


## Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

<b>A. Project Information</b>					
Building number, street name				Unit no.	Lot/con.
Municipality INNINFILL	Postal code	Plan number/ other description			
<b>B. Individual who reviews and takes responsibility for design activities</b>					
Name <b>MICHAEL O'ROURKE</b>		Firm <b>HVAC DESIGNS LTD.</b>			
Street address <b>375 FINLEY AVE</b>				Unit no. <b>202</b>	Lot/con. <b>N/A</b>
Municipality <b>AJAX</b>	Postal code <b>L1S 2E2</b>	Province <b>ONTARIO</b>	E-mail <b>info@hvacdesigns.ca</b>		
Telephone number <b>(905) 619-2300</b>	Fax number <b>(905) 619-2375</b>	Cell number ( )			
<b>C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]</b>					
<input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings		<input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection		<input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> On-site Sewage Systems	
Description of designer's work <b>HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12</b>			<b>Model:</b> RL-6C  <b>Project:</b> ALCONA		
<b>D. Declaration of Designer</b>					
I, <u><b>MICHAEL O'ROURKE</b></u> (print name) declare that (choose one as appropriate):					
<input type="checkbox"/> I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories.  Individual BCIN: _____ Firm BCIN: _____					
<input checked="" type="checkbox"/> I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code.  Individual BCIN: <u>19669</u> Basis for exemption from registration and qualification: <u>O.B.C SENTENCE 3.2.4.1 (4)</u>					
<input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____					
I certify that:					
1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm.					
July 8, 2022 Date			 Signature of Designer		

**NOTE:**

- For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d) of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

SITE NAME: ALCONA										DATE: Jul-22		WINTER NATURAL AIR CHANGE RATE		HEAT LOSS AT °F. 83		CSA-F280-12																			
BUILDER: BAYVIEW WELLINGTON HOMES										LO# 97837		SUMMER NATURAL AIR CHANGE RATE		HEAT GAIN AT °F. 9		SB-12 PACKAGE A1																			
TYPE: RL-8C										GFA: 2842		BATH		LOFT		WIC-3																			
ROOM USE										BED-2		BED-3		BED-4		ENS2																			
EXP. WALL										CLG. HT.		CLG. HT.		CLG. HT.		CLG. HT.																			
FACTORS										LOSS		LOSS		LOSS		LOSS																			
GRS.WALL AREA										GAIN		GAIN		GAIN		GAIN																			
GLAZING										LOSS		LOSS		LOSS		LOSS																			
NORTH										23.3	15.0	23	9	13	9	31	6																		
EAST										23.3	40.5	39	909	1581	0	0	0	0																	
SOUTH										23.3	23.9	25	582	597	22	513	526	18	419	430	8	186	191	0	0	0	0								
WEST										23.3	40.5	0	0	0	0	0	0	0	28	652	1135	0	0	0	9	210	215	0	0	0					
SKYLT.										40.8	99.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
DOORS										22.0	2.4	20	439	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
NET EXPOSED WALL										4.9	0.5	249	1216	135	194	948	105	233	1138	126	46	225	25	188	918	102	81	396	44	45	220	24	45	220	24
NET EXPOSED BSMT WALL ABOVE GR										3.9	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG										1.4	0.5	423	594	223	130	183	68	0	0	0	0	0	0	0	143	201	75	0	0	0	0	0	0	0	
NO ATTIC EXPOSED CLG										3.0	1.1	0	0	0	0	0	0	0	130	391	147	0	0	0	0	0	0	0	0	0	0	0	0	0	
EXPOSED FLOOR										2.8	0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
BASEMENT/CRAWL HEAT LOSS										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SLAB ON GRADE HEAT LOSS										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SUBTOTAL HT LOSS										3741								977	577	1838	2601	411	216	1772	1312	605	259	389	430	389	430	389	430		
SUB TOTAL HT GAIN																																			
LEVEL FACTOR / MULTIPLIER										0.10	0.33	2584						0.20	0.56	0.20	0.56	0.20	0.56	0.20	0.56	0.20	0.56	0.20	0.56	0.20	0.56	0.20	0.56		
AIR CHANGE HEAT LOSS										1232								551	26	1468	82	232	583	342	242	17	12	17	12	17	12	17	12		
AIR CHANGE HEAT GAIN										115								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
DUCT LOSS										0								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
DUCT GAIN										0								0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE										240								240	1	240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS										325								325	1	325	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H										4972								1528	1518	4069	3230	643	716	2355	947	351	672	951	672	951	672	951	672	951	
TOTAL HT GAIN x 1.3 BTU/H										4556								1080																	

