

PROJECT TITLE:  
139 Woodglen Close SW

DRAWING TITLE:  
ARCH PLAN

LOCATION:  
CALGARY, ALBERTA, CANADA

DATE:  
25.05.2021

BASEMENT FLOOR

NOTES:

1. THE LAYOUT DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT AND SPECIALIST DRAWINGS AND THE SPECIFICATION.

2. SIZES OF CONDUITS ARE TO BE SELECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE "REGULATIONS" AND AS A FUNCTION OF THE NUMBER & SIZE OF THE INDICATED CONDUCTORS.

3. INSTALLATION HEIGHTS:  
h1: 23.622 inches.  
h2: 43.3071 inches.  
h3: 47.2441 inches.  
h4: 70.86 inches.

LEGEND:

WALL MOUNTED SIMPLEX SOCKET OUTLET (2P+E) 16A/120V FED FROM NORMAL PANELBOARD.

WALL MOUNTED DUPLEX SOCKET OUTLET (2P+E) 16A/120V FED FROM NORMAL PANELBOARD.

WALL MOUNTED POWER SOCKET OUTLET (2P+E) 20A/120V FED FROM NORMAL PANELBOARD.

WALL MOUNTED ELECTRICAL OUTLET (2P+E) 20A/120V FED FROM NORMAL PANELBOARD.

WALL MOUNTED ELECTRICAL OUTLET FOR FAN (2P+E) 20A/120V FED FROM NORMAL PANELBOARD.

SURFACE MOUNTED PANELBOARD.

SINGLE PHASE ISOLATOR SWITCH RATED 30y AMPS.

P.S: WP & CO DENOTE RESPECTIVELY WATERPROOF & COVERED.

MAIN FLOOR

ELECTRICAL LOAD CALCULATION (SINGLE PHASE 120/208V)			
SERVICE CALCULATION			
TYPE OF LOAD	CONNECTED LOAD (VA)	DEMAIND FACTOR	DEMAND LOAD (VA)
LIGHTING	1850	0.5	925
SOCKETS OUTLETS	7000	0.5	3500
KITCHEN EQUIPMENT	3500	0.5	1750
Mechanical Load	1500	1	1500
TOTAL CONNECTED LOAD (VA)			13850
TOTAL CURRENT (A)			66.58653846
80% TATING			83.23317308
PANEL REQUIREMENT			80A

NOTES:

1. THE LAYOUT DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT AND SPECIALIST DRAWINGS AND THE SPECIFICATION.
2. SIZES OF CONDUITS ARE TO BE SELECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE "REGULATIONS" AND AS A FUNCTION OF THE NUMBER & SIZE OF THE INDICATED CONDUCTORS.
3. INSTALLATION HEIGHTS:  
h1: 23.622 inches.  
h2: 43.3071 inches.  
h3: 47.2441 inches.

LEGEND:

	WALL MOUNTED TELECOMMUNICATION OUTLET, 2 OUTLETS RJ45/CAT5
	WALL MOUNTED TELECOMMUNICATION OUTLET, 1 OUTLETS RJ45/CAT5.
	CEILING MOUNTED TELECOMMUNICATION OUTLET FOR POE ACCESS POINT (WIFI) , 1 OUTLET RJ45/CAT5.
	WALL MOUNTED TV OUTLET INCLUDING RG6 CABLE
	TV BOX TV BOX INCLUDING SPLITTER
	TV BOX TV BOX INCLUDING MDF AND ACTIVE SWITCH
	WALL MOUNTED BELL
	WALL MOUNTED PUSH BUTTON FOR BELL

P.S: WP DENOTES WATERPROOF.

NOTES:

1. THE LAYOUT DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT AND SPECIALIST DRAWINGS AND THE SPECIFICATION.
2. DO NOT SCALE FROM THE LAYOUT DRAWINGS WORK ACCORDING TO ARCHITECTURAL , ID OR ELECTRICAL DETAILS UNLESS OTHERWISE INDICATED.
3. SIZES OF CONDUITS ARE TO BE SELECTED BY THE CONTRACTOR IN ACCORDANCE WITH THE "REGULATIONS" AND AS A FUNCTION OF THE NUMBER & SIZE OF THE INDICATED CONDUCTORS.
4. SOCKET OUTLETS ARE MOUNTED AT 17.71in AFFL AND SWITCHES AT 43.3071in AFFL UNLESS OTHERWISE INDICATED.

LEGEND:

	CEILING LIGHT POINT (x INDICATES CONTROL REF.)
	WALL MOUNTED LIGHTING FIXTURE (x INDICATES CONTROL REF.)
	WALL MOUNTED ELECTRICAL OUTLET FOR FAN (2P+E) 20A/120V FED FROM NORMAL PANELBOARD.
	WALL MOUNTED ONE WAY ONE GANG SWITCH RATED 10 AMPS. (x INDICATES CONTROL REF.)
	WALL MOUNTED ONE WAY TWO GANGS SWITCH RATED 10 AMPS. (xyz INDICATE CONTROL REF.)
	WALL MOUNTED ONE WAY THREE GANGS SWITCH RATED 10 AMPS. (xyz INDICATE CONTROL REF.)
	WALL MOUNTED TWO WAYS ONE GANG SWITCH RATED 10 AMPS. (x INDICATE CONTROL REF.)
	WALL MOUNTED TWO WAYS TWO GANGS SWITCH RATED 10 AMPS. (xyz INDICATE CONTROL REF.)
	SURFACE MOUNTED ELECTRICAL PANELBOARD.

