



**Load Short Form
Entire House
Bounds Heating & Air**

Job:
Date: Jun 22, 2015
By: Joe Mullins
Plan: The Bristol

28845 West Newberry Road, Newberry, FL 32669 Phone 352-472-2761 Fax 352-472-1809 Email joe@bounds@yahoo.com Web. www.boundshvac.com

Project Information

For. Aaron Simque Construction
Lot 100 The Preserve, Lake City

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	68	75	Construction quality	Semi-tight
Design TD (°F)	35	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	29	52		

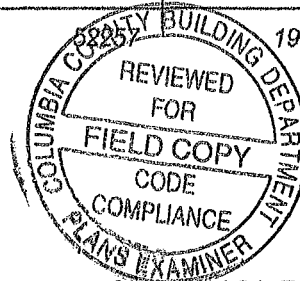
HEATING EQUIPMENT

Make Carrier
Trade
Model CH14NB06000G
AHRI ref 7835948
Efficiency 8.1 HSPF
Heating input
Heating output 57762 Btuh @ 47°F
Temperature rise 27 °F
Actual air flow 1935 cfm
Air flow factor 0.039 cfm/Btuh
Static pressure 1.00 in H2O
Space thermostat

COOLING EQUIPMENT

Make Carrier
Trade
Cond CH14NB06000G
Coil FX4DNF061L00
AHRI ref 7835948
Efficiency 12.2 EER, 14 SEER
Sensible cooling 40635 Btuh
Latent cooling 17415 Btuh
Total cooling 58050 Btuh
Actual air flow 1935 cfm
Air flow factor 0.047 cfm/Btuh
Static pressure 1.00 in H2O
Load sensible heat ratio 0.81

ROOM NAME		Area (ft ²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Zone 2	p	852	17837	11921	692	556
Zone 1	p	2207	32060	31460	1243	1468
Entire House	d	3059	49897	41472	1935	1935
Other equip loads			4392	2133		
Equip. @ 0.97 RSM				42298		
Latent cooling				9960		
TOTALS		3059	54290		1935	1935



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



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**Load Short Form
Zone 1
Bounds Heating & Air**

Job:
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Project Information

For Aaron Simque Construction
Lot 100 The Preserve, Lake City

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	33	92	Method	
Inside db (°F)	68	75	Construction quality	Semi-tight
Design TD (°F)	35	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	29	52		

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	182	3741	3688	145	172
WIC 3	20	485	185	19	9
WIC 2	20	485	185	19	9
bedroom 2	173	3973	4066	154	190
bath 2	46	87	141	3	7
dining	187	2870	1895	111	88
foyer	78	1974	1468	77	69
kitchen/nook	351	3548	3900	138	182
hall 1	32	0	0	0	0
great room	403	3870	4041	150	189
master bedroom	254	6604	6485	256	303
toilet	24	421	174	16	8
master bath	160	1894	2902	73	135
WIC 1	102	1446	1193	56	56
laundry	65	663	1136	26	53
hall 2	109	0	0	0	0

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Zone 1	p	2207	32060	31460	1243	1468
Other equip loads			0	0		
Equip. @ 0.97 RSM				30516		
Latent cooling				3823		
TOTALS		2207	32060	34339	1243	1468

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



**Load Short Form
Zone 2
Bounds Heating & Air**

Job:
Date: Jun 22, 2015
By: Joe Mullins
Plan: The Bristol

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Project Information

For: Aaron Simque Construction
Lot 100 The Preserve, Lake City

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	68	75	Construction quality	Semi-tight
Design TD (°F)	35	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	29	52		

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)
media room	521	10699	6251	415	292
Bath 3	67	1148	507	45	24
bedroom 4	264	5989	5163	232	241
Zone 2	p 852	17837	11921	692	556
Other equip loads		0	0		
Equip. @ 0.97 RSM			11564		
Latent cooling			2104		
TOTALS	852	17837	13668	692	556

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Project Summary
Entire House
Bounds Heating & Air

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Project Information

For: Aaron Simque Construction
Lot 100 The Preserve, Lake City

Notes:

Design Information

Weather Gainesville, 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	52 gr/lb

