

# Load Short Form

## Entire House

### Comfort Air Design dba Wiemer Heating

Job: 5208 Rock Hollow  
 Date: May 01, 2019  
 By: Gene Miller  
 Plan: 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

## Project Information

For: Touchstone Homes

## Design Information

	Htg	Clg		Infiltration
Outside db (°F)	-7	90	Method	Simplified
Inside db (°F)	70	75	Construction quality	Semi-tight
Design TD (°F)	77	15	Fireplaces	
Daily range	-	H		
Inside humidity (%)	30	50		
Moisture difference (gr/lb)	35	-29		

### HEATING EQUIPMENT

Make	Bryant
Trade	Bryant 915 Legacy Line 95 Gas ...
Model	915SA48080S17
AHRI ref	5039418
Efficiency	95.5 AFUE
Heating input	80000 Btuh
Heating output	63180 Btuh
Temperature rise	64 °F
Actual air flow	1070 cfm
Air flow factor	0.030 cfm/Btuh
Static pressure	0.90 in H2O
Space thermostat	

### COOLING EQUIPMENT

Make	Bryant
Trade	BRYANT HEATING AND COOLING SYS...
Cond	113AEW0360000E0
Coil	CNPVU3717ALA++TDR
AHRI ref	9212458
Efficiency	11.0 EER, 13 SEER
Sensible cooling	27165 Btuh
Latent cooling	0 Btuh
Total cooling	27165 Btuh
Actual air flow	1160 cfm
Air flow factor	0.080 cfm/Btuh
Static pressure	0.90 in H2O
Load sensible heat ratio	1.00

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Storage	140	0	0	0	0
Bedroom 6	236	2666	761	81	61
Mech	185	0	0	0	0
Family	945	6390	855	194	68
Bedroom 4	180	1628	183	50	15
Bsmt Bath	53	298	5	9	0
Bedroom 5	177	2050	213	62	17
Cold Rm	88	0	0	0	0
M WIC	92	1395	190	42	15
Master	210	1621	1433	49	114
M Bath	146	1648	339	50	27
Utility	87	1450	279	44	22
Kitchen/dining	354	3254	2543	99	203
Great Rm	648	6598	5198	201	414

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

Bedroom 2	155	2362	534	72	43
Bath	45	497	110	15	9
Bedroom 3	147	2778	1840	85	147
M TR	36	531	73	16	6
Entire House	3923	35167	14555	1070	1160
Other equip loads		6581	1253		
Equip. @ 0.95 RSM			14954		
Latent cooling			0		
TOTALS	3923	41748	14954	1070	1160

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



# Building Analysis

## Entire House

### Comfort Air Design dba Wiemer Heating

Job: 5208 Rock Hollow  
 Date: May 01, 2019  
 By: Gene Miller  
 Plan: 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

## Project Information

For: Touchstone Homes

## Design Conditions

### Location:

Idaho Falls Rgnl, ID, US  
 Elevation: 4744 ft  
 Latitude: 44°N

### Outdoor:

Drybulb (°F)  
 Daily range (°F)  
 Wet bulb (°F)  
 Wind speed (mph)

### Heating

-7  
 -  
 -  
 15.0

### Cooling

90  
 35 ( H )  
 61  
 7.5

### Indoor:

Indoor temperature (°F)  
 Design TD (°F)  
 Relative humidity (%)  
 Moisture difference (gr/lb)

### Heating

70  
 77  
 30  
 35.3

### Cooling

75  
 15  
 50  
 -29.4

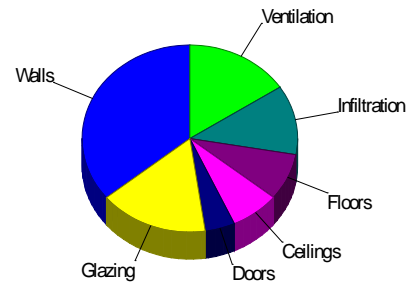
### Infiltration:

Method  
 Construction quality  
 Fireplaces

Simplified  
 Semi-tight  
 0

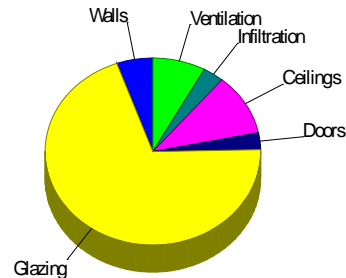
## Heating

Component	Btuh/ft²	Btuh	% of load
Walls	4.4	14980	35.9
Glazing	24.5	6848	16.4
Doors	29.9	1885	4.5
Ceilings	1.5	3073	7.4
Floors	1.7	3380	8.1
Infiltration	2.1	5002	12.0
Ducts		0	0
Piping		0	0
Humidification		0	0
Ventilation		6581	15.8
Adjustments		0	0
<b>Total</b>		<b>41748</b>	<b>100.0</b>



## Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.3	860	5.4
Glazing	39.6	11050	69.9
Doors	7.3	457	2.9
Ceilings	0.8	1687	10.7
Floors	0	0	0
Infiltration	0.2	501	3.2
Ducts		0	0
Ventilation		1253	7.9
Internal gains		0	0
Blower		0	0
Adjustments		0	0
<b>Total</b>		<b>15808</b>	<b>100.0</b>



Latent Cooling Load = 0 Btuh  
 Overall U-value = 0.049 Btuh/ft²-°F

Data entries checked.

# Component Constructions

## Entire House

### Comfort Air Design dba Wiemer Heating

Job: 5208 Rock Hollow  
 Date: May 01, 2019  
 By: Gene Miller  
 Plan: 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

## Project Information

For: Touchstone Homes

## Design Conditions

<b>Location:</b>		<b>Indoor:</b>		<b>Heating</b>	<b>Cooling</b>
Idaho Falls Rgnl, ID, US		Indoor temperature (°F)		70	75
Elevation: 4744 ft		Design TD (°F)		77	15
Latitude: 44°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		35.3	-29.4
<b>Outdoor:</b>	<b>Heating</b>	<b>Cooling</b>	<b>Infiltration:</b>		
Dry bulb (°F)	-7	90	Method	Simplified	
Daily range (°F)	-	35 ( H )	Construction quality	Semi-tight	
Wet bulb (°F)	-	61	Fireplaces	0	
Wind speed (mph)	15.0	7.5			

