

SAMPLE HVAC REPORT

ACCA MANUAL J, D, & S



CARSTAIRS ENERGY

Title 24 Energy Compliance &

HERS Verification Services

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Project Information

For: Sample HVAC Report
123 Sesame Street, Anywhere, CA

Cooling Equipment

Design Conditions

Outdoor design DB:	102°F	Sensible gain:	13965 Btuh	Entering coil DB:	77.2°F
Outdoor design WB:	67.8°F	Latent gain:	0 Btuh	Entering coil WB:	63.1°F
Indoor design DB:	75.0°F	Total gain:	13965 Btuh		
Indoor RH:	50%	Estimated airflow:	800 cfm		

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Split AC				
Manufacturer:	Trane	Model:	4TTR3024H1+4GXCB002AC6HUA+*UD2B100A9V3		
Actual airflow:	800 cfm				
Sensible capacity:	23976 Btuh		172% of load		
Latent capacity:	24 Btuh		0% of load		
Total capacity:	24000 Btuh		172% of load	SHR:	0k%

Heating Equipment

Design Conditions

Outdoor design DB:	21.9°F	Heat loss:	24442 Btuh	Entering coil DB:	66.8°F
Indoor design DB:	68.0°F				

Manufacturer's Performance Data at Actual Design Conditions

Equipment type:	Gas furnace				
Manufacturer:	Trane	Model:	TUH1B040A9H21B*		
Actual airflow:	800 cfm				
Output capacity:	38000 Btuh		155% of load	Temp. rise:	50 °F

Meets all requirements of ACCA Manual S.



Residential Plans Examiner Review Form for HVAC System Design (Loads, Equipment, Ducts)

**Form
RPER 1
15 Mar 09**

Header Information

Contractor: Carstairs Energy	REQUIRED ATTACHMENTS	ATTACHED
Mechanical license: Timothy Carstairs, CEA, HERS, GPR	Manual J1 Form (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Building plan #:	or MJ1AE Form* (and supporting worksheets):	Yes <input type="checkbox"/> No <input type="checkbox"/>
Home address (Street or Lot#, Block, Subdivision): 123 Sesame Street, Entire House	OEM performance data (heating, cooling, blower):	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Manual D Friction Rate Worksheet:	Yes <input type="checkbox"/> No <input type="checkbox"/>
	Duct distribution sketch:	Yes <input type="checkbox"/> No <input type="checkbox"/>

HVAC LOAD CALCULATION (IRC M1401.3)

Design Conditions

Winter Design Conditions

Outdoor temperature: 22 °F
 Indoor temperature: 68 °F
 Total heat loss: 24442 Btuh

Summer Design Conditions

Outdoor temperature: 102 °F
 Indoor temperature: 75 °F
 Grains difference: -17 gr/lb @50% RH
 Sensible heat gain: 13039 Btuh
 Latent heat gain: 0 Btuh
 Total heat gain: 13039 Btuh

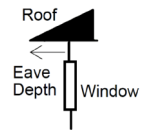
Building Construction Information

Building

Orientation: Front Door faces South
North, East, West, South, Northeast, Northwest, Southeast, Southwest
 Number of bedrooms: 0
 Conditioned floor area: 1346 ft²
 Number of occupants: 0

Windows

Eave overhang depth: 2.0 ft
 Internal shade: shades
Blinds, drapes, etc.
 Number of skylights: 0



HVAC EQUIPMENT SELECTION (IRC M1401.3)

Heating Equipment Data

Equipment type: Gas furnace
Furnace, Heat pump, Boiler, etc.
 Model: Trane
 TUH1B040A9H21B*
 Heating output capacity: 38000 Btuh
Heat pumps - capacity at winter design outdoor conditions
 Aux. heating output capacity: 0 Btuh

Cooling Equipment Data

Equipment type: Split AC
Air Conditioner, Heat pump, etc.
 Model: Trane
 4TTR3024H1
 Total cooling capacity: 24000 Btuh
 Sensible cooling capacity: 23976 Btuh
 Latent cooling capacity: 24 Btuh

Blower Data

Heating cfm: 800
 Cooling cfm: 800
 Static pressure: 0.50 in H₂O
Fan's rated external static pressure for design airflow

HVAC DUCT DISTRIBUTION SYSTEM DESIGN (IRC M1601.1)

Design airflow: 800 cfm	Longest supply duct: 175 ft	Duct Materials Used
Equipment design ESP: 0.50 in H ₂ O	Longest return duct: 34 ft	Trunk duct: Round flex vinyl
Total device pressure losses: -0.4 in H ₂ O	Total effective length (TEL): 208 ft	Branch duct: Round flex vinyl
Available static pressure (ASP): 0.09 in H₂O	Friction rate: 0.043 in/100ft <small>Friction Rate = ASP ÷ (TEL × 100)</small>	

I declare the load calculation, equipment, equipment selection and duct design were rigorously performed based on the building plan listed above. I understand the claims made on these forms will be subject to review and verification.