ROOM USE										MUD		KT/BR		GRT		LAUN		WIR2		FOY		BAS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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## SITE NAME: ALCONA

BUILDER: BAYVIEW WELLINGTON HOMES

TYPE: RL-6C

DATE: Jul-22

GFA: 2842 LO# 97837

HEATING CFM 985

TOTAL HEAT LOSS 51,782

AIR FLOW RATE CFM 19.02

COOLING CFM 985

TOTAL HEAT GAIN 31,183

AIR FLOW RATE CFM 31.59

furnace pressure

furnace filter

a/c coil pressure

available pressure

for s/a &amp; r/a

plenum pressure s/a

max s/a diff press. loss

min adjusted pressure s/a

r/a pressure

r/a grille press. loss

adjusted pressure r/a

r/a pressure

r/a grille press. loss

adjusted pressure r/a

\$LENNOX

70

FAN SPEED

LOW

MEDLOW

MEDIUM

MEDIUM HIGH

HIGH

AFUE = 96 %

INPUT (BTU/H) = 66,000

OUTPUT (BTU/H) = 63,900

DESIGN CFM = 985

CFM @ 6" E.S.P.

TEMPERATURE RISE

60

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## RUN #

ROOM NAME

RM LOSS MBH.

CFM PER RUN HEAT

RM GAIN MBH.

CFM PER RUN COOLING

ADJUSTED PRESSURE

ACTUAL DUCT LGH.

EQUIVALENT LENGTH

TOTAL EFFECTIVE LENGTH

ADJUSTED PRESSURE

ROUND DUCT SIZE

HEATING VELOCITY (ft/min)

COOLING VELOCITY (ft/min)

OUTLET GRILL SIZE

TRUNK

## RUN #

ROOM NAME

RM LOSS MBH.

CFM PER RUN HEAT

RM GAIN MBH.

CFM PER RUN COOLING

ADJUSTED PRESSURE

ACTUAL DUCT LGH.

EQUIVALENT LENGTH

TOTAL EFFECTIVE LENGTH

ADJUSTED PRESSURE

ROUND DUCT SIZE

HEATING VELOCITY (ft/min)

COOLING VELOCITY (ft/min)