## Construction descriptions

Construction descriptions	Or	Area ft <sup>2</sup>	U-value Btuh/ft <sup>2</sup> -°F	Insul R ft <sup>2</sup> -°F/Btuh	Htg HTM Btuh/ft <sup>2</sup>	Loss Btuh	Clg HTM Btuh/ft <sup>2</sup>	Gain Btuh
<b>Walls</b>								
12F-0sw: Frm wall, vnl ext, 3/8" wood shth, r-21 cav ins, 1/2" gypsum board int fnsh, 2"x6" wood frm, 16" o.c. stud	n	347	0.065	21.0	4.99	1729	0.48	167
	e	429	0.065	21.0	4.99	2138	0.48	206
	s	373	0.065	21.0	4.99	1858	0.48	179
	w	460	0.065	21.0	4.99	2292	0.48	221
	all	1608	0.065	21.0	4.99	8017	0.48	773
15B19-0wc-6: Bg wall, light dry soil, 2"x4" wood int frm, concrete wall, r-19 cav ins, 8" thk, 1/2" gypsum board int fnsh	n	346	0.043	19.0	3.73	1289	0.04	14
	e	539	0.043	19.0	3.77	2034	0.04	24
	s	376	0.043	19.0	3.85	1447	0.05	19
	w	569	0.043	19.0	3.85	2193	0.05	29
	all	1830	0.043	19.0	3.80	6963	0.05	87

## Partitions (none)

## Windows

2 glazing, clr low-e outr, argon gas, vnl frm mat, clr innr, 1/2" gap, 1/8" thk, SHGC .35; 2 glazing, clr low-e outr, argon gas, vnl frm mat, clr innr, 1/2" gap, 1/8" thk, SHGC .35; foreground = new concrete (0.32); 6.67 ft head ht	n	29	0.320	0	24.5	712	11.3	328
	n	30	0.320	0	24.5	736	11.3	340
	e	120	0.320	0	24.5	2933	47.4	5667
	e	30	0.320	0	24.5	736	47.4	1423
	s	3	0.320	0	24.5	74	30.4	91
	w	68	0.320	0	24.5	1657	47.4	3201
	all	279	0.320	0	24.5	6848	39.6	11050

## Doors

11D0: Door, wd sc type	e	21	0.390	0	29.9	628	7.25	152
	w	42	0.390	0	29.9	1256	7.25	305
	all	63	0.390	0	29.9	1885	7.25	457

## Ceilings

16B-50ad: Attic ceiling, asphalt shingles roof mat, r-50 ceil ins, 1/2" gypsum board int fnsh		2003	0.020	50.0	1.53	3073	0.84	1687
---	--	------	-------	------	------	------	------	------

## Floors

21A-28v: Bg floor, light dry soil, 6.5' depth, vinyl flr fnsh		2003	0.022	0	1.69	3380	0	0
---	--	------	-------	---	------	------	---	---



# Project Summary

## Entire House

### Comfort Air Design dba Wiemer Heating

Job: 5208 Rock Hollow  
 Date: May 01, 2019  
 By: Gene Miller  
 Plan: 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

## Project Information

For: Touchstone Homes

Notes: INFORMATION CONTAINED WITHIN THE REPORT IS PER THE RESCHECK COMPLIANCE CERTIFICATE. IF ANY OF THESE VALUES SHOULD CHANGE, THIS REPORT WILL BE NULL AND VOID.

## Design Information

Weather: Idaho Falls Rgnl, ID, US

### Winter Design Conditions

Outside db -7 °F  
 Inside db 70 °F  
 Design TD 77 °F

### Summer Design Conditions

Outside db 90 °F  
 Inside db 75 °F  
 Design TD 15 °F  
 Daily range H  
 Relative humidity 50 %  
 Moisture difference -29 gr/lb

### Heating Summary

Structure 35167 Btuh  
 Ducts 0 Btuh  
 Central vent (93 cfm) 6581 Btuh  
   Outside air  
 Humidification 0 Btuh  
 Piping 0 Btuh  
 Equipment load 41748 Btuh

### Sensible Cooling Equipment Load Sizing

Structure 14555 Btuh  
 Ducts 0 Btuh  
 Central vent (93 cfm) 1253 Btuh  
   Outside air  
 Blower 0 Btuh  
 Use manufacturer's data n  
 Rate/swing multiplier 0.95  
 Equipment sensible load 14954 Btuh

### Infiltration

Method Simplified  
 Construction quality Semi-tight  
 Fireplaces 0

### Latent Cooling Equipment Load Sizing

Structure -623 Btuh  
 Ducts 0 Btuh  
 Central vent (93 cfm) -1557 Btuh  
   Outside air  
 Equipment latent load 0 Btuh

	Heating	Cooling
Area (ft <sup>2</sup> )	3923	3923
Volume (ft <sup>3</sup> )	22285	22285
Air changes/hour	0.19	0.10
Equiv. AVF (cfm)	71	37

**Equipment Total Load (Sen+Lat)** 14954 Btuh  
 Req. total capacity at 1.00 SHR 1.2 ton

### Heating Equipment Summary

Make Bryant  
 Trade Bryant 915 Legacy Line 95 Gas ...  
 Model 915SA48080S17  
 AHRI ref 5039418

Efficiency 95.5 AFUE  
 Heating input 80000 Btuh  
 Heating output 63180 Btuh  
 Temperature rise 64 °F  
 Actual air flow 1070 cfm  
 Air flow factor 0.030 cfm/Btuh  
 Static pressure 0.90 in H2O  
 Space thermostat

### Cooling Equipment Summary

Make Bryant  
 Trade BRYANT HEATING AND COOLING SYS...  
 Cond 113AEW0360000E0  
 Coil CNPVU3717ALA++TDR  
 AHRI ref 9212458

Efficiency 11.0 EER, 13 SEER  
 Sensible cooling 27165 Btuh  
 Latent cooling 0 Btuh  
 Total cooling 27165 Btuh  
 Actual air flow 1160 cfm  
 Air flow factor 0.080 cfm/Btuh  
 Static pressure 0.90 in H2O  
 Load sensible heat ratio 1.00

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



# AED Assessment

## Entire House

### Comfort Air Design dba Wiemer Heating

Job: 5208 Rock Hollow  
 Date: May 01, 2019  
 By: Gene Miller  
 Plan: 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

