



Load Multizone Summary Report

Barra Designs,LLC.

Job: Manual J Sample
 Date: 1/27/24
 By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

Infiltration Summary

ZONE NAME	Heating				Cooling			
	Volume ft³	ACH	AVF cfm	HTM Btuh/ft²	Volume ft³	ACH	AVF cfm	HTM Btuh/ft²
AH2	21623	0.22	80	1.4	21623	0.12	42	0.4
AH1	8699	0.32	46	1.4	8699	0.17	24	0.4
(Unconditioned)	0	0	0	0	0	0	0	0
Entire House	30322	0.25	126	1.4	30322	0.13	66	0.4

Load and AVF Summary

ROOM NAME	Area ft²	Htg load Btuh	Clg load Btuh	Htg AVF cfm	Clg AVF cfm
Office 2	120	3515	2002	115	90
Playroom	176	4006	5105	131	229
Side Entry	65	1364	725	45	32
Kitchen	178	2208	4033	72	181
Nook	141	3365	1202	110	54
Powder	39	486	101	16	5
Entry	115	2727	1250	89	56
Dining	141	3310	1166	109	52
Living	423	5013	4816	164	216
Office	144	2828	1796	93	80
Parlour	235	3277	1333	108	60
Master Closet	172	1484	390	49	17
Master Bed	301	3392	3550	111	159
Master Bath	252	5192	2425	170	109
M.Toilet	31	24	42	1	2
Breezeway	170	5358	4876	176	219
AH2	2703	47549	34813	1560	1560
Bedroom 1	162	2382	2821	96	120
Bathroom 3	76	938	624	38	27
Laundry	50	59	725	2	31
Bedroom 2	193	1535	1785	62	76
1-2 Bath	65	1029	617	41	26
Vanity 2	46	641	409	26	17
Vanity 1	47	666	425	27	18
Bedroom 3	146	1976	2351	79	100
Hallway	182	3659	2377	147	101
AH1	967	12884	12134	518	518
Garage	312	0	0	0	0
Storage	24	0	0	0	0
Pantry	20	0	0	0	0
Stairwell Up	85	0	0	0	0
Closet	23	0	0	0	0
Closet 1	39	0	0	0	0
Stairwell Down	53	0	0	0	0

Closet 2	38	0	0	0	0
Closet 3	32	0	0	0	0
(Unconditioned)	625	0	0	0	0
Entire House	4294	60433	46947	2078	2078



Project Information

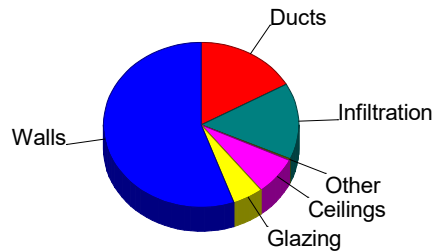
For: Manual J Sample, Barra designs,LLC.
 72 Albermarle Ave, New Rochelle, NY 10801
 Email: info@barradesigns.com

Design Conditions

Location: Houston Executive, TX, US Elevation: 168 ft Latitude: 30°N		Indoor: Indoor temperature (°F) Design TD (°F) Relative humidity (%) Moisture difference (gr/lb)	Heating 70 38 50 33.8	Cooling 75 21 50 43.7
Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 32 - - 15.0	Cooling 96 20 (M) 77 7.5	Infiltration: Method Construction quality Fireplaces	Simplified Semi-tight 0

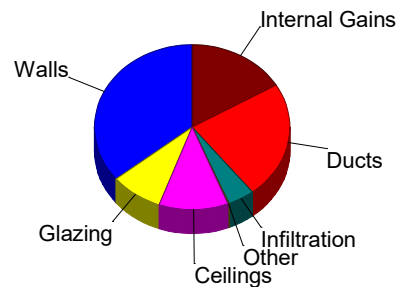
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.5	7142	55.4
Glazing	9.1	657	5.1
Doors	0	0	0
Ceilings	1.0	955	7.4
Floors	0.6	41	0.3
Infiltration	1.4	1922	14.9
Ducts		2167	16.8
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		12884	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	2.1	4343	35.8
Glazing	14.7	1058	8.7
Doors	0	0	0
Ceilings	1.4	1392	11.5
Floors	0.3	22	0.2
Infiltration	0.4	539	4.4
Ducts		2780	22.9
Ventilation		0	0
Internal gains		2000	16.5
Blower		0	0
Adjustments		0	0
Total		12134	100.0



Latent Cooling Load = 1213 Btuh
 Overall U-value = 0.074 Btuh/ft²-°F, Window / Floor Area = 7.4 %

Data entries checked.



Project Information

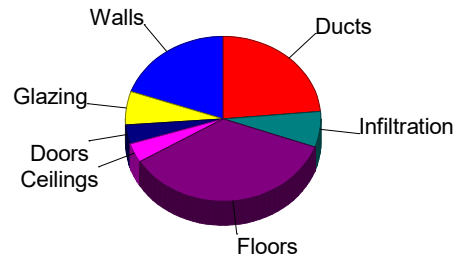
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Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 32 - - 15.0	Cooling 96 20 (M) 77 7.5	Infiltration: Method Construction quality Fireplaces
			Simplified Semi-tight 0

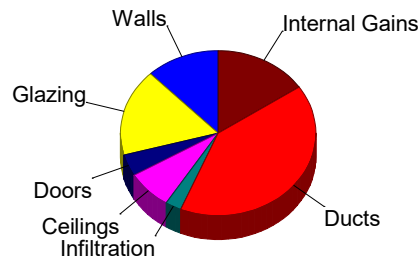
Heating

Component	Btuh/ft²	Btuh	% of load
Walls	3.5	9319	19.6
Glazing	9.1	3128	6.6
Doors	14.8	1764	3.7
Ceilings	1.0	1805	3.8
Floors	6.3	17018	35.8
Infiltration	1.4	3327	7.0
Ducts		11188	23.5
Piping		0	0
Humidification		0	0
Ventilation		0	0
Adjustments		0	0
Total		47549	100.0



Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	1.6	4237	12.2
Glazing	17.3	5945	17.1
Doors	12.4	1480	4.3
Ceilings	1.5	2632	7.6
Floors	0	0	0
Infiltration	0.4	933	2.7
Ducts		14166	40.7
Ventilation		0	0
Internal gains		5420	15.6
Blower		0	0
Adjustments		0	0
Total		34813	100.0



Latent Cooling Load = 4847 Btuh
 Overall U-value = 0.113 Btuh/ft²-°F, Window / Floor Area = 12.7 %

Data entries checked.



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Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 32 - - 15.0	Cooling 96 20 (M) 77 7.5	Infiltration: Method Construction quality Fireplaces
		Simplified Semi-tight 0	

Construction descriptions

	Or	Area ft²	U-value Btuh/ft²·°F	Insul R ft²·°F/Btuh	Htg HTM Btuh/ft²	Loss Btuh	Clg HTM Btuh/ft²	Gain Btuh
Walls 12C-0bw: Fm wall, brk 4" ext, 1/2" wood shth, r-13 cav ins, 1/2" gypsum board int fsh, 2"x4" wood fm, 16" o.c. stud	n	346	0.091	13.0	3.46	1195	1.58	547
	ne	14	0.091	13.0	3.46	49	1.58	22
	e	548	0.091	13.0	3.46	1895	1.58	868
	s	460	0.091	13.0	3.46	1589	1.58	728
	w	487	0.091	13.0	3.46	1684	1.58	771
	nw	13	0.091	13.0	3.46	44	1.58	20
	all	1867	0.091	13.0	3.46	6456	1.58	2956
Partitions 12C-0sw: Fm wall, stucco ext, r-13 cav ins, 2"x4" wood fm, 16" o.c. stud		828	0.091	13.0	3.46	2863	1.55	1281

Windows

1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 1 ft overhang (4 ft window ht, 0 ft sep.); 6.67 ft head ht	n	18	0.240	0	9.12	164	9.50	171
	n	20	0.240	0	9.12	182	9.50	190
	n	44	0.240	0	9.12	401	9.50	418
	w	24	0.240	0	9.12	219	25.1	602
	all	106	0.240	0	9.12	967	13.0	1381
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 1 ft overhang (6 ft window ht, 0 ft sep.); 6.67 ft head ht	e	15	0.240	0	9.12	137	26.5	397
	e	120	0.240	0	9.12	1094	26.5	3175
	s	15	0.240	0	9.12	137	9.70	146
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 1 ft overhang (2.5 ft window ht, 0 ft sep.); 6.67 ft head ht	all	150	0.240	0	9.12	1368	24.8	3717
	s	30	0.240	0	9.12	274	9.50	285
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 1 ft overhang (5 ft window ht, 0 ft sep.); 6.67 ft head ht	s	15	0.240	0	9.12	137	9.50	142
	s	42	0.240	0	9.12	383	9.97	419