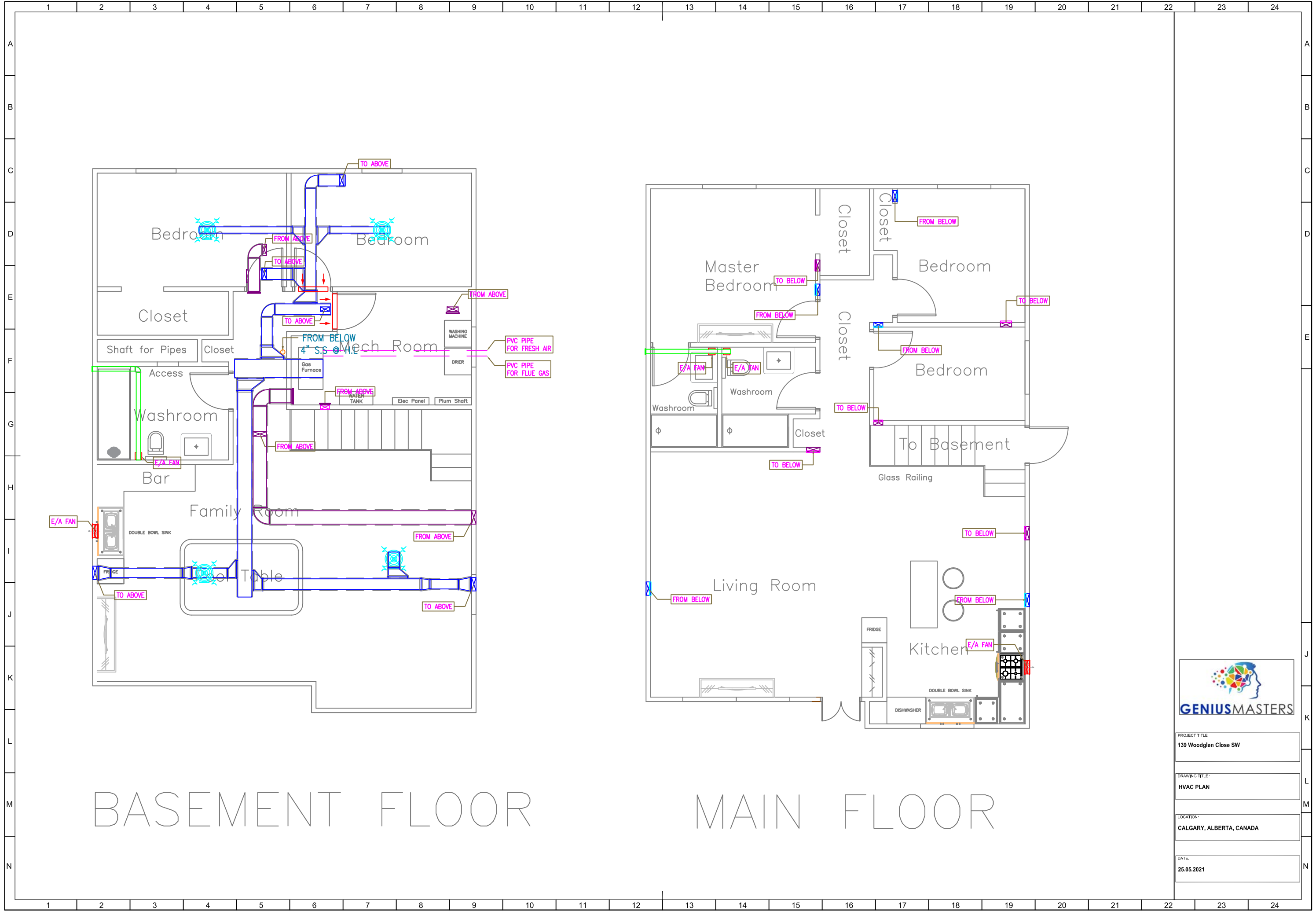


PROJECT TITLE:  
139 Woodglen Close SW

DRAWING TITLE:  
ELECTRICAL PLAN

LOCATION:  
CALGARY, ALBERTA, CANADA

DATE:  
25.05.2021

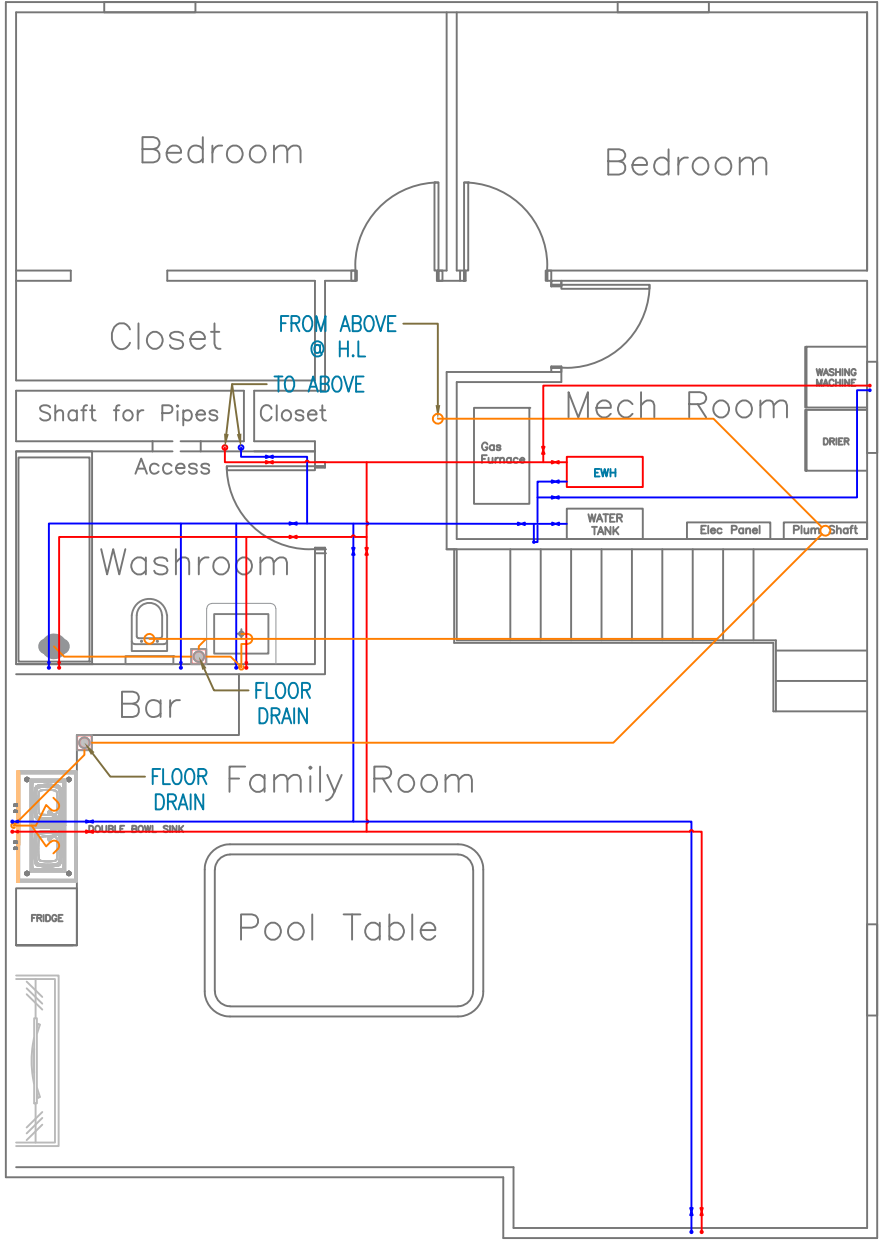


PROJECT TITLE:  
139 Woodglen Close SW

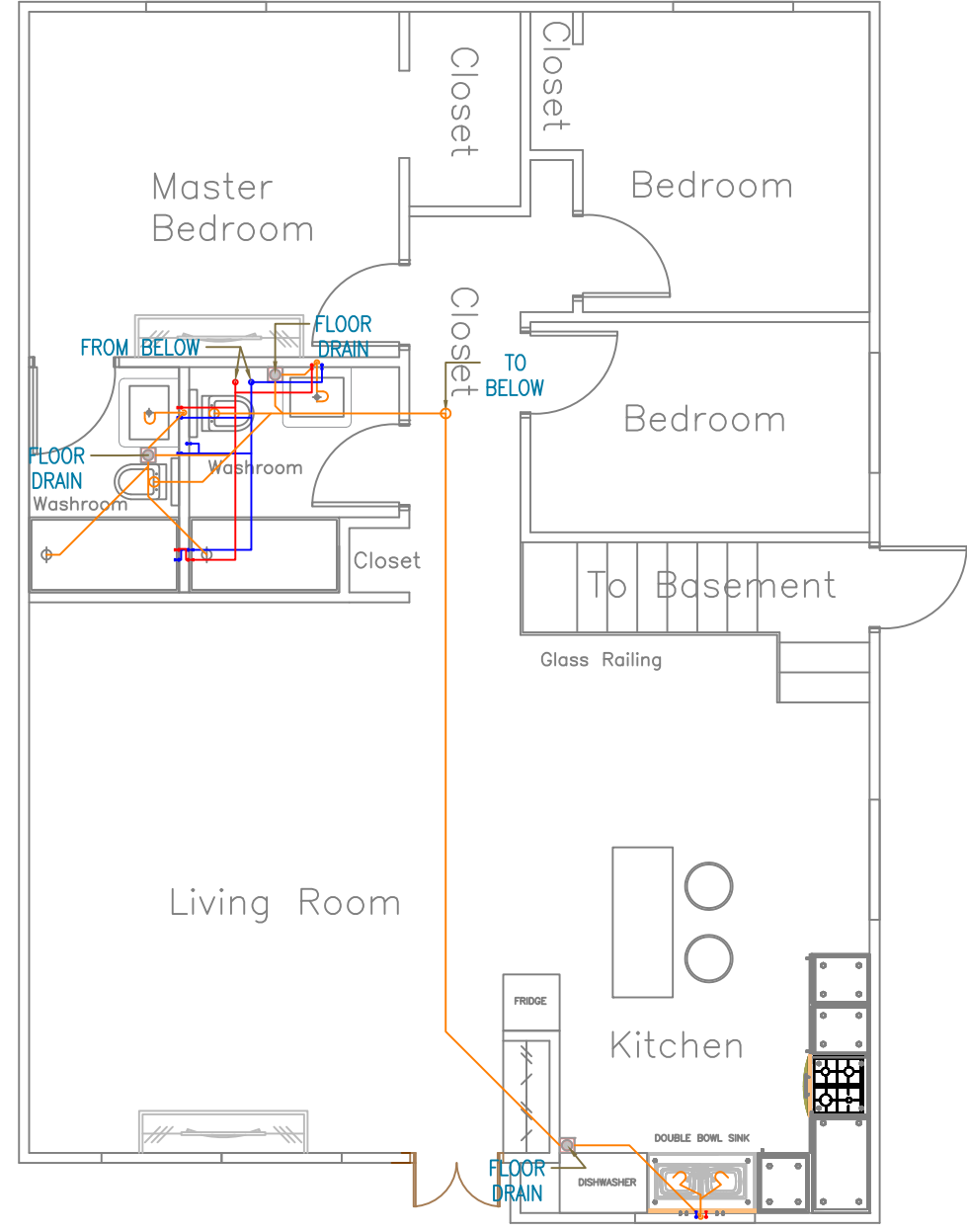
DRAWING TITLE:  
HVAC PLAN

LOCATION:  
CALGARY, ALBERTA, CANADA

DATE:  
25.05.2021



BASEMENT FLOOR



MAIN FLOOR



PROJECT TITLE:  
139 Woodglen Close SW

DRAWING TITLE:  
PLUMBING PLAN

LOCATION:  
CALGARY, ALBERTA, CANADA

DATE:  
25.05.2021

## Design Weather Parameters & MSHGs

House Canada

05/20/2021

MJ

11:49AM

### Design Parameters:

City Name ..... **Calgary**  
Location ..... **Alberta**  
Latitude ..... **51.1** Deg.  
Longitude ..... **114.0** Deg.  
Elevation ..... **3556.0** ft  
Summer Design Dry-Bulb ..... **83.0** °F  
Summer Coincident Wet-Bulb ..... **60.0** °F  
Summer Daily Range ..... **22.0** °F  
Winter Design Dry-Bulb ..... **-31.0** °F  
Winter Design Wet-Bulb ..... **-31.0** °F  
Atmospheric Clearness Number ..... **1.10**  
Average Ground Reflectance ..... **0.20**  
Soil Conductivity ..... **0.800** BTU/(hr-ft-°F)  
Local Time Zone (GMT +/- N hours) ..... **7.0** hours  
Consider Daylight Savings Time ..... **No**  
Simulation Weather Data ..... **noneN/A**  
Current Data is ..... **User Modified**  
Design Cooling Months ..... **January to December**

### Design Day Maximum Solar Heat Gains

(The MSHG values are expressed in BTU/(hr-ft²) )

