



Project Summary

Entire House

Bounds Heating and Air

Job:
Date: Feb 24, 2025
By:

Email: jlegler@boundshvac.com

Project Information

For: Bousquet, Amira Builders

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

Heating Summary

Structure	28143 Btuh
Ducts (R-6.0)	6481 Btuh
Central vent (0 cfm)	0 Btuh

Humidification	0 Btuh
Piping	0 Btuh
Equipment load	34624 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft ²)	2015	2015
Volume (ft ³)	20909	20909
Air changes/hour	0.32	0.16
Equiv. AVF (cfm)	112	56

Heating Equipment Summary

Make	Carrier
Trade	15 SEER2 HP
Model	GH5SAN53600AA0
AHRI ref	214101828

Efficiency	7.5 HSPF2
Heating input	
Heating output	35600 Btuh @ 47°F
Temperature rise	31 °F
Actual air flow	1050 cfm
Air flow factor	0.030 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = 33 °F	

Backup: n/a n/a
Input = 0 kW, Output = 0 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	44 gr/lb

Sensible Cooling Equipment Load Sizing

Structure	18368 Btuh
Ducts (R-6.0)	8117 Btuh
Central vent (0 cfm)	0 Btuh

Blower 0 Btuh

Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	25743 Btuh

Latent Cooling Equipment Load Sizing

Structure	2453 Btuh
Ducts	1597 Btuh
Central vent (0 cfm)	0 Btuh

Equipment latent load 4051 Btuh

Equipment Total Load (Sen+Lat)	29794 Btuh
Req. total capacity at 0.70 SHR	3.1 ton

Cooling Equipment Summary

Make	Carrier
Trade	15 SEER2 HP
Cond	GH5SAN53600AA0
Coil	FJ5ANXB36L00
AHRI ref	214101828

Efficiency	12.0 EER2, 14.5 SEER2
Sensible cooling	24500 Btuh
Latent cooling	10500 Btuh
Total cooling	35000 Btuh
Actual air flow	1050 cfm
Air flow factor	0.038 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.87

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



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Project Summary (Rest of House) Bounds Heating and Air

Job:
Date: Feb 24, 2025
By:

Email: jlegler@boundshvac.com

Project Information

For: Bousquet, Amira Builders

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

Heating Summary

Structure	19401 Btuh
Ducts (R-6.0)	4468 Btuh
Central vent (0 cfm)	0 Btuh

Humidification	0 Btuh
Piping	0 Btuh
Equipment load	23869 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft ²)	1319	1319
Volume (ft ³)	13949	13949
Air changes/hour	0.34	0.17
Equiv. AVF (cfm)	79	40

Heating Equipment Summary

Make	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a

Efficiency	n/a
Heating input	
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	n/a

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

Sensible Cooling Equipment Load Sizing

Structure	16494 Btuh
Ducts (R-6.0)	7288 Btuh
Central vent (0 cfm)	0 Btuh

Blower	0 Btuh
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Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	23116 Btuh

Latent Cooling Equipment Load Sizing

Structure	1572 Btuh
Ducts	1046 Btuh
Central vent (0 cfm)	0 Btuh

Equipment latent load	2617 Btuh
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Equipment Total Load (Sen+Lat)	25733 Btuh
Req. total capacity at 0.70 SHR	2.8 ton

Cooling Equipment Summary

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a

Efficiency	n/a
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0

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Project Summary

master zone

Bounds Heating and Air

Job:
Date: Feb 24, 2025
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Email: jlegler@boundshvac.com

Project Information

For: Bousquet, Amira Builders

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

Heating Summary

Structure	8742 Btuh
Ducts (R-6.0)	2013 Btuh
Central vent (0 cfm)	0 Btuh

Humidification	0 Btuh
Piping	0 Btuh
Equipment load	10755 Btuh

Infiltration

Method	Simplified
Construction quality	Average
Fireplaces	0

	Heating	Cooling
Area (ft ²)	696	696
Volume (ft ³)	6960	6960
Air changes/hour	0.28	0.14
Equiv. AVF (cfm)	32	16

