



Manual S Compliance Report

Entire House

Bounds Heating and Air



Job: Burk
Date: Jun 28, 2025
By:

25645 West Newberry Road, Newberry, FL 32669 Phone: (352) 472-2761 Fax: (352) 472-2761 Email: jlegler@boundshvac.com

Project Information

For: Burke, Hartley Brothers

Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	25704 Btuh	Entering coil DB:	77.3°F
Outdoor design WB:	75.8°F	Latent gain:	3774 Btuh	Entering coil WB:	63.6°F
Indoor design DB:	75.0°F	Total gain:	29479 Btuh		
Indoor RH:	50%	Estimated airflow:	1167 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	GH5SAN53600AA0+FJ5ANXB36L00
Actual airflow:	1167 cfm		
Sensible capacity:	28114 Btuh	109% of load	
Latent capacity:	5377 Btuh	142% of load	
Total capacity:	33491 Btuh	114% of load	SHR: 84%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	30844 Btuh	Entering coil DB:	67.0°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:	1167 cfm		
Output capacity:	35600 Btuh	115% of load	Capacity balance: 31 °F
Supplemental heat required:	0 Btuh		Economic balance: -99 °F

Backup equipment type:	Elec strip		
Manufacturer:		Model:	
Actual airflow:	1167 cfm		
Output capacity:	0 kW	0% of load	Temp. rise: 0 °F

Meets all requirements of ACCA Manual S.



Load Short Form

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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	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 28 °F
Actual air flow 1167 cfm
Air flow factor 0.038 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 31 °F

Backup:

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 1167 cfm
Air flow factor 0.045 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)
TOILET	28	1394	883	53	40
MASTER BATH	148	2675	1581	101	72
WIC	69	1725	550	65	25
LAUNDRY	51	892	1076	34	49
MASTER BED	199	3243	3930	123	178
DROP	61	0	0	0	0
DINING	160	3211	3276	121	149
KITCHEN	137	1373	2355	52	107
PANTRY	63	1737	790	66	36
LIVING ROOM	367	3367	4332	127	197
FOYER	91	1708	956	65	43
OFFICE	139	2157	1219	82	55
BED 2	161	3411	2489	129	113
BATH 2	54	701	355	27	16

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



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BED 3	146	3249	1913	123	87
HALL	20	0	0	0	0
Entire House	1894	30844	25704	1167	1167
Other equip loads		0	0		
Equip. @ 0.97 RSM			24985		
Latent cooling			3774		
TOTALS	1894	30844	28759	1167	1167

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Project Summary

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Project Information

For: Burke, Hartley Brothers

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 23896 Btuh
Ducts (R-6.0) 6948 Btuh
Central vent (0 cfm) 0 Btuh

Humidification 0 Btuh
Piping 0 Btuh
Equipment load 30844 Btuh

Infiltration

Method Simplified
Construction quality Semi-tight
Fireplaces 0

	Heating	Cooling
Area (ft ²)	1890	1890
Volume (ft ³)	17917	17917
Air changes/hour	0.26	0.14
Equiv. AVF (cfm)	78	42

Heating Equipment Summary

Make Carrier
Trade 15 SEER2 HP
Model GH5SAN53600AA0
AHRI ref 214101828

Efficiency 7.5 HSPF2
Heating input 35600 Btuh @ 47°F
Heating output 28 °F
Temperature rise 1167 cfm
Actual air flow 0.038 cfm/Btuh
Air flow factor 0.50 in H2O
Static pressure
Space thermostat
Capacity balance point = 31 °F

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

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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 17054 Btuh
Ducts (R-6.0) 8651 Btuh
Central vent (0 cfm) 0 Btuh

Blower 0 Btuh

Use manufacturer's data n
Rate/swing multiplier 0.97
Equipment sensible load 24985 Btuh

Latent Cooling Equipment Load Sizing

Structure 2040 Btuh
Ducts 1735 Btuh
Central vent (0 cfm) 0 Btuh

Equipment latent load 3774 Btuh

Equipment Total Load (Sen+Lat) 28759 Btuh
Req. total capacity at 0.70 SHR 3.0 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 1167 cfm
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Static pressure 0.50 in H2O
Load sensible heat ratio 0.87