Contractor's printed name: _____
 Contractor's signature: _____ Date: _____

Reserved for County, Town Municipality or Authority having jurisdiction use.

*Home qualifies for MJ1AE Form based on Abridged Edition Checklist

Project Information

For: Sample HVAC Report
 123 Sesame Street, Anywhere, CA

Notes:

Design Information

Weather: Paso Robles Municipal AP, CA, US

Winter Design Conditions

Outside db	22 °F
Inside db	68 °F
Design TD	46 °F

Summer Design Conditions

Outside db	102 °F
Inside db	75 °F
Design TD	27 °F
Daily range	H
Relative humidity	50 %
Moisture difference	-17 gr/lb

Heating Summary

Structure	19988 Btuh
Ducts	4454 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	24442 Btuh

Sensible Cooling Equipment Load Sizing

Structure	8639 Btuh
Ducts	5326 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	n
Rate/swing multiplier	1.07
Equipment sensible load	14956 Btuh

Infiltration

Method	Simplified
Construction quality	Semi-tight
Fireplaces	1 (Tight)

Latent Cooling Equipment Load Sizing

Structure	-354 Btuh
Ducts	-89 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	0 Btuh

	Heating	Cooling
Area (ft ²)	1346	1346
Volume (ft ³)	12115	12115
Air changes/hour	0.31	0.16
Equiv. AVF (cfm)	63	32

Equipment Total Load (Sen+Lat)	14956 Btuh
Req. total capacity at 1.00 SHR	1.2 ton

Heating Equipment Summary

Make	Trane
Trade	TRANE
Model	TUH1B040A9H21B*
AHRI ref	5722413
Efficiency	95 AFUE
Heating input	40000 Btuh
Heating output	38000 Btuh
Temperature rise	44 °F
Actual air flow	800 cfm
Air flow factor	0.033 cfm/Btuh
Static pressure	0.50 in H2O
Space thermostat	

Cooling Equipment Summary

Make	Trane
Trade	TRANE
Cond	4TTR3024H1
Coil	4GXCB002AC6HUA+*UD2B100A9V3
AHRI ref	8787294
Efficiency	12.2 EER, 14 SEER
Sensible cooling	23976 Btuh
Latent cooling	24 Btuh
Total cooling	24000 Btuh
Actual air flow	800 cfm
Air flow factor	0.057 cfm/Btuh
Static pressure	0.50 in H2O
Load sensible heat ratio	1.00

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

Right-J® Worksheet

Entire House

Carstairs Energy

Job:
 Date: Dec 19, 2018
 By: Carstairs Energy Inc

PO Box 4736, San Luis Obispo, CA 93403 Phone: (805) 904-9048 Fax: (805) 620-3774 Email: title24@yahoo.com Web: www.carstairsenergy.com