Heating Equipment Summary

Make	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a

Efficiency	n/a
Heating input	
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	n/a

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

Sensible Cooling Equipment Load Sizing

Structure	5025 Btuh
Ducts (R-6.0)	2221 Btuh
Central vent (0 cfm)	0 Btuh

Blower	0 Btuh
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Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	7043 Btuh

Latent Cooling Equipment Load Sizing

Structure	881 Btuh
Ducts	552 Btuh
Central vent (0 cfm)	0 Btuh

Equipment latent load	1433 Btuh
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Equipment Total Load (Sen+Lat)	8476 Btuh
Req. total capacity at 0.70 SHR	0.8 ton

Cooling Equipment Summary

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a

Efficiency	n/a
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0

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Load Short Form

Entire House

Bounds Heating and Air

Job:
Date: Feb 24, 2025
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Email: jlegler@boundshvac.com

Project Information

For: Bousquet, Amira Builders

Design Information

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

HEATING EQUIPMENT

Make Carrier
Trade 15 SEER2 HP
Model GH5SAN53600AA0
AHRI ref 214101828

Efficiency 7.5 HSPF2
Heating input
Heating output 35600 Btuh @ 47°F
Temperature rise 31 °F
Actual air flow 1050 cfm
Air flow factor 0.030 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 33 °F

Backup: n/a n/a

Input = 0 kW, Output = 0 Btuh, 100 AFUE

COOLING EQUIPMENT

Make Carrier
Trade 15 SEER2 HP
Cond GH5SAN53600AA0
Coil FJ5ANXB36L00
AHRI ref 214101828

Efficiency 12.0 EER2, 14.5 SEER2
Sensible cooling 24500 Btuh
Latent cooling 10500 Btuh
Total cooling 35000 Btuh
Actual air flow 1050 cfm
Air flow factor 0.038 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)
master zone	696	10755	7246	326	278
(Rest of House)	1319	23869	23782	724	914
Entire House	2015	34624	26485	1050	1050
Other equip loads		0	0		
Equip. @ 0.97 RSM			25743		
Latent cooling			4051		
TOTALS	2015	34624	29794	1050	1050

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Load Short Form
(Rest of House)
Bounds Heating and Air

Job:
Date: Feb 24, 2025
By:

Email: jlegler@boundshvac.com

Project Information

For: Bousquet, Amira Builders

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	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a
Efficiency	n/a
Heating input	
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	n/a

COOLING EQUIPMENT

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a
Efficiency	n/a
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
bedroom 3	177	4849	3315	147	127
bath 2	65	1333	676	40	26
hall 1	58	0	0	0	0
bedroom 2	164	2135	1851	65	71
study	134	3513	3135	107	120
great room	380	6682	8176	203	314
kitchen/dining	341	5356	6629	162	255

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(Rest of House)	1319	23869	23782	724	914
Other equip loads		0	0		
Equip. @ 0.97 RSM			23116		
Latent cooling			2617		
TOTALS	1319	23869	25733	724	914

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Load Short Form
master zone
Bounds Heating and Air

Job:
Date: Feb 24, 2025
By:

Email: jlegler@boundshvac.com

Project Information

For: Bousquet, Amira Builders

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

COOLING EQUIPMENT

Make	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a
Efficiency	n/a
Heating input	
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	n/a

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a
Efficiency	n/a
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	0 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0

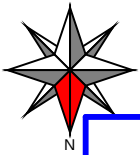
ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
master suite	230	3977	3650	121	140
wc	28	1275	545	39	21
master bath	103	1457	676	44	26
wic	78	947	404	29	16
safe room	93	1908	651	58	25
laundry	71	465	1052	14	40
pantry	40	726	268	22	10
hall 2	53	0	0	0	0

