

Project Information

For: Josh Vida Home, (personal)
 58388 Crossview Lane, Osceola, IN 46561
 Phone: 574-361-3933
 Email: joshvida@gmail.com
 Notes: See assumptions page attached. Revisions per customer.

Design Information

Weather: Goshen Municipal, IN, US

Winter Design Conditions

Outside db **1** °F
 Inside db 70 °F
 Design TD 69 °F

Summer Design Conditions

Outside db 90 °F
 Inside db 75 °F
 Design TD 15 °F
 Daily range M
 Relative humidity 50 %
 Moisture difference 35 gr/lb

Heating Summary

Structure 18656 Btuh
 Ducts 0 Btuh
 Central vent (SER=50% 110 cfm) 4055 Btuh
 Heat recovery
 Humidification 0 Btuh
 Piping 0 Btuh
 Equipment load 22711 Btuh

Sensible Cooling Equipment Load Sizing

Structure 12993 Btuh
 Ducts 0 Btuh
 Central vent (SER=50% 110 cfm) 905 Btuh
 Heat recovery
 Blower 0 Btuh
 Use manufacturer's data n
 Rate/swing multiplier 0.95
 Equipment sensible load 13259 Btuh

Infiltration

Method Blower door
 Shielding / stories 3 (partial) / 1
 Pressure /ACH /AVF 50 Pa / 2.0 / 1228 cfm

	Heating	Cooling
Area (ft ²)	2670	2670
Volume (ft ³)	26615	26615
Air changes/hour	0.16	0.08
Equiv. AVF (cfm)	69	34

Latent Cooling Equipment Load Sizing

Structure 1570 Btuh
 Ducts 0 Btuh
 Central vent (110 cfm) 2509 Btuh
 Heat recovery
 Equipment latent load 4080 Btuh

Equipment Total Load (Sen+Lat) 17339 Btuh
 Req. total capacity at 0.70 SHR 1.6 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 609 cfm
 Air flow factor 0.033 cfm/Btuh
 Static pressure 0 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 609 cfm
 Air flow factor 0.047 cfm/Btuh
 Static pressure 0 in H2O
 Load sensible heat ratio 0.77

Bold/italic values have been manually overridden

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

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Design Information

	Htg	Clg		Infiltration
Outside db (°F)	1	90	Method	Blower door
Inside db (°F)	70	75	Shielding / stories	3 (partial) / 1
Design TD (°F)	69	15	Pressure /ACH /AVF	50 Pa / 2.0 / 1228 cfm
Daily range	-	M		
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	52	35		

HEATING EQUIPMENT

Make	
Trade	
Model	
AHRI ref	
Efficiency	80 AFUE
Heating input	0 Btuh
Heating output	0 Btuh
Temperature rise	0 °F
Actual air flow	609 cfm
Air flow factor	0.033 cfm/Btuh
Static pressure	0 in H2O
Space thermostat	

COOLING EQUIPMENT

Make	
Trade	
Cond	
Coil	
AHRI ref	
Efficiency	0 SEER
Sensible cooling	0 Btuh
Latent cooling	0 Btuh
Total cooling	0 Btuh
Actual air flow	609 cfm
Air flow factor	0.047 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.77

ROOM NAME	Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Dining	141	2191	1328	71	62
Foyer	83	969	256	32	12
Hall	66	77	49	3	2
Kitchen	343	581	1306	19	61
Living	364	1981	2210	65	104
Office 1	101	779	1014	25	48
Pantry	95	1330	848	43	40
b2 Vanity	39	391	71	13	3
b2 WIC	38	45	28	1	1
Bedroom 2	210	2182	1213	71	57
b3 Vanity	30	304	55	10	3
b3 WIC	29	34	21	1	1
Bath 2	52	308	68	10	3
Bedroom 3	186	1765	1377	58	64

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Laundry		85	99	496	3	23
Master Bath		166	1292	352	42	16
Master Bedroom		239	1825	1386	60	65
Master WIC		134	707	165	23	8
Mstr WC		23	450	380	15	18
Powder		29	33	21	1	1
Stair Hall		219	1312	350	43	16
First Floor	d	2670	18656	12993	609	609
Other equip loads			4055	905		
Equip. @ 0.95 RSM				13259		
Latent cooling				4080		
TOTALS		2670	22711	17339	609	609