Doors

11D0: Door, wd sc type	n	39	0.390	0	14.8	571	12.4	479
	e	21	0.390	0	14.8	311	12.4	261
	s	39	0.390	0	14.8	571	12.4	479
	w	21	0.390	0	14.8	311	12.4	261
	all	119	0.390	0	14.8	1764	12.4	1480

Ceilings

16B-30ad: Attic ceiling, asphalt shingles roof mat, r-31 roof ins, r-30 ceil ins		119	0.032	30.0	1.22	145	1.77	211
16B-38ad: Attic ceiling, asphalt shingles roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh		1681	0.026	38.0	0.99	1660	1.44	2421

Floors

22C-5wpm: Bg floor, heavy dry or light damp soil, full int ins cov, on grade depth, r-3 ins, hrd wd flr fnsh		395	1.135	5.0	43.1	17018	0	0
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Project Information

For: Manual J Sample, Barra designs,LLC.
 72 Albermarle Ave, New Rochelle, NY 10801

Email: info@barradesigns.com

Design Conditions

Location: Houston Executive, TX, US Elevation: 168 ft Latitude: 30°N			Indoor: Indoor temperature (°F) 70 Design TD (°F) 38 Relative humidity (%) 50 Moisture difference (gr/lb) 33.8	Heating 70 38 50 33.8	Cooling 75 21 50 43.7
Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 32 - - 15.0	Cooling 96 20 (M) 77 7.5	Infiltration: Method Construction quality Fireplaces	Simplified Semi-tight 0	

Construction descriptions

Construction descriptions	Or	Area ft ²	U-value Btuh/ft ² °F	Insul R ft ² °F/Btuh	Htg HTM Btuh/ft ²	Loss Btuh	Clg HTM Btuh/ft ²	Gain Btuh
Walls 12C-0sw: Frm wall, 1/2" wood shth, r-13 cav ins, 1/2" gypsum board int fnsh, 2"x4" wood frm, 16" o.c. stud	n	422	0.091	13.0	3.46	1460	2.45	1034
	e	188	0.091	13.0	3.46	651	2.45	461
	s	448	0.091	13.0	3.46	1548	2.45	1096
	w	215	0.091	13.0	3.46	744	2.45	527
	all	1274	0.091	13.0	3.46	4404	2.45	3117

Partitions

12C-0sw: Frm wall, stucco ext, r-13 cav ins, 2"x4" wood frm, 16" o.c. stud		792	0.091	13.0	3.46	2739	1.55	1225
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Windows

1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 1 ft overhang (4 ft window ht, 0 ft sep.); 6.67 ft head ht	e	12	0.240	0	9.12	109	25.1	301
	w	12	0.240	0	9.12	109	25.1	301
	all	24	0.240	0	9.12	219	25.1	602
1D-c2ov: 2 glazing, clr outr, air gas, vnl frm mat, clr innr, 1/4" gap, 1/8" thk; NFRC rated (SHGC=0.29); 50% blinds 45°, medium; 1 ft overhang (3 ft window ht, 0 ft sep.); 6.67 ft head ht	n	30	0.240	0	9.12	274	9.50	285
	s	18	0.240	0	9.12	164	9.50	171
	all	48	0.240	0	9.12	438	9.50	456

Doors

(none)

Ceilings

16B-38ad: Attic ceiling, asphalt shingles roof mat, r-38 ceil ins, 1/2" gypsum board int fnsh		967	0.026	38.0	0.99	955	1.44	1392
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Floors

19C-19cscp: Flr floor, frm flr, 6" thkns, carpet flr fnsh, r-2 ext ins, r-19 cav ins, tight cowl ovr, r-11 wall insul		63	0.049	30.0	0.65	41	0.35	22
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Project Summary
AH1
 Barra Designs,LLC.

Job: Manual J Sample
 Date: 1/27/24
 By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

Project Information

For: Manual J Sample, Barra designs,LLC.
 72 Albermarle Ave, New Rochelle, NY 10801

Notes: Email: info@barradesigns.com
 Manual J report package for test Residence.
 Insulation Values, Wall (R13), Ceiling (R-38), SHGC(.24), U-Factor (.29).
 Weather Climate Data - Houston, Texas.

Design Information

Weather: Houston Executive, TX, US

Winter Design Conditions

Outside db 32 °F
 Inside db 70 °F
 Design TD 38 °F

Summer Design Conditions

Outside db 96 °F
 Inside db 75 °F
 Design TD 21 °F
 Daily range M
 Relative humidity 50 %
 Moisture difference 44 gr/lb

Heating Summary

Structure 10717 Btuh
 Ducts 2167 Btuh
 Central vent (0 cfm)
 (none) 0 Btuh
 Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 12884 Btuh

Sensible Cooling Equipment Load Sizing

Structure 9354 Btuh
 Ducts 2780 Btuh
 Central vent (0 cfm)
 (none) 0 Btuh
 Blower 0 Btuh
 Use manufacturer's data n
 Rate/swing multiplier 1.00
 Equipment sensible load 12195 Btuh

Infiltration

Method Simplified
 Construction quality Semi-tight
 Fireplaces 0

Latent Cooling Equipment Load Sizing

Structure 710 Btuh
 Ducts 503 Btuh
 Central vent (0 cfm)
 (none) 0 Btuh
 Equipment latent load 1213 Btuh

	Heating	Cooling
Area (ft ²)	967	967
Volume (ft ³)	8699	8699
Air changes/hour	0.32	0.17
Equiv. AVF (cfm)	46	24

Equipment Total Load (Sen+Lat) 13408 Btuh
 Req. total capacity at 0.70 SHR 1.5 ton

Heating Equipment Summary

Make
 Trade
 Model
 AHRI ref

Efficiency 80 AFUE
 Heating input 0 Btuh
 Heating output 0 Btuh
 Temperature rise 0 °F
 Actual air flow 518 cfm
 Air flow factor 0.040 cfm/Btuh
 Static pressure 0.60 in H2O
 Space thermostat

Cooling Equipment Summary

Make
 Trade
 Cond
 Coil
 AHRI ref
 Efficiency 0 SEER
 Sensible cooling 0 Btuh
 Latent cooling 0 Btuh
 Total cooling 0 Btuh
 Actual air flow 518 cfm
 Air flow factor 0.043 cfm/Btuh
 Static pressure 0 in H2O
 Load sensible heat ratio 0.91

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



Project Summary

AH2

Barra Designs,LLC.

Job: Manual J Sample
 Date: 1/27/24
 By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

Project Information

For: Manual J Sample, Barra designs,LLC.
 72 Albermarle Ave, New Rochelle, NY 10801

Notes: Email: info@barradesigns.com
 Manual J report package for test Residence.
 Insulation Values, Wall (R13), Ceiling (R-38), SHGC(.24), U-Factor (.29).
 Weather Climate Data - Houston, Texas.