		Entire House							M. Bath						
1	Room name	149.8 ft							18.5 ft						
2	Exposed wall	9.0 ft							9.0 ft						
3	Room height	d							heat/cool						
4	Room dimensions	1346.1 ft²							75.0 ft²						
5	Room area								6.0 x 12.5 ft						
	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	12E-0sw	0.068	n	3.13	1.40	421	276	864	385	54	46	144	64	
	G	10D-v	0.320	n	14.75	8.71	42	0	620	366	0	0	0	0	
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	8	0	118	100	8	0	118	100	
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	60	0	885	749	0	0	0	0	
11	G	4A4-2ovd	0.320	n	14.75	12.44	35	0	516	435	0	0	0	0	
	W	12E-0sw	0.068	e	3.13	1.40	313	281	880	392	0	0	0	0	
	G	2 glazing, clr outr,	0.320	e	14.75	25.80	12	5	177	310	0	0	0	0	
	G	2 glazing, clr outr,	0.320	e	14.75	26.70	20	6	295	534	0	0	0	0	
	W	12E-0sw	0.068	s	3.13	1.40	302	220	688	307	0	0	0	0	
	G	10D-v	0.320	s	14.75	9.02	42	73	620	379	0	0	0	0	
	G	2 glazing, clr outr,	0.320	s	14.75	12.48	40	80	590	499	0	0	0	0	
	W	12E-0sw	0.068	w	3.13	1.40	313	307	962	429	113	113	353	157	
	G	2 glazing, clr outr,	0.320	w	14.75	25.80	6	3	89	155	0	0	0	0	
	R	12C-0sw	0.091	-	4.20	1.34	119	98	412	132	0	0	0	0	
	D	11D0	0.390	n	17.98	11.56	21	21	378	243	0	0	0	0	
	C	16BR-30tl	0.032	-	1.48	1.70	1346	1346	1986	2289	75	75	111	128	
	F	22A-tpl	0.989	-	45.59	0.00	1346	150	6828	0	75	19	843	0	
6	c) AED excursion									0				-11	
	Envelope loss/gain								16907	7704			1569	438	
12	a) Infiltration								3082	935			381	116	
	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)								19988	8639			1950	554	
	Less external load								0	0			0	0	
	Less transfer								0	0			0	0	
	Redistribution								0	0			0	0	
14	Subtotal								19988	8639			1950	554	
15	Duct loads					22%	62%		4454	5326	22%	62%	434	341	
	Total room load								24442	13965			2384	895	
	Air required (cfm)								800	800			78	51	

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



Right-J® Worksheet
Entire House
Carstairs Energy

PO Box 4736, San Luis Obispo, CA 93403 Phone: (805) 904-9048 Fax: (805) 620-3774 Email: title24@yahoo.com Web: www.carstairsenergy.com

1 Room name				M. Bed		Bath 2								
2 Exposed wall				11.0 ft		8.3 ft								
3 Room height				9.0 ft		9.0 ft								
4 Room dimensions				1.0 x 187.4 ft		6.0 x 8.3 ft								
5 Room area				187.4 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	12E-0sw	0.068	n	3.13	1.40	99	57	179	80	0	0	0	0
	G	10D-v	0.320	n	14.75	8.71	42	0	620	366	0	0	0	0
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	0	0	0	0	0	0	0	0
11	G	4A4-2ovd	0.320	n	14.75	12.44	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	e	3.13	1.40	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	e	14.75	25.80	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	e	14.75	26.70	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	s	3.13	1.40	0	0	0	0	0	0	0	0
	G	10D-v	0.320	s	14.75	9.02	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	s	14.75	12.48	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	w	3.13	1.40	0	0	0	0	74	68	214	95
	G	2 glazing, clr outr,	0.320	w	14.75	25.80	0	0	0	0	6	1	89	155
	R	12C-0sw	0.091	-	4.20	1.34	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	17.98	11.56	0	0	0	0	0	0	0	0
	C	16BR-30tl	0.032	-	1.48	1.70	187	187	276	319	50	50	73	84
	F	22A-tpl	0.989	-	45.59	0.00	187	11	502	0	50	8	376	0
6	c) AED excursion													98
	Envelope loss/gain								1576	749			752	433
12	a) Infiltration								226	69			170	52
	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)								1803	817			921	484
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								32	36			13	14
14	Subtotal								1835	854			934	498
15	Duct loads					22%	62%		409	526	22%	62%	208	307
	Total room load								2244	1380			1142	806
	Air required (cfm)								73	79			37	46

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Right-J® Worksheet
Entire House
Carstairs Energy

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1 Room name				Hall		Bed 2								
2 Exposed wall				0 ft		25.0 ft								
3 Room height				9.0 ft		9.0 ft								
4 Room dimensions				1.0 x 69.6 ft		11.0 x 14.0 ft								
5 Room area				69.6 ft²		154.0 ft²								
6	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	12E-0sw	0.068	n	3.13	1.40	0	0	0	0	0	0	0	0
	G	10D-v	0.320	n	14.75	8.71	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	0	0	0	0	0	0	0	0
11	G	4A4-2ovd	0.320	n	14.75	12.44	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	e	3.13	1.40	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	e	14.75	25.80	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	e	14.75	26.70	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	s	3.13	1.40	0	0	0	0	99	79	248	110
	G	10D-v	0.320	s	14.75	9.02	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	s	14.75	12.48	0	0	0	0	20	20	295	250
	W	12E-0sw	0.068	w	3.13	1.40	0	0	0	0	126	126	395	176
	G	2 glazing, clr outr,	0.320	w	14.75	25.80	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	4.20	1.34	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	17.98	11.56	0	0	0	0	0	0	0	0
	C	16BR-30tl	0.032	-	1.48	1.70	70	70	103	118	154	154	227	262
	F	22A-tpl	0.989	-	45.59	0.00	70	0	0	0	154	25	1140	0
6	c) AED excursion													-18
	Envelope loss/gain								103	116			2305	780
12	a) Infiltration								0	0			514	156
	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)								103	116			2819	936
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								-103	-116			12	14
14	Subtotal								0	0			2831	950
15	Duct loads						22%	62%	0	0	22%	62%	631	586
	Total room load								0	0			3462	1536
	Air required (cfm)								0	0			113	88

