



**Load Short Form**  
**Entire House**  
**Acacia Engineering**

Job: 2744-21  
 Date: 26 May 2021  
 By: Prativa Upreti

Cert.#:  
 Calgary, AB Phone: 403-245-2200 Email: pupreti@acaciaengineering.ca

**Project Information**

For: Volstad Residence  
 11 Poplar Point, Red Deer County, AB

**Design Information**

	<b>Htg</b>	<b>Clg</b>		<b>Infiltration</b>	
Outside db (°F)	-26	82	Method		F280-12
Inside db (°F)	72	75	Expos. categ		Light local shielding
Design TD (°F)	98	7	Const. categ		Present (1961-) (ACH=3.57)
Daily range	-	M	Number of stories		1.0
Inside humidity (%)	50	50			
Moisture difference (gr/lb)	57	5			

**HEATING EQUIPMENT**

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

**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	0 cfm
Air flow factor	0 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)
Living/Dining/Kit	872	19653	11296	0	0
Pantry	75	1689	469	0	0
Main Entry	174	4115	2884	0	0
Mech	109	1847	515	0	0
WC	35	476	377	0	0
Storage	154	2700	620	0	0
Laundry	74	1237	458	0	0
Bedroom 1	183	2966	1678	0	0
Shared Bath	115	1760	530	0	0
Bedroom 2	191	6075	3082	0	0
Master Bedroom	340	9013	4290	0	0
Hall	188	2860	1303	0	0
Mudroom	136	2708	1372	0	0
Ensuite	176	5997	3469	0	0

*Bold/italic values have been manually overridden*



Dressing		106	1795	689	0	<b>0</b>
Garage		879	14763	2329	0	<b>0</b>
Study		88	3114	2190	0	<b>0</b>
<hr/>						
Entire House	d	3893	82767	37551	0	<b>0</b>
Other equip loads			0	0		
Equip. @ 1.00 RSM				37551		
Latent cooling				11265		
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TOTALS		3893	82767	48817	0	<b>0</b>

**NOTE:**

The Calculated heat loss or heat gain is based on an outdoor design temperature as shown above. There are few days in a year when the temperature is below or above the design temperature. Therefore we recommend adding safety factor to the calculated heat loss or heat gain when sizing the mechanical system.

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**Project Summary**  
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**Acacia Engineering**

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 11 Poplar Point, Red Deer County, AB

Notes:

**Design Information**

Weather: Red Deer, AB, CA

**Winter Design Conditions**

Outside db -26 °F  
 Inside db 72 °F  
 Design TD 98 °F

**Summer Design Conditions**

Outside db 82 °F  
 Inside db 75 °F  
 Design TD 7 °F  
 Daily range M  
 Relative humidity 50 %  
 Moisture difference 5 gr/lb

**Heating Summary**

Structure 82767 Btuh  
 Ducts 0 Btuh  
 Central vent (0 cfm) 0 Btuh  
 (none)  
 Humidification 0 Btuh  
 Piping 0 Btuh  
 Equipment load 82767 Btuh

**Sensible Cooling Equipment Load Sizing**

Structure 37551 Btuh  
 Ducts 0 Btuh  
 Central vent (0 cfm) 0 Btuh  
 (none)  
 Blower 0 Btuh  
 Use manufacturer's data y  
 Rate/swing multiplier 1.00  
 Equipment sensible load 37551 Btuh

**Infiltration**

Method F280-12  
 Expos. categ Light local shielding  
 Const. categ Present (1961-) (ACH=3.57)  
 Number of stories 1.0

	<b>Heating</b>	<b>Cooling</b>
Area (ft <sup>2</sup> )	3893	3893
Volume (ft <sup>3</sup> )	35430	35430
Air changes/hour	0.23	0.05
Equiv. AVF (cfm)	137	28

**Latent Cooling Equipment Load Sizing**

Structure 11265 Btuh  
 Ducts 0 Btuh  
 Central vent (0 cfm) 0 Btuh  
 (none)  
 Equipment latent load 11265 Btuh

**Equipment Total Load (Sen+Lat)** 48817 Btuh  
 Req. total capacity at 0.00 SHR 4.5 ton

**Heating Equipment Summary**

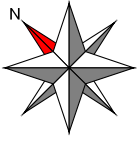
Make  
 Trade  
 Model  
 AHRI ref

Efficiency 0 AFUE  
 Heating input 0 Btuh  
 Heating output 0 Btuh  
 Temperature rise  
 Actual air flow  
 Air flow factor  
 Static pressure  
 Space thermostat