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Design Conditions

Location: Goshen Municipal, IN, US Elevation: 830 ft Latitude: 42°N	Indoor: Indoor temperature (°F) Design TD (°F) Relative humidity (%) Moisture difference (gr/lb)	Heating 70 69 50 51.7	Cooling 75 15 50 34.5
Outdoor: Dry bulb (°F) Daily range (°F) Wet bulb (°F) Wind speed (mph)	Heating 1 - - 15.0	Cooling 90 20 (M) 74 7.5	Infiltration: Method Shielding / stories Pressure /ACH /AVF
		Blower door 3 (partial) / 1 50 Pa / 2.0 / 1228 cfm	

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 Frm wall, vnl ext, 1/2" wood shth, r-23 cav ins, 5/8" gypsum board int fnsh, r-9.6 ext bd ins, 2"x6" wood frm, 24" o.c. stud	n	564	0.036	32.6	2.48	1401	0.42	236
	e	607	0.036	32.6	2.48	1507	0.42	253
	s	391	0.036	32.6	2.48	971	0.42	163
	w	372	0.036	32.6	2.48	924	0.42	155
	all	1934	0.036	32.6	2.48	4803	0.42	808

Partitions

Frm wall, 5/8" gyp.bd ext, r-21 cav ins, 1/2" gypsum board int fnsh, r-9 ext bd ins, 2"x6" wood frm, 16" o.c. stud	393	0.037	32.6	2.55	1002	0.22	86
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Windows

4A5-2ocd: 2 glazing, clr low-e outr, argon gas, clad wd frm mat, clr innr, 1/2" gap, 1/4" thk; NFRC rated (SHGC=0.28); 2 ft overhang (7 ft window ht, 1 ft sep.); 8 ft head ht	n	35	0.190	0	13.1	459	8.29	290
4B5-2fc: 2 glazing, clr low-e outr, argon gas, clad wd frm mat, clr innr, 1/2" gap, 1/4" thk; NFRC rated (SHGC=0.28); 50% blinds 45°, medium; 2 ft overhang (4.5 ft window ht, 1 ft sep.); 8 ft head ht	e	27	0.190	0	13.1	354	23.3	628
Anderson 400 Clad: 2 glazing, clr low-e outr, argon gas, clad wd frm mat, clr innr, 1/2" gap, 1/4" thk; NFRC rated (SHGC=0.28); 50% blinds 45°, medium; 50% outdoor insect screen; 2 ft overhang (4.5 ft window ht, 1 ft sep.); 8 ft head ht	e	95	0.190	0	13.1	1239	20.9	1979
	e	27	0.280	0	19.3	522	22.2	599
	w	41	0.190	0	13.1	531	20.9	848
	all	162	0.190	0	14.1	2291	21.2	3427
4B5-2fc: 2 glazing, clr low-e outr, argon gas, clad wd frm mat, clr innr, 1/2" gap, 1/4" thk; NFRC rated (SHGC=0.28); 50% blinds 45°, medium; 2 ft overhang (4 ft window ht, 1 ft sep.); 8 ft head ht	s	14	0.190	0	13.1	184	7.00	98
4B5-2fc: 2 glazing, clr low-e outr, argon gas, clad wd frm mat, clr innr, 1/2" gap, 1/4" thk; NFRC rated (SHGC=0.28); 50% blinds 45°, medium; 2 ft overhang (3.3 ft window ht, 1 ft sep.); 8 ft head ht	w	17	0.190	0	13.1	216	22.3	368

Doors

11P0: Door, mtl pur core type

w	21	0.290	10.5	20.0	420	7.74	163
n	35	0.290	10.5	20.0	700	7.74	271
all	56	0.290	10.5	20.0	1121	7.74	434

CeilingsAttic ceiling, asphalt shingles roof mat, r-60 ceil ins, 1/2" gypsum board int
fnsh

2670	0.017	60.0	1.17	3132	0.85	2279
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Floors

(none)