Heating Summary

Structure	37861 Btuh
Ducts	12037 Btuh
Central vent (115 cfm)	4392 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	54290 Btuh

Sensible Cooling Equipment Load Sizing

Structure	26626 Btuh
Ducts	14847 Btuh
Central vent (115 cfm)	2133 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	42298 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

	Heating	Cooling
Area (ft ²)	3059	3059
Volume (ft ³)	27530	27530
Air changes/hour	0.19	0.10
Equiv. AVF (cfm)	87	46

Latent Cooling Equipment Load Sizing

Structure	3013 Btuh
Ducts	2914 Btuh
Central vent (115 cfm)	4033 Btuh
Equipment latent load	9960 Btuh
Equipment total load	52257 Btuh
Req. total capacity at 0.70 SHR	5.0 ton

Heating Equipment Summary

Make	Carrier
Trade	
Model	CH14NB06000G
AHRI ref	7835948

Efficiency	8.1 HSPF
Heating input	
Heating output	57762 Btuh @ 47°F
Temperature rise	27 °F
Actual air flow	1935 cfm
Air flow factor	0.039 cfm/Btuh
Static pressure	1.00 in H2O
Space thermostat	

Cooling Equipment Summary

Make	Carrier
Trade	
Cond	CH14NB06000G
Coil	FX4DNF061L00
AHRI ref	7835948

Efficiency	12.2 EER, 14 SEER
Sensible cooling	40635 Btuh
Latent cooling	17415 Btuh
Total cooling	58050 Btuh
Actual air flow	1935 cfm
Air flow factor	0.047 cfm/Btuh
Static pressure	1.00 in H2O
Load sensible heat ratio	0.81

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Project Summary Zone 1 Bounds Heating & Air

Job:
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Plan: The Bristol

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Project Information

For. Aaron Simque Construction
Lot 100 The Preserve, Lake City

Notes

Design Information

Weather. Gainesville, 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	52 gr/lb

Heating Summary

Structure	24326 Btuh
Ducts	7734 Btuh
Central vent (83 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	32060 Btuh

Sensible Cooling Equipment Load Sizing

Structure	20197 Btuh
Ducts	11262 Btuh
Central vent (83 cfm)	0 Btuh
Blower	0 Btuh

Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	30516 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

	Heating	Cooling
Area (ft²)	2207	2207
Volume (ft³)	19863	19863
Air changes/hour	0.15	0.08
Equiv. AVF (cfm)	50	26

Latent Cooling Equipment Load Sizing

Structure	1721 Btuh
Ducts	2102 Btuh
Central vent (83 cfm)	0 Btuh
Equipment latent load	3823 Btuh

Equipment total load	34339 Btuh
Req. total capacity at 0.70 SHR	3.6 ton

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

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
Zone 2
Bounds Heating & Air

Job:
Date: Jun 22, 2015
By: Joe Mullins
Plan: The Bristol

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Project Information

For: Aaron Simque Construction
Lot 100 The Preserve, Lake City

Notes

Design Information

Weather: Gainesville, 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	52 gr/lb

Heating Summary

Structure	13534 Btuh
Ducts	4303 Btuh
Central vent (32 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	17837 Btuh

Sensible Cooling Equipment Load Sizing

Structure	7654 Btuh
Ducts	4268 Btuh
Central vent (32 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	11564 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	0

	Heating	Cooling
Area (ft²)	852	852
Volume (ft³)	7667	7667
Air changes/hour	0.29	0.15
Equiv. AVF (cfm)	37	20

Latent Cooling Equipment Load Sizing

Structure	1292 Btuh
Ducts	812 Btuh
Central vent (32 cfm)	0 Btuh
Equipment latent load	2104 Btuh
Equipment total load	13668 Btuh
Req. total capacity at 0.70 SHR	1.4 ton