Design Information

Weather: Houston Executive, TX, US

Winter Design Conditions

Outside db 32 °F
 Inside db 70 °F
 Design TD 38 °F

Summer Design Conditions

Outside db 96 °F
 Inside db 75 °F
 Design TD 21 °F
 Daily range M
 Relative humidity 50 %
 Moisture difference 44 gr/lb

Heating Summary

Structure 36361 Btuh
 Ducts 11188 Btuh
 Central vent (0 cfm)
 (none) 0 Btuh
 Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 47549 Btuh

Sensible Cooling Equipment Load Sizing

Structure 20647 Btuh
 Ducts 14166 Btuh
 Central vent (0 cfm)
 (none) 0 Btuh
 Blower 0 Btuh
 Use manufacturer's data n
 Rate/swing multiplier 1.00
 Equipment sensible load 34987 Btuh

Infiltration

Method Simplified
 Construction quality Semi-tight
 Fireplaces 0

Latent Cooling Equipment Load Sizing

Structure 2029 Btuh
 Ducts 2818 Btuh
 Central vent (0 cfm)
 (none) 0 Btuh
 Equipment latent load 4847 Btuh

	Heating	Cooling
Area (ft ²)	2703	2703
Volume (ft ³)	21623	21623
Air changes/hour	0.22	0.12
Equiv. AVF (cfm)	80	42

Equipment Total Load (Sen+Lat) 39834 Btuh
 Req. total capacity at 0.70 SHR 4.2 ton

Heating Equipment Summary

Make Goodman MFG.
 Trade Goodman
 Model GSZ140481K* + ARUF61D14** + TXV
 AHRI ref 201650585

Efficiency 9 HSPF
 Heating input
 Heating output 45745 Btuh @ 47°F
 Temperature rise 27 °F
 Actual air flow 1560 cfm
 Air flow factor 0.033 cfm/Btuh
 Static pressure 0.60 in H2O
 Space thermostat
 Capacity balance point = 32 °F

Cooling Equipment Summary

Make Goodman MFG.
 Trade Goodman
 Cond GSZ140481K* + ARUF61D14** + TXV
 Coil
 AHRI ref 201650585
 Efficiency 12.2 EER, 14 SEER

Sensible cooling 32181 Btuh
 Latent cooling 13792 Btuh
 Total cooling 45973 Btuh
 Actual air flow 1560 cfm
 Air flow factor 0.045 cfm/Btuh
 Static pressure 0.60 in H2O
 Load sensible heat ratio 0.88

Backup:
 Input = 13 kW, Output = 45350 Btuh, 100 AFUE

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





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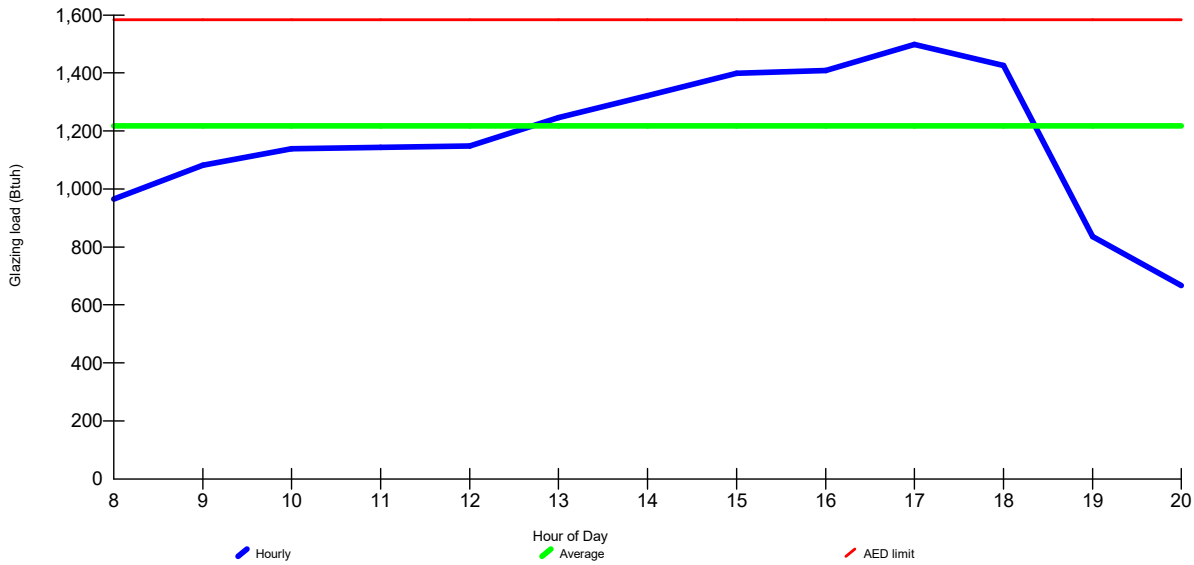
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Design Conditions

Location:		Indoor:	Heating	Cooling
Houston Executive, TX, US		Indoor temperature (°F)	70	75
Elevation:	168 ft	Design TD (°F)	38	21
Latitude:	30°N	Relative humidity (%)	50	50
Outdoor:		Moisture difference (gr/lb)	33.8	43.7
	Heating	Cooling		
Dry bulb (°F)	32	96		
Daily range (°F)	-	20 (M)		
Wet bulb (°F)	-	77		
Wind speed (mph)	15.0	7.5		

Test for Adequate Exposure Diversity

Hourly Glazing Load



Maximum hourly glazing load exceeds average by 23.1%.

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

AED excursion: 0 Btuh



Project Information

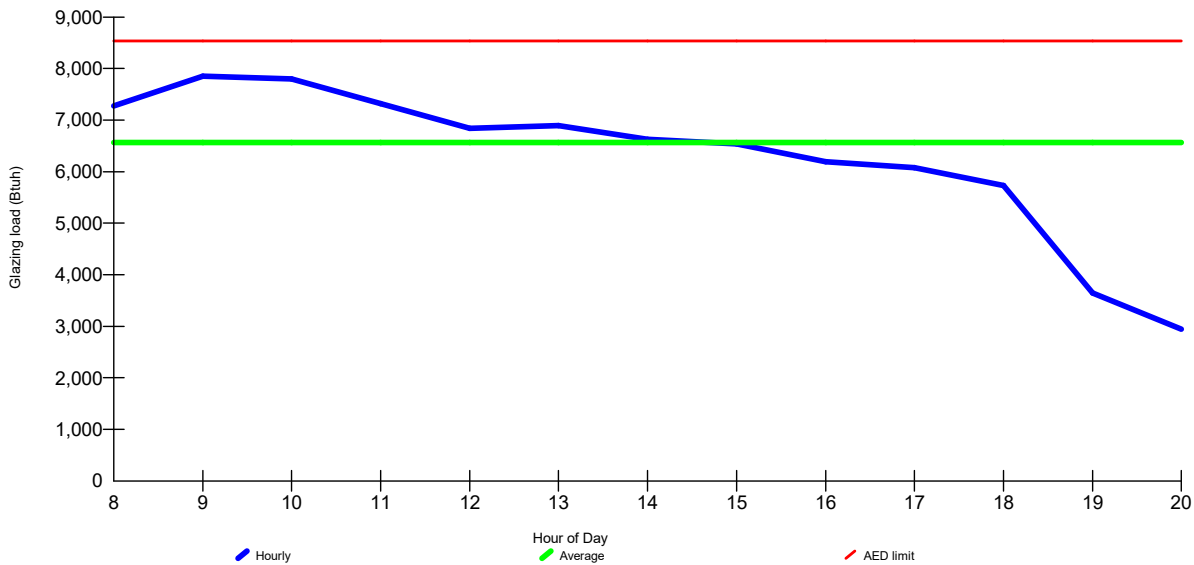
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Design Conditions

Location:		Indoor:		Heating	Cooling
Houston Executive, TX, US		Indoor temperature (°F)		70	75
Elevation: 168 ft		Design TD (°F)		38	21
Latitude: 30°N		Relative humidity (%)		50	50
		Moisture difference (gr/lb)		33.8	43.7
Outdoor:	Heating	Cooling	Infiltration:		
Dry bulb (°F)	32	96			
Daily range (°F)	-	20 (M)			
Wet bulb (°F)	-	77			
Wind speed (mph)	15.0	7.5			

Test for Adequate Exposure Diversity

Hourly Glazing Load



Maximum hourly glazing load exceeds average by 19.6%.

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

AED excursion: 0 Btuh



Right-J® Worksheet AH1

Barra Designs,LLC.