# Design Weather Parameters & MSHGs

House Canada

05/20/2021

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Month	N	NNE	NE	ENE	E	ESE	SE	SSE	S
January	14.4	14.4	14.4	44.5	112.8	175.8	221.7	246.3	256.3
February	20.2	20.2	31.5	102.9	174.4	225.4	259.5	272.8	273.7
March	26.7	26.7	85.0	162.3	213.7	254.8	265.2	261.7	257.2
April	33.3	64.6	141.5	194.1	237.9	247.2	240.2	222.6	215.7
May	38.6	107.1	170.5	218.0	239.4	237.3	217.0	189.5	179.7
June	51.7	121.1	179.7	222.0	237.1	229.0	204.3	173.9	162.5
July	41.7	102.8	169.5	211.9	236.1	230.0	210.9	185.9	174.8
August	35.2	66.3	135.9	189.5	229.1	239.8	230.8	216.1	208.6
September	27.9	27.9	73.7	151.2	203.1	240.8	250.9	249.7	248.2
October	21.2	21.2	30.5	97.8	164.5	218.0	249.5	261.5	265.0
November	14.8	14.8	14.8	45.1	107.8	172.0	216.1	244.5	252.2
December	11.9	11.9	11.9	23.2	86.7	146.4	196.9	224.9	237.3
Month	SSW	SW	WSW	W	WNW	NW	NNW	HOR	Mult
January	249.1	222.9	173.2	114.2	42.4	14.4	14.4	72.8	1.00
February	269.8	257.4	228.9	167.6	106.2	27.4	20.2	131.3	1.00
March	260.3	264.7	250.9	219.8	158.4	89.2	26.7	190.5	1.00
April	222.8	241.5	248.2	237.1	196.9	141.5	64.1	235.9	1.00
May	190.3	217.4	238.0	238.3	218.5	169.4	108.2	261.7	1.00
June	175.3	205.1	230.5	235.8	222.3	176.5	122.4	269.0	1.00
July	186.7	212.7	233.5	232.6	214.6	164.7	108.3	259.2	1.00
August	215.9	233.4	239.5	228.3	190.0	136.8	64.3	232.6	1.00
September	250.3	251.7	241.1	201.6	151.4	74.2	27.9	184.4	1.00
October	263.0	249.9	213.0	166.9	94.2	32.4	21.2	130.3	1.00
November	243.2	214.9	173.1	106.9	46.1	14.8	14.8	73.6	1.00
December	226.9	194.7	148.6	83.5	26.3	11.9	11.9	51.8	1.00

Mult. = User-defined solar multiplier factor.

## Wall Constructions

House Canada

05/20/2021

MJ

11:50AM

### External Wall

#### Wall Details

Outside Surface Color ..... **Dark**  
 Absorptivity ..... **0.900**  
 Overall U-Value ..... **0.088** BTU/(hr-ft<sup>2</sup>-°F)

#### Wall Layers Details (Inside to Outside)

Layers	Thickness in	Density lb/ft <sup>3</sup>	Specific Ht. BTU / (lb - °F)	R-Value (hr-ft <sup>2</sup> -°F)/BTU	Weight lb/ft <sup>2</sup>
Inside surface resistance	0.000	0.0	0.00	2.27131	0.0
Air space	0.000	0.0	0.00	0.56783	0.0
Timber + Insulation	0.000	0.0	0.00	5.67826	0.0
Face brick	4.000	125.0	0.22	0.56783	41.7
Outside surface resistance	0.000	0.0	0.00	2.27131	0.0
<b>Totals</b>	<b>4.000</b>	<b>-</b>		<b>11.35654</b>	<b>41.7</b>

Roof Constructions	
House Canada	05/20/2021
MJ	11:50AM

## Roof

### Roof Details

Outside Surface Color ..... **Dark**  
Absorptivity ..... **0.900**  
Overall U-Value ..... **0.029** BTU/(hr-ft<sup>2</sup>-°F)

### Roof Layers Details (Inside to Outside)

Layers	Thickness in	Density lb/ft <sup>3</sup>	Specific Ht. BTU / (lb - °F)	R-Value (hr-ft <sup>2</sup> -°F)/BTU	Weight lb/ft <sup>2</sup>
Inside surface resistance	0.000	0.0	0.00	0.68500	0.0
Steel deck	0.034	489.0	0.12	0.00011	1.4
Board insulation	1.000	2.0	0.22	28.40000	0.2
Built-up roofing	0.376	70.0	0.35	4.65618	2.2
Outside surface resistance	0.000	0.0	0.00	0.33300	0.0
<b>Totals</b>	<b>1.409</b>	<b>-</b>		<b>34.07429</b>	<b>3.7</b>



## Window Constructions

House Canada

05/20/2021

MJ

11:50AM

### Window 1 ft^2

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#### Window Details:

Detailed Input ..... **No**  
Height ..... **1.00** ft  
Width ..... **1.00** ft  
Overall U-Value ..... **0.528** BTU/(hr-ft<sup>2</sup>-°F)  
Overall Shade Coefficient ..... **0.800**

## Space Input Data

12- House Canada Rev.01

05/24/2021

MJ

07:42PM

### BAS - BEDROOM 1

#### 1. General Details:

Floor Area ..... **158.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **8.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... **HOTEL: Bedroom/living room**  
OA Requirement 1 ..... **5.0** CFM/person  
OA Requirement 2 ..... **0.06** CFM/ft<sup>2</sup>  
Space Usage Defaults **ASHRAE Standard 62.1-2010**

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **1.27** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **Full**

##### 2.2. Task Lighting:

Wattage ..... **0.50** W/ft<sup>2</sup>  
Schedule ..... **Full**

##### 2.3. Electrical Equipment:

Wattage ..... **200.0** Watts  
Schedule ..... **Full**

#### 3. Walls, Windows, Doors:

##### 2.4. People:

Occupancy ..... **2.0** People  
Activity Level ..... **Sedentary Work**  
Sensible ..... **280.0** BTU/hr/person  
Latent ..... **270.0** BTU/hr/person  
Schedule ..... **Full**

##### 2.5. Miscellaneous Loads:

Sensible ..... **0** BTU/hr  
Schedule ..... **None**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

Exp.	Wall Gross Area (ft²)	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
N	112.0	12	0	0
W	92.0	0	0	0

## Space Input Data

12- House Canada Rev.01

05/24/2021

MJ

07:42PM

### 3.1. Construction Types for Exposure N

Wall Type ..... External Wall

1st Window Type ..... Window 1 ft^2

### 3.2. Construction Types for Exposure W

Wall Type ..... External Wall

### 4. Roofs, Skylights:

(No Roof or Skylight data).

### 5. Infiltration:

Design Cooling ..... 0.00 CFM

Design Heating ..... 0.00 CFM

Energy Analysis ..... 0.00 CFM

Infiltration occurs only when the fan is off.

### 6. Floors:

Type ..... Slab Floor Below Grade

Floor Area ..... 158.0 ft<sup>2</sup>

Exposed Perimeter ..... 50.0 ft

Total Floor U-Value ..... 0.029 BTU/(hr-ft<sup>2</sup>-°F)

Floor Depth ..... 8.0 ft

Basement Wall U-Value ..... 0.088 BTU/(hr-ft<sup>2</sup>-°F)

Wall Insulation R-Value ..... 0.00 (hr-ft<sup>2</sup>-°F)/BTU

Wall Insulation Depth ..... 0.0 ft

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Wall Partition

Area ..... 150.0 ft<sup>2</sup>

U-Value ..... 0.450 BTU/(hr-ft<sup>2</sup>-°F)

Uncondit. Space Max Temp ..... 85.0 °F

Ambient at Space Max Temp ..... 83.0 °F

Uncondit. Space Min Temp ..... 50.0 °F

Ambient at Space Min Temp ..... 31.0 °F

#### 7.2. 2nd Partition Details:

(No partition data).

## Space Input Data

12- House Canada Rev.01

05/24/2021

MJ

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## Space Input Data

12- House Canada Rev.01

05/24/2021

MJ

07:42PM

### BAS - BEDROOM 2

#### 1. General Details:

Floor Area ..... **115.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **8.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... **HOTEL: Bedroom/living room**  
OA Requirement 1 ..... **5.0** CFM/person  
OA Requirement 2 ..... **0.06** CFM/ft<sup>2</sup>  
Space Usage Defaults **ASHRAE Standard 62.1-2010**

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **1.27** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **Full**

##### 2.4. People:

Occupancy ..... **2.0** People  
Activity Level ..... **Sedentary Work**  
Sensible ..... **280.0** BTU/hr/person  
Latent ..... **270.0** BTU/hr/person  
Schedule ..... **Full**

##### 2.2. Task Lighting:

Wattage ..... **0.50** W/ft<sup>2</sup>  
Schedule ..... **Full**

##### 2.5. Miscellaneous Loads:

Sensible ..... **0** BTU/hr  
Schedule ..... **None**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

#### 2.3. Electrical Equipment:

Wattage ..... **200.0** Watts  
Schedule ..... **Full**

#### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (ft <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
E	68.0	0	0	0
N	108.0	12	0	0

#### 3.1. Construction Types for Exposure E

Wall Type ..... **External Wall**

## Space Input Data

12- House Canada Rev.01

05/24/2021

MJ

07:42PM

### 3.2. Construction Types for Exposure N

Wall Type ..... **External Wall**

1st Window Type ..... **Window 1 ft^2**

### 4. Roofs, Skylights:

**(No Roof or Skylight data).**

### 5. Infiltration:

Design Cooling ..... **0.00** CFM

Design Heating ..... **0.00** CFM

Energy Analysis ..... **0.00** CFM

Infiltration occurs only when the fan is off.

