Project Summary
Entire House
Bounds Heating and Air

Job:
Date: Oct 24, 2025
By:

Email: jlegler@boundshvac.com

Project Information

For: Caruthers, CoreyAmira

Notes:

Design Information

Weather: Gainesville Regional, FL, US

Winter Design Conditions

Outside db	33	°F
Inside db	68	°F
Design TD	35	°F
Ventilation Method	MJ8	

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	25692	Btuh
Ducts (R-6.0)	10757	Btuh
Central vent (0 cfm)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	36448	Btuh

Sensible Cooling Equipment Load Sizing

Structure	20067	Btuh
Ducts (R-6.0)	13354	Btuh
Central vent (0 cfm)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.97	
Equipment sensible load	32486	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	*2673*	*2673*
Volume (ft³)	27992	27992
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	149	75

Latent Cooling Equipment Load Sizing

Structure	2413	Btuh
Ducts	2686	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	5099	Btuh
Equipment Total Load (Sen+Lat)	37584	Btuh
Req. total capacity at 0.70 SHR	3.9	ton

Heating Equipment Summary

Make	Carrier
Trade	15 SEER2 HP
Model	GH5SAN54800AA0
AHRI ref	214101900

Efficiency	7.5 HSPF2	
Heating input		
Heating output	47500	Btuh @ 47°F
Temperature rise	28	°F
Actual air flow	1567	cfm
Air flow factor	0.043	cfm/Btuh
Static pressure	0.50	in H2O

Space thermostat
Capacity balance point = 27 °F

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

Cooling Equipment Summary

Make	Carrier
Trade	15 SEER2 HP
Cond	GH5SAN54800AA0
Coil	FJ5ANXC48L00
AHRI ref	214101900

Efficiency	12.0 EER2, 15 SEER2	
Sensible cooling	32900	Btuh
Latent cooling	14100	Btuh
Total cooling	47000	Btuh
Actual air flow	1567	cfm
Air flow factor	0.047	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.87	

Bold/italic values have been manually overridden

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

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Load Short Form

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Design Information

	Htg	Clg
Outside db (°F)	33	92
Inside db (°F)	68	75
Design TD (°F)	35	17
Daily range	-	M
Inside humidity (%)	50	50
Moisture difference (gr/lb)	29	44

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

HEATING EQUIPMENT

Make	Carrier
Trade	15 SEER2 HP
Model	GH5SAN54800AA0
AHRI ref	214101900

Efficiency	7.5 HSPF2	
Heating input		
Heating output	47500	Btuh @ 47°F
Temperature rise	28	°F
Actual air flow	1567	cfm
Air flow factor	0.043	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

Capacity balance point = 27 °F

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

COOLING EQUIPMENT

Make	Carrier
Trade	15 SEER2 HP
Cond	GH5SAN54800AA0
Coil	FJ5ANXC48L00
AHRI ref	214101900

Efficiency	12.0 EER2, 15 SEER2	
Sensible cooling	32900	Btuh
Latent cooling	14100	Btuh
Total cooling	47000	Btuh
Actual air flow	1567	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)
bath 2	75	1582	1817	68	85
wic 2	35	857	455	37	21
bedroom 2	175	1473	1435	63	67
pantry	33	405	237	17	11
kitchen	503	6551	6575	282	308
closet	30	114	95	5	4
foyer	209	3163	4033	136	189
1/2	23	88	73	4	3
great room	583	8958	8007	385	375
bedroom 3	193	1964	1530	84	72
wic 3	33	811	430	35	20
bath 3	71	1548	1796	67	84
ah	20	0	0	0	0
laundry	106	1103	787	47	37

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

wic	82	939	670	40	31
wc	27	590	382	25	18
master bath	124	969	659	42	31
master bedroom	272	5336	4439	229	208
hall	80	0	0	0	0
Entire House	2674	36448	33421	1567	1567
Other equip loads		0	0		
Equip. @ 0.97 RSM			32486		
Latent cooling			5099		
TOTALS	2674	36448	37584	1567	1567