Job: Manual J Sample

Date: 1/27/24

By: db

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1 Room name				AH1				Bedroom 1							
2 Exposed wall				237.5 ft				42.0 ft							
3 Room height				9.0 ft				9.0 ft heat/cool							
4 Room dimensions				966.6 ft²				162.0 ft² 1.0 x 162.0 ft							
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	12C-0bw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0	
11	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	n	3.46	2.45	452	422	1460	1034	0	0	0	0	
	G	1D-c2ov	0.240	n	9.12	9.50	30	0	274	285	0	0	0	0	
	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0	
	W	12C-0bw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0	
	D	11D0	0.390	e	0.00	0.00	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	e	3.46	2.45	200	188	651	461	25	25	86	61	
	G	1D-c2ov	0.240	e	9.12	25.10	12	2	109	301	0	0	0	0	
	W	12C-0bw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0	
	D	11D0	0.390	s	0.00	0.00	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	s	3.46	2.45	466	448	1548	1096	86	77	265	187	
	G	1D-c2ov	0.240	s	9.12	9.50	18	18	164	171	9	9	82	85	
	W	12C-0bw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0	
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0	
	D	11D0	0.390	w	0.00	0.00	0	0	0	0	0	0	0	0	
	W	12C-0sw	0.091	w	3.46	2.45	227	215	744	527	167	155	534	378	
	G	1D-c2ov	0.240	w	9.12	25.10	12	2	109	301	12	2	109	301	
	W	12C-0bw	0.091	nw	0.00	0.00	0	0	0	0	0	0	0	0	
	P	12C-0sw	0.091	-	3.46	1.55	792	792	2739	1225	101	101	350	157	
	C	16B-30ad	0.032	-	0.00	0.00	0	0	0	0	0	0	0	0	
	C	16B-38ad	0.026	-	0.99	1.44	967	967	955	1392	162	162	160	233	
	F	19C-19csp	0.049	-	0.65	0.35	63	63	41	22	0	0	0	0	
	F	22C-5wpm	1.135	-	0.00	0.00	0	0	0	0	0	0	0	0	
6	c) AED excursion									0				161	
	Envelope loss/gain									8795	6815			1586	1564
12	a) Infiltration									1922	539			395	111
	b) Room ventilation									0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0	0
			Appliances/other							2000				500	
	Subtotal (lines 6 to 13)									10717	9354			1981	2175
	Less external load									0	0			0	0
	Less transfer									0	0			0	0
	Redistribution									0	0			0	0
14	Subtotal									10717	9354			1981	2175
15	Duct loads						20%	30%		2167	2780	20%	30%	401	646
	Total room load									12884	12134			2382	2821
	Air required (cfm)									518	518			96	120

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



Right-Suite® Universal 2023 23.0.04 RSU24965

2024-Feb-06 10:40:28

...nts\Clients Project Files\12719 PEBBLEBROOK.rut Calc = MJ8 Front Door faces: NW

Page 1



Right-J® Worksheet AH1

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name		Bathroom 3						Laundry						
2 Exposed wall		18.0 ft						0 ft						
3 Room height		9.0 ft						9.0 ft						
4 Room dimensions		11.3 x 6.8 ft						5.5 x 9.0 ft						
5 Room area		75.9 ft²						49.5 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	12C-0bw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
11	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	3.46	2.45	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	3.46	2.45	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	25.10	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.46	2.45	101	101	350	248	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.46	2.45	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	0.00	0.00	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	61	61	210	94	0	0	0	0
	C	16B-30ad	0.032	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.99	1.44	76	76	75	109	50	50	49	71
	F	19C-19cscap	0.049	-	0.65	0.35	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-11				-13
	Envelope loss/gain								635	440			49	59
12	a) Infiltration								145	41			0	0
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @		230		0			0	0			0
			Appliances/other							0				500
	Subtotal (lines 6 to 13)								780	481			49	559
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								780	481			49	559
15	Duct loads						20%	30%	158	143	20%	30%	10	166
	Total room load								938	624			59	725
	Air required (cfm)								38	27			2	31

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



Right-J® Worksheet AH1

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name		Bedroom 2						1-2 Bath						
2 Exposed wall		25.8 ft						22.5 ft						
3 Room height		9.0 ft						9.0 ft						
4 Room dimensions		1.0 x 192.8 ft						1.0 x 65.0 ft						
5 Room area		192.8 ft²						65.0 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	12C-0bw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
11	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	3.46	2.45	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	3.46	2.45	25	25	86	61	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	25.10	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.46	2.45	104	95	327	231	56	56	195	138
	G	1D-c2ov	0.240	s	9.12	9.50	9	9	82	85	0	0	0	0
	W	12C-0bw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.46	2.45	25	25	86	61	0	0	0	0
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	0.00	0.00	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	79	79	272	122	146	146	506	226
	C	16B-30ad	0.032	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.99	1.44	193	193	190	278	65	65	64	94
	F	19C-19cscp	0.049	-	0.65	0.35	24	24	15	8	17	17	11	6
	F	22C-5wpm	1.135	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-31				-11
	Envelope loss/gain								1058	815			775	453
12	a) Infiltration								219	61			80	23
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @		230		0			0	0			0
			Appliances/other							500				0
	Subtotal (lines 6 to 13)								1277	1376			856	475
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								1277	1376			856	475
15	Duct loads						20%	30%	258	409	20%	30%	173	141
	Total room load								1535	1785			1029	617
	Air required (cfm)								62	76			41	26

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



Right-Suite® Universal 2023 23.0.04 RSU24965

2024-Feb-06 10:40:28

...nts\Clients Project Files\12719 PEBBLEBROOK.rut Calc = MJ8 Front Door faces: NW

Page 3



Right-J® Worksheet AH1

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name				Vanity 2 13.0 ft				Vanity 1 13.5 ft						
2 Exposed wall				9.0 ft heat/cool				9.0 ft heat/cool						
3 Room height				6.5 x 7.0 ft				6.8 x 7.0 ft						
4 Room dimensions				45.5 ft²				47.3 ft²						
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	12C-0bw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
11	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	3.46	2.45	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	3.46	2.45	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	25.10	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.46	2.45	59	59	202	143	61	61	210	149
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.46	2.45	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	0.00	0.00	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	59	59	202	90	61	61	210	94
	C	16B-30ad	0.032	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.99	1.44	46	46	45	66	47	47	47	68
	F	19C-19cscap	0.049	-	0.65	0.35	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-7				-7
	Envelope loss/gain								450	292			467	303
12	a) Infiltration								84	23			87	24
	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)								533	316			554	328
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								533	316			554	328
15	Duct loads					20%	30%		108	94	20%	30%	112	97
	Total room load								641	409			666	425
	Air required (cfm)								26	17			27	18

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



Right-Suite® Universal 2023 23.0.04 RSU24965

2024-Feb-06 10:40:28

...nts\Clients Project Files\12719 PEBBLEBROOK.rut Calc = MJ8 Front Door faces: NW

Page 4



Right-J® Worksheet AH1

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name				Bedroom 3 32.0 ft				Hallway 70.8 ft						
2 Exposed wall				9.0 ft 1.0 x 146.4 ft heat/cool				9.0 ft 1.0 x 182.2 ft heat/cool						
3 Room height				146.4 ft²				182.2 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	12C-0bw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
11	D	11D0	0.390	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	3.46	2.45	95	80	275	195	358	343	1185	839
	G	1D-c2ov	0.240	n	9.12	9.50	15	0	137	142	15	0	137	142
	W	12C-0bw	0.091	ne	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	3.46	2.45	133	121	418	296	18	18	62	44
	G	1D-c2ov	0.240	e	9.12	25.10	12	2	109	301	0	0	0	0
	W	12C-0bw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	3.46	2.45	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	3.46	2.45	18	18	62	44	18	18	62	44
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	0.00	0.00	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	43	43	148	66	243	243	840	376
	C	16B-30ad	0.032	-	0.00	0.00	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.99	1.44	146	146	145	211	182	182	180	262
	F	19C-19cscap	0.049	-	0.65	0.35	0	0	0	0	23	23	15	8
	F	22C-5wpm	1.135	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion													
	Envelope loss/gain								1293	1214			2481	1675
12	a) Infiltration								350	98			562	158
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230		0				0	0			0
			Appliances/other							500				0
	Subtotal (lines 6 to 13)								1644	1813			3044	1833
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								1644	1813			3044	1833
15	Duct loads					20%	30%		332	539	20%	30%	615	545
	Total room load								1976	2351			3659	2377
	Air required (cfm)								79	100			147	101

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



Right-Suite® Universal 2023 23.0.04 RSU24965

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...nts\Clients Project Files\12719 PEBBLEBROOK.rut Calc = MJ8 Front Door faces: NW