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

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

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



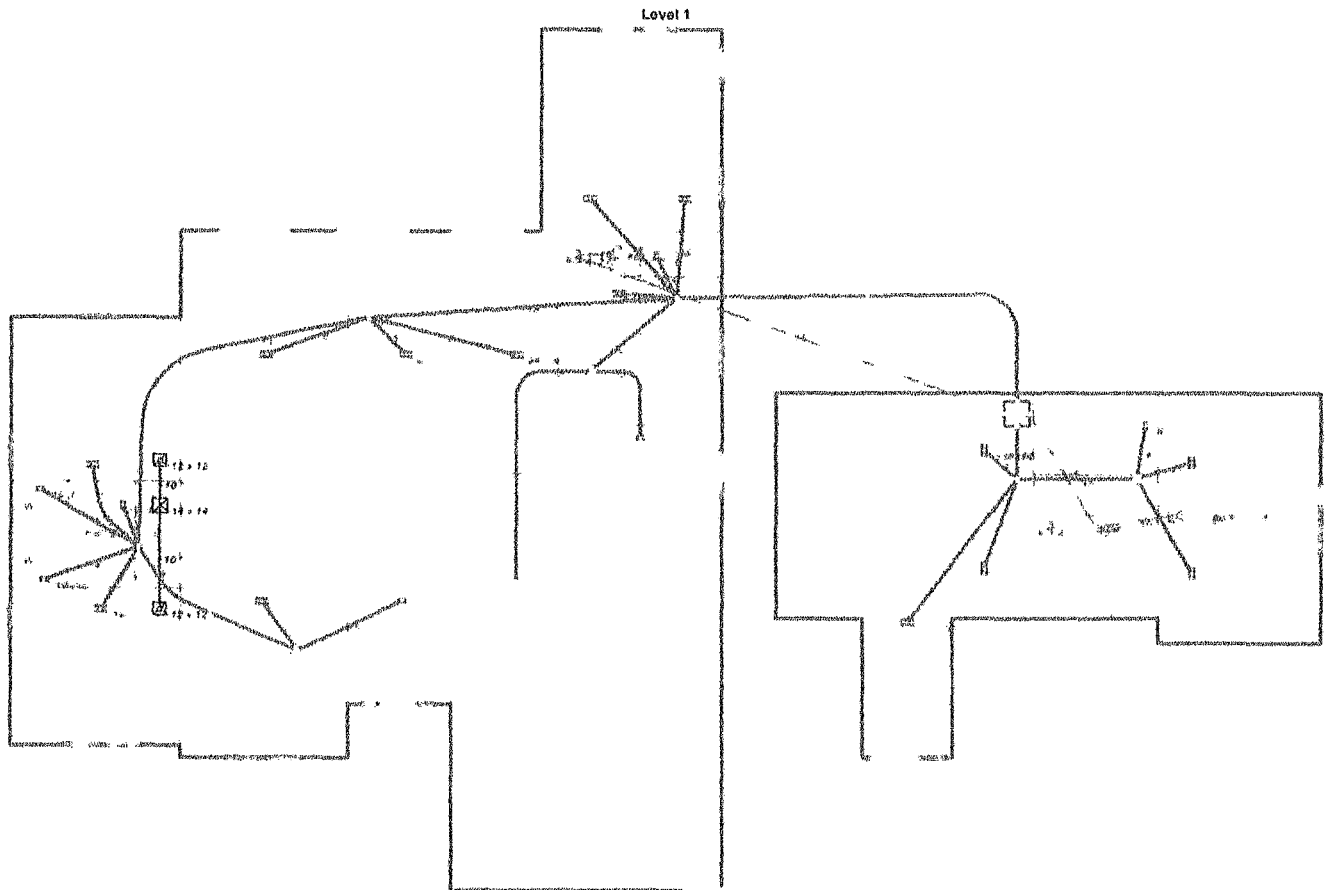
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Job #:
Performed by Joe Mullins for:
Aaron Simque Construction
Lot 100 The Preserve
Lake City

Bounds Heating & Air
25645 West Newberry Road
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Duct System Summary Entire House Bounds Heating & Air

Job:
Date: Jun 22, 2015
By: Joe Mullins
Plan: The Bristol

26645 West Newberry Road Newberry, FL 32069 Phone 352-472-2761 Fax 352-472-1809 Email joe.albounds@yahoo.com Web www.boundshvac.com