OUTLET GRILL SIZE

TRUNK

## SUPPLY AIR TRUNK SIZE

TRUNK

CFM

TRUNK A

TRUNK B

TRUNK C

TRUNK D

TRUNK E

TRUNK F

TRUNK G

TRUNK H

TRUNK I

TRUNK J

TRUNK K

TRUNK L

TRUNK M

TRUNK N

TRUNK O

TRUNK P

TRUNK Q

TRUNK R

TRUNK S

TRUNK T

TRUNK U

TRUNK V

TRUNK W

TRUNK X

TRUNK Y

TRUNK Z

DROP

## RETURN AIR TRUNK SIZE

TRUNK

CFM

TRUNK A

TRUNK B

TRUNK C

TRUNK D

TRUNK E

TRUNK F

TRUNK G

TRUNK H

TRUNK I

TRUNK J

TRUNK K

TRUNK L

TRUNK M

TRUNK N

TRUNK O

TRUNK P

TRUNK Q

TRUNK R

TRUNK S

TRUNK T

TRUNK U

TRUNK V

TRUNK W

TRUNK X

TRUNK Y

TRUNK Z

DROP

## RETURN AIR TRUNK SIZE

TRUNK

CFM

TRUNK A

TRUNK B

TRUNK C

TRUNK D

TRUNK E

TRUNK F

TRUNK G

TRUNK H

TRUNK I

TRUNK J

TRUNK K

TRUNK L

TRUNK M

TRUNK N

TRUNK O

TRUNK P

TRUNK Q

TRUNK R

TRUNK S

TRUNK T

TRUNK U

TRUNK V

TRUNK W

TRUNK X

TRUNK Y

TRUNK Z

DROP

## RETURN AIR TRUNK SIZE

TRUNK

CFM

TRUNK A

TRUNK B

TRUNK C

TRUNK D

TRUNK E

TRUNK F

TRUNK G

TRUNK H

TRUNK I

TRUNK J

TRUNK K

TRUNK L

TRUNK M

TRUNK N

TRUNK O

TRUNK P

TRUNK Q

TRUNK R

TRUNK S

TRUNK T

TRUNK U

TRUNK V

TRUNK W

TRUNK X

TRUNK Y

TRUNK Z

DROP

## RETURN AIR TRUNK SIZE

TRUNK

CFM

TRUNK A

TRUNK B

TRUNK C

TRUNK D

TRUNK E

TRUNK F

TRUNK G

TRUNK H

TRUNK I

TRUNK J

TRUNK K

TRUNK L

TRUNK M

TRUNK N

TRUNK O

TRUNK P

TRUNK Q

TRUNK R

TRUNK S

TRUNK T

TRUNK U

TRUNK V

TRUNK W

TRUNK X

TRUNK Y

TRUNK Z

DROP

## RETURN AIR TRUNK SIZE

TRUNK

CFM

TRUNK A

TRUNK B

TRUNK C

TRUNK D

TRUNK E

TRUNK F

TRUNK G

TRUNK H

TRUNK I

TRUNK J

TRUNK K

TRUNK L

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TRUNK P

TRUNK Q

TRUNK R

TRUNK S

TRUNK T

TRUNK U

TRUNK V

TRUNK W

TRUNK X

TRUNK Y

TRUNK Z

DROP

## RETURN AIR TRUNK SIZE

TRUNK

CFM

TRUNK A

TRUNK B

TRUNK C

TRUNK D

TRUNK E

TRUNK F

TRUNK G

TRUNK H

TRUNK I

TRUNK J

TRUNK K

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TRUNK Q

TRUNK R

TRUNK S

TRUNK T

TRUNK U

TRUNK V

TRUNK W

TRUNK X

TRUNK Y

TRUNK Z

DROP

## RETURN AIR TRUNK SIZE

TRUNK

CFM

TRUNK A

TRUNK B

TRUNK C

TRUNK D

TRUNK E

TRUNK F

TRUNK G

TRUNK H

TRUNK I

TRUNK J

TRUNK K

TRUNK L

TRUNK M

TRUNK N

TRUNK O

TRUNK P

TRUNK Q

TRUNK R

TRUNK S

TRUNK T

TRUNK U

TRUNK V

TRUNK W

TYPE: RL-6C  
SITE NAME: ALCONA

LO # 97837

# RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

**COMBUSTION APPLIANCES** 9.32.3.1(1)

a) ☒ Direct vent (sealed combustion) only

b) ☐ Positive venting induced draft (except fireplaces)

c) ☐ Natural draft, B-vent or induced draft gas fireplace

d) ☐ Solid Fuel (including fireplaces)

e) ☐ No Combustion Appliances

**HEATING SYSTEM**

☒ Forced Air ☐ Non Forced Air

☐ Electric Space Heat

**HOUSE TYPE** 9.32.1(2)

☒ I Type a) or b) appliance only, no solid fuel

☐ II Type I except with solid fuel (including fireplaces)