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		Room name		First Floor				Dining						
		Exposed wall		276.5 ft				24.5 ft						
		Room height		10.0 ft				9.0 ft						
		Room dimensions		d				15.3 x 9.3 ft						
		Room area		276.3 ft²				141.1 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	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
11	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	599	564	1401	236	83	48	120	20
	G	4A5-2ocd	0.190	n	13.11	8.29	35	0	459	290	35	0	459	290
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	755	607	1507	253	137	97	240	40
	G	4B5-2fc	0.190	e	13.11	23.27	27	4	354	628	14	2	177	314
	G	Anderson 400 Clad	0.190	e	13.11	20.95	95	13	1239	1979	0	0	0	0
	G	Anderson 400 Clad	0.280	e	19.32	22.19	27	4	522	599	27	4	522	599
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	405	391	971	163	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	14	14	184	98	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	450	372	924	155	0	0	0	0
	G	4B5-2fc	0.190	w	13.11	22.33	17	3	216	368	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	41	6	531	848	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	21	21	420	163	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	428	393	1002	86	0	0	0	0
	D	11P0	0.290	n	20.01	7.74	35	35	700	271	0	0	0	0
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	2670	2670	3132	2279	141	141	165	120
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									0				-112
	Envelope loss/gain									13562	8418			1683 1273
12	a) Infiltration									5093	556			508 55
	b) Room ventilation									0	0			0 0
13	Internal gains:		Occupants @	230	4					920	0			0 0
			Appliances/other							3100				0 0
	Subtotal (lines 6 to 13)									18656	12993			2191 1328
	Less external load									0	0			0 0
	Less transfer									0	0			0 0
	Redistribution									0	0			0 0
14	Subtotal									18656	12993			2191 1328
15	Duct loads									0	0	-0%	0%	0 0
	Total room load									18656	12993			2191 1328
	Air required (cfm)									609	609			71 62

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1 Room name				Foyer				Hall						
2 Exposed wall				10.0 ft 10.5 ft heat/cool				9.0 ft 0 ft heat/cool						
3 Room height				1.0 x 83.2 ft				1.0 x 65.7 ft						
4 Room dimensions				83.2 ft²				65.7 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	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	0	0	0	0	0	0	0	0
11	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	13.11	20.95	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	0	0	0	0	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	105	84	209	35	0	0	0	0
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	0	0	0	0	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	21	21	420	163	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	0	0	0	0	0	0	0	0
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	0	0	0	0
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	83	83	98	71	66	66	77	56
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-39				-7
	Envelope loss/gain									726	229		77	49
12	a) Infiltration									242	26		0	0
	b) Room ventilation									0	0		0	0
13	Internal gains:		Occupants @	230		0				0	0		0	0
			Appliances/other							0			0	0
	Subtotal (lines 6 to 13)									969	256		77	49
	Less external load									0	0		0	0
	Less transfer									0	0		0	0
	Redistribution									0	0		0	0
14	Subtotal									969	256		77	49
15	Duct loads									0	0		0	0
	Total room load									969	256		77	49
	Air required (cfm)									32	12		3	2

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		Kitchen		Living										
1	Room name	10.0 ft		14.0 ft										
2	Exposed wall	7.0 ft		16.8 ft										
3	Room height	heat/cool		heat/cool										
4	Room dimensions	1.0 x 342.9 ft		16.8 x 21.8 ft										
5	Room area	342.9 ft²		364.3 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	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	0	0	0	0	0	0	0	0
11	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	0	0	0	0	235	194	482	81
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	14	2	177	314
	G	Anderson 400 Clad	0.190	e	13.11	20.95	0	0	0	0	27	4	354	566
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	0	0	0	0	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	0	0	0	0	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	0	0	0	0	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	70	70	179	15	0	0	0	0
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	0	0	0	0
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	343	343	402	293	364	364	427	311
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion													-20
	Envelope loss/gain								581	106			1440	1251
12	a) Infiltration								0	0			541	59
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230		0			0	0				0
			Appliances/other						1200					900
	Subtotal (lines 6 to 13)								581	1306			1981	2210
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								581	1306			1981	2210
15	Duct loads								0	0	-0%	0%	0	0
	Total room load								581	1306			1981	2210
	Air required (cfm)								19	61			65	104

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



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		Office 1 12.0 ft 9.0 ft x 11.3 ft 101.3 ft²						Pantry 20.8 ft 1.0 ft x 95.3 ft 95.3 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	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
11	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	0	0	0	0	0	0	0	0
	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	13.11	20.95	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	27	27	67	11	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	0	0	0	0	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	81	68	168	28	120	104	257	43
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	17	3	216	368
	G	Anderson 400 Clad	0.190	w	13.11	20.95	14	2	177	283	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	0	0	0	0	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	0	0	0	0	88	74	188	16
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	14	14	280	108
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	101	101	119	86	95	95	112	81
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									79				200
	Envelope loss/gain								530	487			1053	818
12	a) Infiltration								249	27			277	30
	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)								779	1014			1330	848
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								779	1014			1330	848
15	Duct loads								0	0	-0%	0%	0	0
	Total room load								779	1014			1330	848
	Air required (cfm)								25	48			43	40