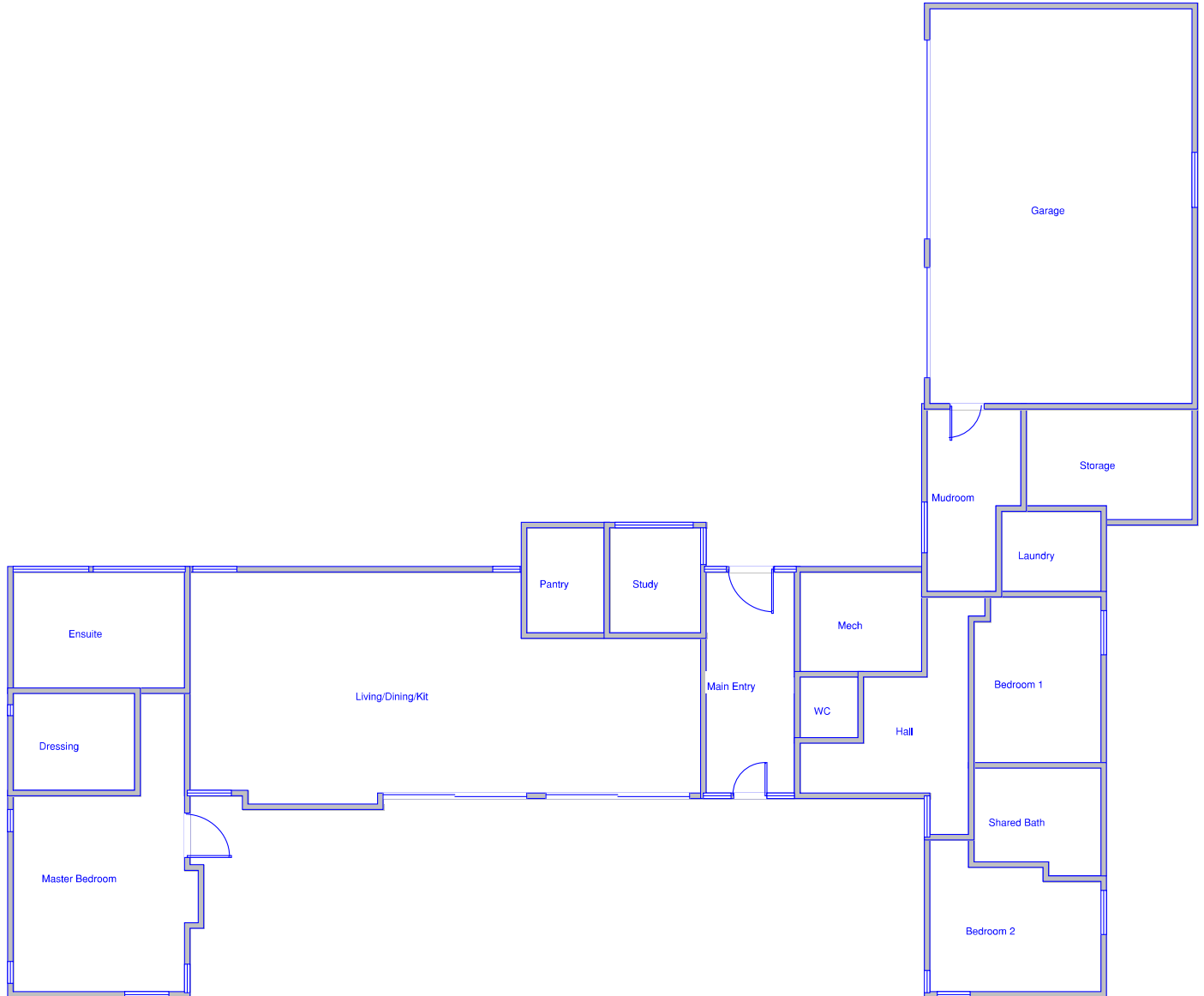
**Cooling Equipment Summary**

Make  
 Trade  
 Cond  
 Coil  
 AHRI ref  
 Efficiency 0 SEER  
 Sensible cooling 0 Btuh  
 Latent cooling 0 Btuh  
 Total cooling  
 Actual air flow  
 Air flow factor  
 Static pressure  
 Load sensible heat ratio

*Bold/italic values have been manually overridden*



First floor



**Job #: 2744-21**  
**Performed by Prativa Upreti for:**  
Volstad Residence  
11 Poplar Point  
Red Deer County, AB

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