☐ III Any Type c) appliance

☐ IV Type I, or II with electric space heat

☐ Other: Type I, II or IV no forced air

**SYSTEM DESIGN OPTIONS** O.N.H.W.P.

☐ 1 Exhaust only/Forced Air System

☐ 2 HRV with Ducting/Forced Air System

☒ 3 HRV Simplified/connected to forced air system

☐ 4 HRV with Ducting/non forced air system

☐ Part 6 Design

**TOTAL VENTILATION CAPACITY** 9.32.3.3(1)

Basement + Master Bedroom	2	@ 21.2 cfm	42.4	cfm
Other Bedrooms	3	@ 10.6 cfm	31.8	cfm
Kitchen & Bathrooms	5	@ 10.6 cfm	53	cfm
Other Rooms	6	@ 10.6 cfm	63.6	cfm
Table 9.32.3.A.		TOTAL	190.8	cfm

**PRINCIPAL VENTILATION CAPACITY REQUIRED** 9.32.3.4.(1)

1	Bedroom	31.8	cfm
2	Bedroom	47.7	cfm
3	Bedroom	63.6	cfm
4	Bedroom	79.5	cfm
5	Bedroom	95.4	cfm
	<b>TOTAL</b>	<b>79.5</b>	<b>cfm</b>

**SUPPLEMENTAL VENTILATION CAPACITY** 9.32.3.5.

Total Ventilation Capacity	190.8	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	111.3	cfm

**PRINCIPAL EXHAUST FAN CAPACITY**

Model: VANE V150H Location: BSMT

79.5 cfm ☒ HVI Approved

**PRINCIPAL EXHAUST HEAT LOSS CALCULATION**

CFM	$\Delta T$ °F	FACTOR	% LOSS
79.5 CFM	X 83 F	X 1.08	X 0.25

**SUPPLEMENTAL FANS** BY INSTALLING CONTRACTOR

Location	Model	cfm	HVI	Sones
ENS	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5
BATH	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5
ENS2	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5
W/R2	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5

**HEAT RECOVERY VENTILATOR** 9.32.3.11.

Model: VANE V150H

150 cfm high 35 cfm low

75 % Sensible Efficiency ☒ HVI Approved  
@ 32 deg F ( 0 deg C)

**LOCATION OF INSTALLATION**

Lot: Concession

Township: Plan:

Address:

Roll # Building Permit #

**BUILDER:** BAYVIEW WELLINGTON HOMES

Name:

Address:

City:

Telephone #: Fax #:

**INSTALLING CONTRACTOR**

Name:

Address:

City:

Telephone #: Fax #:

**DESIGNER CERTIFICATION**

I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.

Name: HVAC Designs Ltd.

Signature: *Michael O'Rourke*

HRAI # 001820

Date: July-22

LO#: 97837

Model: RL-6C

Volume Calculation

CSA F280-12 Residential Heat Loss and Heat Gain Calculations

Formula Sheet (For Air Leakage / Ventilation Calculation)

Builder: BAYVIEW WELLINGTON HOMES

Date: 2022-07-08

House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	998	9	8982
First	998	10	9980
Second	1006	9	9054
Third	838	9	7542
Fourth	0	9	0
Total:			35,558.0 ft³
Total:			1006.9 m³

WINTER NATURAL AIR CHANGE RATE		0.439
SUMMER NATURAL AIR CHANGE RATE		0.097

Design Temperature Difference				
	Tin °C	Tout °C	ΔT °C	ΔT °F
Winter DTDh	22	-24	46	83
Summer DTDc	24	29	5	9