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

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1	Room name				b2 Vanity				b2 WIC					
	Exposed wall				8.0 ft				0 ft					
	Room height				9.0 ft				9.0 ft					
3	Room dimensions				1.0 x 39.0 ft				5.3 x 7.3 ft					
5	Room area				39.0 ft²				38.1 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	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	54	54	134	23	0	0	0	0
11	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	18	18	45	8	0	0	0	0
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	13.11	20.95	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	0	0	0	0	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	0	0	0	0	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	0	0	0	0	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	0	0	0	0	0	0	0	0
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	0	0	0	0
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	39	39	46	33	38	38	45	32
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									-11				-4
	Envelope loss/gain								225	52			45	28
12	a) Infiltration								166	18			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)								391	71			45	28
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								391	71			45	28
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								391	71			45	28
	Air required (cfm)								13	3			1	1

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1	Room name				Bedroom 2				b3 Vanity					
	Exposed wall				38.3 ft				6.3 ft					
	Room height				9.0 ft				9.0 ft					
2	Room dimensions				14.0 x 15.0 ft				7.0 x 4.3 ft					
3	Room area				210.0 ft²				29.8 ft²					
4	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)	
5					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	135	135	335	56	38	38	95	16
11	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	126	99	246	41	0	0	0	0
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	13.11	20.95	27	4	354	566	0	0	0	0
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	83	83	207	35	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	0	0	0	0	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	0	0	0	0	18	18	45	8
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	0	0	0	0	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	0	0	0	0	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	0	0	0	0	0	0	0	0
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	0	0	0	0
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	210	210	246	179	30	30	35	25
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									19				-8
	Envelope loss/gain								1388	896			175	40
12	a) Infiltration								794	87			130	14
	b) Room ventilation								0	0			0	0
13	Internal gains: Occupants @ 230						1			230	0			0
	Appliances/other									0				0
	Subtotal (lines 6 to 13)								2182	1213			304	55
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								2182	1213			304	55
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								2182	1213			304	55
	Air required (cfm)								71	57			10	3

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				b3 WIC 0 ft				Bath 2 5.8 ft						
				9.0 ft 5.3 x 5.5 ft heat/cool				9.0 ft 1.0 x 51.6 ft heat/cool						
				28.9 ft²				51.6 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
1		Room name												
2		Exposed wall												
3		Room height												
4		Room dimensions												
5		Room area												
6	W	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	0	0	0	0	52	52	129	22
11	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	13.11	20.95	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	0	0	0	0	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	0	0	0	0	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	0	0	0	0	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	0	0	0	0	0	0	0	0
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	0	0	0	0
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	29	29	34	25	52	52	61	44
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion													
	Envelope loss/gain								34	21			189	55
12	a) Infiltration								0	0			119	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)								34	21			308	68
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								34	21			308	68
15	Duct loads								-0%	0%			0	0
	Total room load								34	21			308	68
	Air required (cfm)								1	1			10	3

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		Bedroom 3 29.3 ft 9.0 ft 14.0 x 13.3 ft heat/cool 185.5 ft²						Laundry 0 ft 9.0 ft 10.3 x 8.3 ft heat/cool 84.6 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	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
11	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	119	119	296	50	0	0	0	0
	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	13.11	20.95	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	18	18	45	8	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	0	0	0	0	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	126	99	246	41	0	0	0	0
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	27	4	354	566	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	0	0	0	0	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	0	0	0	0	0	0	0	0
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	0	0	0	0
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	186	186	218	158	85	85	99	72
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion									258				-77
	Envelope loss/gain								1158	1080			99	-4
12	a) Infiltration								607	66			0	0
	b) Room ventilation								0	0			0	0
13	Internal gains:		Occupants @	230		1				230	0			0
			Appliances/other							0				500
	Subtotal (lines 6 to 13)								1765	1377			99	496
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								1765	1377			99	496
15	Duct loads								0	0			0	0
	Total room load								1765	1377			99	496
	Air required (cfm)								58	64			3	23