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

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Manual S Compliance Report

Entire House

Bounds Heating and Air

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Project Information

For: Caruthers, CoreyAmira

Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	33421	Btuh	Entering coil DB:	77.6°F
Outdoor design WB:	75.8°F	Latent gain:	5099	Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	38520	Btuh		
Indoor RH:	50%	Estimated airflow:	1567	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Carrier		Model:	GH5SAN54800AA0+FJ5ANXC48L00	
Actual airflow:	1567	cfm			
Sensible capacity:	37061	Btuh	111% of load		
Latent capacity:	7732	Btuh	152% of load		
Total capacity:	44793	Btuh	116% of load	SHR:	83%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	36448	Btuh	Entering coil DB:	66.8°F
Indoor design DB:	68.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP					
Manufacturer:	Carrier		Model:	GH5SAN54800AA0+FJ5ANXC48L00		
Actual airflow:	1567	cfm				
Output capacity:	47500	Btuh	130% of load		Capacity balance:	27 °F
Supplemental heat required:	0	Btuh			Economic balance:	-99 °F

Backup equipment type:	Elec strip				
Manufacturer:	n/a	Model:	n/a+n/a		
Actual airflow:	1567	cfm			
Output capacity:	0	kW	0% of load	Temp. rise:	0 °F

Meets all requirements of ACCA Manual S.

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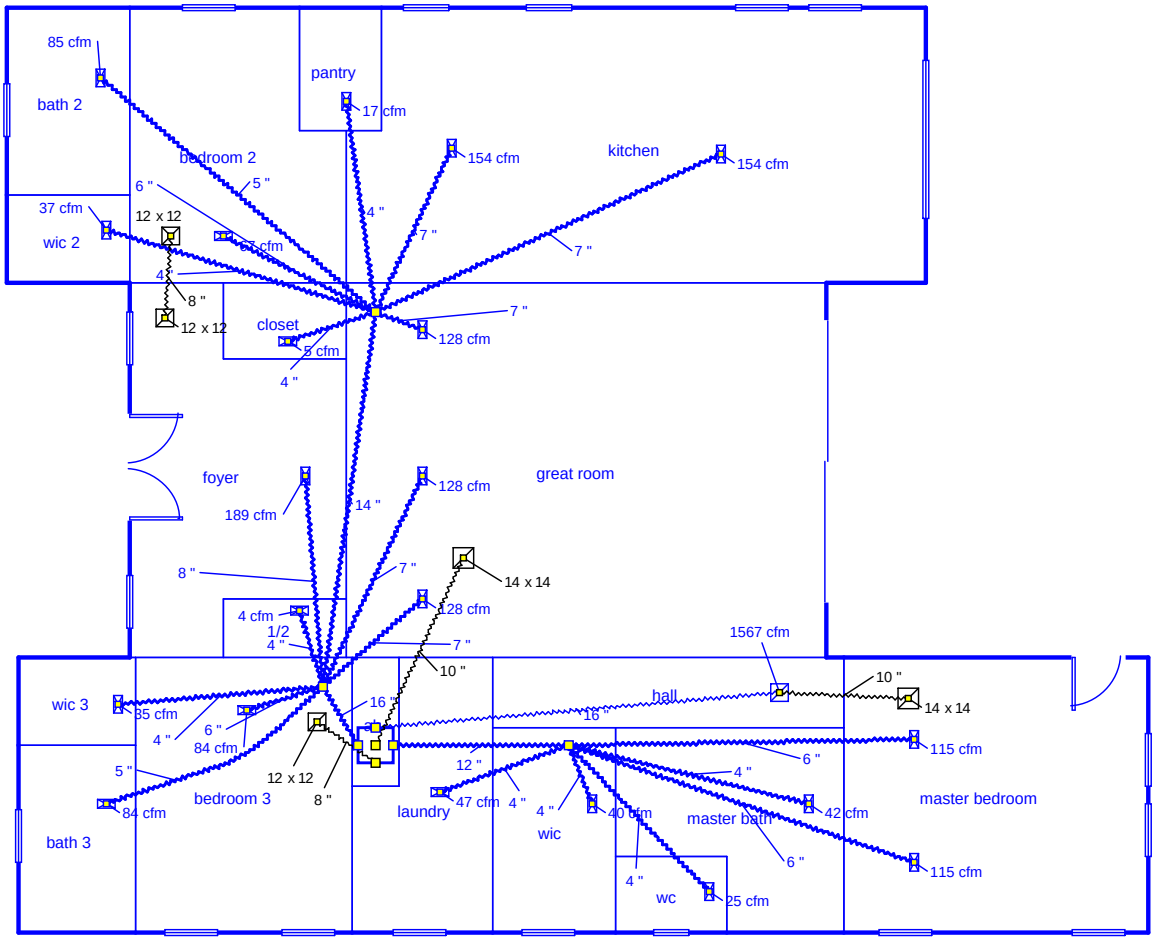
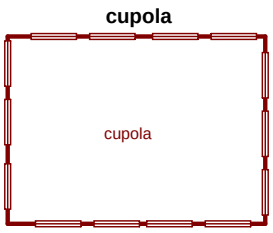
N