Page 5



Right-J® Worksheet AH2

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name				AH2		Office 2								
2 Exposed wall				394.6 ft		31.5 ft								
3 Room height				8.0 ft		8.0 ft								
4 Room dimensions						9.3 x 13.0 ft								
5 Room area				2702.8 ft²		120.3 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	12C-0bw	0.091	n	3.46	1.58	466	346	1195	547	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	18	0	164	171	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	20	0	182	190	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	44	0	401	418	0	0	0	0
11	D	11D0	0.390	n	14.82	12.44	39	39	571	479	0	0	0	0
	W	12C-0sw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	3.46	1.58	14	14	49	22	0	0	0	0
	W	12C-0bw	0.091	e	3.46	1.58	704	548	1895	868	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	15	2	137	397	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	120	17	1094	3175	0	0	0	0
	D	11D0	0.390	e	14.82	12.44	21	21	311	261	0	0	0	0
	W	12C-0sw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	3.46	1.58	600	460	1589	728	74	59	204	93
	G	1D-c2ov	0.240	s	9.12	9.50	30	30	274	285	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	15	15	137	142	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.70	15	14	137	146	15	14	137	146
	G	1D-c2ov	0.240	s	9.12	9.97	42	32	383	419	0	0	0	0
	D	11D0	0.390	s	14.82	12.44	39	39	571	479	0	0	0	0
	W	12C-0sw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	3.46	1.58	532	487	1684	771	104	104	360	165
	G	1D-c2ov	0.240	w	9.12	25.10	24	5	219	602	0	0	0	0
	D	11D0	0.390	w	14.82	12.44	21	21	311	261	0	0	0	0
	W	12C-0sw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	3.46	1.58	13	13	44	20	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	828	828	2863	1281	74	74	256	114
	C	16B-30ad	0.032	-	1.22	1.77	119	119	145	211	0	0	0	0
	C	16B-38ad	0.026	-	0.99	1.44	1681	1681	1660	2421	120	120	119	173
	F	19C-19cscap	0.049	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	43.13	0.00	2703	395	17018	0	120	32	1359	0
6	c) AED excursion								0				-75	
	Envelope loss/gain								33034		14294		2434 616	
12	a) Infiltration								3327		933		254 71	
	b) Room ventilation								0		0		0 0	
13	Internal gains:		Occupants @ 230		4				920		0		0 0	
			Appliances/other						4500				500	
	Subtotal (lines 6 to 13)								36361		20647		2688 1187	
	Less external load								0		0		0 0	
	Less transfer								0		0		0 0	
	Redistribution								0		0		0 0	
14	Subtotal								36361		20647		2688 1187	
15	Duct loads				31%		69%		11188		14166		31% 69% 827 815	
	Total room load								47549		34813		3515 2002	
	Air required (cfm)								1560		1560		115 90	

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



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...nts\Clients Project Files\12719 PEBBLEBROOK.rut Calc = MJ8 Front Door faces: NW

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Right-J® Worksheet AH2

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name		Playroom						Side Entry						
2 Exposed wall		31.8 ft						9.0 ft						
3 Room height		8.0 ft heat/cool						8.0 ft heat/cool						
4 Room dimensions		175.5 ft² 13.5 x 13.0 ft						65.0 ft² 10.0 x 6.5 ft						
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	12C-0bw	0.091	n	3.46	1.58	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
11	D	11D0	0.390	n	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	3.46	1.58	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	3.46	1.58	104	44	152	70	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	60	8	547	1587	0	0	0	0
	D	11D0	0.390	e	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	3.46	1.58	108	108	373	171	30	30	104	48
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.70	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.97	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	3.46	1.58	0	0	0	0	42	21	73	33
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	14.82	12.44	0	0	0	0	21	21	311	261
	W	12C-0sw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	3.46	1.58	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	42	42	145	65	0	0	0	0
	C	16B-30ad	0.032	-	1.22	1.77	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.99	1.44	176	176	173	253	65	65	64	94
	F	19C-19cscap	0.049	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	43.13	0.00	176	32	1369	0	65	9	388	0
6	c) AED excursion									297				-35
	Envelope loss/gain								2761	2443			940	401
12	a) Infiltration								303	85			103	29
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @		230		0			0	0			0
			Appliances/other							500				0
	Subtotal (lines 6 to 13)								3064	3028			1043	430
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								3064	3028			1043	430
15	Duct loads								31%	69%			31%	69%
	Total room load								4006	5105			1364	725
	Air required (cfm)								131	229			45	32

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



Right-Suite® Universal 2023 23.0.04 RSU24965

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Right-J® Worksheet AH2

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name				Kitchen 18.5 ft 8.0 ft 10.0 x 17.8 ft heat/cool 177.5 ft²				Nook 29.0 ft 8.0 ft 12.0 x 11.8 ft heat/cool 141.0 ft²									
2 Exposed wall	3 Room height	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	12C-0bw	0.091	n	3.46	1.58		0	0	0	0	96	74	256	117		
	G	1D-c2ov	0.240	n	9.12	9.50		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50		0	0	0	0	22	0	201	209		
11	D	11D0	0.390	n	14.82	12.44		0	0	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	0.00	0.00		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00		0	0	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	3.46	1.58		0	0	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	3.46	1.58		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46		0	0	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	14.82	12.44		0	0	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	0.00	0.00		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00		0	0	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	3.46	1.58		0	0	0	0	16	16	55	25		
	G	1D-c2ov	0.240	s	9.12	9.50		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.70		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.97		0	0	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	14.82	12.44		0	0	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	0.00	0.00		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00		0	0	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	3.46	1.58		142	118	408	187	94	94	325	149		
	G	1D-c2ov	0.240	w	9.12	25.10		24	5	219	602	0	0	0	0	0	0
	D	11D0	0.390	w	14.82	12.44		0	0	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	0.00	0.00		0	0	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00		0	0	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	3.46	1.58		0	0	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55		6	6	21	9	26	26	90	40		
	C	16B-30ad	0.032	-	1.22	1.77		3	3	3	4	23	23	29	42		
	C	16B-38ad	0.026	-	0.99	1.44		38	38	37	54	74	74	73	106		
	F	19C-19cscap	0.049	-	0.00	0.00		0	0	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	43.13	0.00		178	19	798	0	141	29	1251	0		
6	c) AED excursion																-57
	Envelope loss/gain									1486	1135			2279	631		
12	a) Infiltration									203	57			294	83		
	b) Room ventilation									0	0			0	0		
13	Internal gains:		Occupants @		230		0				0	0					0
			Appliances/other								1200						0
	Subtotal (lines 6 to 13)									1689	2392			2573	713		
	Less external load									0	0			0	0		
	Less transfer									0	0			0	0		
	Redistribution									0	0			0	0		
14	Subtotal									1689	2392			2573	713		
15	Duct loads								31%	69%	520	1641	31%	69%	792	489	
	Total room load									2208	4033			3365	1202		
	Air required (cfm)									72	181			110	54		

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



Right-Suite® Universal 2023 23.0.04 RSU24965

2024-Feb-06 10:40:28

...nts\Clients Project Files\12719 PEBBLEBROOK.rut Calc = MJ8 Front Door faces: NW

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Right-J® Worksheet AH2

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name				Powder		Entry								
2 Exposed wall				8.0 ft		21.0 ft								
3 Room height				5.3 ft		1.0 ft								
4 Room dimensions				x 7.5 ft		x 114.6 ft								
5 Room area				39.4 ft²		114.6 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	12C-0bw	0.091	n	3.46	1.58	0	0	0	0	68	30	102	47
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
11	D	11D0	0.390	n	14.82	12.44	0	0	0	0	39	39	571	479
	W	12C-0sw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	3.46	1.58	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	3.46	1.58	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	3.46	1.58	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.70	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.97	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	3.46	1.58	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	3.46	1.58	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	42	42	145	65	100	100	346	155
	C	16B-30ad	0.032	-	1.22	1.77	0	0	0	0	23	23	28	41
	C	16B-38ad	0.026	-	0.99	1.44	0	0	0	0	36	36	36	52
	F	19C-19cscop	0.049	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	43.13	0.00	39	5	226	0	115	21	906	0
6	c) AED excursion													-60
	Envelope loss/gain								372	60			1988	714
12	a) Infiltration								0	0			97	27
	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)								372	60			2085	742
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								372	60			2085	742
15	Duct loads						31%	69%	114	41	31%	69%	642	509
	Total room load								486	101			2727	1250
	Air required (cfm)								16	5			89	56

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



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Right-Suite® Universal 2023 23.0.04 RSU24965

...nts\Clients Project Files\12719 PEBBLEBROOK.rut Calc = MJ8 Front Door faces: NW