Project Information

For: Aaron Simque Construction
Lot 100 The Preserve, Lake City

	Heating	Cooling
External static pressure	1.00 in H ₂ O	1.00 in H ₂ O
Pressure losses	0.30 in H ₂ O	0.30 in H ₂ O
Available static pressure	0.70 in H ₂ O	0.70 in H ₂ O
Supply / return available pressure	0.509 / 0.191 in H ₂ O	0.509 / 0.191 in H ₂ O
Lowest friction rate	0.178 in/100ft	0.178 in/100ft
Actual air flow	1935 cfm	1935 cfm
Total effective length (TEL)	393 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 3	h 1148	45	24	0.396	4.0	0x0	VIFx	18.4	110.0	st8
WIC 1	h 1446	56	56	0.291	5.0	0x0	VIFx	54.9	120.0	st3
WIC 2	h 485	19	9	0.209	4.0	0x0	VIFx	103.2	140.0	st5
WIC 3	h 485	19	9	0.208	4.0	0x0	VIFx	104.4	140.0	st5
bath 2	c 141	3	7	0.213	4.0	0x0	VIFx	98.7	140.0	st5
bedroom 2	c 4066	154	190	0.211	8.0	0x0	VIFx	100.9	140.0	st5
bedroom 3	c 3688	145	172	0.205	8.0	0x0	VIFx	103.2	145.0	st5
bedroom 4	c 2582	116	120	0.383	7.0	0x0	VIFx	22.8	110.0	st8
bedroom 4-A	c 2582	116	120	0.396	7.0	0x0	VIFx	18.5	110.0	st8
dining	h 2870	111	88	0.181	7.0	0x0	VIFx	116.1	165.0	st6
foyer	h 1974	77	69	0.178	5.0	0x0	VIFx	120.3	165.0	st6
great room	c 2020	75	94	0.230	6.0	0x0	VIFx	66.3	155.0	st7
great room-A	c 2020	75	94	0.270	6.0	0x0	VIFx	73.8	115.0	st4
kitchen/nook	c 3900	138	182	0.225	8.0	0x0	VIFx	70.9	155.0	st7
laundry	c 1136	26	53	0.270	5.0	0x0	VIFx	68.6	120.0	st3
master bath	c 2902	73	135	0.374	7.0	0x0	VIFx	41.0	95.0	st1
master bedroom	c 3243	128	151	0.358	7.0	0x0	VIFx	47.0	95.0	st1
master bedroom-A	c 3243	128	151	0.365	7.0	0x0	VIFx	44.4	95.0	st1
media room	h 3566	138	97	0.520	7.0	0x0	VIFx	7.9	90.0	st2
media room-A	h 3566	138	97	0.498	7.0	0x0	VIFx	12.1	90.0	st2
media room-B	h 3566	138	97	0.467	7.0	0x0	VIFx	19.1	90.0	st2
toilet	h 421	16	8	0.377	4.0	0x0	VIFx	40.1	95.0	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
st8	Peak AVF	277	265	0.383	508	10.0	0 x 0	VinIFlx	st2
st2	Peak AVF	692	556	0.383	647	14.0	0 x 0	VinIFlx	
st3	Peak AVF	82	109	0.270	407	7.0	0 x 0	VinIFlx	st1
st6	Peak AVF	188	157	0.178	538	8.0	0 x 0	VinIFlx	st5
st5	Peak AVF	528	543	0.178	508	14.0	0 x 0	VinIFlx	st4
st4	Peak AVF	816	913	0.178	654	16.0	0 x 0	VinIFlx	st1
st7	Peak AVF	213	276	0.225	506	10.0	0 x 0	VinIFlx	st4
st1	Peak AVF	1243	1468	0.178	831	18.0	0 x 0	VinIFlx	

Return Branch Detail Table

Name	Grill 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
rb6	0x0	553	459	67.2	0.285	1015	10.0	0x 0		VIFx	rt1
rb7	0x0	425	426	64.7	0.295	542	12.0	0x 0		VIFx	rt1
rb1	0x0	558	667	70.6	0.271	478	16.0	0x 0		VIFx	rt2
rb2	0x0	399	472	107.2	0.178	601	12.0	0x 0		VIFx	rt2

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rt1	Peak AVF	978	885	0.285	915	14.0	0 x 0	VinIFlx	
rt2	Peak AVF	957	1139	0.178	645	18.0	0 x 0	VinIFlx	