

## Project Information

Notes: READ ALL ACCOMPANYING NOTES BEFORE COMMENCING PROJECT  
DRAWINGS SCALED TO BE PRINTED ON 11X17 A4 PAPER

## Design Information

Weather: Port Hope, ON, CA

### Winter Design Conditions

Outside db	-6 °F
Inside db	72 °F
Design TD	78 °F

### Summer Design Conditions

Outside db	84 °F
Inside db	75 °F
Design TD	9 °F
Daily range	M
Relative humidity	50 %
Moisture difference	40 gr/lb

### Heating Summary

Structure	22681 Btuh
Ducts	0 Btuh
Central vent (0 cfm)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	22681 Btuh

### Sensible Cooling Equipment Load Sizing

Structure	15270 Btuh
Ducts	0 Btuh
Central vent (0 cfm)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	15270 Btuh

### Infiltration

Method	F280-12
Exposure category	Heavy shielding
Const. categ.	Energy Tight (ACH=1.5)
Number of stories	1.0

	Heating	Cooling
Area (ft <sup>2</sup> )	4426	4426
Volume (ft <sup>3</sup> )	42047	42047
Air changes/hour	0.07	0.02
Equiv. AVF (cfm)	51	11

### Latent Cooling Equipment Load Sizing

Structure	4581 Btuh
Ducts	0 Btuh
Central vent (0 cfm)	0 Btuh
Equipment latent load	4581 Btuh
<b>Equipment Total Load (Sen+Lat)</b>	<b>19852 Btuh</b>
Req. total capacity at 0.70 SHR	1.8 ton

### Heating Equipment Summary

Make	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a
Efficiency	n/a
Heating input	
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	n/a

### Cooling Equipment Summary

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a
Efficiency	n/a
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

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### Summer Design Conditions

Outside db	84 °F
Inside db	75 °F
Design TD	9 °F
Daily range	M
Relative humidity	50 %
Moisture difference	40 gr/lb

### Heating Summary

Structure	10792 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	10792 Btuh

### Sensible Cooling Equipment Load Sizing

Structure	2658 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	0 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	2658 Btuh

### Infiltration

Method	F280-12
Exposure category	Heavy shielding
Const. categ.	Energy Tight (ACH=1.5)
Number of stories	1.0

	Heating	Cooling
Area (ft <sup>2</sup> )	2213	2213
Volume (ft <sup>3</sup> )	19917	19917
Air changes/hour	0.09	0.01
Equiv. AVF (cfm)	31	3

### Latent Cooling Equipment Load Sizing

Structure	797 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	797 Btuh

<b>Equipment Total Load (Sen+Lat)</b>	<b>3455 Btuh</b>
Req. total capacity at 0.70 SHR	0.3 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	117 cfm
Air flow factor	0.011 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	117 cfm
Air flow factor	0.044 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.77

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### Winter Design Conditions

Outside db	-6 °F
Inside db	72 °F
Design TD	78 °F

### Summer Design Conditions

Outside db	84 °F
Inside db	75 °F
Design TD	9 °F
Daily range	M
Relative humidity	50 %
Moisture difference	40 gr/lb

### Heating Summary

Structure	11889 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Humidification	0 Btuh
Piping	0 Btuh
Equipment load	11889 Btuh

### Sensible Cooling Equipment Load Sizing

Structure	12613 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Blower	72 Btuh
Use manufacturer's data	y
Rate/swing multiplier	1.00
Equipment sensible load	12684 Btuh

### Infiltration

Method	F280-12
Exposure category	Heavy shielding
Const. categ.	Energy Tight (ACH=1.5)
Number of stories	1.0

	Heating	Cooling
Area (ft <sup>2</sup> )	2213	2213
Volume (ft <sup>3</sup> )	22130	22130
Air changes/hour	0.06	0.02
Equiv. AVF (cfm)	20	8

### Latent Cooling Equipment Load Sizing

Structure	3784 Btuh
Ducts	0 Btuh
Central vent (0 cfm) (none)	0 Btuh
Equipment latent load	3784 Btuh
<b>Equipment Total Load (Sen+Lat)</b>	<b>16468 Btuh</b>
Req. total capacity at 0.77 SHR	1.4 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	556 cfm
Air flow factor	0.047 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	556 cfm
Air flow factor	0.044 cfm/Btuh
Static pressure	0 in H2O
Load sensible heat ratio	0.77

## Project Information

Fc

## Design Information

	Htg	Clg		Infiltration
Outside db (°F)	-6	84	Method	F280-12
Inside db (°F)	72	75	Exposure category	Heavy shielding
Design TD (°F)	78	9	Construction category	Energy Tight (ACH=1.5)
Daily range	-	M	Number of stories	1.0
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	55	40		

### HEATING EQUIPMENT

Make	n/a
Trade	n/a
Model	n/a
AHRI ref	n/a
Efficiency	n/a
Heating input	
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	n/a

### COOLING EQUIPMENT

Make	n/a
Trade	n/a
Cond	n/a
Coil	n/a
AHRI ref	n/a
Efficiency	n/a
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