6.2.6 Sensible Gain due to Air Leakage

$$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$$

0.439

x

279.69

x

5 °C

x

1.2

=

166 W

0.097

x

279.69

x

5 °C

x

1.2

=

567 Btu/h

6.2.7 Sensible heat Gain due to Ventilation

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

80 CFM

x

9 °F

x

1.08

x

0.25

=

197 Btu/h

5.2.3.1 Heat Loss due to Air Leakage

$$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$$

0.439

x

279.69

x

46 °C

x

1.2

=

6811 W

0.439

x

279.69

x

46 °C

x

1.2

=

23239 Btu/h

5.2.3.2 Heat Loss due to Mechanical Ventilation

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

80 CFM

x

83 °F

x

1.08

x

0.25

=

1786 Btu/h

5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)

$$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{ager} + HL_{pgr}) \div (HL_{agclevel} + HL_{bgclevel})\}$$

Level	Level Factor (LF)	HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HLclevel)	Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)
1	0.4	23,239	4,542	2.047
2	0.3		8,707	0.801
3	0.2		8,236	0.564
4	0.1		7,058	0.329
5	0	0	0	0.000

\*HLairbv = Air leakage heat loss + ventilation heat loss

\*For a balanced or supply only ventilation system HLairve = 0

Michael O'Rourke

BCIN# 19669

Specializing in Residential Mechanical Design Services





375 Finley Ave. Suite 202 Ajax, ON L1S 2E2

Tel: 905.619.2300 Fax: 905.619.2375

Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

## HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: RL-6C

SFQT: 2842

LO# 97837

BUILDER: BAYVIEW WELLINGTON HOMES

SITE: ALCONA

### DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-11	OUTDOOR DESIGN TEMP.	84
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75
		WINDOW SHGC	0.50

### BUILDING DATA

ATTACHMENT:	ATTACHED	# OF STORIES (+BASEMENT):	4
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	35558.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 47.0 ft	WIDTH: 21.0 ft	EXPOSED PERIMETER:	92.0 ft

### 2012 OBC - COMPLIANCE PACKAGE

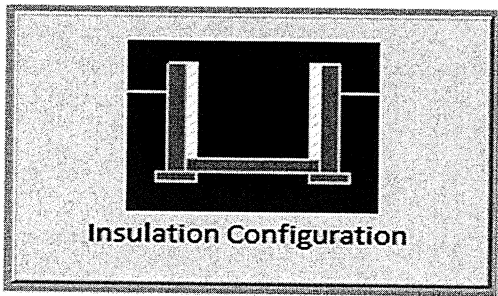
Component	Compliance Package A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 ci	21.12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10	11.13
Windows and Sliding Glass Doors Maximum U-Value	0.28	-
Skylights Maximum U-Value	0.49	-
Space Heating Equipment Minimum AFUE	96%	-
HRV/ERV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

## Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Barrie	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	14.3	 <p>Insulation Configuration</p>
Floor Width (m):	6.4	
Exposed Perimeter (m):	28.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m <sup>2</sup> ):	1.1	
Door Area (m <sup>2</sup> ):	0.0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		930

TYPE: RL-6C  
LO# 97837

Michael O'Rourke BCIN #19669





HVAC Designs Ltd.  
375 Finley Ave, Suite 202  
Ajax ON, L1S 2E2  
905-619-2300

# Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Barrie			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	9.45			
Building Configuration				
Type:	Semi			
Number of Stories:	Three			
Foundation:	Full			
House Volume (m <sup>3</sup> ):	1006.9			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1342.2 cm <sup>2</sup>		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	37.5	37.5		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.439			
Cooling Air Leakage Rate (ACH/H):	0.097			