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

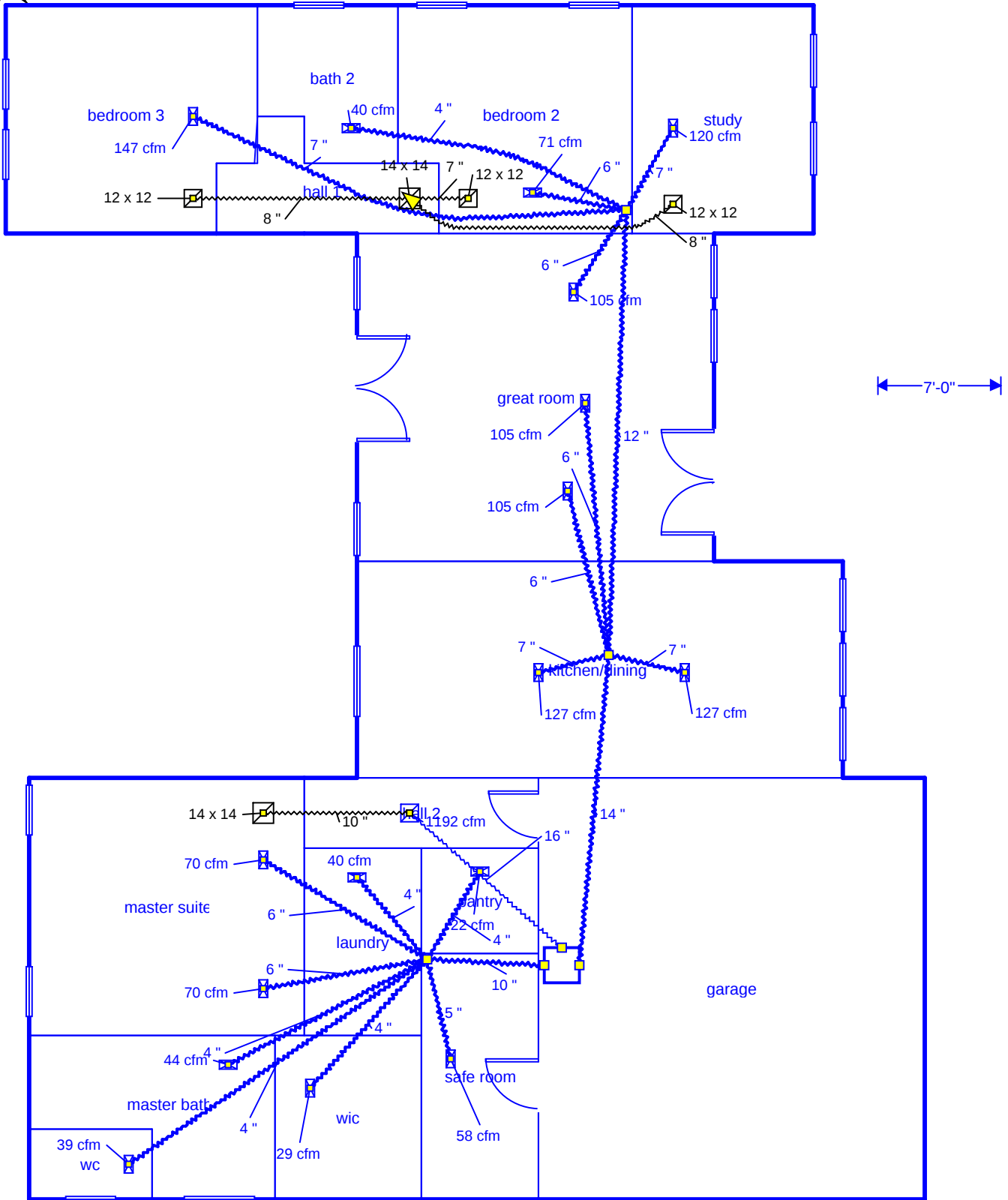
master zone	696	10755	7246	326	278
Other equip loads		0	0		
Equip. @ 0.97 RSM			7043		
Latent cooling			1433		
TOTALS	696	10755	8476	326	278

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





Level 1



Job #:
Performed for:
Bousquet

Bounds Heating and Air

jlegler@boundshvac.com

Scale: 1 : 98

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Manual S Compliance Report

Entire House

Bounds Heating and Air

Job:
Date: Feb 24, 2025
By:

