



Manual S Compliance Report
Entire House
Bounds Heating & Air

Job:
Date: Sep 05, 2019
By:

Newberry, FL

Permit # 000078894

Project Information

For: Peter & Rachelle Kolacia, Harvey builders
554 SW lime way, Fort White, FL

Cooling Equipment

Design Conditions

Outdoor design DB:	92.0°F	Sensible gain:	27830	Btuh	Entering coil DB:	77.5°F
Outdoor design WB:	76.3°F	Latent gain:	3821	Btuh	Entering coil WB:	63.7°F
Indoor design DB:	75.0°F	Total gain:	31651	Btuh		
Indoor RH:	50%	Estimated airflow:	1050	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	CH14NB03600G0B0+FB4CNP036L
Actual airflow:	1050	cfm	
Sensible capacity:	25072	Btuh	90% of load
Latent capacity:	5716	Btuh	150% of load
Total capacity:	30788	Btuh	97% of load SHR: 81%

Heating Equipment

Design Conditions

Outdoor design DB:	33.4°F	Heat loss:	0	Btuh	Entering coil DB:	70.0°F
Indoor design DB:	70.0°F					

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Carrier	Model:	CH14NB03600G0B0+FB4CNP036L
Actual airflow:	1050	cfm	
Output capacity:	27142	Btuh	0% of load
Supplemental heat required:	0	Btuh	
Capacity balance:	-31	°F	
Economic balance:	-99	°F	

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

Meets all requirements of ACCA Manual S.



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Load Short Form Entire House Bounds Heating&Air

Job:
Date: Sep 05, 2019
By:

Newberry, FL

Project Information

For: Peter & Rachelle Kolacia, Harvey builders
554 SW lime way, Fort White, FL

Design Information

	Htg	Clg	Infiltration	Simplified
Outside db (°F)	33	92	Method	Semi-tight
Inside db (°F)	70	75	Construction quality	1 (Semi-tight)
Design TD (°F)	37	17	Fireplaces	
Daily range	-	M		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	10	47		

HEATING EQUIPMENT

Make Carrier
Trade CARRIER
Model CH14NB03600G0B0
AHRI ref 9162429

Efficiency 8.2 HSPF
Heating input
Heating output 33800 Btuh @ 47°F
Temperature rise 29 °F
Actual air flow 1050 cfm
Air flow factor 0 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 CARRIER
Cond CH14NB03600G0B0
Coil FB4CNP036L
AHRI ref 9162429

Efficiency 11.5 EER, 14 SEER
Sensible cooling 23100 Btuh
Latent cooling 9900 Btuh
Total cooling 33000 Btuh
Actual air flow 1050 cfm
Air flow factor 0.038 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.88

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Master bedroom	225	0	4227	0	159
Master bath	103	0	511	0	19
master toilet	20	0	42	0	2
Master WIC	88	0	374	0	14
Mudd room	171	0	2886	0	109
A/H	20	0	0	0	0
Great room	601	0	8212	0	310
Kitchen	310	0	3877	0	146
Office	152	0	2237	0	84
Bedroom 2	195	0	1410	0	53
Bath room 2	91	0	465	0	18
Bedroom 3	195	0	2935	0	111
Hallway	29	0	0	0	0
Spare bath	39	0	654	0	25

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



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Entire House	d	2239	0	27830	0	1050
Other equip loads			0	0		
Equip. @ 0.97 RSM				26995		
Latent cooling				3821		
TOTALS		2239	0	30816	0	1050

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Project Summary

Entire House

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Newberry, FL

Project Information

For: Peter & Rachelle Kolacia, Harvey builders
554 SW lime way, Fort White, FL

Notes:

Design Information

Weather: Gainesville Regional AP, FL, US

Winter Design Conditions

Outside db	33 °F
Inside db	70 °F
Design TD	37 °F

Summer Design Conditions

Outside db	92 °F
Inside db	75 °F
Design TD	17 °F
Daily range	M
Relative humidity	50 %
Moisture difference	47 gr/lb

Heating Summary

Structure	0 Btuh
Ducts	0 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	0 Btuh