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



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				Master Bath 22.0 ft				Master Bedroom 26.3 ft						
				9.0 ft		1.0 x 166.3 ft		10.0 ft		14.5 x 16.5 ft				
				166.3 ft²				239.3 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
1		Room name												
2		Exposed wall												
3		Room height												
4		Room dimensions												
5		Room area												
6	W	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	0	0	0	0	118	118	292	49
11	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	36	36	89	15	145	118	293	49
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	13.11	20.95	0	0	0	0	27	4	354	566
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	162	148	368	62	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	14	14	184	98	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	0	0	0	0	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	0	0	0	0	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	0	0	0	0	0	0	0	0
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	0	0	0	0
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	166	166	195	142	239	239	281	204
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c)	AED excursion												-8
		Envelope loss/gain						836	302			1220	860	
12	a)	Infiltration						456	50			605	66	
	b)	Room ventilation						0	0			0	0	
13		Internal gains:	Occupants @	230		0			0	2			460	0
			Appliances/other						0				0	
		Subtotal (lines 6 to 13)						1292	352			1825	1386	
		Less external load						0	0			0	0	
		Less transfer						0	0			0	0	
		Redistribution						0	0			0	0	
14		Subtotal						1292	352			1825	1386	
15		Duct loads						-0%	0%			-0%	0%	0
		Total room load						1292	352			1825	1386	
		Air required (cfm)						42	16			60	65	

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				Master WIC 12.8 ft 9.0 ft heat/cool 10.5 x 12.8 ft 133.9 ft²				Mstr WC 6.5 ft 9.0 ft heat/cool 6.5 x 3.5 ft 22.8 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	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
11	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	0	0	0	0	0	0	0	0
	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	0	0	0	0	59	45	112	19
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	13.11	20.95	0	0	0	0	14	2	177	283
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	115	115	285	48	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	0	0	0	0	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	0	0	0	0	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	0	0	0	0	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	0	0	0	0	0	0	0	0
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	0	0	0	0
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	134	134	157	114	23	23	27	19
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion													44
	Envelope loss/gain								442	137			315	365
12	a) Infiltration								265	29			135	15
	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)								707	165			450	380
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								707	165			450	380
15	Duct loads								0	0	-0%	0%	0	0
	Total room load								707	165			450	380
	Air required (cfm)								23	8			15	18

