Project Summary
Entire House

Job:
Date: Aug 01, 2025
By:

Project Information

For: Howe, Corey Amira

Notes:

Review for Code Compliance
Universal Engineering Science

PX2707 10/20/2025
Examiner-License No.

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	29824	Btuh
Ducts (R-6.0)	4200	Btuh
Central vent (0 cfm)	0	Btuh
Humidification	0	Btuh
Piping	0	Btuh
Equipment load	34024	Btuh

Sensible Cooling Equipment Load Sizing

Structure	19415	Btuh
Ducts (R-6.0)	5263	Btuh
Central vent (0 cfm)	0	Btuh
Blower	0	Btuh
Use manufacturer's data	n	
Rate/swing multiplier	0.97	
Equipment sensible load	23987	Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft²)	1223	1223
Volume (ft³)	11498	11498
Air changes/hour	0.45	0.23
Equiv. AVF (cfm)	86	44

Latent Cooling Equipment Load Sizing

Structure	1907	Btuh
Ducts	1009	Btuh
Central vent (0 cfm)	0	Btuh
Equipment latent load	2916	Btuh
Equipment Total Load (Sen+Lat)	26903	Btuh
Req. total capacity at 0.70 SHR	2.9	ton

Heating Equipment Summary

Make	Carrier
Trade	15 SEER2 HP
Model	GH5SAN53000AA0
AHRI ref	214101792

Efficiency	7.5 HSPF2	
Heating input		
Heating output	28600	Btuh @ 47°F
Temperature rise	28	°F
Actual air flow	947	cfm
Air flow factor	0.028	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

Capacity balance point = 38 °F

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

Cooling Equipment Summary

Make	Carrier
Trade	15 SEER2 HP
Cond	GH5SAN53000AA0
Coil	FJ5ANXB30L00
AHRI ref	214101792

Efficiency	12.0 EER2,14.5 SEER2	
Sensible cooling	19880	Btuh
Latent cooling	8520	Btuh
Total cooling	28400	Btuh
Actual air flow	947	cfm
Air flow factor	0.038	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.89	

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

Load Short Form
Entire House

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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	GH5SAN53000AA0
AHRI ref	214101792

Efficiency	7.5 HSPF2	
Heating input		
Heating output	28600	Btuh @ 47°F
Temperature rise	28	°F
Actual air flow	947	cfm
Air flow factor	0.028	cfm/Btuh
Static pressure	0.50	in H2O
Space thermostat		

Capacity balance point = 38 °F

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

COOLING EQUIPMENT

Make	Carrier
Trade	15 SEER2 HP
Cond	GH5SAN53000AA0
Coil	FJ5ANXB30L00
AHRI ref	214101792

Efficiency	12.0 EER2,14.5 SEER2	
Sensible cooling	19880	Btuh
Latent cooling	8520	Btuh
Total cooling	28400	Btuh
Actual air flow	947	cfm
Air flow factor	0.038	cfm/Btuh
Static pressure	0.50	in H2O
Load sensible heat ratio	0.89	

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
bedroom 2	168	7887	5729	220	220
wic 2	35	1357	746	38	29
master bedroom	183	4277	3120	119	120
master bath	101	6823	3625	190	139
hall	42	0	0	0	0
pantry	27	1339	716	37	27
wic	32	40	68	1	3
bath	52	78	131	2	5
kitchen	204	4772	3953	133	152
great room	378	7451	6590	207	253

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

Entire House	1223	34024	24678	947	947
Other equip loads			0		
Equip. @ 0.97 RSM			23987		
Latent cooling			2916		
TOTALS	1223	34024	26903	947	947

