.0	0x0	VIFx	10.4	90.0	st1
master bath	h 1233	61	34	0.326	4.0	0x0	VIFx	21.8	90.0	st1
master bedroom	h 2848	140	139	0.332	7.0	0x0	VIFx	19.8	90.0	st1
pantry	h 174	9	6	0.361	4.0	0x0	VIFx	11.1	90.0	st1
wic	h 188	9	7	0.347	4.0	0x0	VIFx	15.2	90.0	st1
wic 2	h 389	19	10	0.335	4.0	0x0	VIFx	19.0	90.0	st1

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st1	Peak AVF	484	426	0.317	616	12.0	0 x 0	VinIFlx	
st2	Peak AVF	463	521	0.334	663	12.0	0 x 0	VinIFlx	

Bold/italic values have been manually overridden

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb1	0x 0	947	947	42.7	0.317	536	18.0	0x 0		VIFx	rst2

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst2	Peak AVF	947	947	0.317	678	16.0	0 x 0	VinIFlx	

Bold/italic values have been manually overridden



Manual S Compliance Report
Entire House
Bounds Heating and Air

Job:
Date: Apr 17, 2024
By:

Email: jlegler@boundshvac.com

Project Information

For: Depree, Amira

Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	20093	Btuh	Entering coil DB:	76.9°F
Outdoor design WB:	75.8°F	Latent gain:	3097	Btuh	Entering coil WB:	63.4°F
Indoor design DB:	75.0°F	Total gain:	23190	Btuh		
Indoor RH:	50%	Estimated airflow:	947	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP			
Manufacturer:	Carrier	Model:	GH5SAN43000AA0+FJ4DNXB30L	
Actual airflow:	947	cfm		
Sensible capacity:	19880	Btuh	99%	of load
Latent capacity:	8520	Btuh	275%	of load
Total capacity:	28400	Btuh	122%	of load SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	19278	Btuh	Entering coil DB:	67.1°F
Indoor design DB:	68.0°F					

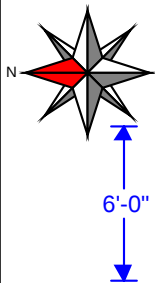
Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP			
Manufacturer:	Carrier	Model:	GH5SAN43000AA0+FJ4DNXB30L	
Actual airflow:	947	cfm		
Output capacity:	28600	Btuh	148%	of load
Supplemental heat required:	0	Btuh		
			Capacity balance:	24 °F
			Economic balance:	-99 °F

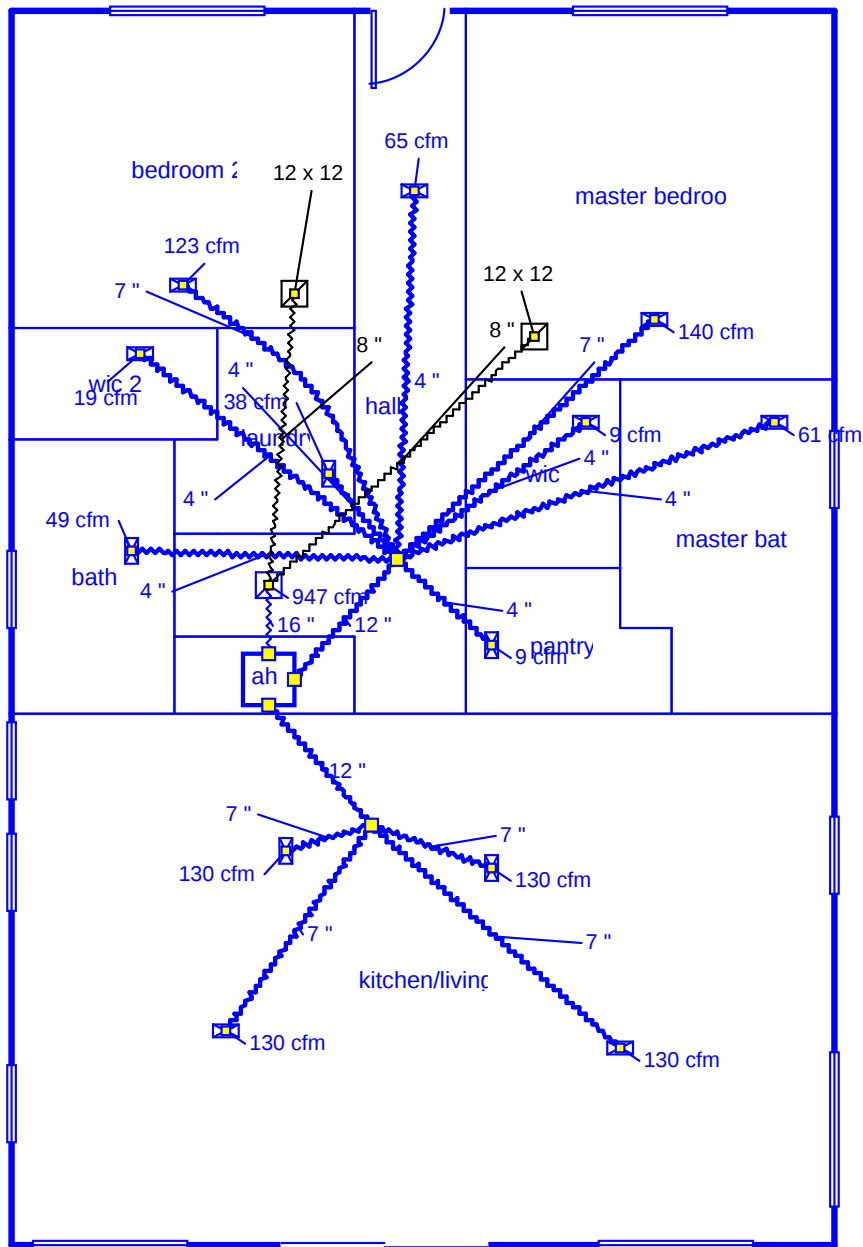
Backup equipment type:	Elec strip			
Manufacturer:	n/a	Model:	n/a+n/a	
Actual airflow:	947	cfm		
Output capacity:	0	kW	0%	of load Temp. rise: 0 °F

Meets all requirements of ACCA Manual S.





Level 1



Job #:
Performed for:
Depree

Bounds Heating and Air

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