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



Right-J® Worksheet
Entire House
Carstairs Energy

Job:
Date: Dec 19, 2018
By: Carstairs Energy Inc

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				Bed 3 22.3 ft 9.0 ft heat/cool 1.0 x 140.3 ft 140.3 ft²				Living Room 16.5 ft 9.0 ft heat/cool 16.5 x 17.8 ft 292.9 ft²						
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	HTM (Btuh/ft²)		Area (ft²) or perimeter (ft)		Load (Btuh)		Area (ft²) or perimeter (ft)		Load (Btuh)	
					Heat	Cool	Gross	N/P/S	Heat	Cool	Gross	N/P/S	Heat	Cool
6	W	12E-0sw	0.068	n	3.13	1.40	0	0	0	0	149	89	277	124
	G	10D-v	0.320	n	14.75	8.71	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	0	0	0	0	60	0	885	749
11	G	4A4-2ovd	0.320	n	14.75	12.44	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	e	3.13	1.40	101	101	317	141	0	0	0	0
	G	2 glazing, clr outr,	0.320	e	14.75	25.80	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	e	14.75	26.70	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	s	3.13	1.40	99	79	248	110	0	0	0	0
	G	10D-v	0.320	s	14.75	9.02	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	s	14.75	12.48	20	20	295	250	0	0	0	0
	W	12E-0sw	0.068	w	3.13	1.40	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	w	14.75	25.80	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	4.20	1.34	0	0	0	0	0	0	0	0
	D	11D0	0.390	n	17.98	11.56	0	0	0	0	0	0	0	0
	C	16BR-30tl	0.032	-	1.48	1.70	140	140	207	239	293	293	432	498
	F	22A-tpl	0.989	-	45.59	0.00	140	22	1014	0	293	17	752	0
6	c) AED excursion									-16				-28
	Envelope loss/gain								2081	724			2347	1343
12	a) Infiltration								458	139			340	103
	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)								2539	863			2686	1446
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								33	38			1126	476
14	Subtotal								2573	900			3813	1922
15	Duct loads						22%	62%	573	555	22%	62%	849	1185
	Total room load								3146	1455			4662	3107
	Air required (cfm)								103	83			153	178

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



Right-J® Worksheet
Entire House
Carstairs Energy

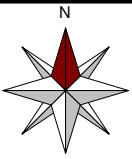
Job:
Date: Dec 19, 2018
By: Carstairs Energy Inc

PO Box 4736, San Luis Obispo, CA 93403 Phone: (805) 904-9048 Fax: (805) 620-3774 Email: title24@yahoo.com Web: www.carstairsenergy.com