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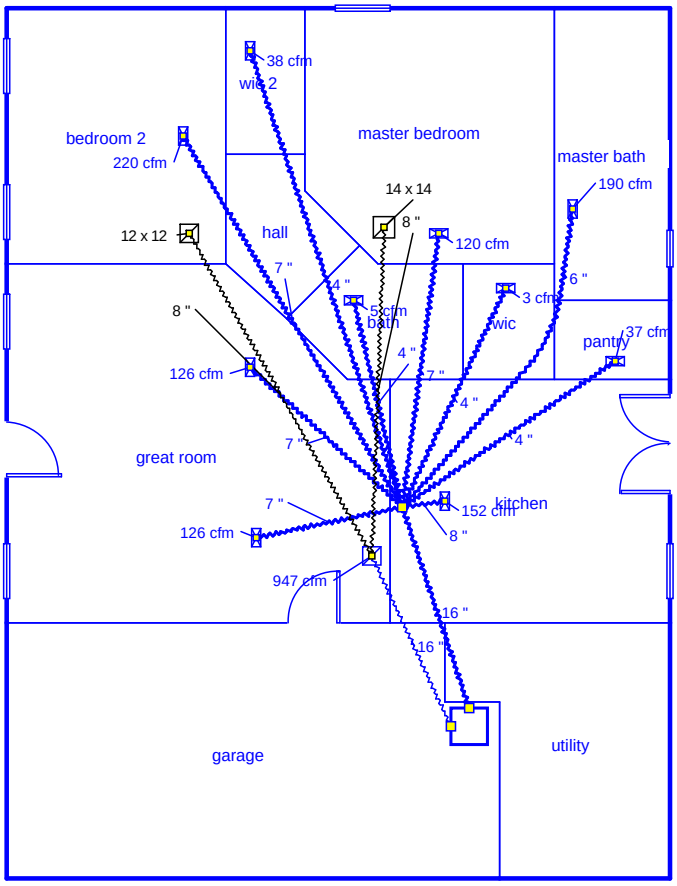
6'-0"

Level 1



Job #: **Performed for:** Howe		Scale: 1 : 126 Page 1 Right-Suite® Universal 2025 25.0.01 RSU57217 2025-Aug-04 14:59:24 ...2025)\Amira, Corey\Howe\Howe.ru

Manual S Compliance Report
Entire House

Job:
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By:

Review for Code Compliance
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Project Information

For: Howe, Corey Amira

Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	24678	Btuh	Entering coil DB:	76.7°F
Outdoor design WB:	75.8°F	Latent gain:	2916	Btuh	Entering coil WB:	63.3°F
Indoor design DB:	75.0°F	Total gain:	27594	Btuh		
Indoor RH:	50%	Estimated airflow:	947	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP				
Manufacturer:	Carrier		Model:	GH5SAN53000AA0+FJ5ANXB30L00	
Actual airflow:	947	cfm			
Sensible capacity:	19880	Btuh	81% of load		
Latent capacity:	8520	Btuh	292% of load		
Total capacity:	28400	Btuh	103% of load	SHR:	70%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	34024	Btuh	Entering coil DB:	67.2°F
Indoor design DB:	68.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP						
Manufacturer:	Carrier		Model:	GH5SAN53000AA0+FJ5ANXB30L00			
Actual airflow:	947	cfm					
Output capacity:	28600	Btuh	84% of load		Capacity balance:	38	°F
Supplemental heat required:	5424	Btuh			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.

Duct System Summary
Entire House

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Project Information

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For: Howe, Corey Amira

	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	0.404 / 0.096 in H2O	0.404 / 0.096 in H2O
Lowest friction rate	0.316 in/100ft	0.316 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	c 131	2	5	0.357	*4.0*	*0x 0*	VlFx	23.2	90.0	st1
bedroom 2-A	c 5729	220	220	0.323	*7.0*	*0x 0*	VlFx	35.2	90.0	st1
great room	c 3295	104	126	0.368	*7.0*	*0x 0*	VlFx	19.8	90.0	st1
great room-A	c 3295	104	126	0.358	*7.0*	*0x 0*	VlFx	22.9	90.0	st1
kitchen	c 3953	133	152	0.389	*8.0*	*0x 0*	VlFx	14.0	90.0	st1
master bath	h 6823	190	139	0.320	*6.0*	*0x 0*	VlFx	31.2	95.0	st1
master bedroom	c 3120	119	120	0.346	*7.0*	*0x 0*	VlFx	26.7	90.0	st1
pantry	h 1339	37	27	0.349	*4.0*	*0x 0*	VlFx	25.7	90.0	st1
wic	c 68	1	3	0.352	*4.0*	*0x 0*	VlFx	24.9	90.0	st1
wic 2	h 1357	38	29	0.316	*4.0*	*0x 0*	VlFx	37.9	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	947	947	0.316	678	*16.0*	*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
rb1	0x 0	947	947	30.3	0.316	536	18.0	0x 0		VlFx	rst2

Bold/italic values have been manually overridden

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	0.316	678	*16.0*	*0* x *0*	VinlFlx	

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