Sensible Cooling Equipment Load Sizing

Structure	19361 Btuh
Ducts	8469 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	0.97
Equipment sensible load	26995 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	1 (Semi-tight)

Latent Cooling Equipment Load Sizing

Structure	1984 Btuh
Ducts	1838 Btuh
Central vent (0 cfm)	0 Btuh
(none)	
Equipment latent load	3821 Btuh

	Heating	Cooling
Area (ft²)	0	2239
Volume (ft³)	0	20147
Air changes/hour	0.41	0.11
Equiv. AVF (cfm)	0	37

Equipment Total Load (Sen+Lat)	30816 Btuh
Req. total capacity at 0.70 SHR	3.2 ton

Heating Equipment Summary

Make	Carrier
Trade	CARRIER
Model	CH14NB03600G0B0
AHRI ref	9162429
Efficiency	8.2 HSPF
Heating input	
Heating output	33800 Btuh @ 47°F
Temperature rise	29 °F
Actual air flow	1050 cfm
Air flow factor	0 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	
Capacity balance point = -31 °F	
Backup:	
Input = 0 kW, Output = 0 Btuh, 100 AFUE	

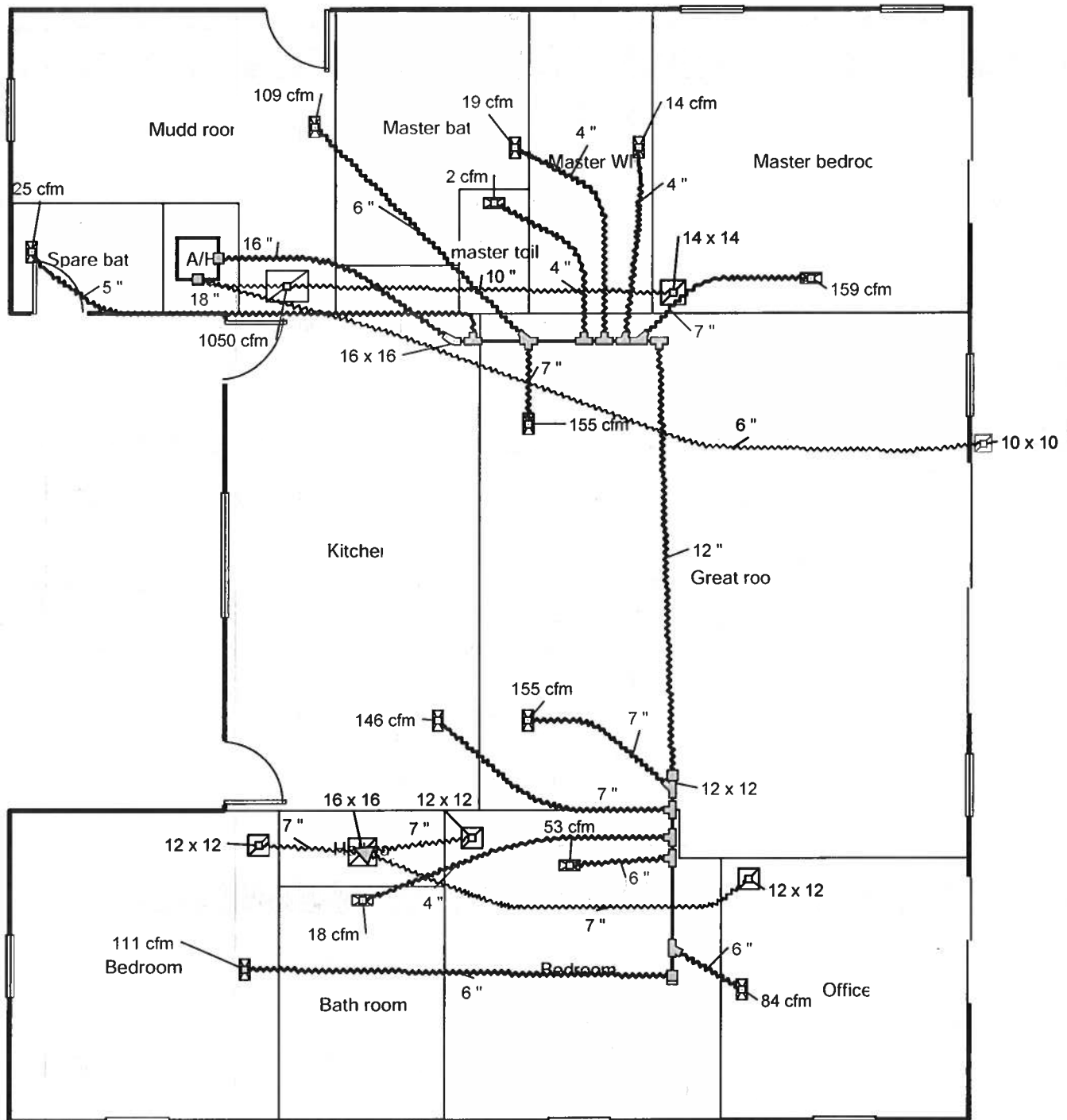
Cooling Equipment Summary

Make	Carrier
Trade	CARRIER
Cond	CH14NB03600G0B0
Coil	FB4CNP036L
AHRI ref	9162429
Efficiency	11.5 EER, 14 SEER
Sensible cooling	23100 Btuh
Latent cooling	9900 Btuh
Total cooling	33000 Btuh
Actual air flow	1050 cfm
Air flow factor	0.038 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	0.88

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



Level 1



Job #:
Performed for:
Peter & Rachelle Kolacia
554 SW lime way
Fort White, FL

Bounds Heating&Air

Newberry, FL

Scale: 1 : 85

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Duct System Summary

Entire House

Bounds Heating&Air

Job:
Date: Sep 05, 2019
By:

Newberry, FL