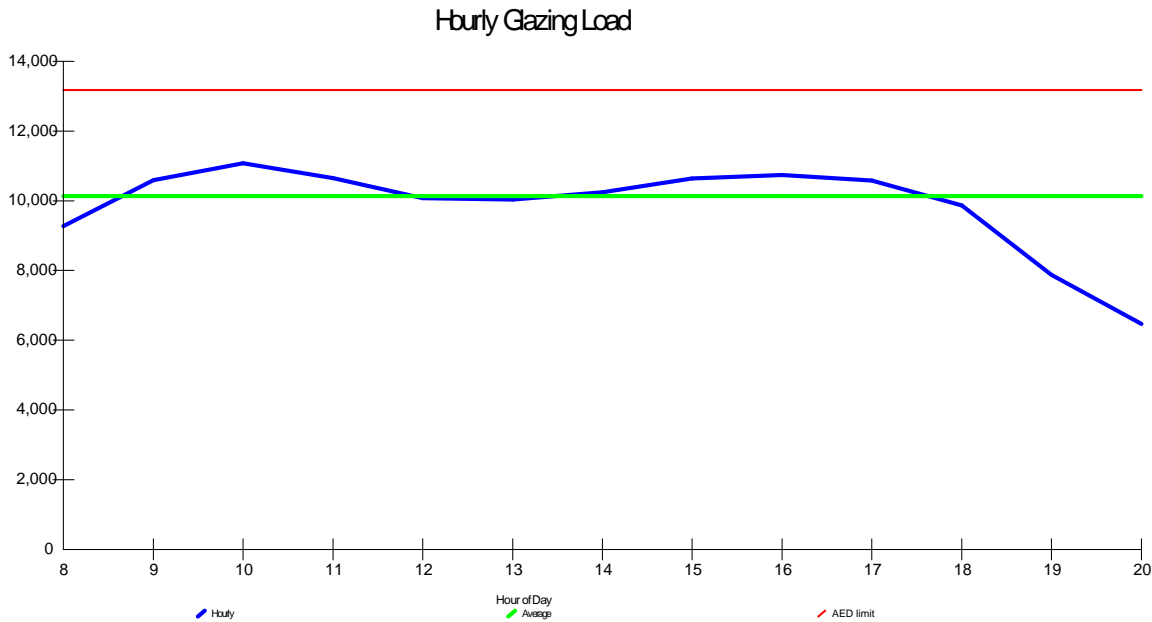
## Project Information

For: Touchstone Homes

## Design Conditions

<b>Location:</b>		<b>Indoor:</b>		<b>Heating</b>	<b>Cooling</b>
Idaho Falls Rgnl, ID, US		Indoor temperature (°F)		70	75
Elevation: 4744 ft		Design TD (°F)		77	15
Latitude: 44°N		Relative humidity (%)		30	50
		Moisture difference (gr/lb)		35.3	-29.4
<b>Outdoor:</b>	<b>Heating</b>	<b>Cooling</b>	<b>Infiltration:</b>		
Dry bulb (°F)	-7	90			
Daily range (°F)	-	35 ( H )			
Wet bulb (°F)	-	61			
Wind speed (mph)	15.0	7.5			

## Test for Adequate Exposure Diversity



**Maximum hourly glazing load exceeds average by 9.3%.**

**House has adequate exposure diversity (AED), based on AED limit of 30%.**

**AED excursion: 0 Btuh**

**Right-J® Worksheet**  
*Entire House*  
**Comfort Air Design dba Wiemer Heating**

**Job:** 5208 Rock Hollow  
**Date:** May 01, 2019  
**By:** Gene Miller  
**Plan:** 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

1		Room name		Entire House				Storage						
2		Exposed wall		420.0 ft				24.3 ft						
3		Room height		9.0 ft				9.0 ft						
4		Room dimensions		3923.0 ft²				9.5 x 14.8 ft						
5		Room area						140.1 ft²						
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12F-0sw	0.065	n	4.99	0.48	376	347	1729	167	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	29	0	712	328	0	0	0	0
	W	15B19-0wc-6	0.069	n	3.73	0.04	376	346	1289	14	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	30	0	736	340	0	0	0	0
11	W	12F-0sw	0.065	e	4.99	0.48	569	429	2138	206	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	120	0	2933	5667	0	0	0	0
	D	11D0	0.390	e	29.91	7.25	21	21	628	152	0	0	0	0
	W	15B19-0wc-6	0.069	e	3.77	0.04	569	539	2034	24	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	30	0	736	1423	0	0	0	0
	W	12F-0sw	0.065	s	4.99	0.48	376	373	1858	179	0	0	0	0
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	3	0	74	91	0	0	0	0
	W	15B19-0wc-6	0.069	s	3.85	0.05	376	376	1447	19	86	86	329	4
	W	12F-0sw	0.065	w	4.99	0.48	569	460	2292	221	0	0	0	0
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	68	0	1657	3201	0	0	0	0
	D	11D0	0.390	w	29.91	7.25	42	42	1256	305	0	0	0	0
	W	15B19-0wc-6	0.069	w	3.85	0.05	569	569	2193	29	133	133	511	7
	C	16B-50ad	0.020	-	1.53	0.84	2003	2003	3073	1687	0	0	0	0
	F	21A-28v	0.022	-	1.69	0.00	2003	2003	3380	0	140	140	236	0
6	c) AED excursion									0				-1
	Envelope loss/gain								30165	14054			1077	10
12	a) Infiltration								5002	501			126	13
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0
			Appliances/other							0				0
	Subtotal (lines 6 to 13)								35167	14555			1203	23
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			-1203	-23
14	Subtotal								35167	14555			0	0
15	Duct loads						0%	0%	0	0	-0%	0%	0	0
	Total room load								35167	14555			0	0
	Air required (cfm)								1070	1160			0	0

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





**Right-J® Worksheet**  
*Entire House*  
**Comfort Air Design dba Wiemer Heating**

**Job:** 5208 Rock Hollow  
**Date:** May 01, 2019  
**By:** Gene Miller  
**Plan:** 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