TYPE: RL-6C  
LO# 97837

Michael O'Rourke BCIN# 19669

















Michael O'Rourke  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

CSA-F280-12

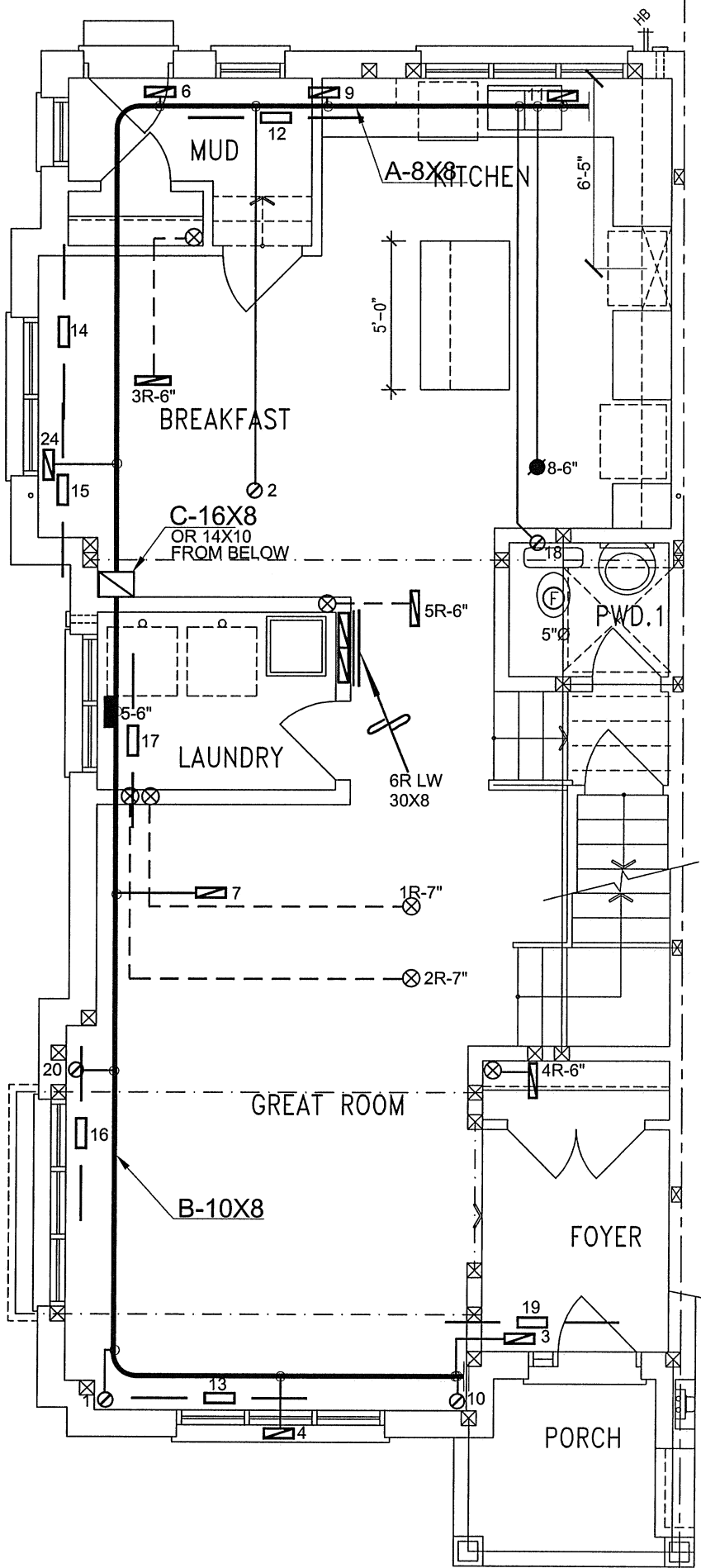
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PACKAGE A1

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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Client		<div><div><div>HVAC</div><div>DESIGNS LTD.</div></div><div>375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div></div>		HEAT LOSS 53568 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS				Sheet Title	
BAYVIEW WELLINGTON HOMES				MAKE LENNOX		3RD FLOOR 6 2 2				BASEMENT HEATING LAYOUT	
Project Name ALCONA INNISFIL, ONTARIO		MODEL ML196UH070XE36B		2ND FLOOR 8 3 2							
RL-6C		INPUT 66 MBTU/H		1ST FLOOR 7 1 2							
2842 sqft		OUTPUT 63.9 MBTU/H		BASEMENT 3 1 0				Date JUNE/2022			
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.		COOLING 2.5 TONS		ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A				Scale 3/16" = 1'-0"			
		FAN SPEED 985 cfm @ 0.6" w.c.						BCIN# 19669			
										LO# 97837	