### 6. Floors:

Type ..... **Slab Floor Below Grade**

Floor Area ..... **115.0** ft<sup>2</sup>

Exposed Perimeter ..... **45.0** ft

Total Floor U-Value ..... **0.029** BTU/(hr-ft<sup>2</sup>-°F)

Floor Depth ..... **8.0** ft

Basement Wall U-Value ..... **0.088** BTU/(hr-ft<sup>2</sup>-°F)

Wall Insulation R-Value ..... **0.00** (hr-ft<sup>2</sup>-°F)/BTU

Wall Insulation Depth ..... **0.0** ft

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... **Wall Partition**

Area ..... **84.0** ft<sup>2</sup>

U-Value ..... **0.450** BTU/(hr-ft<sup>2</sup>-°F)

Uncondit. Space Max Temp ..... **85.0** °F

Ambient at Space Max Temp ..... **83.0** °F

Uncondit. Space Min Temp ..... **50.0** °F

Ambient at Space Min Temp ..... **31.0** °F

#### 7.2. 2nd Partition Details:

**(No partition data).**

## Space Input Data

12- House Canada Rev.01

05/24/2021

MJ

07:42PM

### BAS - FAMILY & KITCHEN

#### 1. General Details:

Floor Area ..... **617.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **8.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... **GENERAL: Break room**  
OA Requirement 1 ..... **5.0** CFM/person  
OA Requirement 2 ..... **0.06** CFM/ft<sup>2</sup>  
Space Usage Defaults **ASHRAE Standard 62.1-2010**

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **1.27** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **Full**

##### 2.2. Task Lighting:

Wattage ..... **0.50** W/ft<sup>2</sup>  
Schedule ..... **Full**

##### 2.3. Electrical Equipment:

Wattage ..... **1500.0** Watts  
Schedule ..... **Full**

#### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (ft <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
W	146.0	0	0	0
S	225.0	0	0	0
E	180.0	12	0	0

##### 3.1. Construction Types for Exposure W

Wall Type ..... **External Wall**

##### 2.4. People:

Occupancy ..... **6.0** People  
Activity Level ..... **Medium Work**  
Sensible ..... **295.0** BTU/hr/person  
Latent ..... **455.0** BTU/hr/person  
Schedule ..... **Full**

##### 2.5. Miscellaneous Loads:

Sensible ..... **0** BTU/hr  
Schedule ..... **None**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

## Space Input Data

12- House Canada Rev.01

05/24/2021

MJ

07:42PM

### 3.2. Construction Types for Exposure S

Wall Type ..... External Wall

### 3.3. Construction Types for Exposure E

Wall Type ..... External Wall

1st Window Type ..... Window 1 ft^2

### 4. Roofs, Skylights:

(No Roof or Skylight data).

### 5. Infiltration:

Design Cooling ..... 0.00 CFM

Design Heating ..... 0.00 CFM

Energy Analysis ..... 0.00 CFM

Infiltration occurs only when the fan is off.

### 6. Floors:

Type ..... Slab Floor Below Grade

Floor Area ..... 617.0 ft<sup>2</sup>

Exposed Perimeter ..... 125.0 ft

Total Floor U-Value ..... 0.029 BTU/(hr-ft<sup>2</sup>-°F)

Floor Depth ..... 8.0 ft

Basement Wall U-Value ..... 0.088 BTU/(hr-ft<sup>2</sup>-°F)

Wall Insulation R-Value ..... 0.00 (hr-ft<sup>2</sup>-°F)/BTU

Wall Insulation Depth ..... 0.0 ft

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Wall Partition

Area ..... 200.0 ft<sup>2</sup>

U-Value ..... 0.450 BTU/(hr-ft<sup>2</sup>-°F)

Uncondit. Space Max Temp ..... 85.0 °F

Ambient at Space Max Temp ..... 83.0 °F

Uncondit. Space Min Temp ..... 50.0 °F

Ambient at Space Min Temp ..... 31.0 °F

#### 7.2. 2nd Partition Details:

(No partition data).



## Space Input Data

12- House Canada Rev.01

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## Space Input Data

12- House Canada Rev.01

05/24/2021

MJ

07:42PM

### GF - BEDROOM 3

#### 1. General Details:

Floor Area ..... **106.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **8.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... **HOTEL: Bedroom/living room**  
OA Requirement 1 ..... **5.0** CFM/person  
OA Requirement 2 ..... **0.06** CFM/ft<sup>2</sup>  
Space Usage Defaults **ASHRAE Standard 62.1-2010**

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **1.27** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **Full**

##### 2.4. People:

Occupancy ..... **2.0** People  
Activity Level ..... **Sedentary Work**  
Sensible ..... **280.0** BTU/hr/person  
Latent ..... **270.0** BTU/hr/person  
Schedule ..... **Full**

##### 2.2. Task Lighting:

Wattage ..... **0.50** W/ft<sup>2</sup>  
Schedule ..... **Full**

##### 2.5. Miscellaneous Loads:

Sensible ..... **0** BTU/hr  
Schedule ..... **None**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

#### 2.3. Electrical Equipment:

Wattage ..... **200.0** Watts  
Schedule ..... **Full**

#### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (ft <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
N	92.0	16	0	0
E	80.0	0	0	0

#### 3.1. Construction Types for Exposure N

Wall Type ..... **External Wall**  
1st Window Type ..... **Window 1 ft^2**

## Space Input Data

12- House Canada Rev.01

05/24/2021

MJ

07:42PM

### 3.2. Construction Types for Exposure E

Wall Type ..... External Wall

### 4. Roofs, Skylights:

Exp.	Roof Gross Area (ft²)	Roof Slope (deg.)	Skylight Qty.
H	106.0	0	0

### 4.1. Construction Types for Exposure H

Roof Type ..... Roof

### 5. Infiltration:

Design Cooling ..... 0.00 CFM

Design Heating ..... 0.00 CFM

Energy Analysis ..... 0.00 CFM

Infiltration occurs only when the fan is off.

### 6. Floors:

Type ..... Floor Above Unconditioned Space

Floor Area ..... 106.0 ft²

Total Floor U-Value ..... 0.029 BTU/(hr-ft²-°F)

Unconditioned Space Max Temp. .... 85.0 °F

Ambient at Space Max Temp. .... 83.0 °F

Unconditioned Space Min Temp. .... 50.0 °F

Ambient at Space Min Temp. .... 31.0 °F

### 7. Partitions:

(No partition data).

## Space Input Data

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### GF - BEDROOM 4

#### 1. General Details:

Floor Area ..... **80.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **8.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... **HOTEL: Bedroom/living room**  
OA Requirement 1 ..... **5.0** CFM/person  
OA Requirement 2 ..... **0.06** CFM/ft<sup>2</sup>  
Space Usage Defaults **ASHRAE Standard 62.1-2010**

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **1.27** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **Full**

##### 2.2. Task Lighting:

Wattage ..... **0.50** W/ft<sup>2</sup>  
Schedule ..... **Full**

##### 2.3. Electrical Equipment:

Wattage ..... **200.0** Watts  
Schedule ..... **Full**

#### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (ft <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
E	56.0	16	0	0

##### 3.1. Construction Types for Exposure E

Wall Type ..... **External Wall**  
1st Window Type ..... **Window 1 ft^2**

##### 2.4. People:

Occupancy ..... **2.0** People  
Activity Level ..... **Sedentary Work**  
Sensible ..... **280.0** BTU/hr/person  
Latent ..... **270.0** BTU/hr/person  
Schedule ..... **Full**

##### 2.5. Miscellaneous Loads:

Sensible ..... **0** BTU/hr  
Schedule ..... **None**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

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### 4. Roofs, Skylights:

Exp.	Roof Gross Area (ft²)	Roof Slope (deg.)	Skylight Qty.
H	80.0	0	0

#### 4.1. Construction Types for Exposure H

Roof Type ..... **Roof**

### 5. Infiltration:

Design Cooling ..... **0.00** CFM

Design Heating ..... **0.00** CFM

Energy Analysis ..... **0.00** CFM

Infiltration occurs only when the fan is off.

### 6. Floors:

Type ..... **Floor Above Unconditioned Space**

Floor Area ..... **80.0** ft²

Total Floor U-Value ..... **0.029** BTU/(hr-ft²-°F)

Unconditioned Space Max Temp. .... **85.0** °F

Ambient at Space Max Temp. .... **83.0** °F

Unconditioned Space Min Temp. .... **50.0** °F

Ambient at Space Min Temp. .... **31.0** °F

### 7. Partitions:

**(No partition data).**

## Space Input Data

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### GF - KITCHEN

#### 1. General Details:

Floor Area ..... **260.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **8.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage .... **FOOD SERVICE: Kitchen (cooking)**  
OA Requirement 1 ..... **7.5** CFM/person  
OA Requirement 2 ..... **0.12** CFM/ft<sup>2</sup>  
Space Usage Defaults **ASHRAE Standard 62.1-2010**

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **1.27** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **Full**

##### 2.4. People:

Occupancy ..... **4.0** People  
Activity Level ..... **Heavy Work**  
Sensible ..... **525.0** BTU/hr/person  
Latent ..... **925.0** BTU/hr/person  
Schedule ..... **Full**

##### 2.2. Task Lighting:

Wattage ..... **0.50** W/ft<sup>2</sup>  
Schedule ..... **Full**

##### 2.5. Miscellaneous Loads:

Sensible ..... **0** BTU/hr  
Schedule ..... **None**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

#### 2.3. Electrical Equipment:

Wattage ..... **3500.0** Watts  
Schedule ..... **Full**

#### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (ft <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
E	180.0	16	0	0
S	100.0	16	0	0

#### 3.1. Construction Types for Exposure E

Wall Type ..... **External Wall**  
1st Window Type ..... **Window 1 ft^2**

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### 3.2. Construction Types for Exposure S

Wall Type ..... External Wall

1st Window Type ..... Window 1 ft^2

### 4. Roofs, Skylights:

Exp.	Roof Gross Area (ft²)	Roof Slope (deg.)	Skylight Qty.
H	260.0	0	0

### 4.1. Construction Types for Exposure H

Roof Type ..... Roof

### 5. Infiltration:

Design Cooling ..... 0.00 CFM

Design Heating ..... 0.00 CFM

Energy Analysis ..... 0.00 CFM

Infiltration occurs only when the fan is off.

### 6. Floors:

Type ..... Floor Above Unconditioned Space

Floor Area ..... 260.0 ft²

Total Floor U-Value ..... 0.029 BTU/(hr-ft²-°F)

Unconditioned Space Max Temp. .... 85.0 °F

Ambient at Space Max Temp. .... 83.0 °F

Unconditioned Space Min Temp. .... 50.0 °F

Ambient at Space Min Temp. .... 31.0 °F

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Wall Partition

Area ..... 200.0 ft²

U-Value ..... 0.450 BTU/(hr-ft²-°F)

Uncondit. Space Max Temp ..... 85.0 °F

Ambient at Space Max Temp ..... 83.0 °F

Uncondit. Space Min Temp ..... 50.0 °F

Ambient at Space Min Temp ..... 31.0 °F

#### 7.2. 2nd Partition Details:

(No partition data).