1 Room name		Bedroom 6						Mech						
2 Exposed wall		32.3 ft						19.5 ft						
3 Room height		9.0 ft						9.0 ft						
4 Room dimensions		1.0 x 236.3 ft						9.5 x 19.5 ft						
5 Room area		236.3 ft²						185.3 ft²						
Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)		
				Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool	
6	W	12F-0sw	0.065	n	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	n	3.73	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
11	W	12F-0sw	0.065	e	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	e	3.77	0.04	133	118	432	4	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	15	0	368	711	0	0	0	0
	W	12F-0sw	0.065	s	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	s	3.85	0.05	158	158	607	8	0	0	0	0
	W	12F-0sw	0.065	w	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	w	3.85	0.05	0	0	0	0	176	176	676	9
	C	16B-50ad	0.020	-	1.53	0.84	0	0	0	0	0	0	0	0
	F	21A-28v	0.022	-	1.69	0.00	236	236	399	0	185	185	313	0
6	c) AED excursion									7				-1
	Envelope loss/gain								1805	731			989	8
12	a) Infiltration								167	17			101	10
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0		0	0			0	0
			Appliances/other						0	0			0	0
	Subtotal (lines 6 to 13)								1972	748			1090	18
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								693	13			-1090	-18
14	Subtotal								2666	761			0	0
15	Duct loads								-0%	0%			0	0
	Total room load								2666	761			0	0
	Air required (cfm)								81	61			0	0

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



**Right-J® Worksheet**  
*Entire House*  
**Comfort Air Design dba Wiemer Heating**

**Job:** 5208 Rock Hollow  
**Date:** May 01, 2019  
**By:** Gene Miller  
**Plan:** 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

1 Room name				Family 53.3 ft				Bedroom 4 26.0 ft						
2 Exposed wall				9.0 ft 1.0 x 944.8 ft heat/cool				9.0 ft 1.0 x 179.8 ft heat/cool						
3 Room height				944.8 ft <sup>2</sup>				179.8 ft <sup>2</sup>						
4 Room dimensions														
5 Room area														
	Ty	Construction number	U-value (Btuh/ft <sup>2</sup> -°F)	Or	HTM (Btuh/ft <sup>2</sup> )		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12F-0sw	0.065	n	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	n	3.73	0.04	79	79	303	4	128	113	415	4
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	15	0	368	170
11	W	12F-0sw	0.065	e	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	e	3.77	0.04	331	316	1195	14	106	106	407	5
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	15	0	368	711	0	0	0	0
	W	12F-0sw	0.065	s	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	s	3.85	0.05	70	70	269	4	0	0	0	0
	W	12F-0sw	0.065	w	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	w	3.85	0.05	0	0	0	0	0	0	0	0
	C	16B-50ad	0.020	-	1.53	0.84	0	0	0	0	0	0	0	0
	F	21A-28v	0.022	-	1.69	0.00	945	945	1594	0	180	180	303	0
6	c) AED excursion									6				-9
	Envelope loss/gain								3729	740			1494	170
12	a) Infiltration								276	28			135	13
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0
			Appliances/other							0				0
	Subtotal (lines 6 to 13)								4005	767			1628	183
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								2386	88			0	0
14	Subtotal								6390	855			1628	183
15	Duct loads								-0%	0%			0	0
	Total room load								6390	855			1628	183
	Air required (cfm)								194	68			50	15

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



**Right-J® Worksheet**  
*Entire House*  
**Comfort Air Design dba Wiemer Heating**

**Job:** 5208 Rock Hollow  
**Date:** May 01, 2019  
**By:** Gene Miller  
**Plan:** 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

1 Room name				Bsmt Bath 5.3 ft				Bedroom 5 27.5 ft						
2 Exposed wall				9.0 ft 5.3 x 10.0 ft heat/cool				9.0 ft 1.0 x 176.8 ft heat/cool						
3 Room height				52.5 ft²				176.8 ft²						
4 Room dimensions														
5 Room area														
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12F-0sw	0.065	n	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	n	3.73	0.04	47	47	182	2	122	107	389	3
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	15	0	368	170
11	W	12F-0sw	0.065	e	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	e	3.77	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	s	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	s	3.85	0.05	0	0	0	0	16	16	61	1
	W	12F-0sw	0.065	w	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	w	3.85	0.05	0	0	0	0	110	110	425	6
	C	16B-50ad	0.020	-	1.53	0.84	0	0	0	0	0	0	0	0
	F	21A-28v	0.022	-	1.69	0.00	53	53	89	0	177	177	298	0
6	c) AED excursion									0				-9
	Envelope loss/gain								271	2			1540	170
12	a) Infiltration								27	3			142	14
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0
			Appliances/other							0				0
	Subtotal (lines 6 to 13)								298	5			1683	185
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			367	28
14	Subtotal								298	5			2050	213
15	Duct loads								0	0	-0%	0%	0	0
	Total room load								298	5			2050	213
	Air required (cfm)								9	0			62	17

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



# Right-J® Worksheet

## Entire House

### Comfort Air Design dba Wiemer Heating

**Job:** 5208 Rock Hollow  
**Date:** May 01, 2019  
**By:** Gene Miller  
**Plan:** 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

				Cold Rm 22.0 ft				M WIC 19.8 ft						
				9.0 ft 5.3 x 16.8 ft heat/cool				9.0 ft 12.3 x 7.5 ft heat/cool						
				87.9 ft²				91.9 ft²						
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12F-0sw	0.065	n	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	n	3.73	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
11	W	12F-0sw	0.065	e	4.99	0.48	0	0	0	0	68	68	337	32
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	e	3.77	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	s	4.99	0.48	0	0	0	0	110	110	550	53
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	s	3.85	0.05	47	47	182	2	0	0	0	0
	W	12F-0sw	0.065	w	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	w	3.85	0.05	151	151	581	8	0	0	0	0
	C	16B-50ad	0.020	-	1.53	0.84	84	84	128	71	92	92	141	77
	F	21A-28v	0.022	-	1.69	0.00	88	88	148	0	0	0	0	0
6	c) AED excursion													
	Envelope loss/gain								1040	76			1027	153
12	a) Infiltration								114	11			368	37
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0		0	0			0	0
			Appliances/other						0	0			0	0
	Subtotal (lines 6 to 13)								1153	88			1395	190
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								-1153	-88			0	0
14	Subtotal								0	0			1395	190
15	Duct loads								-0%	0%			0	0
	Total room load								0	0			1395	190
	Air required (cfm)								0	0			42	15

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



**Right-J® Worksheet**  
*Entire House*  
**Comfort Air Design dba Wiemer Heating**

**Job:** 5208 Rock Hollow  
**Date:** May 01, 2019  
**By:** Gene Miller  
**Plan:** 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