Right-J® Worksheet AH2

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name				Dining 29.8 ft				Living 44.5 ft						
2 Exposed wall				8.0 ft heat/cool				8.0 ft heat/cool						
3 Room height				12.0 x 11.8 ft				1.0 x 422.8 ft						
4 Room dimensions				141.0 ft²				422.8 ft²						
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	12C-0bw	0.091	n	3.46	1.58	96	74	256	117	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	22	0	201	209	0	0	0	0
11	D	11D0	0.390	n	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	3.46	1.58	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	3.46	1.58	20	20	69	32	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	3.46	1.58	0	0	0	0	164	134	463	212
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	30	30	274	285
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.70	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.97	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	3.46	1.58	26	26	90	41	0	0	0	0
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	3.46	1.58	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	96	96	332	149	192	192	664	297
	C	16B-30ad	0.032	-	1.22	1.77	0	0	0	0	38	38	46	67
	C	16B-38ad	0.026	-	0.99	1.44	99	99	98	143	236	236	233	340
	F	19C-19cscap	0.049	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	43.13	0.00	141	30	1283	0	423	45	1919	0
6	c) AED excursion													-230
	Envelope loss/gain								2328	634			3599	971
12	a) Infiltration								203	57			234	66
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230		0				0	4			920
			Appliances/other							0				900
	Subtotal (lines 6 to 13)								2531	691			3833	2856
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								2531	691			3833	2856
15	Duct loads								31%	69%			31%	69%
	Total room load								3310	1166			5013	4816
	Air required (cfm)								109	52			164	216

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



Right-Suite® Universal 2023 23.0.04 RSU24965

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...nts\Clients Project Files\12719 PEBBLEBROOK.rut Calc = MJ8 Front Door faces: NW



Right-J® Worksheet AH2

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name				Office 24.0 ft				Parlour 26.8 ft						
2 Exposed wall				8.0 ft 12.3 x 11.8 ft heat/cool				8.0 ft 1.0 x 235.2 ft heat/cool						
3 Room height				143.9 ft²				235.2 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	12C-0bw	0.091	n	3.46	1.58	98	80	277	127	92	72	249	114
	G	1D-c2ov	0.240	n	9.12	9.50	18	0	164	171	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	20	0	182	190
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	14.82	12.44	0	0	0	0	0	0	0	0
11	W	12C-0sw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	3.46	1.58	0	0	0	0	14	14	49	22
	W	12C-0bw	0.091	e	3.46	1.58	94	94	325	149	38	38	131	60
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	3.46	1.58	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.70	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.97	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	3.46	1.58	0	0	0	0	58	58	201	92
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	3.46	1.58	0	0	0	0	13	13	44	20
	P	12C-0sw	0.091	-	3.46	1.55	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.22	1.77	0	0	0	0	0	0	0	0
	C	16B-38ad	0.026	-	0.99	1.44	89	89	87	128	187	187	185	269
	F	19C-19cscap	0.049	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	43.13	0.00	144	24	1035	0	235	27	1157	0
6	c) AED excursion													
	Envelope loss/gain								1888	488			2199	704
12	a) Infiltration								274	77			307	86
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230			0			0	0			0
			Appliances/other							500				0
	Subtotal (lines 6 to 13)								2163	1065			2506	791
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								2163	1065			2506	791
15	Duct loads						31%	69%	665	731	31%	69%	771	542
	Total room load								2828	1796			3277	1333
	Air required (cfm)								93	80			108	60

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



Right-Suite® Universal 2023 23.0.04 RSU24965

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Right-J® Worksheet AH2

Barra Designs,LLC.

Job: Manual J Sample

Date: 1/27/24

By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name				Master Closet				Master Bed						
2 Exposed wall				13.5 ft				23.0 ft						
3 Room height				8.0 ft heat/cool				8.0 ft heat/cool						
4 Room dimensions				12.8 x 13.5 ft				1.0 x 301.4 ft						
5 Room area				172.1 ft²				301.4 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	12C-0bw	0.091	n	3.46	1.58	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
11	D	11D0	0.390	n	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	3.46	1.58	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	3.46	1.58	108	108	373	171	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	3.46	1.58	0	0	0	0	106	26	88	40
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.70	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.97	0	0	0	0	42	32	383	419
	D	11D0	0.390	s	14.82	12.44	0	0	0	0	39	39	571	479
	W	12C-0sw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	3.46	1.58	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	3.46	1.58	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	0	0	0	0	78	78	270	121
	C	16B-30ad	0.032	-	1.22	1.77	20	20	25	36	0	0	0	0
	C	16B-38ad	0.026	-	0.99	1.44	0	0	0	0	141	141	139	203
	F	19C-19cscap	0.049	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	43.13	0.00	172	14	582	0	301	23	992	0
6	c) AED excursion													-99
	Envelope loss/gain								980	188			2443	1163
12	a) Infiltration								154	43			151	42
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @		230		0			0	0			0
			Appliances/other							0				900
	Subtotal (lines 6 to 13)								1135	231			2594	2105
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								1135	231			2594	2105
15	Duct loads						31%	69%	349	159	31%	69%	798	1444
	Total room load								1484	390			3392	3550
	Air required (cfm)								49	17			111	159

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



Right-Suite® Universal 2023 23.0.04 RSU24965

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Right-J® Worksheet AH2

Barra Designs,LLC.

Job: Manual J Sample
Date: 1/27/24
By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name		Master Bath						M.Toilet						
2 Exposed wall		43.3 ft						0 ft						
3 Room height		8.0 ft						8.0 ft						
4 Room dimensions		1.0 x 252.4 ft						5.0 x 6.3 ft						
5 Room area		252.4 ft²						31.3 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	12C-0bw	0.091	n	3.46	1.58	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0	0	0	0	0
11	D	11D0	0.390	n	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	n	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	ne	3.46	1.58	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	e	3.46	1.58	178	163	564	258	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	15	2	137	397	0	0	0	0
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0	0	0	0	0
	D	11D0	0.390	e	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	s	3.46	1.58	102	87	301	138	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.50	15	15	137	142	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.70	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	9.12	9.97	0	0	0	0	0	0	0	0
	D	11D0	0.390	s	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	s	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	w	3.46	1.58	66	66	228	105	0	0	0	0
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0	0	0	0	0
	D	11D0	0.390	w	14.82	12.44	0	0	0	0	0	0	0	0
	W	12C-0sw	0.091	w	0.00	0.00	0	0	0	0	0	0	0	0
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	12C-0bw	0.091	nw	3.46	1.58	0	0	0	0	0	0	0	0
	P	12C-0sw	0.091	-	3.46	1.55	0	0	0	0	0	0	0	0
	C	16B-30ad	0.032	-	1.22	1.77	12	12	14	21	0	0	0	0
	C	16B-38ad	0.026	-	0.99	1.44	233	233	230	336	19	19	19	27
	F	19C-19cscap	0.049	-	0.00	0.00	0	0	0	0	0	0	0	0
	F	22C-5wpm	1.135	-	43.13	0.00	252	43	1865	0	31	0	0	0
6	c) AED excursion									-97				-2
	Envelope loss/gain								3476	1300			19	25
12	a) Infiltration								494	139			0	0
	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)								3971	1438			19	25
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								3971	1438			19	25
15	Duct loads								1222	987	31%	69%	6	17
	Total room load								5192	2425			24	42
	Air required (cfm)								170	109			1	2

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



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Right-J® Worksheet AH2

Barra Designs,LLC.