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### GF - LIVING ROOM

#### 1. General Details:

Floor Area ..... **333.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **8.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... **HOTEL: Bedroom/living room**  
OA Requirement 1 ..... **5.0** CFM/person  
OA Requirement 2 ..... **0.06** CFM/ft<sup>2</sup>  
Space Usage Defaults **ASHRAE Standard 62.1-2010**

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **1.27** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **Full**

##### 2.4. People:

Occupancy ..... **8.0** People  
Activity Level ..... **Medium Work**  
Sensible ..... **295.0** BTU/hr/person  
Latent ..... **455.0** BTU/hr/person  
Schedule ..... **Full**

##### 2.2. Task Lighting:

Wattage ..... **0.50** W/ft<sup>2</sup>  
Schedule ..... **Full**

##### 2.5. Miscellaneous Loads:

Sensible ..... **0** BTU/hr  
Schedule ..... **None**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

#### 2.3. Electrical Equipment:

Wattage ..... **600.0** Watts  
Schedule ..... **Full**

#### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (ft <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
W	148.0	0	0	0
S	132.0	56	0	0

#### 3.1. Construction Types for Exposure W

Wall Type ..... **External Wall**

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### 3.2. Construction Types for Exposure S

Wall Type ..... **External Wall**

1st Window Type ..... **Window 1 ft^2**

### 4. Roofs, Skylights:

Exp.	Roof Gross Area (ft²)	Roof Slope (deg.)	Skylight Qty.
H	333.0	0	0

### 4.1. Construction Types for Exposure H

Roof Type ..... **Roof**

### 5. Infiltration:

Design Cooling ..... **0.00** CFM

Design Heating ..... **0.00** CFM

Energy Analysis ..... **0.00** CFM

Infiltration occurs only when the fan is off.

### 6. Floors:

Type ..... **Floor Above Unconditioned Space**

Floor Area ..... **333.0** ft²

Total Floor U-Value ..... **0.029** BTU/(hr-ft²-°F)

Unconditioned Space Max Temp. .... **85.0** °F

Ambient at Space Max Temp. .... **83.0** °F

Unconditioned Space Min Temp. .... **50.0** °F

Ambient at Space Min Temp. .... **31.0** °F

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... **Wall Partition**

Area ..... **88.0** ft²

U-Value ..... **0.450** BTU/(hr-ft²-°F)

Uncondit. Space Max Temp ..... **85.0** °F

Ambient at Space Max Temp ..... **83.0** °F

Uncondit. Space Min Temp ..... **50.0** °F

Ambient at Space Min Temp ..... **31.0** °F

#### 7.2. 2nd Partition Details:

**(No partition data).**

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## Space Input Data

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### GF - MASTER BEDROOM

#### 1. General Details:

Floor Area ..... **168.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **8.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... **HOTEL: Bedroom/living room**  
OA Requirement 1 ..... **5.0** CFM/person  
OA Requirement 2 ..... **0.06** CFM/ft<sup>2</sup>  
Space Usage Defaults **ASHRAE Standard 62.1-2010**

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **1.27** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **Full**

##### 2.2. Task Lighting:

Wattage ..... **0.50** W/ft<sup>2</sup>  
Schedule ..... **Full**

##### 2.3. Electrical Equipment:

Wattage ..... **200.0** Watts  
Schedule ..... **Full**

#### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (ft <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
N	132.0	16	0	0
W	92.0	0	0	0

##### 3.1. Construction Types for Exposure N

Wall Type ..... **External Wall**  
1st Window Type ..... **Window 1 ft^2**

##### 2.4. People:

Occupancy ..... **2.0** People  
Activity Level ..... **Sedentary Work**  
Sensible ..... **280.0** BTU/hr/person  
Latent ..... **270.0** BTU/hr/person  
Schedule ..... **Full**

##### 2.5. Miscellaneous Loads:

Sensible ..... **0** BTU/hr  
Schedule ..... **None**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

## Space Input Data

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### 3.2. Construction Types for Exposure W

Wall Type ..... **External Wall**

### 4. Roofs, Skylights:

Exp.	Roof Gross Area (ft²)	Roof Slope (deg.)	Skylight Qty.
H	168.0	0	0

### 4.1. Construction Types for Exposure H

Roof Type ..... **Roof**

### 5. Infiltration:

Design Cooling ..... **0.00** CFM  
Design Heating ..... **0.00** CFM  
Energy Analysis ..... **0.00** CFM

Infiltration occurs only when the fan is off.

### 6. Floors:

Type ..... **Floor Above Unconditioned Space**  
Floor Area ..... **168.0** ft²  
Total Floor U-Value ..... **0.029** BTU/(hr-ft²-°F)  
Unconditioned Space Max Temp. .... **85.0** °F  
Ambient at Space Max Temp. .... **83.0** °F  
Unconditioned Space Min Temp. .... **50.0** °F  
Ambient at Space Min Temp. .... **31.0** °F

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... **Wall Partition**  
Area ..... **152.0** ft²  
U-Value ..... **0.450** BTU/(hr-ft²-°F)  
Uncondit. Space Max Temp ..... **85.0** °F  
Ambient at Space Max Temp ..... **83.0** °F  
Uncondit. Space Min Temp ..... **50.0** °F  
Ambient at Space Min Temp ..... **31.0** °F

#### 7.2. 2nd Partition Details:

**(No partition data).**

## Air System Sizing Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

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### Air System Information

Air System Name ..... **FURNACE**

Number of zones ..... **1**

Equipment Class ..... **UNDEF**

Floor Area ..... **1837.0** ft<sup>2</sup>

Air System Type ..... **SZCAV**

Location ..... **Calgary, Alberta**

### Sizing Calculation Information

Calculation Months ..... **Jan to Dec**

Zone CFM Sizing ..... **Sum of space airflow rates**

Sizing Data ..... **Calculated**

Space CFM Sizing ..... **Individual peak space loads**

### Central Cooling Coil Sizing Data

Total coil load ..... **7.5** Tons

Load occurs at ..... **Jul 1300**

Total coil load ..... **89.7** MBH

OA DB / WB ..... **80.6 / 59.2** °F

Sensible coil load ..... **82.0** MBH

Entering DB / WB ..... **76.2 / 64.4** °F

Coil CFM at Jul 1300 ..... **5236** CFM

Leaving DB / WB ..... **59.7 / 58.5** °F

Max block CFM ..... **5236** CFM

Coil ADP ..... **57.8** °F

Sum of peak zone CFM ..... **5236** CFM

Bypass Factor ..... **0.100**

Sensible heat ratio ..... **0.914**

Resulting RH ..... **56** %

ft<sup>2</sup>/Ton ..... **245.8**

Design supply temp. .... **58.0** °F

BTU/(hr-ft<sup>2</sup>) ..... **48.8**

Zone T-stat Check ..... **1 of 1** OK

Water flow @ 10.0 °F rise ..... **17.95** gpm

Max zone temperature deviation ..... **0.0** °F

### Central Heating Coil Sizing Data

Max coil load ..... **78.7** MBH

Load occurs at ..... **Des Htg**

Coil CFM at Des Htg ..... **5236** CFM

BTU/(hr-ft<sup>2</sup>) ..... **42.8**

Max coil CFM ..... **5236** CFM

Ent. DB / Lvg DB ..... **64.3 / 80.1** °F

Water flow @ 20.0 °F drop ..... **7.87** gpm

### Supply Fan Sizing Data

## Air System Sizing Summary for FURNACE

Project Name: 12- House Canada Rev.01

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Actual max CFM .....	<b>5236</b>	CFM	Fan motor BHP .....	<b>0.00</b>	BHP
Standard CFM .....	<b>4597</b>	CFM	Fan motor kW .....	<b>0.00</b>	kW
Actual max CFM/ft² .....	<b>2.85</b>	CFM/ft²	Fan static .....	<b>0.00</b>	in wg

### Outdoor Ventilation Air Data

Design airflow CFM .....	<b>276</b>	CFM	CFM/person .....	<b>9.85</b>	CFM/person
CFM/ft² .....	<b>0.15</b>	CFM/ft²			

## Zone Sizing Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

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### Air System Information

Air System Name ..... **FURNACE**

Number of zones ..... **1**

Equipment Class ..... **UNDEF**

Floor Area ..... **1837.0** ft<sup>2</sup>

Air System Type ..... **SZCAV**

Location ..... **Calgary, Alberta**

### Sizing Calculation Information

Calculation Months ..... **Jan to Dec**

Zone CFM Sizing ..... **Sum of space airflow rates**

Sizing Data ..... **Calculated**

Space CFM Sizing ..... **Individual peak space loads**

### Zone Sizing Data

Zone Name	Maximum Cooling Sensible (MBH)	Design Airflow (CFM)	Minimum Airflow (CFM)	Time of Peak Load	Maximum Heating Load (MBH)	Zone Floor Area (ft <sup>2</sup> )	Zone CFM/ft <sup>2</sup>
Zone 1	82.6	5236	5236	Jul 1600	52.2	1837.0	2.85

### Zone Terminal Sizing Data

No Zone Terminal Sizing Data required for this system.

### Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft <sup>2</sup> )	Space CFM/ft <sup>2</sup>
<b>Zone 1</b>							
BAS - BEDROOM 1	1	5.2	Jul 1900	321	6.8	158.0	2.03
BAS - BEDROOM 2	1	4.3	Jul 1500	269	5.6	115.0	2.34
BAS - FAMILY & KITCHEN	1	21.1	Jul 1700	1308	15.2	617.0	2.12
GF - MASTER BEDROOM	1	5.7	Jul 1800	354	5.1	168.0	2.11
GF - BEDROOM 3	1	4.4	Jun 1500	275	2.9	106.0	2.59
GF - BEDROOM 4	1	3.8	Jun 1000	237	1.6	80.0	2.97
GF - KITCHEN	1	24.4	Jul 1500	1511	7.3	260.0	5.81
GF - LIVING ROOM	1	15.5	Aug 1500	960	7.6	333.0	2.88



Zone Sizing Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

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## Ventilation Sizing Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

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### 1. Summary

Ventilation Sizing Method ..... **Sum of Space OA Airflows**

Design Ventilation Airflow Rate ..... **276** CFM

### 2. Space Ventilation Analysis Table

Zone Name / Space Name	Mult.	Floor Area (ft²)	Maximum Occupants	Maximum Supply Air (CFM)	Required Outdoor Air (CFM/person)	Required Outdoor Air (CFM/ft²)	Required Outdoor Air (CFM)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (CFM)
<b>Zone 1</b>									
BAS - BEDROOM 1	1	158.0	2.0	321.2	5.00	0.06	0.0	0.0	19.5
BAS - BEDROOM 2	1	115.0	2.0	268.6	5.00	0.06	0.0	0.0	16.9
BAS - FAMILY & KITCHEN	1	617.0	6.0	1308.0	5.00	0.06	0.0	0.0	67.0
GF - MASTER BEDROOM	1	168.0	2.0	354.3	5.00	0.06	0.0	0.0	20.1
GF - BEDROOM 3	1	106.0	2.0	275.0	5.00	0.06	0.0	0.0	16.4
GF - BEDROOM 4	1	80.0	2.0	237.5	5.00	0.06	0.0	0.0	14.8
GF - KITCHEN	1	260.0	4.0	1511.5	7.50	0.12	0.0	0.0	61.2
GF - LIVING ROOM	1	333.0	8.0	959.6	5.00	0.06	0.0	0.0	60.0
<b>Totals (incl. Space Multipliers)</b>				<b>5235.5</b>					<b>275.8</b>

## Air System Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

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# Air System Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

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	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1300			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 80.6 °F / 59.2 °F			HEATING OA DB / WB -31.0 °F / -31.0 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	172 ft²	8219	-	172 ft²	-	-
Wall Transmission	1771 ft²	18151	-	1771 ft²	15750	-
Roof Transmission	947 ft²	1525	-	947 ft²	2807	-
Window Transmission	172 ft²	173	-	172 ft²	9172	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	1837 ft²	162	-	1837 ft²	11818	-
Partitions	874 ft²	2320	-	874 ft²	7866	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	2333 W	7960	-	0	0	-
Task Lighting	919 W	3134	-	0	0	-
Electric Equipment	6600 W	22519	-	0	0	-
People	28	9030	12770	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	7319	639	10%	4741	0
>> Total Zone Loads	-	80512	13409	-	52155	0
Zone Conditioning	-	80783	13409	-	52352	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Return Fan Load	5236 CFM	0	-	5236 CFM	0	-
Ventilation Load	276 CFM	1217	-5713	276 CFM	26300	0
Supply Fan Load	5236 CFM	0	-	5236 CFM	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	82001	7696	-	78652	0
Central Cooling Coil	-	82001	7699	-	0	0
Central Heating Coil	-	0	-	-	78652	-
>> Total Conditioning	-	82001	7699	-	78652	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

## Zone Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

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Prepared by: MJ

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Zone 1	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1600			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 82.3 °F / 59.8 °F			HEATING OA DB / WB -31.0 °F / -31.0 °F		
	OCCUPIED T-STAT 75.0 °F			OCCUPIED T-STAT 70.0 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	172 ft²	7284	-	172 ft²	-	-
Wall Transmission	1771 ft²	20092	-	1771 ft²	15750	-
Roof Transmission	947 ft²	1712	-	947 ft²	2807	-
Window Transmission	172 ft²	351	-	172 ft²	9172	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	1837 ft²	198	-	1837 ft²	11818	-
Partitions	874 ft²	2839	-	874 ft²	7866	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	2333 W	7960	-	0	0	-
Task Lighting	919 W	3134	-	0	0	-
Electric Equipment	6600 W	22519	-	0	0	-
People	28	9030	12770	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	7512	639	10%	4741	0
>> Total Zone Loads	-	82632	13409	-	52155	0

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

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**TABLE 1.1.A. COMPONENT LOADS FOR SPACE " BAS - BEDROOM 1 " IN ZONE " Zone 1 "**

	<b>DESIGN COOLING</b>			<b>DESIGN HEATING</b>		
	<b>COOLING DATA AT Jul 1900</b>			<b>HEATING DATA AT DES HTG</b>		
	<b>COOLING OA DB / WB 75.5 °F / 57.5 °F</b>			<b>HEATING OA DB / WB -31.0 °F / -31.0 °F</b>		
	<b>OCCUPIED T-STAT 75.0 °F</b>			<b>OCCUPIED T-STAT 70.0 °F</b>		
		<b>Sensible</b>	<b>Latent</b>		<b>Sensible</b>	<b>Latent</b>
<b>SPACE LOADS</b>	<b>Details</b>	<b>(BTU/hr)</b>	<b>(BTU/hr)</b>	<b>Details</b>	<b>(BTU/hr)</b>	<b>(BTU/hr)</b>
Window & Skylight Solar Loads	12 ft²	270	-	12 ft²	-	-
Wall Transmission	192 ft²	1941	-	192 ft²	1708	-
Roof Transmission	0 ft²	0	-	0 ft²	0	-
Window Transmission	12 ft²	-2	-	12 ft²	640	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	158 ft²	0	-	158 ft²	2494	-
Partitions	150 ft²	300	-	150 ft²	1350	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	201 W	685	-	0	0	-
Task Lighting	79 W	270	-	0	0	-
Electric Equipment	200 W	682	-	0	0	-
People	2	560	540	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	471	27	10%	619	0
<b>&gt;&gt; Total Zone Loads</b>	<b>-</b>	<b>5177</b>	<b>567</b>	<b>-</b>	<b>6811</b>	<b>0</b>

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.1.B. ENVELOPE LOADS FOR SPACE " BAS - BEDROOM 1 " IN ZONE " Zone 1 "**

				COOLING	COOLING	HEATING
	Area	U-Value	Shade	TRANS	SOLAR	TRANS
	(ft²)	(BTU/(hr-ft²-°F))	Coeff.	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>N EXPOSURE</b>						
WALL	100	0.088	-	533	-	889
WINDOW 1	12	0.528	0.800	-2	270	640
<b>W EXPOSURE</b>						
WALL	92	0.088	-	1408	-	818

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.2.A. COMPONENT LOADS FOR SPACE " BAS - BEDROOM 2 " IN ZONE " Zone 1 "**

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 83.0 °F / 60.0 °F			HEATING OA DB / WB -31.0 °F / -31.0 °F		
	OCCUPIED T-STAT 75.0 °F			OCCUPIED T-STAT 70.0 °F		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(BTU/hr)	(BTU/hr)	Details	(BTU/hr)	(BTU/hr)
Window & Skylight Solar Loads	12 ft²	251	-	12 ft²	-	-
Wall Transmission	164 ft²	1444	-	164 ft²	1459	-
Roof Transmission	0 ft²	0	-	0 ft²	0	-
Window Transmission	12 ft²	26	-	12 ft²	640	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	115 ft²	0	-	115 ft²	2200	-
Partitions	84 ft²	278	-	84 ft²	756	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	146 W	498	-	0	0	-
Task Lighting	58 W	196	-	0	0	-
Electric Equipment	200 W	682	-	0	0	-
People	2	560	540	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	394	27	10%	505	0
>> Total Zone Loads	-	4329	567	-	5560	0

**TABLE 1.2.B. ENVELOPE LOADS FOR SPACE " BAS - BEDROOM 2 " IN ZONE " Zone 1 "**

				COOLING	COOLING	HEATING
	Area	U-Value	Shade	TRANS	SOLAR	TRANS
	(ft²)	(BTU/(hr-ft²-°F))	Coeff.	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>E EXPOSURE</b>						
WALL	68	0.088	-	981	-	605
<b>N EXPOSURE</b>						
WALL	96	0.088	-	464	-	854
WINDOW 1	12	0.528	0.800	26	251	640



## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.3.A. COMPONENT LOADS FOR SPACE " BAS - FAMILY & KITCHEN " IN ZONE " Zone 1 "**

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 80.8 °F / 59.3 °F			HEATING OA DB / WB -31.0 °F / -31.0 °F		
	OCCUPIED T-STAT 75.0 °F			OCCUPIED T-STAT 70.0 °F		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(BTU/hr)	(BTU/hr)	Details	(BTU/hr)	(BTU/hr)
Window & Skylight Solar Loads	12 ft²	572	-	12 ft²	-	-
Wall Transmission	539 ft²	7362	-	539 ft²	4794	-
Roof Transmission	0 ft²	0	-	0 ft²	0	-
Window Transmission	12 ft²	19	-	12 ft²	640	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	617 ft²	0	-	617 ft²	6574	-
Partitions	200 ft²	600	-	200 ft²	1800	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	784 W	2674	-	0	0	-
Task Lighting	309 W	1053	-	0	0	-
Electric Equipment	1500 W	5118	-	0	0	-
People	6	1770	2730	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	1917	137	10%	1381	0
>> Total Zone Loads	-	21085	2867	-	15189	0

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.3.B. ENVELOPE LOADS FOR SPACE " BAS - FAMILY & KITCHEN " IN ZONE " Zone 1 "**