ROOM NAME		Area (ft²)	Htg load (Btuh)	Clg load (Btuh)	Htg AVF (cfm)	Clg AVF (cfm)
Basement M_S	d	2213	10792	2658	117	117
Main Floor M_S	d	2213	11889	12613	556	556
Entire House	d	4426	22681	15270	673	673
Other equip loads			0	0		
Equip. @ 1.00 RSM				15270		
Latent cooling				4581		
<b>TOTALS</b>		<b>4426</b>	<b>22681</b>	<b>19852</b>	<b>673</b>	<b>673</b>

## Project Information

## Design Information

	<b>Htg</b>	<b>Clg</b>		<b>Infiltration</b>
Outside db (°F)	-6	84	Method	F280-12
Inside db (°F)	72	75	Exposure category	Heavy shielding
Design TD (°F)	78	9	Construction category	Energy Tight (ACH=1.5)
Daily range	-	M	Number of stories	1.0
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	55	40		

### 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	117 cfm
Air flow factor	0.011 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	117 cfm
Air flow factor	0.044 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)
GYM	216	405	4	4	0
UTILITY	393	2188	73	24	3
BATH #2	78	0	0	0	0
STORAGE	392	1123	17	12	1
GREAT ROOM	940	5953	2166	65	95
BEDROOM #3	195	1124	398	12	18

Basement M_S	d	2213	10792	2658	117	117
Other equip loads			0	0		
Equip. @ 1.00 RSM				2658		
Latent cooling				797		
TOTALS		2213	10792	3455	117	117

## Project Information

## Design Information

	Htg	Clg		Infiltration
Outside db (°F)	-6	84	Method	F280-12
Inside db (°F)	72	75	Exposure category	Heavy shielding
Design TD (°F)	78	9	Construction category	Energy Tight (ACH=1.5)
Daily range	-	M	Number of stories	1.0
Inside humidity (%)	50	50		
Moisture difference (gr/lb)	55	40		

### 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	556 cfm
Air flow factor	0.047 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	556 cfm
Air flow factor	0.044 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)
BATH	63	317	252	15	11
BEDROOM #2	176	1219	511	57	23
OFFICE	132	773	447	36	20
FOYER	372	1098	365	51	16
DINING RM	208	938	490	44	22
MASTER BEDROOM	195	1261	757	59	33
ENSUITE	142	1021	473	48	21
W.I.C.	108	359	70	17	3
HALL	54	61	25	3	1
KITCHEN/LIVING	563	3779	8887	177	392
PANTRY	41	47	19	2	1
LAUNDRY	159	1016	317	48	14

Main Floor M_S	d	2213	11889	12613	556	556
Other equip loads			0	72		
Equip. @ 1.00 RSM				12684		
Latent cooling				3784		
TOTALS		2213	11889	16468	556	556



## Project Information

## Design Conditions

**Location:**

 Port Hope, ON, CA  
 Elevation: 266 ft  
 Latitude: 44°N

**Outdoor:**

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

**Heating**

 -6  
 -  
 -  
 9.3

**Cooling**

 84  
 16 ( M )  
 73  
 5.0

**Indoor:**

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

**Heating**

 72  
 78  
 50  
 55.3

**Cooling**

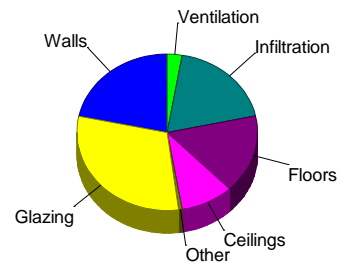
 75  
 9  
 50  
 39.8

**Infiltration:**

 Method: F280-12  
 Exposure category: Heavy shielding  
 Construction category: Energy Tight (ACH=1.5)  
 Number of stories: 1.0

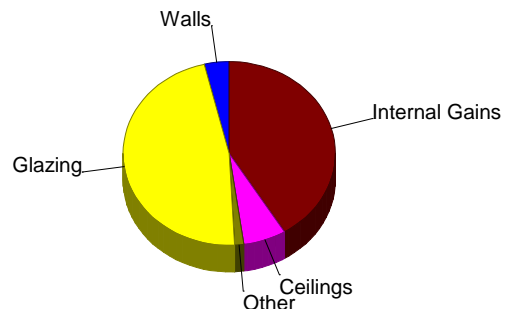
## Heating

Component	Btuh/ft²	Btuh	% of load
Walls	0.5	4919	21.7
Glazing	15.6	6877	30.3
Doors	9.9	152	0.7
Ceilings	1.0	2140	9.4
Floors	1.7	3684	16.2
Infiltration	9.5	4304	19.0
Ducts		0	0
Hydronic		0	0
Humidification		0	0
Ventilation		605	2.7
Adjustments		0	0
<b>Total</b>		<b>22681</b>	<b>100.0</b>



## Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.1	576	3.8
Glazing	16.3	7184	47.0
Doors	0.4	6	0.0
Ceilings	0.4	996	6.5
Floors	0	0	0
Infiltration	0.2	112	0.7
Ducts		0	0
Ventilation		95	0.6
Internal gains		6302	41.3
Blower		0	0
Adjustments		0	0
<b>Total</b>		<b>15270</b>	<b>100.0</b>



Latent Cooling Load = 4581 Btuh  
 Overall U-value = 0.031 Btuh/ft²-°F

Data entries checked.