Job: Manual J Sample

Date: 1/27/24

By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

1 Room name				Breezeway										
2 Exposed wall				43.8 ft										
3 Room height				8.0 ft		heat/cool								
4 Room dimensions				1.0 x 169.6 ft										
5 Room area				169.6 ft²										
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) 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	12C-0bw	0.091	n	3.46	1.58	16	16	55	25				
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0				
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0				
	G	1D-c2ov	0.240	n	9.12	9.50	0	0	0	0				
11	D	11D0	0.390	n	14.82	12.44	0	0	0	0				
	W	12C-0sw	0.091	n	0.00	0.00	0	0	0	0				
	G	1D-c2ov	0.240	n	0.00	0.00	0	0	0	0				
	W	12C-0bw	0.091	ne	3.46	1.58	0	0	0	0				
	W	12C-0bw	0.091	e	3.46	1.58	162	81	280	128				
	G	1D-c2ov	0.240	e	9.12	26.46	0	0	0	0				
	G	1D-c2ov	0.240	e	9.12	26.46	60	8	547	1587				
	D	11D0	0.390	e	14.82	12.44	21	21	311	261				
	W	12C-0sw	0.091	e	0.00	0.00	0	0	0	0				
	G	1D-c2ov	0.240	e	0.00	0.00	0	0	0	0				
	W	12C-0bw	0.091	s	3.46	1.58	0	0	0	0				
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0				
	G	1D-c2ov	0.240	s	9.12	9.50	0	0	0	0				
	G	1D-c2ov	0.240	s	9.12	9.70	0	0	0	0				
	G	1D-c2ov	0.240	s	9.12	9.97	0	0	0	0				
	D	11D0	0.390	s	14.82	12.44	0	0	0	0				
	W	12C-0sw	0.091	s	0.00	0.00	0	0	0	0				
	G	1D-c2ov	0.240	s	0.00	0.00	0	0	0	0				
	W	12C-0bw	0.091	w	3.46	1.58	0	0	0	0				
	G	1D-c2ov	0.240	w	9.12	25.10	0	0	0	0				
	D	11D0	0.390	w	14.82	12.44	0	0	0	0				
	W	12C-0sw	0.091	w	0.00	0.00	0	0	0	0				
	G	1D-c2ov	0.240	w	0.00	0.00	0	0	0	0				
	W	12C-0bw	0.091	nw	3.46	1.58	0	0	0	0				
	P	12C-0sw	0.091	-	3.46	1.55	172	172	595	266				
	C	16B-30ad	0.032	-	1.22	1.77	0	0	0	0				
	C	16B-38ad	0.026	-	0.99	1.44	170	170	168	244				
	F	19C-19cscp	0.049	-	0.00	0.00	0	0	0	0				
	F	22C-5wpm	1.135	-	43.13	0.00	170	44	1887	0				
6	c) AED excursion									308				
	Envelope loss/gain								3843	2821				
12	a) Infiltration								254	71				
	b) Room ventilation								0	0				
13	Internal gains:		Occupants @	230			0			0				
			Appliances/other							0				
	Subtotal (lines 6 to 13)								4097	2892				
	Less external load								0	0				
	Less transfer								0	0				
	Redistribution								0	0				
14	Subtotal								4097	2892				
15	Duct loads						31%	69%	1261	1984				
	Total room load								5358	4876				
	Air required (cfm)								176	219				

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



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Loads for Multiple Orientations

AH2

Barra Designs,LLC.

Job: Manual J Sample
 Date: 1/27/24
 By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

Project Information

For: Manual J Sample, Barra designs,LLC.
 72 Albermarle Ave, New Rochelle, NY 10801

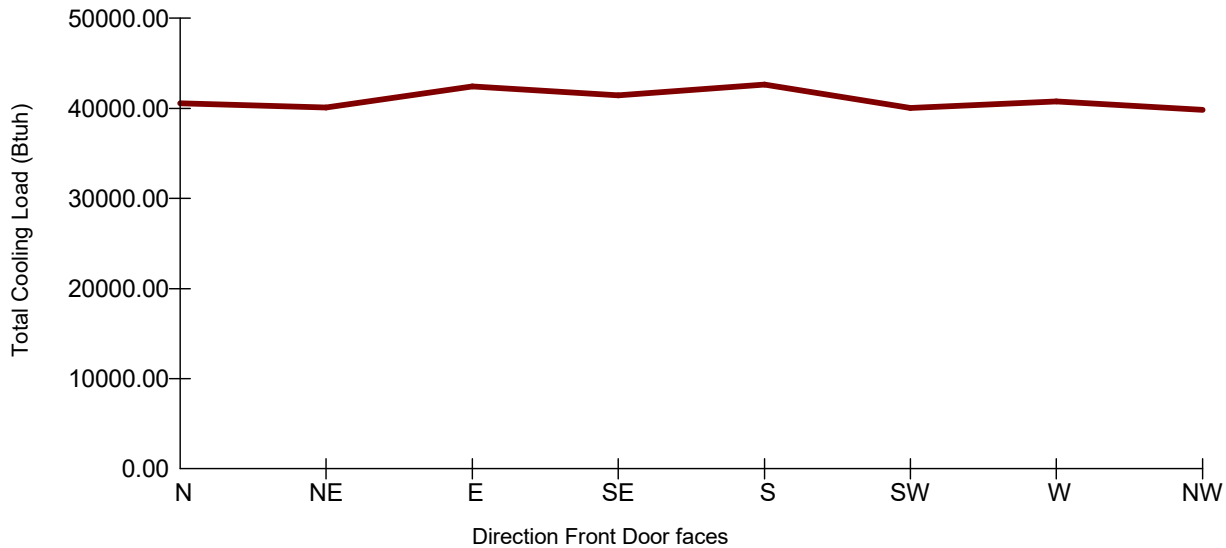
Email: info@barradesigns.com

Design Conditions

Location: Houston Executive, TX, US Elevation: 168 ft Latitude: 30°N	Indoor: Indoor temperature (°F) Design TD (°F) Relative humidity (%) Moisture difference (gr/lb)	Heating 70 38 50 33.8	Cooling 75 21 50 43.7
Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 32 - - 15.0	Cooling 96 20 (M) 77 7.5	Infiltration:

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	35716	35244	37594	36606	37779	35204	35944	34987
Latent Load (Btuh)	4847	4847	4847	4847	4847	4847	4847	4847
Total Load (Btuh)	40563	40091	42441	41453	42627	40052	40792	39834
Heating AVF (cfm)	1560	1560	1560	1560	1560	1560	1560	1560
Cooling AVF (cfm)	1560	1560	1560	1560	1560	1560	1560	1560

Building Orientation Cooling Load



Current Orientation: Front Door faces Northwest
 Highest Cooling Load: Front Door faces South

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



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Loads for Multiple Orientations

AH1

Barra Designs,LLC.

Job: Manual J Sample
 Date: 1/27/24
 By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

Project Information

For: Manual J Sample, Barra designs,LLC.
 72 Albermarle Ave, New Rochelle, NY 10801

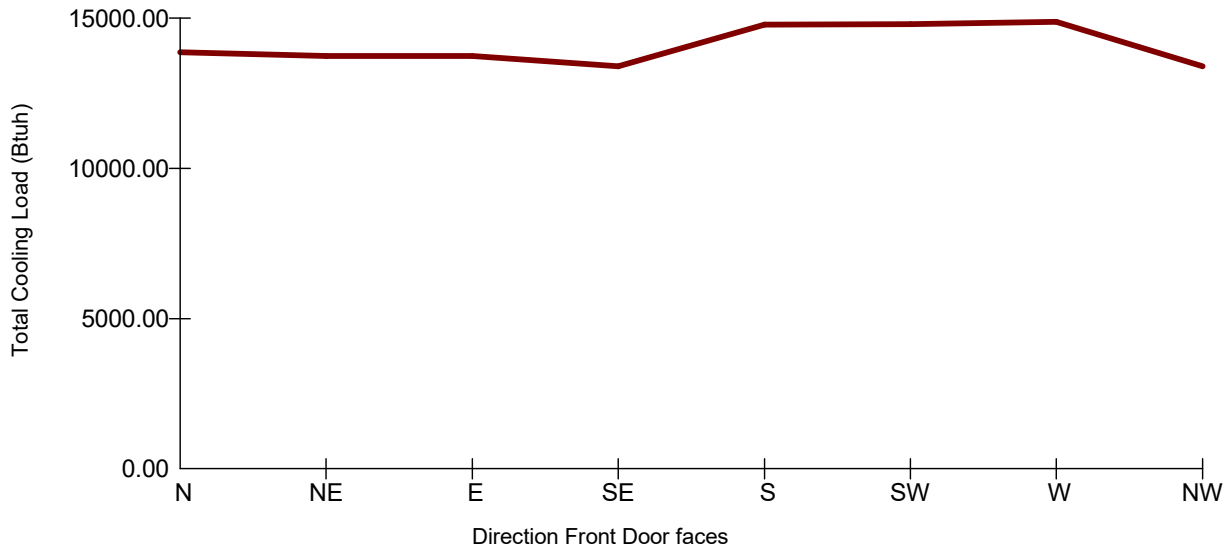
Email: info@barradesigns.com

Design Conditions

Location: Houston Executive, TX, US Elevation: 168 ft Latitude: 30°N	Indoor: Indoor temperature (°F) Design TD (°F) Relative humidity (%) Moisture difference (gr/lb)	Heating 70 38 50 33.8	Cooling 75 21 50 43.7
Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 32 - - 15.0	Cooling 96 20 (M) 77 7.5	Infiltration:

Front Door	North	Northeast	East	Southeast	South	Southwest	West	Northwest
Sensible Load (Btuh)	12656	12527	12532	12195	13445	13460	13528	12195
Latent Load (Btuh)	1217	1217	1217	1213	1348	1348	1348	1213
Total Load (Btuh)	13873	13744	13749	13408	14793	14808	14876	13408
Heating AVF (cfm)	538	532	532	518	567	568	571	518
Cooling AVF (cfm)	538	532	532	518	567	568	571	518

Building Orientation Cooling Load



Current Orientation: Front Door faces Northwest
 Highest Cooling Load: Front Door faces West

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



J1 Form - Worksheet A
AH1
Barra Designs,LLC.