Project Information

For: Peter & Rachelle Kolacia, Harvey builders
554 SW lime way, Fort White, FL

	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	0.422 / 0.078 in H2O	0.422 / 0.078 in H2O
Lowest friction rate	0.098 in/100ft	0.098 in/100ft
Actual air flow	1050 cfm	1050 cfm
Total effective length (TEL)	512 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 room 2	c 465	0	18	0.098	4.0	0x 0	VIFx	62.2	370.0	st4
Bedroom 2	c 1410	0	53	0.106	6.0	0x 0	VIFx	52.6	345.0	st4
Bedroom 3	c 2935	0	111	0.106	6.0	0x 0	VIFx	73.9	325.0	st4
Great room	c 4106	0	155	0.201	7.0	0x 0	VIFx	20.3	190.0	st2
Great room-A	c 4106	0	155	0.099	7.0	0x 0	VIFx	52.5	375.0	st4
Kitchen	c 3877	0	146	0.100	7.0	0x 0	VIFx	58.2	365.0	st4
Master WIC	c 374	0	14	0.145	4.0	0x 0	VIFx	30.3	260.0	st2
Master bath	c 511	0	19	0.140	4.0	0x 0	VIFx	31.9	270.0	st2
Master bedroom	c 4227	0	159	0.156	7.0	0x 0	VIFx	31.2	240.0	st2
Mudd room	c 2886	0	109	0.191	6.0	0x 0	VIFx	30.9	190.0	st2
Office	c 2237	0	84	0.108	6.0	0x 0	VIFx	55.8	335.0	st4
Spare bath	c 654	0	25	0.167	5.0	0x 0	VIFx	37.4	215.0	st2
master toilet	c 42	0	2	0.144	4.0	0x 0	VIFx	28.2	265.0	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
st4	Peak AVF	0	567	0.098	567	12.0	12 x 12	RectFbg	st3
st2	Peak AVF	0	1050	0.098	591	16.0	16 x 16	RectFbg	st1
st3	Peak AVF	0	567	0.098	722	12.0	0 x 0	VinIFlx	st2
st1	Peak AVF	0	1050	0.098	752	16.0	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	0x0	0	1050	79.4	0.098	666	17.0	0x 0		VIFx	rst9

Return Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
rst9	Peak AVF	0	1050	0.098	594	18.0	0 x 0	VinIFlx	

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