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

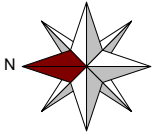


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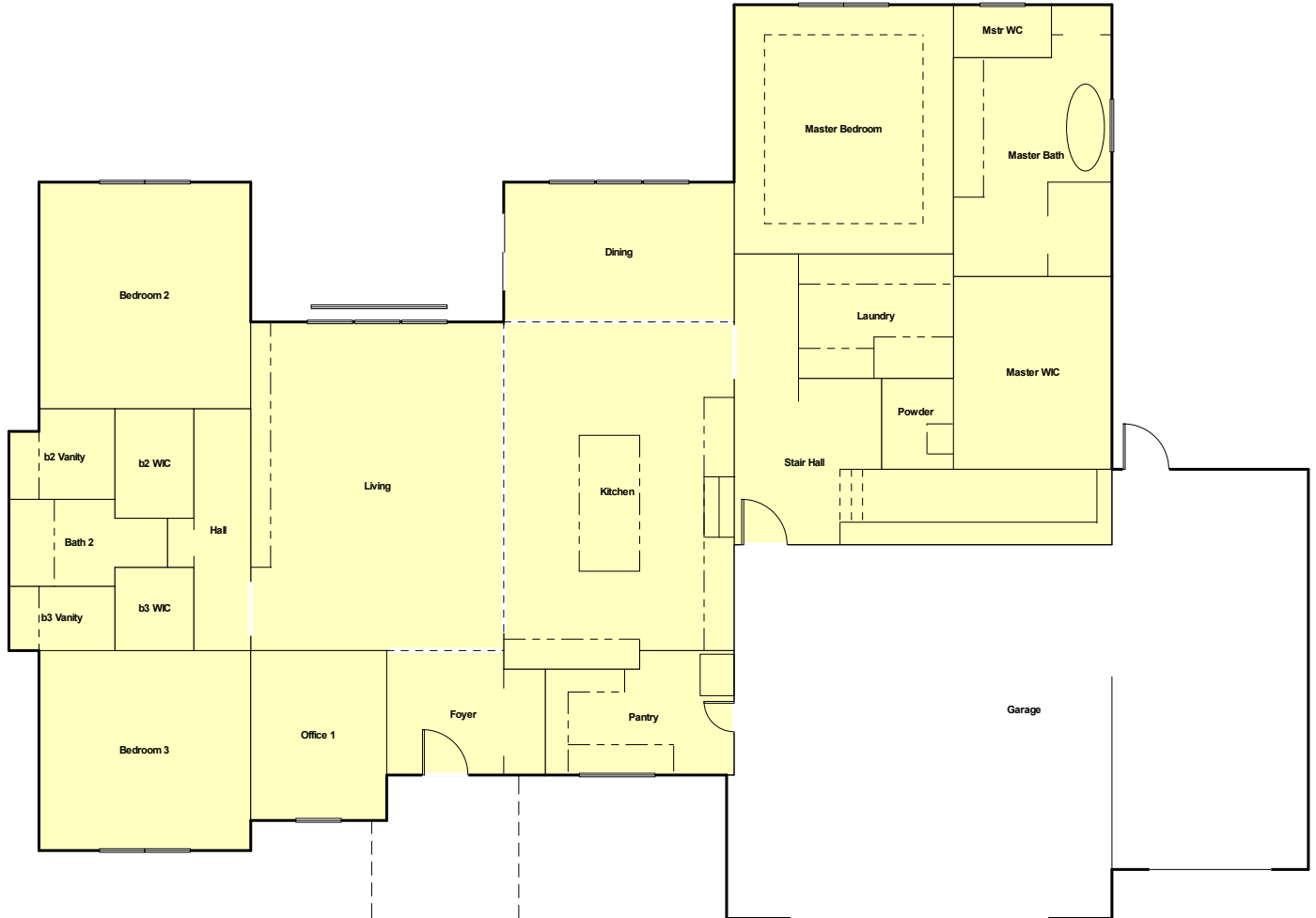
1	Room name				Powder				Stair Hall					
	Exposed wall				0 ft				30.0 ft					
	Room height				9.0 ft				9.0 ft					
3	Room dimensions				4.8 x 6.0 ft				1.0 x 218.6 ft					
5	Room area				28.5 ft²				218.6 ft²					
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (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	Bg wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	n	2.48	0.42	0	0	0	0	0	0	0	0
11	G	4A5-2ocd	0.190	n	13.11	8.29	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	e	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	e	13.11	23.27	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	e	13.11	20.95	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.280	e	19.32	22.19	0	0	0	0	0	0	0	0
	W	Bg wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	s	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	s	13.11	7.00	0	0	0	0	0	0	0	0
	W	15B15-0wc-8	0.088	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Bq wall, light dry s	0.059	w	0.00	0.00	0	0	0	0	0	0	0	0
	W	Frm wall, vnl ext, 1	0.036	w	2.48	0.42	0	0	0	0	0	0	0	0
	G	4B5-2fc	0.190	w	13.11	22.33	0	0	0	0	0	0	0	0
	G	Anderson 400 Clad	0.190	w	13.11	20.95	0	0	0	0	0	0	0	0
	D	11P0	0.290	w	20.01	7.74	0	0	0	0	0	0	0	0
	P	Frm wall, 5/8" gyp.b	0.037	-	2.55	0.22	0	0	0	0	270	249	636	54
	D	11P0	0.290	n	20.01	7.74	0	0	0	0	21	21	420	163
	C	Attic ceiling, aspha	0.017	-	1.17	0.85	29	29	33	24	219	219	256	187
	F	21B-28t	0.015	-	0.00	0.00	0	0	0	0	0	0	0	0
6	c) AED excursion													
	Envelope loss/gain								33	21			1312	350
12	a) Infiltration								0	0			0	0
	b) Room ventilation								0	0			0	0
13	Internal gains: Occupants @ 230						0				0			0
	Appliances/other										0			0
	Subtotal (lines 6 to 13)								33	21			1312	350
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								0	0			0	0
14	Subtotal								33	21			1312	350
15	Duct loads						-0%	0%	0	0	-0%	0%	0	0
	Total room load								33	21			1312	350
	Air required (cfm)								1	1			43	16

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





First Floor



Job #: Judah2201r1
Performed by R Streeter for:

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Osceola, IN 46561
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