



Load Short Form
Entire House
High Springs Electric

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

Project Information

For: Hartzog Residence
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 4TWL6060A1
AHRI ref 10594188

Efficiency 9.5 HSPF
Heating input
Heating output 53000 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 = 33 °F

COOLING EQUIPMENT

Make Trane
Trade TRANE
Model 4TWL6060A1
AHRI ref 10594188
Efficiency 11.0 EER, 14.5 SEER
Sensible cooling 40600 Btuh
Latent cooling 17400 Btuh
Total cooling 58000 Btuh
Actual air flow 1933 cfm
Air flow factor 0.045 cfm/Btuh
Static pressure 0.50 in H2O
Load sensible heat ratio 0.82

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
(Rest of House)	2905	48334	45532	0	2055
(Unconditioned)	860	0	0	0	0
Entire House	3765	48334	42826	0	1933
Other equip loads		3823	1787		
Equip. @ 1.00 RSM			44613		
Latent cooling			9796		
TOTALS	3765	52156	54409	0	1933

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



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Load Short Form (Rest of House) High Springs Electric

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

Project Information

For: Hartzog Residence
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 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)
m bd	279	7354	5802	0	262
m bath	185	3573	4305	0	194
wc	22	66	575	0	26
m wic	176	3379	1603	0	72
bath 2	42	148	660	0	30
cc	26	0	0	0	0
m foyer	30	0	0	0	0
H	23	0	0	0	0
office	139	3221	3084	0	139
foyer dining	231	4972	4502	0	203
gr rm	452	5311	6298	0	284
kit nook	367	4340	6815	0	308
pantry	43	1049	476	0	21
bd 2	258	4986	3111	0	140

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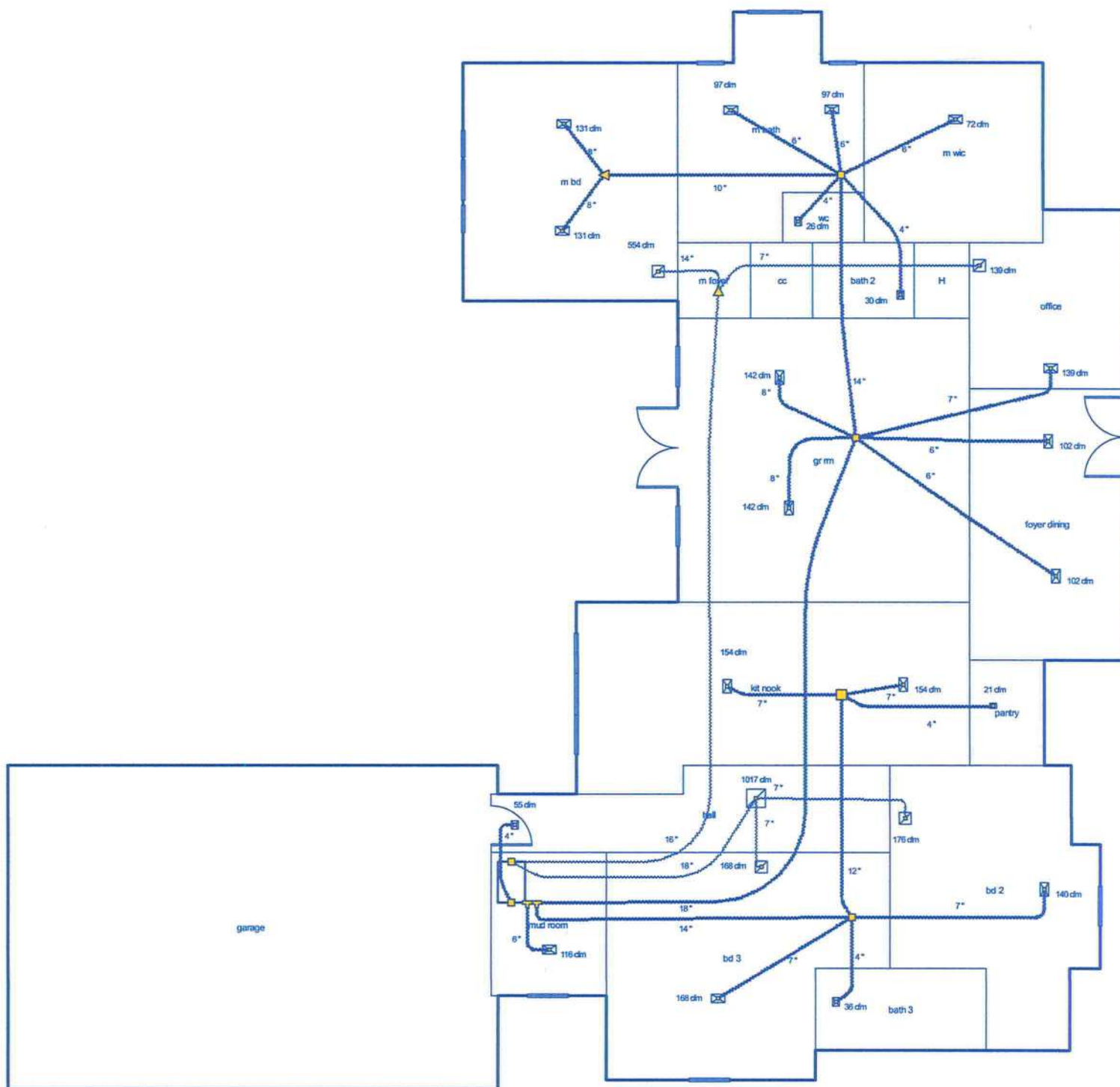
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bath 3	76	1719	790	0	36
bd 3	305	3922	3728	0	168
mud room	90	2404	2565	0	116
hall	161	1891	1220	0	55
(Rest of House)	2905	48334	45532	0	2055
Other equip loads		0	0		
Equip. @ 1.00 RSM			45532		
Latent cooling			6984		
TOTALS	2905	48334	52515	0	2055