1 Room name				Master 12.8 ft 9.0 ft heat/cool				M Bath 21.5 ft 9.0 ft 1.0 x 145.9 ft heat/cool						
2 Exposed wall				16.5 x 12.8 ft										
3 Room height				210.4 ft²				145.9 ft²						
4 Room dimensions														
5 Room area														
	Ty	Construction number	U-value (Btuh/ft²-°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12F-0sw	0.065	n	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	n	3.73	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
11	W	12F-0sw	0.065	e	4.99	0.48	115	90	447	43	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	25	0	614	1186	0	0	0	0
	D	11D0	0.390	e	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	e	3.77	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	s	4.99	0.48	0	0	0	0	133	130	647	62
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	0	0	0	0	3	0	74	91
	W	15B19-0wc-6	0.069	s	3.85	0.05	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	w	4.99	0.48	0	0	0	0	61	61	303	29
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	w	3.85	0.05	0	0	0	0	0	0	0	0
	C	16B-50ad	0.020	-	1.53	0.84	210	210	323	177	146	146	224	123
	F	21A-28v	0.022	-	1.69	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									3				-7
	Envelope loss/gain								1384	1409			1247	299
12	a) Infiltration								238	24			401	40
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0
			Appliances/other							0				0
	Subtotal (lines 6 to 13)								1621	1433			1648	339
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								1621	1433			1648	339
15	Duct loads								-0%	0%			0	0
	Total room load								1621	1433			1648	339
	Air required (cfm)								49	114			50	27

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



**Right-J® Worksheet**  
*Entire House*  
**Comfort Air Design dba Wiemer Heating**

**Job:** 5208 Rock Hollow  
**Date:** May 01, 2019  
**By:** Gene Miller  
**Plan:** 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

1 Room name				Utility 12.5 ft heat/cool				Kitchen/dining 21.5 ft heat/cool						
2 Exposed wall				9.0 ft 1.0 x 86.6 ft				9.0 ft 1.0 x 354.4 ft						
3 Room height				86.6 ft <sup>2</sup>				354.4 ft <sup>2</sup>						
4 Room dimensions														
5 Room area														
	Ty	Construction number	U-value (Btuh/ft <sup>2</sup> -°F)	Or	HTM (Btuh/ft <sup>2</sup> )		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12F-0sw	0.065	n	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	n	3.73	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
11	W	12F-0sw	0.065	e	4.99	0.48	0	0	0	0	126	63	314	30
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	42	0	1031	1992
	D	11D0	0.390	e	29.91	7.25	0	0	0	0	21	21	628	152
	W	15B19-0wc-6	0.069	e	3.77	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	s	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	s	3.85	0.05	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	w	4.99	0.48	113	92	456	44	68	68	337	32
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	29.91	7.25	21	21	628	152	0	0	0	0
	W	15B19-0wc-6	0.069	w	3.85	0.05	0	0	0	0	0	0	0	0
	C	16B-50ad	0.020	-	1.53	0.84	87	87	133	73	354	354	544	298
	F	21A-28v	0.022	-	1.69	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion													
	Envelope loss/gain								1217	255			2853	2503
12	a) Infiltration								233	23			401	40
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0
			Appliances/other							0				0
	Subtotal (lines 6 to 13)								1450	279			3254	2543
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								1450	279			3254	2543
15	Duct loads								-0%	0%			0	0
	Total room load								1450	279			3254	2543
	Air required (cfm)								44	22			99	203

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



**Right-J® Worksheet**  
*Entire House*  
**Comfort Air Design dba Wiemer Heating**

**Job:** 5208 Rock Hollow  
**Date:** May 01, 2019  
**By:** Gene Miller  
**Plan:** 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

1 Room name				Great Rm 50.8 ft				Bedroom 2 25.8 ft						
2 Exposed wall				9.0 ft 1.0 x 647.8 ft heat/cool				9.0 ft 1.0 x 154.9 ft heat/cool						
3 Room height				647.8 ft <sup>2</sup>				154.9 ft <sup>2</sup>						
4 Room dimensions														
5 Room area														
	Ty	Construction number	U-value (Btuh/ft <sup>2</sup> -°F)	Or	HTM (Btuh/ft <sup>2</sup> )		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12F-0sw	0.065	n	4.99	0.48	79	79	393	38	126	101	504	49
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	25	0	614	283
	W	15B19-0wc-6	0.069	n	3.73	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
11	W	12F-0sw	0.065	e	4.99	0.48	155	103	512	49	106	106	527	51
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	53	0	1289	2490	0	0	0	0
	D	11D0	0.390	e	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	e	3.77	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	s	4.99	0.48	72	72	359	35	0	0	0	0
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	s	3.85	0.05	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	w	4.99	0.48	151	87	435	42	0	0	0	0
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	43	0	1043	2016	0	0	0	0
	D	11D0	0.390	w	29.91	7.25	21	21	628	152	0	0	0	0
	W	15B19-0wc-6	0.069	w	3.85	0.05	0	0	0	0	0	0	0	0
	C	16B-50ad	0.020	-	1.53	0.84	648	648	994	545	155	155	238	130
	F	21A-28v	0.022	-	1.69	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion													
	Envelope loss/gain								5652	5103			1882	486
12	a) Infiltration								946	95			480	48
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0
			Appliances/other							0				0
	Subtotal (lines 6 to 13)								6598	5198			2362	534
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								6598	5198			2362	534
15	Duct loads								-0%	0%			0	0
	Total room load								6598	5198			2362	534
	Air required (cfm)								201	414			72	43

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



**Right-J® Worksheet**  
*Entire House*  
**Comfort Air Design dba Wiemer Heating**

**Job:** 5208 Rock Hollow  
**Date:** May 01, 2019  
**By:** Gene Miller  
**Plan:** 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