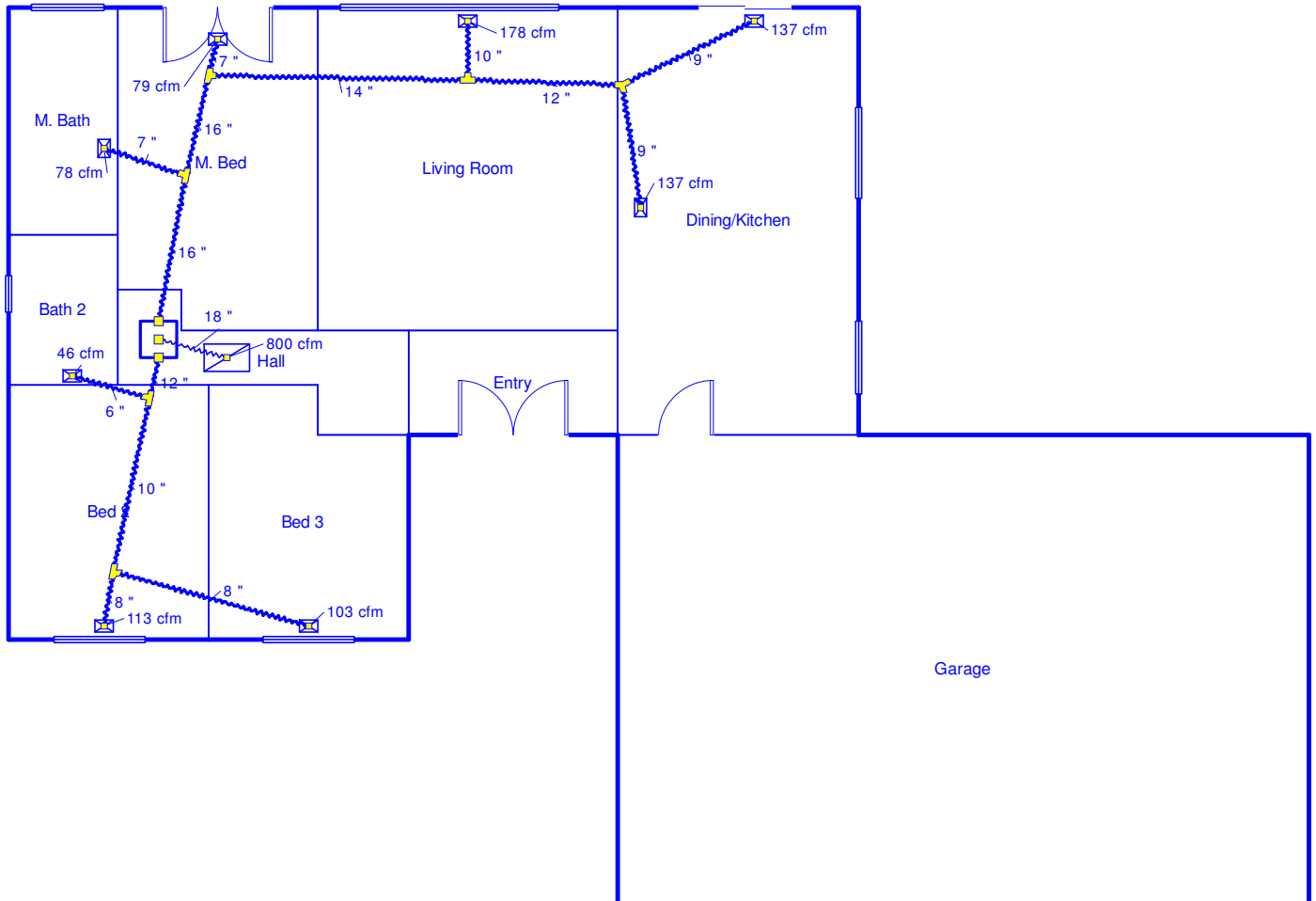
1 Room name				Dining/Kitchen 36.8 ft				Entry 11.5 ft						
2 Exposed wall				9.0 ft heat/cool				9.0 ft heat/cool						
3 Room height				13.3 x 23.5 ft				11.5 x 5.8 ft						
4 Room dimensions				311.4 ft²				66.1 ft²						
5 Room area														
	Ty	Construction number	U-value (Btuh/ft²·°F)	Or	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	12E-0sw	0.068	n	3.13	1.40	119	84	264	118	0	0	0	0
	G	10D-v	0.320	n	14.75	8.71	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	n	14.75	12.48	0	0	0	0	0	0	0	0
11	G	4A4-2ovd	0.320	n	14.75	12.44	35	0	516	435	0	0	0	0
	W	12E-0sw	0.068	e	3.13	1.40	212	180	563	251	0	0	0	0
	G	2 glazing, clr outr,	0.320	e	14.75	25.80	12	3	177	310	0	0	0	0
	G	2 glazing, clr outr,	0.320	e	14.75	26.70	20	3	295	534	0	0	0	0
	W	12E-0sw	0.068	s	3.13	1.40	0	0	0	0	104	62	193	86
	G	10D-v	0.320	s	14.75	9.02	0	0	0	0	42	37	620	379
	G	2 glazing, clr outr,	0.320	s	14.75	12.48	0	0	0	0	0	0	0	0
	W	12E-0sw	0.068	w	3.13	1.40	0	0	0	0	0	0	0	0
	G	2 glazing, clr outr,	0.320	w	14.75	25.80	0	0	0	0	0	0	0	0
	R	12C-0sw	0.091	-	4.20	1.34	119	98	412	132	0	0	0	0
	D	11D0	0.390	n	17.98	11.56	21	21	378	243	0	0	0	0
	C	16BR-30tl	0.032	-	1.48	1.70	311	311	459	530	66	66	98	112
	F	22A-tpl	0.989	-	45.59	0.00	311	37	1676	0	66	12	524	0
6	c) AED excursion									-52				44
	Envelope loss/gain								4740	2500			1434	621
12	a) Infiltration								756	229			237	72
	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)								5496	2729			1671	693
	Less external load								0	0			0	0
	Less transfer								0	0			0	0
	Redistribution								557	231			-1671	-693
14	Subtotal								6053	2960			0	0
15	Duct loads						22%	62%	1349	1825	22%	62%	0	0
	Total room load								7402	4785			0	0
	Air required (cfm)								242	274			0	0

