



Load Short Form
Entire House
High Springs Electric

Job:
Date: Jul 29, 2022
By: Donna Brackeen

Project Information

For: Hartzog Pool House
310 Southwest Deer Run Drive, FT White

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)	33	44		

HEATING EQUIPMENT

Make Trane
Trade TRANE
Model 4TWR4024G1
AHRI ref 203461410
Efficiency 8.2 HSPF
Heating input
Heating output 22000 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 = 31 °F

COOLING EQUIPMENT

Make Trane
Trade TRANE
Cond 4TWR4024G1
Coil TMM4B0A24S21SAA++TXV
AHRI ref 203461410
Efficiency 11.5 EER, 14 SEER
Sensible cooling 15680 Btuh
Latent cooling 6720 Btuh
Total cooling 22400 Btuh
Actual air flow 747 cfm
Air flow factor 0.047 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.84

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
bath	59	2159	1182	0	55
ac	18	0	0	0	0
Pool House	788	16979	14783	0	691
Entire House	865	19138	15965	0	747
Other equip loads		0	0		
Equip. @ 1.00 RSM			15965		
Latent cooling			3104		
TOTALS	865	19138	19069	0	747

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

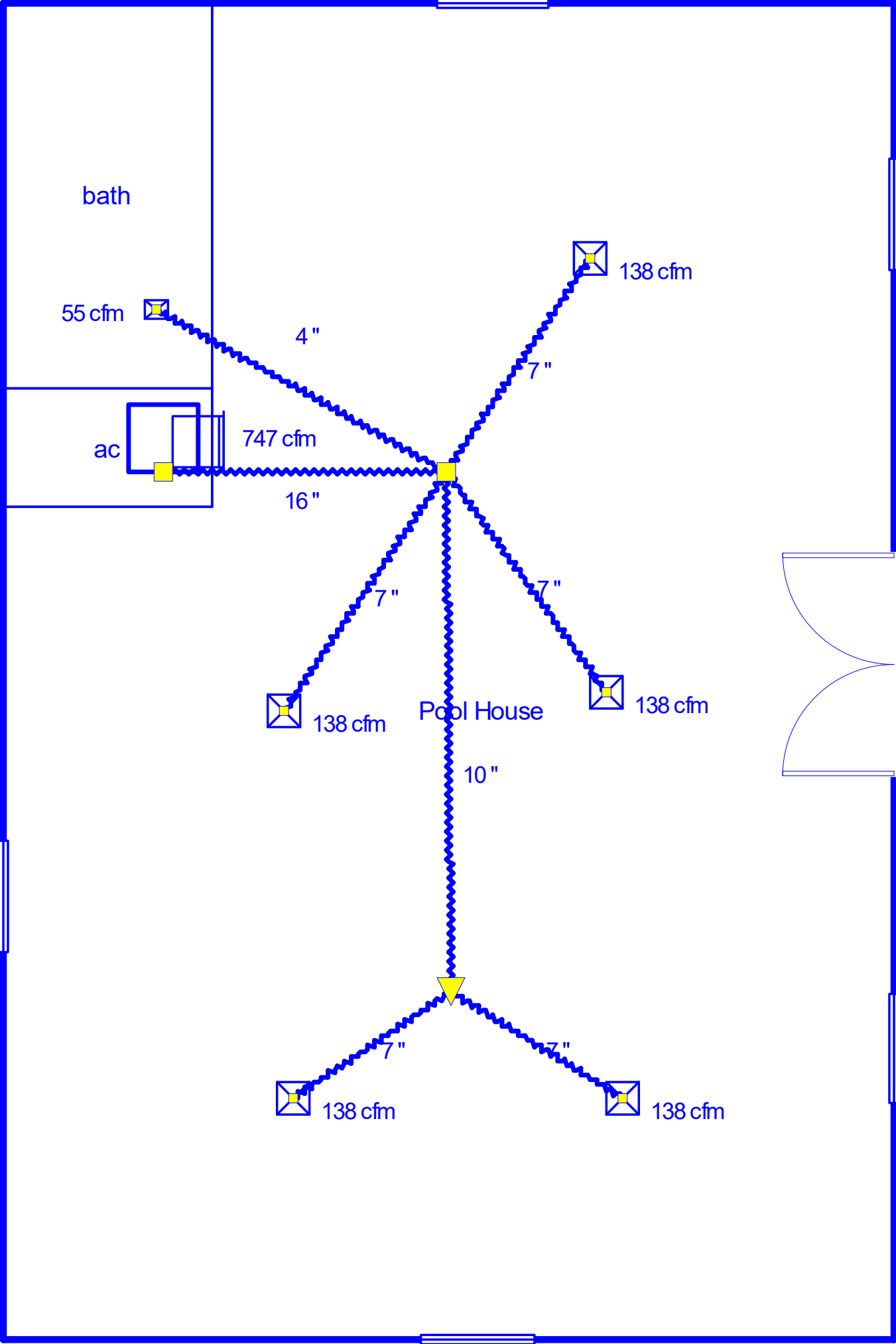


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Manual S Compliance Report

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Cooling Equipment

Design Conditions

Outdoor design DB:	92.2°F	Sensible gain:	15965	Btuh	Entering coil DB:	76.7°F
Outdoor design WB:	75.8°F	Latent gain:	3104	Btuh	Entering coil WB:	63.3°F
Indoor design DB:	75.0°F	Total gain:	19069	Btuh		
Indoor RH:	50%	Estimated airflow:	747	cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split ASHP			
Manufacturer:	Trane	Model:	4TWR4024G1+TMM4B0A24S21SAA++TXV	
Actual airflow:	747	cfm		
Sensible capacity:	17896	Btuh	112% of load	
Latent capacity:	3461	Btuh	112% of load	
Total capacity:	21357	Btuh	112% of load	SHR: 84%

Heating Equipment

Design Conditions

Outdoor design DB:	33.2°F	Heat loss:	19138	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:	4TWR4024G1+TMM4B0A24S21SAA++TXV	
Actual airflow:	0	cfm		
Output capacity:	22000	Btuh	115% of load	Capacity balance: 31 °F
Supplemental heat required:	0	Btuh		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 H2O	0.50 in H2O
Pressure losses	0.18 in H2O	0.18 in H2O
Available static pressure	0.32 in H2O	0.32 in H2O
Supply / return available pressure	0.160 / 0.160 in H2O	0.160 / 0.160 in H2O
Lowest friction rate	0.233 in/100ft	0.233 in/100ft
Actual air flow	0 cfm	747 cfm
Total effective length (TEL)	137 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
Pool House	c 2957	0	138	0.234	7.0	0x0	VIFx	26.8	110.0	st2
Pool House-A	c 2957	0	138	0.233	7.0	0x0	VIFx	27.1	110.0	st2
Pool House-B	c 2957	0	138	0.305	7.0	0x0	VIFx	15.0	90.0	st1
Pool House-C	c 2957	0	138	0.304	7.0	0x0	VIFx	15.4	90.0	st1
Pool House-D	c 2957	0	138	0.306	7.0	0x0	VIFx	14.6	90.0	st1
bath	c 1182	0	55	0.300	4.0	0x0	VIFx	16.6	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
st2	Peak AVF	0	277	0.233	507	10.0	0 x 0	VinIFlx	st1
st1	Peak AVF	0	747	0.233	535	16.0	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	0x0	0	747	0	0	0	0	0x 0		VIFx	