				COOLING	COOLING	HEATING
	Area	U-Value	Shade	TRANS	SOLAR	TRANS
	(ft²)	(BTU/(hr-ft²-°F))	Coeff.	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>W EXPOSURE</b>						
WALL	146	0.088	-	1881	-	1298
<b>S EXPOSURE</b>						
WALL	225	0.088	-	3133	-	2001
<b>E EXPOSURE</b>						
WALL	168	0.088	-	2349	-	1494
WINDOW 1	12	0.528	0.800	19	572	640

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.4.A. COMPONENT LOADS FOR SPACE " GF - MASTER BEDROOM " IN ZONE " Zone 1 "**

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1800			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 78.4 °F / 58.4 °F			HEATING OA DB / WB -31.0 °F / -31.0 °F		
	OCCUPIED T-STAT 75.0 °F			OCCUPIED T-STAT 70.0 °F		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(BTU/hr)	(BTU/hr)	Details	(BTU/hr)	(BTU/hr)
Window & Skylight Solar Loads	16 ft²	354	-	16 ft²	-	-
Wall Transmission	208 ft²	1908	-	208 ft²	1850	-
Roof Transmission	168 ft²	244	-	168 ft²	498	-
Window Transmission	16 ft²	13	-	16 ft²	853	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	168 ft²	28	-	168 ft²	97	-
Partitions	152 ft²	388	-	152 ft²	1368	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	213 W	728	-	0	0	-
Task Lighting	84 W	287	-	0	0	-
Electric Equipment	200 W	682	-	0	0	-
People	2	560	540	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	519	27	10%	467	0
>> Total Zone Loads	-	5712	567	-	5133	0

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.4.B. ENVELOPE LOADS FOR SPACE " GF - MASTER BEDROOM " IN ZONE " Zone 1 "**

				COOLING	COOLING	HEATING
	Area	U-Value	Shade	TRANS	SOLAR	TRANS
	(ft²)	(BTU/(hr-ft²-°F))	Coeff.	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>N EXPOSURE</b>						
WALL	116	0.088	-	598	-	1032
WINDOW 1	16	0.528	0.800	13	354	853
<b>W EXPOSURE</b>						
WALL	92	0.088	-	1310	-	818
<b>H EXPOSURE</b>						
ROOF	168	0.029	-	244	-	498

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.5.A. COMPONENT LOADS FOR SPACE " GF - BEDROOM 3 " IN ZONE " Zone 1 "**

	<b>DESIGN COOLING</b>			<b>DESIGN HEATING</b>		
	<b>COOLING DATA AT Jun 1500</b>			<b>HEATING DATA AT DES HTG</b>		
	<b>COOLING OA DB / WB 79.0 °F / 58.0 °F</b>			<b>HEATING OA DB / WB -31.0 °F / -31.0 °F</b>		
	<b>OCCUPIED T-STAT 75.0 °F</b>			<b>OCCUPIED T-STAT 70.0 °F</b>		
		<b>Sensible</b>	<b>Latent</b>		<b>Sensible</b>	<b>Latent</b>
<b>SPACE LOADS</b>	<b>Details</b>	<b>(BTU/hr)</b>	<b>(BTU/hr)</b>	<b>Details</b>	<b>(BTU/hr)</b>	<b>(BTU/hr)</b>
Window & Skylight Solar Loads	16 ft²	366	-	16 ft²	-	-
Wall Transmission	156 ft²	1575	-	156 ft²	1387	-
Roof Transmission	106 ft²	191	-	106 ft²	314	-
Window Transmission	16 ft²	0	-	16 ft²	853	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	106 ft²	14	-	106 ft²	61	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	135 W	459	-	0	0	-
Task Lighting	53 W	181	-	0	0	-
Electric Equipment	200 W	682	-	0	0	-
People	2	560	540	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	403	27	10%	262	0
<b>&gt;&gt; Total Zone Loads</b>	<b>-</b>	<b>4432</b>	<b>567</b>	<b>-</b>	<b>2878</b>	<b>0</b>

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.5.B. ENVELOPE LOADS FOR SPACE " GF - BEDROOM 3 " IN ZONE " Zone 1 "**

				COOLING	COOLING	HEATING
	Area	U-Value	Shade	TRANS	SOLAR	TRANS
	(ft²)	(BTU/(hr-ft²-°F))	Coeff.	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>N EXPOSURE</b>						
WALL	76	0.088	-	398	-	676
WINDOW 1	16	0.528	0.800	0	366	853
<b>E EXPOSURE</b>						
WALL	80	0.088	-	1176	-	711
<b>H EXPOSURE</b>						
ROOF	106	0.029	-	191	-	314

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.6.A. COMPONENT LOADS FOR SPACE " GF - BEDROOM 4 " IN ZONE " Zone 1 "**

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jun 1000 COOLING OA DB / WB 66.7 °F / 53.5 °F OCCUPIED T-STAT 75.0 °F			HEATING DATA AT DES HTG HEATING OA DB / WB -31.0 °F / -31.0 °F OCCUPIED T-STAT 70.0 °F		
		Sensible	Latent		Sensible	Latent
<b>SPACE LOADS</b>	<b>Details</b>	<b>(BTU/hr)</b>	<b>(BTU/hr)</b>	<b>Details</b>	<b>(BTU/hr)</b>	<b>(BTU/hr)</b>
Window & Skylight Solar Loads	16 ft²	1239	-	16 ft²	-	-
Wall Transmission	40 ft²	538	-	40 ft²	356	-
Roof Transmission	80 ft²	59	-	80 ft²	237	-
Window Transmission	16 ft²	-78	-	16 ft²	853	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	80 ft²	-4	-	80 ft²	46	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	102 W	347	-	0	0	-
Task Lighting	40 W	136	-	0	0	-
Electric Equipment	200 W	682	-	0	0	-
People	2	560	540	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	348	27	10%	149	0
<b>&gt;&gt; Total Zone Loads</b>	<b>-</b>	<b>3828</b>	<b>567</b>	<b>-</b>	<b>1642</b>	<b>0</b>

**TABLE 1.6.B. ENVELOPE LOADS FOR SPACE " GF - BEDROOM 4 " IN ZONE " Zone 1 "**

				COOLING	COOLING	HEATING
	Area	U-Value	Shade	TRANS	SOLAR	TRANS
	(ft²)	(BTU/(hr-ft²-°F))	Coeff.	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>E EXPOSURE</b>						
WALL	40	0.088	-	538	-	356
WINDOW 1	16	0.528	0.800	-78	1239	853
<b>H EXPOSURE</b>						
ROOF	80	0.029	-	59	-	237



## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.7.A. COMPONENT LOADS FOR SPACE " GF - KITCHEN " IN ZONE " Zone 1 "**

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 83.0 °F / 60.0 °F			HEATING OA DB / WB -31.0 °F / -31.0 °F		
	OCCUPIED T-STAT 75.0 °F			OCCUPIED T-STAT 70.0 °F		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(BTU/hr)	(BTU/hr)	Details	(BTU/hr)	(BTU/hr)
Window & Skylight Solar Loads	32 ft²	1815	-	32 ft²	-	-
Wall Transmission	248 ft²	3460	-	248 ft²	2206	-
Roof Transmission	260 ft²	478	-	260 ft²	771	-
Window Transmission	32 ft²	69	-	32 ft²	1706	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	260 ft²	55	-	260 ft²	151	-
Partitions	200 ft²	661	-	200 ft²	1800	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	330 W	1127	-	0	0	-
Task Lighting	130 W	444	-	0	0	-
Electric Equipment	3500 W	11942	-	0	0	-
People	4	2100	3700	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	2215	185	10%	663	0
>> Total Zone Loads	-	24365	3885	-	7297	0

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.7.B. ENVELOPE LOADS FOR SPACE " GF - KITCHEN " IN ZONE " Zone 1 "**

				COOLING	COOLING	HEATING
	Area	U-Value	Shade	TRANS	SOLAR	TRANS
	(ft²)	(BTU/(hr-ft²-°F))	Coeff.	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>E EXPOSURE</b>						
WALL	164	0.088	-	2365	-	1459
WINDOW 1	16	0.528	0.800	34	845	853
<b>S EXPOSURE</b>						
WALL	84	0.088	-	1094	-	747
WINDOW 1	16	0.528	0.800	34	970	853
<b>H EXPOSURE</b>						
ROOF	260	0.029	-	478	-	771

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.8.A. COMPONENT LOADS FOR SPACE " GF - LIVING ROOM " IN ZONE " Zone 1 "**

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Aug 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 83.0 °F / 60.0 °F			HEATING OA DB / WB -31.0 °F / -31.0 °F		
	OCCUPIED T-STAT 75.0 °F			OCCUPIED T-STAT 70.0 °F		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(BTU/hr)	(BTU/hr)	Details	(BTU/hr)	(BTU/hr)
Window & Skylight Solar Loads	56 ft²	4140	-	56 ft²	-	-
Wall Transmission	224 ft²	2488	-	224 ft²	1992	-
Roof Transmission	333 ft²	535	-	333 ft²	987	-
Window Transmission	56 ft²	120	-	56 ft²	2986	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	333 ft²	71	-	333 ft²	193	-
Partitions	88 ft²	291	-	88 ft²	792	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	423 W	1443	-	0	0	-
Task Lighting	167 W	568	-	0	0	-
Electric Equipment	600 W	2047	-	0	0	-
People	8	2360	3640	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 5%	1406	182	10%	695	0
>> Total Zone Loads	-	15469	3822	-	7646	0

## Space Design Load Summary for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**TABLE 1.8.B. ENVELOPE LOADS FOR SPACE " GF - LIVING ROOM " IN ZONE " Zone 1 "**

				COOLING	COOLING	HEATING
	Area	U-Value	Shade	TRANS	SOLAR	TRANS
	(ft²)	(BTU/(hr-ft²-°F))	Coeff.	(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>W EXPOSURE</b>						
WALL	148	0.088	-	1336	-	1316
<b>S EXPOSURE</b>						
WALL	76	0.088	-	1151	-	676
WINDOW 1	56	0.528	0.800	120	4140	2986
<b>H EXPOSURE</b>						
ROOF	333	0.029	-	535	-	987