Job: Manual J Sample
 Date: 1/27/24
 By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

Supporting Detail	
Project Name: 12719 PEBBLEBROOK	Date: 1/27/24
Address: 72 Albermarle Ave, New Rochelle, NY 10801	
Phone:	Job ID: Manual J Sample

Worksheet A Location and Design Conditions			
Weather Location: Houston Executive, TX, US	Elevation = 168	Latitude = 30	
Indoor Conditions, Heating: DB = 70 °F RH = 50 %	Indoor Conditions, Cooling: DB = 75 °F RH = 50 %		
Table 1 Conditions 99% DB = 32 °F 1% DB = 96 °F	Grains Difference = 44 gr/lb	Daily Range = M	
Design Temperature Differences	HTD = 38 °F	CTD = 21 °F	

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



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J1 Form - Worksheet A
AH2
Barra Designs,LLC.

Job: Manual J Sample
 Date: 1/27/24
 By: db

72 Albermarle Ave, New Rochelle, NY 10801 Email: info@barradesigns.com Web: www.barradesigns.com

Supporting Detail	
Project Name: 12719 PEBBLEBROOK	Date: 1/27/24
Address: 72 Albermarle Ave, New Rochelle, NY 10801	
Phone:	Job ID: Manual J Sample

Worksheet A Location and Design Conditions			
Weather Location: Houston Executive, TX, US	Elevation = 168	Latitude = 30	
Indoor Conditions, Heating: DB = 70 °F RH = 50 %	Indoor Conditions, Cooling: DB = 75 °F RH = 50 %		
Table 1 Conditions 99% DB = 32 °F 1% DB = 96 °F	Grains Difference = 44 gr/lb	Daily Range = M	
Design Temperature Differences	HTD = 38 °F	CTD = 21 °F	

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

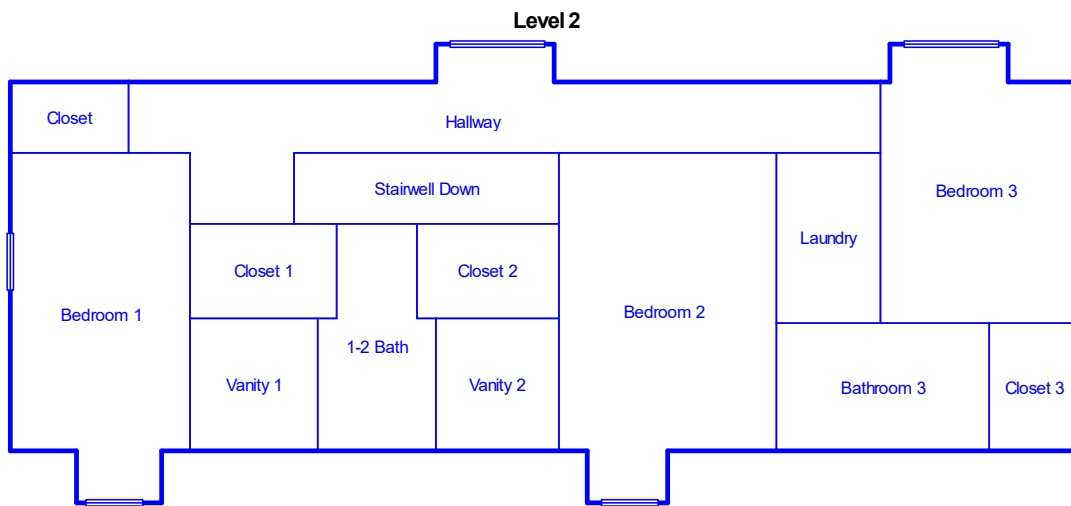
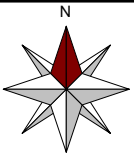


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Job #: Manual J Sample
Performed by db for:
Manual J Sample
72 Albermarle Ave
New Rochelle, NY 10801
info@barradesigns.com

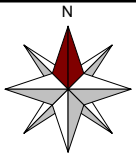
Barra Designs,LLC.

72 Albermarle Ave
New Rochelle, NY 10801

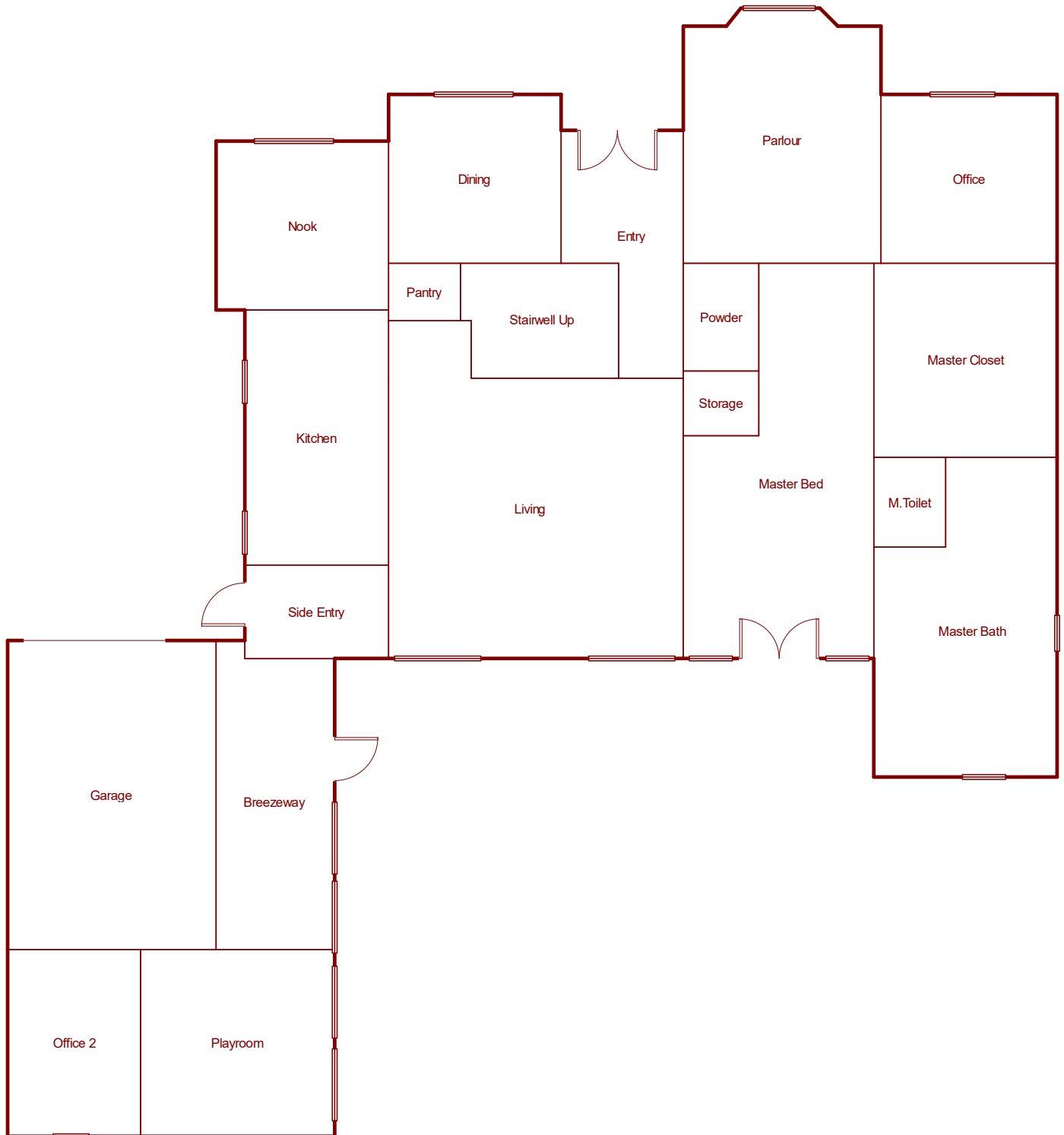
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Level 1



Job #: Manual J Sample
Performed by db for:
Manual J Sample
72 Albermarle Ave
New Rochelle, NY 10801
info@barradesigns.com

Barra Designs,LLC.
72 Albermarle Ave
New Rochelle, NY 10801

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