



Load Short Form

Entire House

High Springs Electric

Job:
Date: Jan 16, 2022
By: Donna Brackeen

Project Information

For: Turner Residence, G.Buzbee
664 SW Appalachee Ter, Fort White, FL 32038

Design Information

	Htg	Clg	Infiltration	
Outside db (°F)	33	92	Method	Simplified
Inside db (°F)	70	75	Construction quality	Average
Design TD (°F)	37	17	Fireplaces	0
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	32	47		

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 4TWR4036G1
AHRI ref 10157515

Efficiency 8.5 HSPF

Heating input
Heating output 33400 Btuh @ 47°F
Temperature rise 0 °F
Actual air flow 0 cfm
Air flow factor 0 cfm/Btuh
Static pressure 0.50 in H2O
Space thermostat
Capacity balance point = 30 °F

COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 4TWR4036G1
Coil TMM5A0B36M31SAA
AHRI ref 10157515

Efficiency 12.5 EER, 15 SEER

Sensible cooling 24780 Btuh
Latent cooling 10620 Btuh
Total cooling 35400 Btuh
Actual air flow 1180 cfm
Air flow factor 0.043 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)
laundry	121	3968	2695	0	115
pantry	34	0	0	0	0
living	371	5768	7252	0	309
kit dining	365	6112	6997	0	298
m bd	226	5182	5505	0	235
wic	36	0	0	0	0
m bath	93	1200	844	0	36
hall	60	0	0	0	0
wc	19	31	394	0	17
bath	72	991	589	0	25
bd 2	203	4704	3394	0	145

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



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Entire House	1600	27956	27670	0	1180
Other equip loads		0	0		
Equip. @ 1.00 RSM			27670		
Latent cooling			4264		
TOTALS	1600	27956	31935	0	1180