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





Level 1



Job #:
Performed by Carstairs Energy Inc for:
Sample HVAC Report
123 Sesame Street
Anywhere, CA

Carstairs Energy
PO Box 4736
San Luis Obispo, CA 93403
Phone: (805) 904-9048 Fax: (805) 620-3774
www.carstairsenergy.com title24@yahoo.com

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Duct System Summary

Entire House

Carstairs Energy

Job:
Date: Dec 19, 2018
By: Carstairs Energy Inc

PO Box 4736, San Luis Obispo, CA 93403 Phone: (805) 904-9048 Fax: (805) 620-3774 Email: title24@yahoo.com Web: www.carstairsenergy.com

Project Information

For: Sample HVAC Report
123 Sesame Street, Anywhere, CA

	Heating	Cooling
External static pressure	0.50 in H2O	0.50 in H2O
Pressure losses	0.41 in H2O	0.41 in H2O
Available static pressure	0.09 in H2O	0.09 in H2O
Supply / return available pressure	0.075 / 0.015 in H2O	0.075 / 0.015 in H2O
Lowest friction rate	0.043 in/100ft	0.043 in/100ft
Actual air flow	800 cfm	800 cfm
Total effective length (TEL)	208 ft	

Supply Branch Detail Table

Name	Design (Btuh)	Htg (cfm)	Clg (cfm)	Design FR	Diam (in)	H x W (in)	Duct Matl	Actual Ln (ft)	Ftg. Eqv Ln (ft)	Trunk
Bath 2	c 806	37	46	0.082	6.0	0x0	VIFx	6.7	85.0	st2
Bed 2	h 3462	113	88	0.066	8.0	0x0	VIFx	15.1	100.0	st6
Bed 3	h 3146	103	83	0.061	8.0	0x0	VIFx	23.2	100.0	st6
Dining/Kitchen	c 2393	121	137	0.043	9.0	0x0	VIFx	44.6	130.0	st5
Dining/Kitchen-A	c 2393	121	137	0.043	9.0	0x0	VIFx	43.4	130.0	st5
Living Room	c 3107	153	178	0.052	10.0	0x0	VIFx	31.3	115.0	st4
M. Bath	h 2384	78	51	0.077	7.0	0x0	VIFx	12.9	85.0	st1
M. Bed	c 1380	73	79	0.065	7.0	0x0	VIFx	15.8	100.0	st3

Supply Trunk Detail Table

Name	Trunk Type	Htg (cfm)	Clg (cfm)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Duct Material	Trunk
st2	Peak AVF	254	218	0.061	323	12.0	0 x 0	VinIFlx	
st6	Peak AVF	216	171	0.061	397	10.0	0 x 0	VinIFlx	st2
st1	Peak AVF	546	582	0.043	417	16.0	0 x 0	VinIFlx	
st3	Peak AVF	468	531	0.043	380	16.0	0 x 0	VinIFlx	st1
st4	Peak AVF	395	452	0.043	423	14.0	0 x 0	VinIFlx	st3
st5	Peak AVF	242	274	0.043	349	12.0	0 x 0	VinIFlx	st4

Return Branch Detail Table

Name	Grille Size (in)	Htg (cfm)	Clg (cfm)	TEL (ft)	Design FR	Veloc (fpm)	Diam (in)	H x W (in)	Stud/Joist Opening (in)	Duct Matl	Trunk
rb2	0x0	800	800	33.9	0.043	453	18.0	0x 0		VIFx	