5'-0"

Level 1



Job #: **Performed for:** Caruthers	**Bounds Heating and Air** jlegler@boundshvac.com	Scale: 1 : 131 Page 1 Right-Suite® Universal 2025 25.0.01 RSU57217 2025-Oct-28 08:41:33 ...a, Corey\Caruthers\Caruthers.rup



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Duct System Summary

Entire House

Bounds Heating and Air

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By:

Email: jlegler@boundshvac.com

Project Information

For: Caruthers, CoreyAmira

	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	0.357 / 0.143 in H2O	0.357 / 0.143 in H2O
Lowest friction rate	0.227 in/100ft	0.227 in/100ft
Actual air flow	1567 cfm	1567 cfm
Total effective length (TEL)	220 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
1/2	h	88	4	3	0.362	*4.0*	*0x 0*	VlFx	8.4	90.0	st2
bath 2	c	1817	68	85	0.229	*5.0*	*0x 0*	VlFx	46.0	110.0	st3
bath 3	c	1796	67	84	0.315	*5.0*	*0x 0*	VlFx	18.2	95.0	st2
bedroom 2	c	1435	63	67	0.246	*6.0*	*0x 0*	VlFx	35.1	110.0	st3
bedroom 3	h	1964	84	72	0.362	*6.0*	*0x 0*	VlFx	8.4	90.0	st2
closet	h	114	5	4	0.254	*4.0*	*0x 0*	VlFx	30.7	110.0	st3
foyer-A	c	4033	136	189	0.337	*8.0*	*0x 0*	VlFx	15.9	90.0	st2
great room	h	2987	128	125	0.258	*7.0*	*0x 0*	VlFx	28.3	110.0	st3
great room-A	h	2986	128	125	0.333	*7.0*	*0x 0*	VlFx	17.2	90.0	st2
great room-B	h	2986	128	125	0.352	*7.0*	*0x 0*	VlFx	11.4	90.0	st2
kitchen	c	3288	141	154	0.245	*7.0*	*0x 0*	VlFx	35.7	110.0	st3
kitchen-A	c	3288	141	154	0.227	*7.0*	*0x 0*	VlFx	47.1	110.0	st3
laundry	h	1103	47	37	0.331	*4.0*	*0x 0*	VlFx	17.8	90.0	st1
master bath	h	969	42	31	0.313	*4.0*	*0x 0*	VlFx	24.1	90.0	st1
master bedroom	h	2668	115	104	0.298	*6.0*	*0x 0*	VlFx	29.7	90.0	st1
master bedroom-A	h	2668	115	104	0.295	*6.0*	*0x 0*	VlFx	30.8	90.0	st1
pantry	h	405	17	11	0.242	*4.0*	*0x 0*	VlFx	37.5	110.0	st3
wc	h	590	25	18	0.320	*4.0*	*0x 0*	VlFx	21.6	90.0	st1
wic	h	939	40	31	0.344	*4.0*	*0x 0*	VlFx	13.6	90.0	st1
wic 2	h	857	37	21	0.236	*4.0*	*0x 0*	VlFx	41.5	110.0	st3
wic 3	h	811	35	20	0.338	*4.0*	*0x 0*	VlFx	15.6	90.0	st2

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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
st3	Peak AVF	601	623	0.227	583	*14.0*	*0* x *0*	VinlFlx	st2
st2	Peak AVF	1183	1242	0.227	889	*16.0*	*0* x *0*	VinlFlx	
st1	Peak AVF	384	325	0.295	489	*12.0*	*0* x *0*	VinlFlx	

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	1567	1567	63.1	0.227	594	22.0	0x 0		VlFx	rst1

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst1	Peak AVF	1567	1567	0.227	1122	*16.0*	*0* x *0*	VinlFlx	

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