1 Room name				Bath 5.5 ft				Bedroom 3 32.5 ft						
2 Exposed wall				9.0 ft 5.5 ft x 8.3 ft heat/cool				9.0 ft 1.0 ft x 146.8 ft heat/cool						
3 Room height				45.4 ft <sup>2</sup>				146.8 ft <sup>2</sup>						
4 Room dimensions														
5 Room area														
	Ty	Construction number	U-value (Btuh/ft <sup>2</sup> -°F)	Or	HTM (Btuh/ft <sup>2</sup> )		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12F-0sw	0.065	n	4.99	0.48	50	46	227	22	122	122	606	58
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	4	0	98	45	0	0	0	0
	W	15B19-0wc-6	0.069	n	3.73	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0	0	0	0	0
11	W	12F-0sw	0.065	e	4.99	0.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	e	3.77	0.04	0	0	0	0	0	0	0	0
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	s	4.99	0.48	0	0	0	0	61	61	303	29
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	s	3.85	0.05	0	0	0	0	0	0	0	0
	W	12F-0sw	0.065	w	4.99	0.48	0	0	0	0	110	85	425	41
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	0	0	0	0	25	0	614	1186
	D	11D0	0.390	w	29.91	7.25	0	0	0	0	0	0	0	0
	W	15B19-0wc-6	0.069	w	3.85	0.05	0	0	0	0	0	0	0	0
	C	16B-50ad	0.020	-	1.53	0.84	45	45	70	38	147	147	225	124
	F	21A-28v	0.022	-	1.69	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-6				341
	Envelope loss/gain								395	100			2172	1779
12	a) Infiltration								103	10			606	61
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0
			Appliances/other							0				0
	Subtotal (lines 6 to 13)								497	110			2778	1840
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								497	110			2778	1840
15	Duct loads								-0%	0%			0	0
	Total room load								497	110			2778	1840
	Air required (cfm)								15	9			85	147

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





# Right-J® Worksheet

## Entire House

### Comfort Air Design dba Wiemer Heating

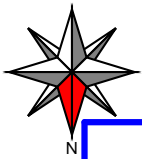
Job: 5208 Rock Hollow  
 Date: May 01, 2019  
 By: Gene Miller  
 Plan: 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

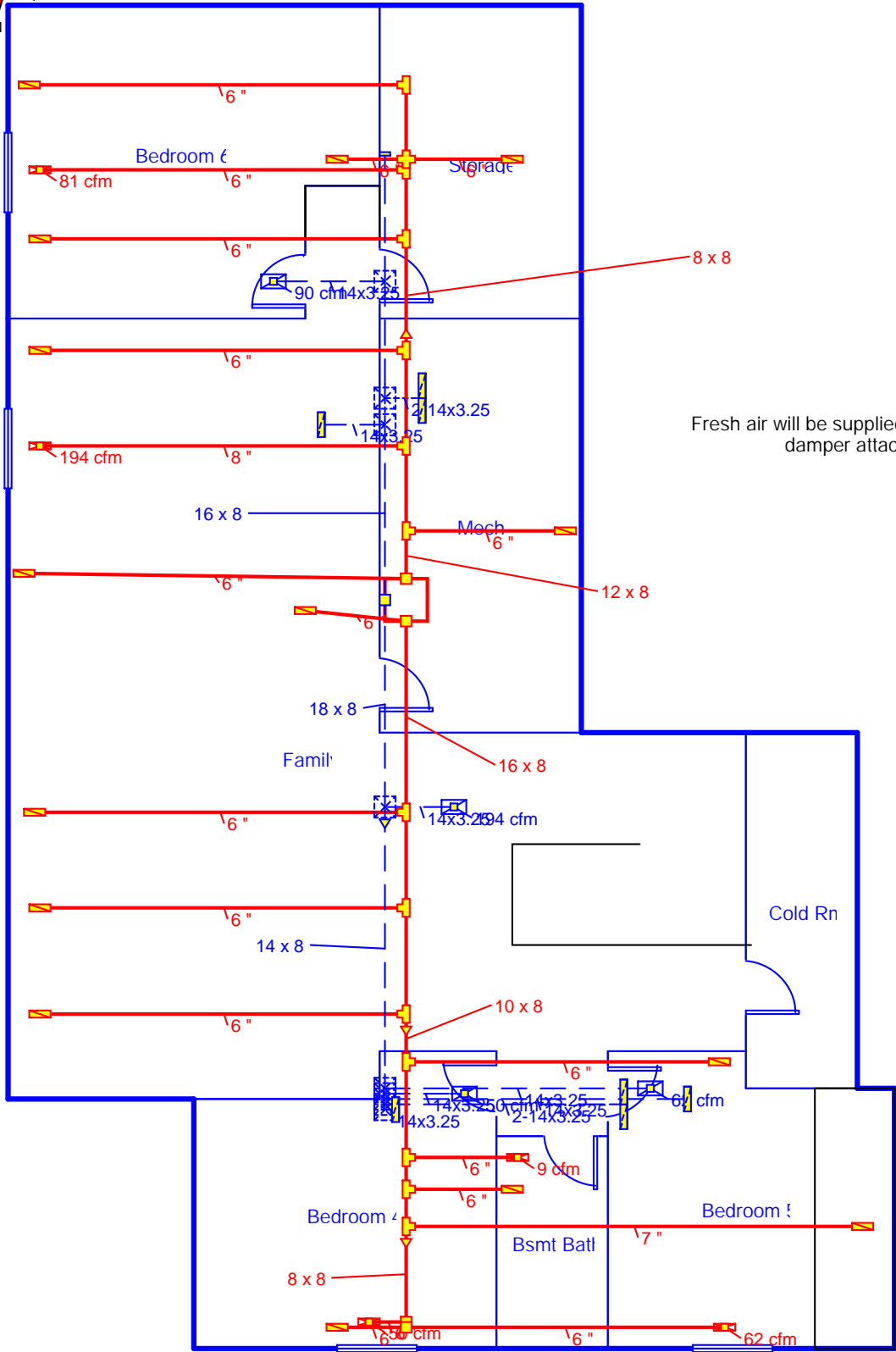
					M TR									
1	Room name				9.0 ft      7.5 ft									
2	Exposed wall				4.8 x 7.5 ft									
3	Room height				heat/cool									
4	Room dimensions				35.6 ft <sup>2</sup>									
5	Room area													
	Ty	Construction number	U-value (Btuh/ft <sup>2</sup> -°F)	Or	HTM (Btuh/ft <sup>2</sup> )		Area (ft <sup>2</sup> ) or perimeter (ft)		Load (Btuh)		Area or perimeter		Load	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12F-0sw	0.065	n	4.99	0.48	0	0	0	0				
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0				
	W	15B19-0wc-6	0.069	n	3.73	0.04	0	0	0	0				
	G	2 glazing, clr low-e	0.320	n	24.54	11.32	0	0	0	0				
11	W	12F-0sw	0.065	e	4.99	0.48	0	0	0	0				
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0				
	D	11D0	0.390	e	29.91	7.25	0	0	0	0				
	W	15B19-0wc-6	0.069	e	3.77	0.04	0	0	0	0				
	G	2 glazing, clr low-e	0.320	e	24.54	47.42	0	0	0	0				
	W	12F-0sw	0.065	s	4.99	0.48	0	0	0	0				
	G	2 glazing, clr low-e	0.320	s	24.54	30.42	0	0	0	0				
	W	15B19-0wc-6	0.069	s	3.85	0.05	0	0	0	0				
	W	12F-0sw	0.065	w	4.99	0.48	68	68	337	32				
	G	2 glazing, clr low-e	0.320	w	24.54	47.42	0	0	0	0				
	D	11D0	0.390	w	29.91	7.25	0	0	0	0				
	W	15B19-0wc-6	0.069	w	3.85	0.05	0	0	0	0				
	C	16B-50ad	0.020	-	1.53	0.84	36	36	55	30				
	F	21A-28v	0.022	-	1.69	0.00	0	0	0	0				
6	c) AED excursion									-4				
	Envelope loss/gain									391	59			
12	a) Infiltration									140	14			
	b) Room ventilation									0	0			
13	Internal gains:		Occupants @	230			0			0	0			
			Appliances/other							0	0			
	Subtotal (lines 6 to 13)									531	73			
	Less external load									0	0			
	Less transfer									0	0			
	Redistribution									0	0			
14	Subtotal									531	73			
15	Duct loads									0	0			
	Total room load									531	73			
	Air required (cfm)									16	6			