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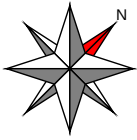
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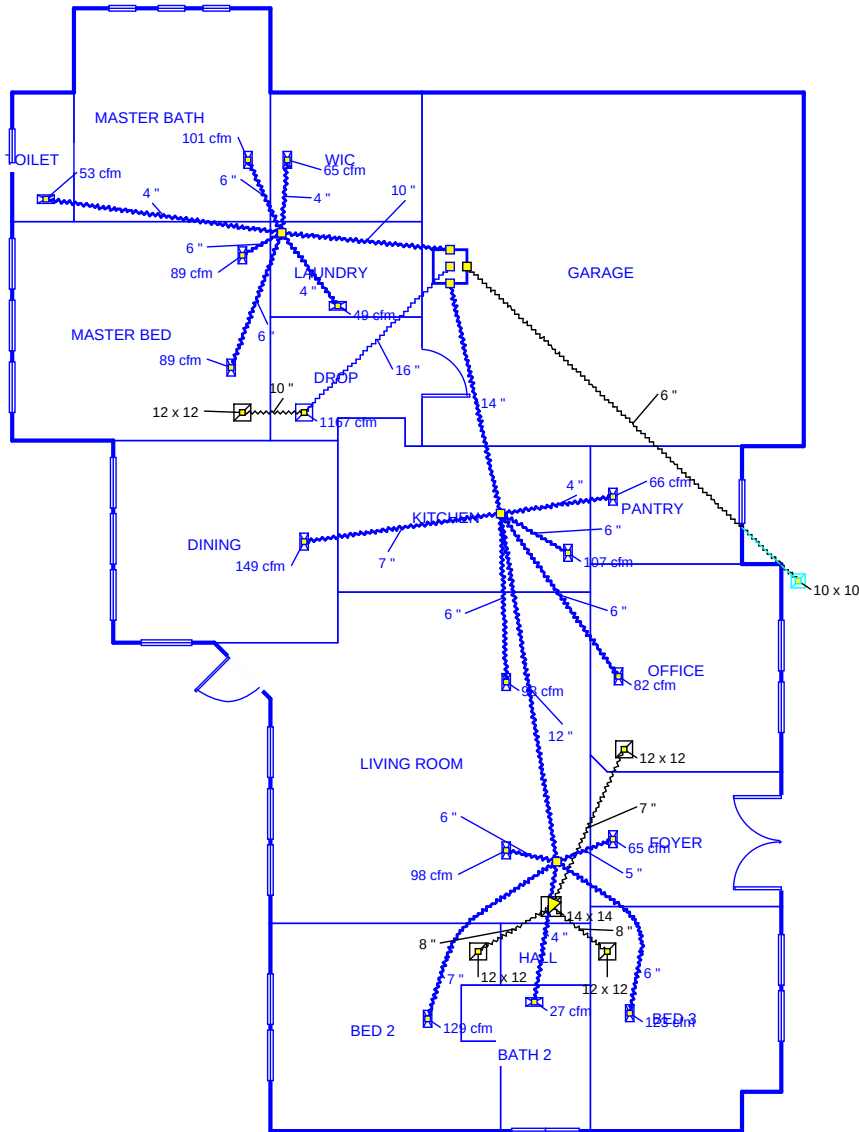
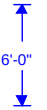
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Level 1



Job #: Burk
Performed for:
Burke

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Duct System Summary

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By:

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Project Information

For: Burke, Hartley Brothers

	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	0.378 / 0.122 in H ₂ O	0.378 / 0.122 in H ₂ O
Lowest friction rate	0.233 in/100ft	0.233 in/100ft
Actual air flow	1167 cfm	1167 cfm
Total effective length (TEL)	215 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 701	27	16	0.247	4.0	0x0	VIFx	43.4	110.0	st3
BED 2	h 3411	129	113	0.233	7.0	0x0	VIFx	47.7	115.0	st3
BED 3	h 3249	123	87	0.234	6.0	0x0	VIFx	46.8	115.0	st3
DINING	c 3276	121	149	0.327	7.0	0x0	VIFx	25.8	90.0	st2
FOYER	h 1708	65	43	0.255	5.0	0x0	VIFx	38.5	110.0	st3
KITCHEN	c 2355	52	107	0.348	6.0	0x0	VIFx	18.6	90.0	st2
LAUNDRY	c 1076	34	49	0.359	4.0	0x0	VIFx	15.5	90.0	st1
LIVING ROOM	c 2166	64	98	0.332	6.0	0x0	VIFx	24.0	90.0	st2
LIVING ROOM-A	c 2166	64	98	0.256	6.0	0x0	VIFx	38.0	110.0	st3
MASTER BATH	h 2675	101	72	0.361	6.0	0x0	VIFx	14.8	90.0	st1
MASTER BED	c 1965	61	89	0.368	6.0	0x0	VIFx	12.7	90.0	st1
MASTER BED-A	c 1965	61	89	0.349	6.0	0x0	VIFx	18.6	90.0	st1
OFFICE	h 2157	82	55	0.326	6.0	0x0	VIFx	25.9	90.0	st2
PANTRY	h 1737	66	36	0.342	4.0	0x0	VIFx	20.7	90.0	st2
TOILET	h 1394	53	40	0.331	4.0	0x0	VIFx	24.2	90.0	st1
WIC	h 1725	65	25	0.363	4.0	0x0	VIFx	14.4	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
st3	Peak AVF	407	358	0.233	518	12.0	0 x 0	VinIFlx	st2
st2	Peak AVF	791	803	0.233	751	14.0	0 x 0	VinIFlx	
st1	Peak AVF	376	364	0.331	689	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
rb2	0x 0	1167	1167	52.3	0.233	535	20.0	0x 0		VIFx	rst10

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst10	Peak AVF	1167	1167	0.233	836	16.0	0 x 0	VinIFlx	

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