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

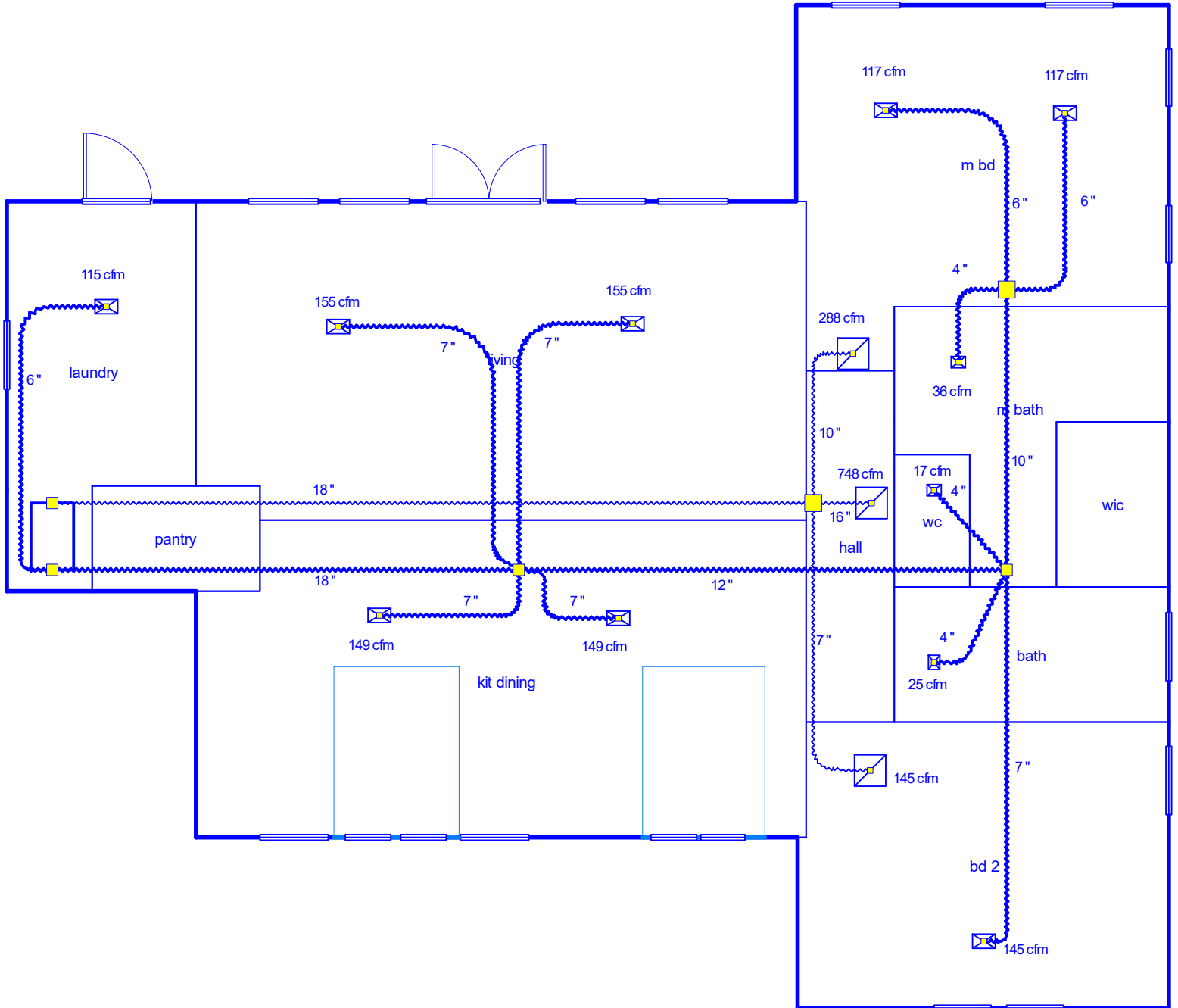


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Manual S Compliance Report

Entire House

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Cooling Equipment

Design Conditions

Outdoor design DB:	91.9°F	Sensible gain:	27670	Btuh	Entering coil DB:	77.0°F
Outdoor design WB:	76.2°F	Latent gain:	4264	Btuh	Entering coil WB:	63.5°F
Indoor design DB:	75.0°F	Total gain:	31935	Btuh		
Indoor RH:	50%	Estimated airflow:	1180	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP		
Manufacturer:	Trane	Model:	4TWR4036G1+TMM5A0B36M31SAA
Actual airflow:	1180	cfm	
Sensible capacity:	24780	Btuh	90% of load
Latent capacity:	10620	Btuh	249% of load
Total capacity:	35400	Btuh	111% of load SHR: 70%

Heating Equipment

Design Conditions

Outdoor design DB:	33.4°F	Heat loss:	27956	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:	Trane	Model:	4TWR4036G1+TMM5A0B36M31SAA
Actual airflow:	0	cfm	
Output capacity:	33400	Btuh	119% of load
Supplemental heat required:	0	Btuh	
Capacity balance:	30	°F	
Economic balance:	-99	°F	

Meets all requirements of ACCA Manual S.





Duct System Summary

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	Heating	Cooling
External static pressure	0.50 in H ₂ O	0.50 in H ₂ O
Pressure losses	0.18 in H ₂ O	0.18 in H ₂ O
Available static pressure	0.32 in H ₂ O	0.32 in H ₂ O
Supply / return available pressure	0.212 / 0.108 in H ₂ O	0.212 / 0.108 in H ₂ O
Lowest friction rate	0.105 in/100ft	0.105 in/100ft
Actual air flow	0 cfm	1180 cfm
Total effective length (TEL)	305 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 589	0	25	0.130	4.0	0x0	VIFx	47.7	115.0	st2
bd 2	c 3394	0	145	0.122	7.0	0x0	VIFx	59.3	115.0	st2
kit dining	c 3499	0	149	0.172	7.0	0x0	VIFx	28.6	95.0	st1
kit dining-A	c 3499	0	149	0.167	7.0	0x0	VIFx	26.9	100.0	st1
laundry	c 2695	0	115	0.220	6.0	0x0	VIFx	16.7	80.0	
living	c 3626	0	155	0.153	7.0	0x0	VIFx	38.6	100.0	st1
living-A	c 3626	0	155	0.162	7.0	0x0	VIFx	36.3	95.0	st1
m bath	c 844	0	36	0.109	4.0	0x0	VIFx	59.6	135.0	st3
m bd	c 2753	0	117	0.105	6.0	0x0	VIFx	67.4	135.0	st3
m bd-A	c 2753	0	117	0.106	6.0	0x0	VIFx	64.6	135.0	st3
wc	c 394	0	17	0.136	4.0	0x0	VIFx	46.7	110.0	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	0	271	0.105	496	10.0	0 x 0	VinIFlx	st2
st2	Peak AVF	0	457	0.105	582	12.0	0 x 0	VinIFlx	st1
st1	Peak AVF	0	1065	0.105	603	18.0	0 x 0	VinIFlx	



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	0	748	86.0	0.125	536	16.0	0x 0		VIFx	rt1
rb2	0x 0	0	145	102.6	0.105	542	7.0	0x 0		VIFx	rt1
rb3	0x 0	0	288	96.8	0.111	527	10.0	0x 0		VIFx	rt1

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	0	1180	0.105	668	18.0	0 x 0	VinIFlx	