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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

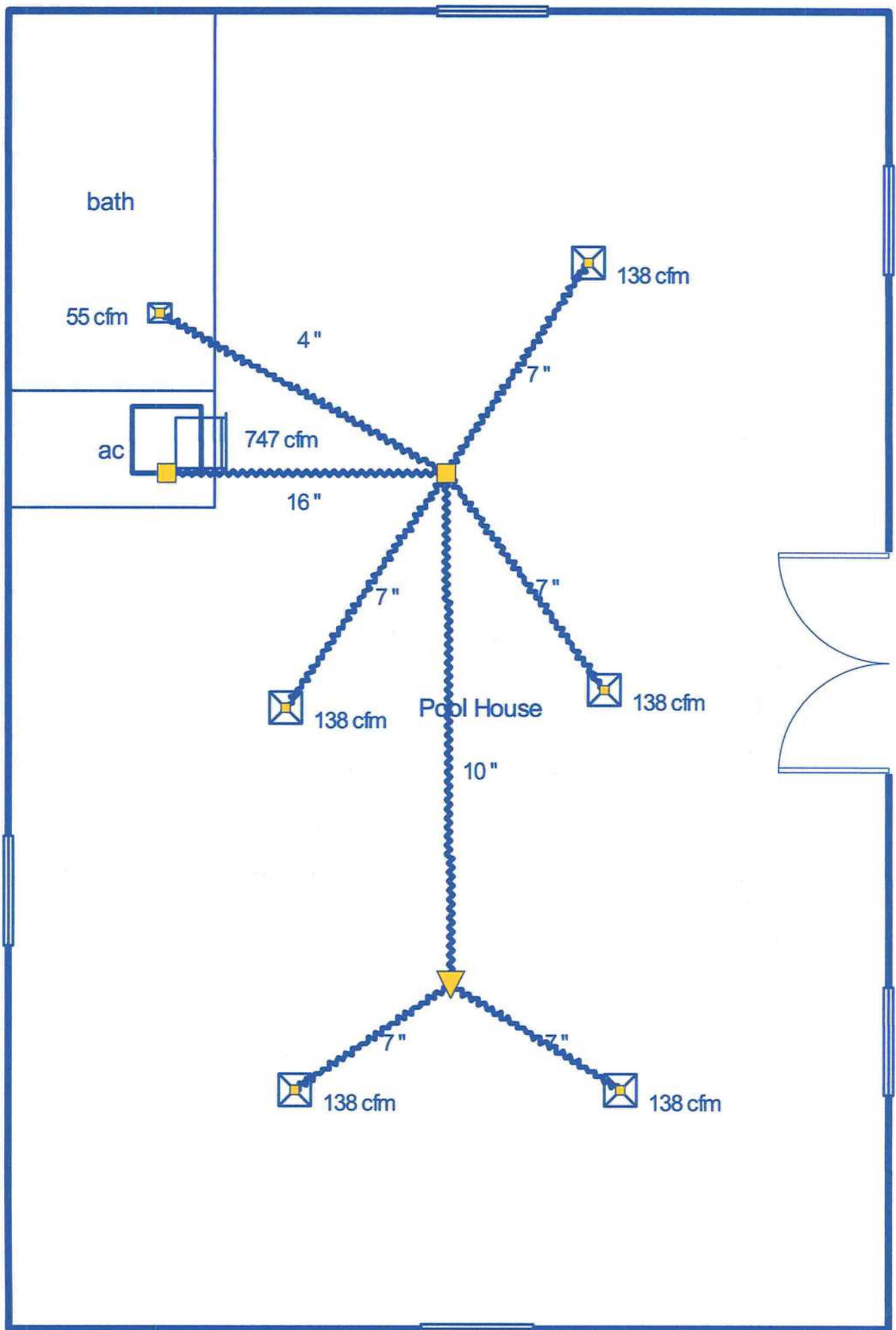
Make Trane
Trade TRANE
Cond 4TWR4024G1
Coil TMM4B0A24S21SAA++TXV
AHRI ref 203461410

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.







Manual S Compliance Report
Entire House
High Springs Electric

Job:
Date: Jul 29, 2022
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Project Information

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

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
Supplemental heat required:	0	Btuh	
			Capacity balance: 31 °F
			Economic balance: -99 °F

Meets all requirements of ACCA Manual S.



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Duct System Summary

Entire House

High Springs Electric

Job:
Date: Jul 29, 2022
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Project Information

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

	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	0.160 / 0.160 in H ₂ O	0.160 / 0.160 in H ₂ O
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	0x0		VIFx	