## Hourly Air System Design Day Loads for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

### DESIGN MONTH: JULY

Hour	OA TEMP (°F)	SUPPLY AIRFLOW (CFM)	CENTRAL COOLING SENSIBLE (MBH)	CENTRAL COOLING TOTAL (MBH)	CENTRAL HEATING COIL (MBH)	PRECOOL COIL (MBH)	PREHEAT COIL (MBH)	TERMINAL COOLING (MBH)	TERMINAL HEATING (MBH)	ZONE HEATING UNIT (MBH)
0000	65.0	5236	68.7	75.3	0.0	0.0	0.0	0.0	0.0	0.0
0100	63.9	5236	65.5	71.7	0.0	0.0	0.0	0.0	0.0	0.0
0200	62.8	5236	64.1	70.1	0.0	0.0	0.0	0.0	0.0	0.0
0300	61.9	5236	63.6	69.8	0.0	0.0	0.0	0.0	0.0	0.0
0400	61.2	5236	62.5	68.6	0.0	0.0	0.0	0.0	0.0	0.0
0500	61.0	5236	59.2	64.6	0.0	0.0	0.0	0.0	0.0	0.0
0600	61.4	5236	59.9	65.3	0.0	0.0	0.0	0.0	0.0	0.0
0700	62.5	5236	61.4	67.0	0.0	0.0	0.0	0.0	0.0	0.0
0800	64.5	5236	63.4	69.2	0.0	0.0	0.0	0.0	0.0	0.0
0900	67.4	5236	66.9	73.0	0.0	0.0	0.0	0.0	0.0	0.0
1000	70.7	5236	70.2	76.5	0.0	0.0	0.0	0.0	0.0	0.0
1100	74.4	5236	75.2	82.2	0.0	0.0	0.0	0.0	0.0	0.0
1200	77.9	5236	79.5	87.0	0.0	0.0	0.0	0.0	0.0	0.0
1300	80.6	5236	82.0	89.7	0.0	0.0	0.0	0.0	0.0	0.0
1400	82.3	5236	81.3	88.6	0.0	0.0	0.0	0.0	0.0	0.0
1500	83.0	5236	81.9	89.2	0.0	0.0	0.0	0.0	0.0	0.0
1600	82.3	5236	81.9	89.2	0.0	0.0	0.0	0.0	0.0	0.0
1700	80.8	5236	81.2	88.5	0.0	0.0	0.0	0.0	0.0	0.0
1800	78.4	5236	80.0	87.2	0.0	0.0	0.0	0.0	0.0	0.0
1900	75.5	5236	78.1	85.0	0.0	0.0	0.0	0.0	0.0	0.0
2000	72.7	5236	76.8	84.0	0.0	0.0	0.0	0.0	0.0	0.0
2100	70.2	5236	74.5	81.4	0.0	0.0	0.0	0.0	0.0	0.0
2200	68.0	5236	71.7	78.5	0.0	0.0	0.0	0.0	0.0	0.0
2300	66.3	5236	68.7	75.1	0.0	0.0	0.0	0.0	0.0	0.0

## Hourly Zone Loads for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

ZONE: Zone 1									
DESIGN MONTH: JULY									
Hour	OA TEMP (°F)	ZONE TEMP (°F)	RH (%)	ZONE AIRFLOW (CFM)	ZONE SENSIBLE LOAD (BTU/hr)	ZONE COND (BTU/hr)	TERMINAL COOLING COIL (BTU/hr)	TERMINAL HEATING COIL (BTU/hr)	ZONE HEATING UNIT (BTU/hr)
0000	65.0	75.9	61	5235.5	70773.8	71554.9	0.0	0.0	0.0
0100	63.9	76.2	62	5235.5	69174.8	68748.0	0.0	0.0	0.0
0200	62.8	76.1	63	5235.5	67620.4	67551.3	0.0	0.0	0.0
0300	61.9	75.8	63	5235.5	66166.0	67260.7	0.0	0.0	0.0
0400	61.2	75.6	63	5235.5	64811.8	66245.6	0.0	0.0	0.0
0500	61.0	76.2	65	5235.5	64162.2	63190.5	0.0	0.0	0.0
0600	61.4	76.3	64	5235.5	64954.6	63752.5	0.0	0.0	0.0
0700	62.5	76.3	64	5235.5	66070.6	64963.5	0.0	0.0	0.0
0800	64.5	76.4	63	5235.5	67992.6	66504.0	0.0	0.0	0.0
0900	67.4	76.4	62	5235.5	70651.7	69212.1	0.0	0.0	0.0
1000	70.7	76.5	61	5235.5	73517.8	71688.7	0.0	0.0	0.0
1100	74.4	76.2	59	5235.5	76235.4	75667.5	0.0	0.0	0.0
1200	77.9	75.9	57	5235.5	78575.6	78961.7	0.0	0.0	0.0
1300	80.6	75.9	56	5235.5	80512.2	80783.5	0.0	0.0	0.0
1400	82.3	76.5	57	5235.5	81857.7	79727.1	0.0	0.0	0.0
1500	83.0	76.6	57	5235.5	82583.9	80222.3	0.0	0.0	0.0
1600	82.3	76.6	57	5235.5	82631.8	80364.5	0.0	0.0	0.0
1700	80.8	76.6	57	5235.5	82285.3	80089.4	0.0	0.0	0.0
1800	78.4	76.6	57	5235.5	81697.4	79558.5	0.0	0.0	0.0
1900	75.5	76.6	58	5235.5	80505.1	78396.8	0.0	0.0	0.0
2000	72.7	76.3	58	5235.5	78462.3	77751.1	0.0	0.0	0.0
2100	70.2	76.2	59	5235.5	76441.9	76020.0	0.0	0.0	0.0
2200	68.0	76.2	60	5235.5	74378.1	73872.7	0.0	0.0	0.0
2300	66.3	76.4	61	5235.5	72489.2	71353.3	0.0	0.0	0.0

## System Psychrometrics for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

**July DESIGN COOLING DAY, 1300**

**TABLE 1: SYSTEM DATA**

Component	Location	Dry-Bulb Temp (°F)	Specific Humidity (lb/lb)	Airflow (CFM)	CO2 Level (ppm)	Sensible Heat (BTU/hr)	Latent Heat (BTU/hr)
Ventilation Air	Inlet	80.6	0.00732	276	400	1217	-5713
Vent - Return Mixing	Outlet	76.2	0.01203	5236	1855	-	-
Central Cooling Coil	Outlet	59.7	0.01167	5236	1855	82001	7699
Central Heating Coil	Outlet	59.7	0.01167	5236	1855	0	-
Supply Fan	Outlet	59.7	0.01167	5236	1855	0	-
Cold Supply Duct	Outlet	59.7	0.01167	5236	1855	-	-
Zone Air	-	75.9	0.01229	5236	1936	80783	13409
Return Plenum	Outlet	75.9	0.01229	5236	1936	0	-

*Air Density x Heat Capacity x Conversion Factor: At sea level = 1.080; At site altitude = 0.948 BTU/(hr-CFM-F)*

*Air Density x Heat of Vaporization x Conversion Factor: At sea level = 4746.6; At site altitude = 4167.5 BTU/(hr-CFM)*

*Site Altitude = 3556.0 ft*

**TABLE 2: ZONE DATA**

Zone Name	Zone Sensible Load (BTU/hr)	T-stat Mode	Zone Cond (BTU/hr)	Zone Temp (°F)	Zone Airflow (CFM)	CO2 Level (ppm)	Terminal Heating Coil (BTU/hr)	Zone Heating Unit (BTU/hr)
Zone 1	80512	Cooling	80783	75.9	5236	1936	0	0



## System Psychrometrics for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

### WINTER DESIGN HEATING

**TABLE 1: SYSTEM DATA**

Component	Location	Dry-Bulb Temp (°F)	Specific Humidity (lb/lb)	Airflow (CFM)	CO2 Level (ppm)	Sensible Heat (BTU/hr)	Latent Heat (BTU/hr)
Ventilation Air	Inlet	-31.0	0.00016	276	400	-26300	0
Vent - Return Mixing	Outlet	64.3	0.00016	5236	578	-	-
Central Cooling Coil	Outlet	64.3	0.00016	5236	578	0	0
Central Heating Coil	Outlet	80.1	0.00016	5236	578	78652	-
Supply Fan	Outlet	80.1	0.00016	5236	578	0	-
Cold Supply Duct	Outlet	80.1	0.00016	5236	578	-	-
Zone Air	-	69.6	0.00016	5236	587	-52352	0
Return Plenum	Outlet	69.6	0.00016	5236	587	0	-

*Air Density x Heat Capacity x Conversion Factor: At sea level = 1.080; At site altitude = 0.948 BTU/(hr-CFM-F)*

*Air Density x Heat of Vaporization x Conversion Factor: At sea level = 4746.6; At site altitude = 4167.5 BTU/(hr-CFM)*

*Site Altitude = 3556.0 ft*

**TABLE 2: ZONE DATA**

Zone Name	Zone Sensible Load (BTU/hr)	T-stat Mode	Zone Cond (BTU/hr)	Zone Temp (°F)	Zone Airflow (CFM)	CO2 Level (ppm)	Terminal Heating Coil (BTU/hr)	Zone Heating Unit (BTU/hr)
Zone 1	-52155	Heating	-52352	69.6	5236	587	0	0

## Psychrometric Analysis for FURNACE

Project Name: 12- House Canada Rev.01

05/24/2021

Prepared by: MJ

07:42PM

Location: Calgary, Alberta

Altitude: 3556.0 ft.

Data for: July DESIGN COOLING DAY, 1300