## Project Information

For:

## Design Conditions

**Location:**

Port Hope, ON, CA  
 Elevation: 266 ft  
 Latitude: 44°N

**Outdoor:**

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

	Heating	Cooling
	-6	84
	-	16 ( M )
	-	73
	9.3	5.0

**Indoor:**

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

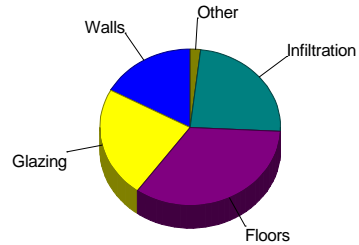
	Heating	Cooling
	72	75
	78	9
	50	50
	55.3	39.8

**Infiltration:**

Method: F280-12  
 Exposure category: Heavy shielding  
 Construction category: Energy Tight (ACH=1.5)  
 Number of stories: 1.0

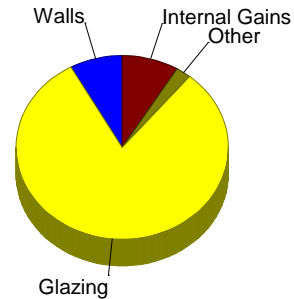
## Heating

Component	Btuh/ft²	Btuh	% of load
Walls	0.3	1849	17.1
Glazing	15.6	2475	22.9
Doors	0	0	0
Ceilings	0	0	0
Floors	1.7	3684	34.1
Infiltration	16.3	2582	23.9
Ducts		0	0
Hydronic		0	0
Humidification		0	0
Ventilation		202	1.9
Adjustments		0	0
<b>Total</b>		<b>10792</b>	<b>100.0</b>



## Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.0	213	8.0
Glazing	13.6	2152	81.0
Doors	0	0	0
Ceilings	0	0	0
Floors	0	0	0
Infiltration	0.2	30	1.1
Ducts		0	0
Ventilation		32	1.2
Internal gains		230	8.7
Blower		0	0
Adjustments		0	0
<b>Total</b>		<b>2658</b>	<b>100.0</b>



Latent Cooling Load = 797 Btuh  
 Overall U-value = 0.032 Btuh/ft²-°F

Data entries checked.

## Project Information

For:

## Design Conditions

**Location:**

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 Elevation: 266 ft  
 Latitude: 44°N

**Outdoor:**

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

	Heating	Cooling
	-6	84
	-	16 ( M )
	-	73
	9.3	5.0

**Indoor:**

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

**Heating**

72  
 78  
 50  
 55.3

**Cooling**

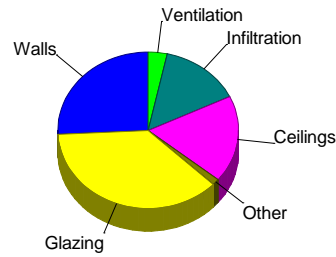
75  
 9  
 50  
 39.8

**Infiltration:**

Method: F280-12  
 Exposure category: Heavy shielding  
 Construction category: Energy Tight (ACH=1.5)  
 Number of stories: 1.0

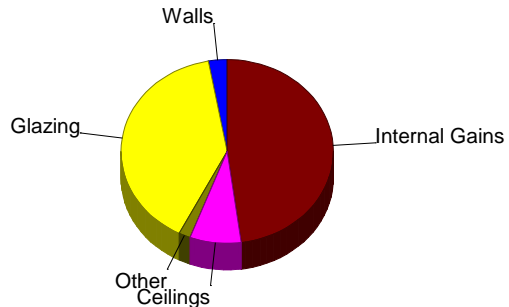
## Heating

Component	Btuh/ft²	Btuh	% of load
Walls	1.7	3069	25.8
Glazing	15.7	4402	37.0
Doors	9.9	152	1.3
Ceilings	1.0	2140	18.0
Floors	0	0	0
Infiltration	5.8	1722	14.5
Ducts		0	0
Hydronic		0	0
Humidification		0	0
Ventilation		403	3.4
Adjustments		0	0
<b>Total</b>		<b>11889</b>	<b>100.0</b>



## Cooling

Component	Btuh/ft²	Btuh	% of load
Walls	0.2	362	2.9
Glazing	17.9	5031	39.7
Doors	0.4	6	0.1
Ceilings	0.4	996	7.9
Floors	0	0	0
Infiltration	0.3	81	0.6
Ducts		0	0
Ventilation		64	0.5
Internal gains		6072	47.9
Blower		72	0.6
Adjustments		0	0
<b>Total</b>		<b>12684</b>	<b>100.0</b>



Latent Cooling Load = 3784 Btuh  
 Overall U-value = 0.029 Btuh/ft²-°F

Data entries checked.