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





# Basement



Fresh air will be supplied with a 6 inch round pipe and damper attached to the return

**Job #: 5208 Rock Hollow**  
**Performed by Gene Miller for:**  
 Touchstone Homes

**Comfort Air Design dba Wiemer Heating**

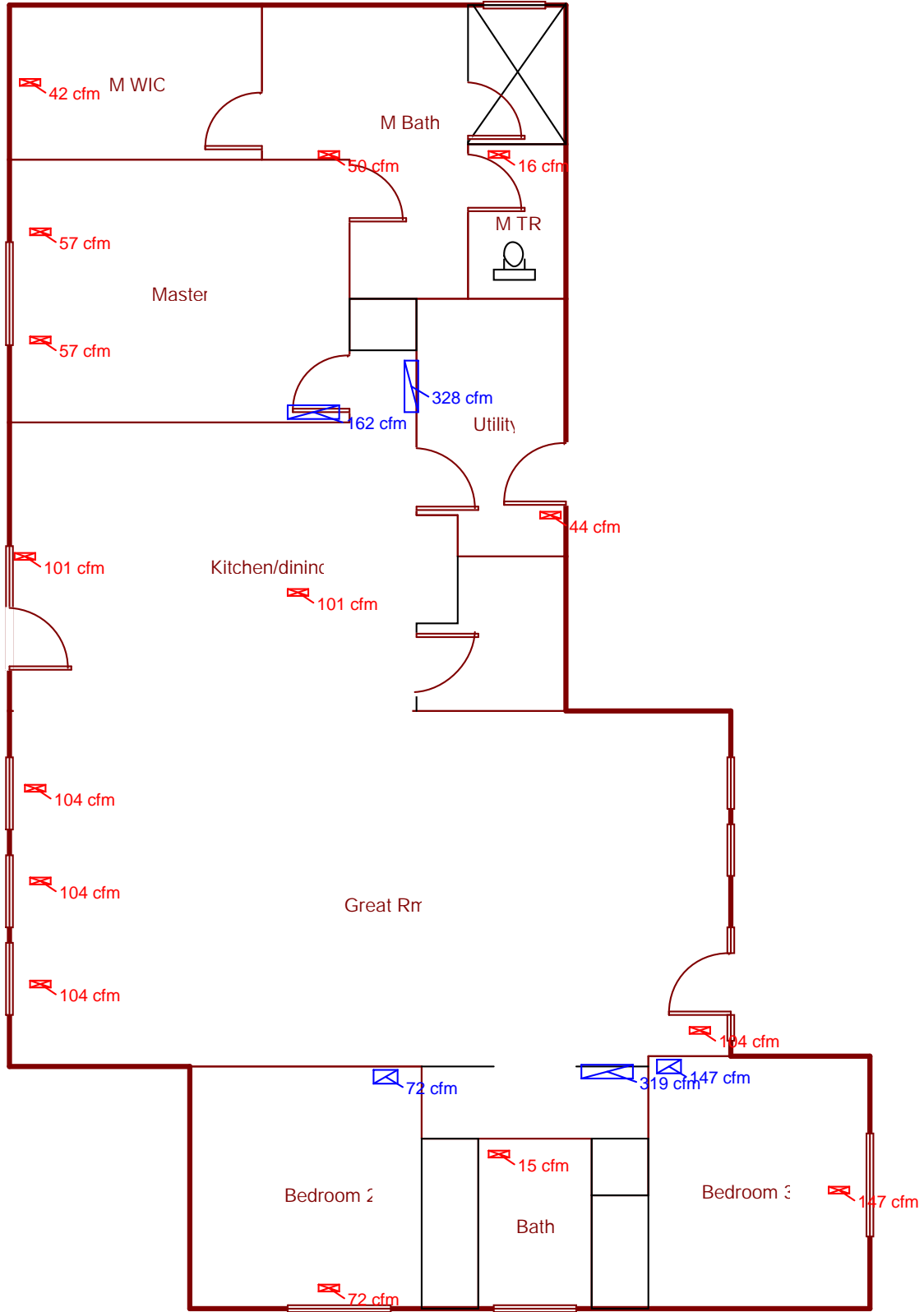
PO Box  
 Idaho Falls, ID 83401  
 Phone: 208-523-3848

Scale: 1 : 92

Page 1  
 Right-Suite@Universal 2019  
 19.0.04 RSU01114  
 2019-May-02 10:02:26  
 ...ne Builders\5208 Rock Hollow.ru



# Main



**Job #: 5208 Rock Hollow**  
**Performed by Gene Miller for:**  
Touchstone Homes

**Comfort Air Design dba Wiemer Heating**

PO Box  
Idaho Falls, ID 83401  
Phone: 208-523-3848

Scale: 1 : 92

Page 2  
Right-Suite@Universal 2019  
19.0.04 RSU01114  
2019-May-02 10:02:27  
...ne Builders\5208 Rock Hollow.ru