Email: jlegler@boundshvac.com

Project Information

For: Bousquet, Amira Builders

Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	26485	Btuh	Entering coil DB:	77.4°F
Outdoor design WB:	75.8°F	Latent gain:	4051	Btuh	Entering coil WB:	63.6°F
Indoor design DB:	75.0°F	Total gain:	30535	Btuh		
Indoor RH:	50%	Estimated airflow:	1050	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP			
Manufacturer:	Carrier	Model:	GH5SAN53600AA0+FJ5ANXB36L00	
Actual airflow:	1050	cfm		
Sensible capacity:	28019	Btuh	106% of load	
Latent capacity:	5472	Btuh	135% of load	
Total capacity:	33491	Btuh	110% of load	SHR: 84%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	34624	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:	Carrier	Model:	GH5SAN53600AA0+FJ5ANXB36L00	
Actual airflow:	1050	cfm		
Output capacity:	29105	Btuh	84% of load	Capacity balance: 33 °F
Supplemental heat required:	5519	Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip			
Manufacturer:	n/a	Model:	n/a+n/a	
Actual airflow:	1050	cfm		
Output capacity:	0	kW	0% of load	Temp. rise: 0 °F

Meets all requirements of ACCA Manual S.



Duct System Summary

Entire House

Bounds Heating and Air

Job:
Date: Feb 24, 2025
By:

Email: jlegler@boundshvac.com

Project Information

For: Bousquet, Amira Builders

	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	0.391 / 0.109 in H ₂ O	0.391 / 0.109 in H ₂ O
Lowest friction rate	0.212 in/100ft	0.212 in/100ft
Actual air flow	1050 cfm	1050 cfm
Total effective length (TEL)	236 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 2	h 1333	40	26	0.224	4.0	0x0	VIFx	59.6	115.0	st3
bedroom 2	c 1851	65	71	0.246	6.0	0x0	VIFx	48.5	110.0	st3
bedroom 3	h 4849	147	127	0.212	7.0	0x0	VIFx	69.1	115.0	st3
great room	c 2725	68	105	0.333	6.0	0x0	VIFx	27.4	90.0	st1
great room-A	c 2725	68	105	0.320	6.0	0x0	VIFx	32.1	90.0	st1
great room-B	c 2725	68	105	0.246	6.0	0x0	VIFx	48.6	110.0	st3
kitchen/dining	c 3314	81	127	0.349	7.0	0x0	VIFx	21.9	90.0	st1
kitchen/dining-A	c 3314	81	127	0.348	7.0	0x0	VIFx	22.2	90.0	st1
laundry	c 1052	14	40	0.380	4.0	0x0	VIFx	12.8	90.0	st2
master bath	h 1457	44	26	0.357	4.0	0x0	VIFx	19.5	90.0	st2
master suite	c 1825	60	70	0.363	6.0	0x0	VIFx	17.6	90.0	st2
master suite-A	c 1825	60	70	0.368	6.0	0x0	VIFx	16.2	90.0	st2
pantry	h 726	22	10	0.381	4.0	0x0	VIFx	12.5	90.0	st2
safe room	h 1908	58	25	0.381	5.0	0x0	VIFx	12.5	90.0	st2
study	c 3135	107	120	0.246	7.0	0x0	VIFx	48.5	110.0	st3
wc	h 1275	39	21	0.333	4.0	0x0	VIFx	27.3	90.0	st2
wic	h 947	29	16	0.366	4.0	0x0	VIFx	16.6	90.0	st2

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	426	450	0.212	573	12.0	0 x 0	VinIFlx	st1
st1	Peak AVF	724	914	0.212	855	14.0	0 x 0	VinIFlx	
st2	Peak AVF	326	278	0.333	598	10.0	0 x 0	VinIFlx	

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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	1050	1192	51.6	0.212	546	20.0	0x 0		VIFx	rst4

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst4	Peak AVF	1050	1192	0.212	854	16.0	0 x 0	VinIFlx	

Bold/italic values have been manually overridden



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