# Duct System Summary

## Entire House

### Comfort Air Design dba Wiemer Heating

Job: 5208 Rock Hollow  
 Date: May 01, 2019  
 By: Gene Miller  
 Plan: 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

## Project Information

For: Touchstone Homes

	<b>Heating</b>	<b>Cooling</b>
External static pressure	0.90 in H2O	0.90 in H2O
Pressure losses	0.41 in H2O	0.41 in H2O
Available static pressure	0.49 in H2O	0.49 in H2O
Supply / return available pressure	0.220 / 0.270 in H2O	0.220 / 0.270 in H2O
Lowest friction rate	0.093 in/100ft	0.093 in/100ft
Actual air flow	1070 cfm	1160 cfm
Total effective length (TEL)	526 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	h 497	15	9	0.115	6.0	0x0	ShMt	31.8	160.0	st2A
Bedroom 2	h 2362	72	43	0.106	6.0	0x0	ShMt	36.5	170.0	st2B
Bedroom 3	c 1840	85	147	0.110	7.0	0x0	ShMt	50.0	150.0	st2A
Bedroom 4	h 1628	50	15	0.102	6.0	0x0	ShMt	34.8	180.0	st2B
Bedroom 5	h 2050	62	17	0.101	6.0	0x0	ShMt	48.3	170.0	st2B
Bedroom 6	h 2666	81	61	0.106	6.0	0x0	ShMt	36.5	170.0	st1A
Bsmt Bath	h 298	9	0	0.110	6.0	0x0	ShMt	30.5	170.0	st2A
Family	h 6390	194	68	0.134	8.0	0x0	ShMt	23.5	140.0	st1
Great Rm	c 1300	50	104	0.133	6.0	0x0	ShMt	35.8	130.0	st2
Great Rm-A	c 1300	50	104	0.102	6.0	0x0	ShMt	35.5	180.0	st2A
Great Rm-B	c 1300	50	104	0.125	6.0	0x0	ShMt	26.5	150.0	st2
Great Rm-C	c 1300	50	104	0.129	6.0	0x0	ShMt	30.8	140.0	st2
Kitchen/dining	c 1272	50	101	0.195	6.0	0x0	ShMt	18.0	95.0	
Kitchen/dining-A	c 1272	50	101	0.220	6.0	0x0	ShMt	4.8	95.0	
M Bath	h 1648	50	27	0.120	6.0	0x0	ShMt	23.0	160.0	st1A
M TR	h 531	16	6	0.119	6.0	0x0	ShMt	24.8	160.0	st1A
M WIC	h 1395	42	15	0.093	6.0	0x0	ShMt	41.0	195.0	st1A
Master	c 716	25	57	0.103	6.0	0x0	ShMt	33.3	180.0	st1A
Master-A	c 716	25	57	0.139	6.0	0x0	ShMt	28.0	130.0	st1
Utility	h 1450	44	22	0.138	6.0	0x0	ShMt	9.8	150.0	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
st1A	Peak AVF	215	166	0.093	483	7.9	8 x 8	ShtMetl	st1
st1	Peak AVF	478	313	0.093	717	10.6	8 x 12	ShtMetl	
st2B	Peak AVF	184	74	0.101	413	7.3	8 x 8	ShtMetl	st2A
st2A	Peak AVF	343	333	0.101	617	9.2	8 x 10	ShtMetl	st2
st2	Peak AVF	493	644	0.101	725	11.7	8 x 16	ShtMetl	

## 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
rb3	0x0	194	68	93.0	0.290	615	6.0	3.25x14	10x9	SJSp	rt1
rb1	0x0	90	61	225.3	0.120	285	5.4	3.25x14	10x9	SJSp	rt2
rb2	0x0	62	17	145.5	0.186	197	4.3	3.25x14	10x9	SJSp	rt1A
rb4	0x0	50	15	147.0	0.184	157	4.0	3.25x14	10x9	SJSp	rt1A
rb5	0x0	193	328	216.3	0.125	520	8.7	2-3.25x14	2-10x18	SJSp	rt2
rb6	0x0	158	162	91.3	0.296	513	5.6	3.25x14	10x9	SJSp	rt2
rb7	0x0	72	43	279.5	0.097	227	5.2	3.25x14	10x9	SJSp	rt1A
rb8	0x0	85	147	167.8	0.161	464	6.1	3.25x14	10x9	SJSp	rt1A
rb9	0x0	166	319	290.0	0.093	506	9.1	2-3.25x14	2-10x18	SJSp	rt1A

## 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	628	608	0.093	628	11.7	8 x 18	ShtMetl	
rt1A	Peak AVF	434	540	0.093	695	11.1	8 x 14	ShtMetl	rt1
rt2	Peak AVF	442	552	0.120	621	10.6	8 x 16	ShtMetl	

**Static Pressure and Friction Rate**  
*Entire House*  
**Comfort Air Design dba Wiemer Heating**

Job: 5208 Rock Hollow  
 Date: May 01, 2019  
 By: Gene Miller  
 Plan: 5208 Rock Hollow

PO Box, Idaho Falls, ID 83401 Phone: 208-523-3848

**Project Information**

For: Touchstone Homes

**Available Static Pressure**

	Heating (in H2O)	Cooling (in H2O)
External static pressure	0.90	0.90
Pressure losses		
Coil	0.22	0.22
Heat exchanger	0	0
Supply diffusers	0.03	0.03
Return grilles	0.03	0.03
Filter	0.10	0.10
Humidifier	0	0
Balancing damper	0.03	0.03
Other device	0	0
Available static pressure	0.49	0.49

**Total Effective Length**

	Supply (ft)	Return (ft)
Measured length of run-out	18	11
Measured length of trunk	23	24
Equivalent length of fittings	195	255
Total length	236	290
Total effective length		526

**Friction Rate**

	Heating (in/100ft)		Cooling (in/100ft)	
Supply Ducts	0.093	OK	0.093	OK
Return Ducts	0.093	OK	0.093	OK

**Fitting Equivalent Length Details**

Supply	4AD=60, 2A0=35, 2A1=45, 12H1=20, 1C=35: TotalEL=195
Return	6M=20, 6B5=110, 6BB=25, 6BA=10, 6BA=10, 6BA=10, 12H1=20, 5A=40, 6BA=10: TotalEL=255