GROUND FLOOR PLAN ELEV. 'B'

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

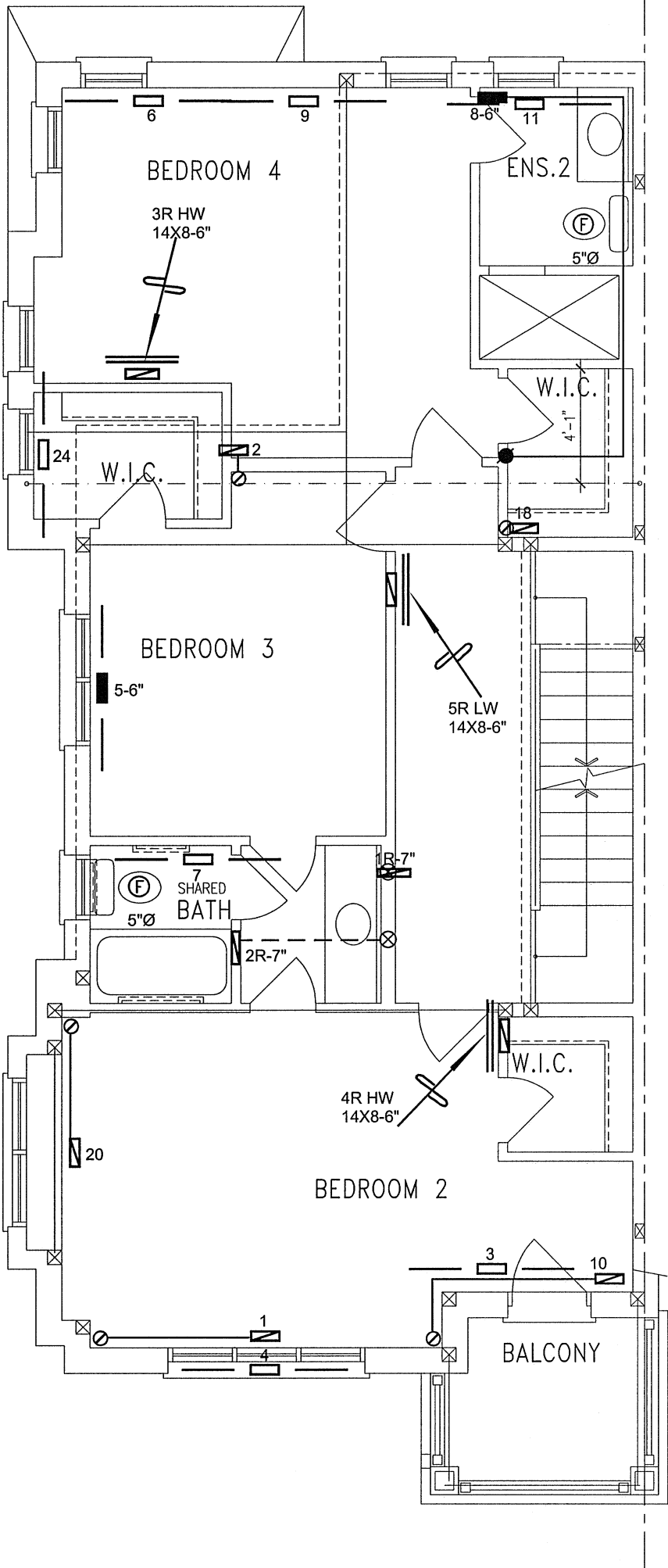
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Michael O'Rourke, BCIN# 19669  
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CSA-F280-12  
PACKAGE A1

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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BAYVIEW WELLINGTON HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JUNE/2022
ALCONA INNISFIL, ONTARIO			Scale	3/16" = 1'-0"
RL-6C			BCIN# 19669	
2842 sqft			LO#	97837



SECOND FLOOR PLAN ELEV. 'B'

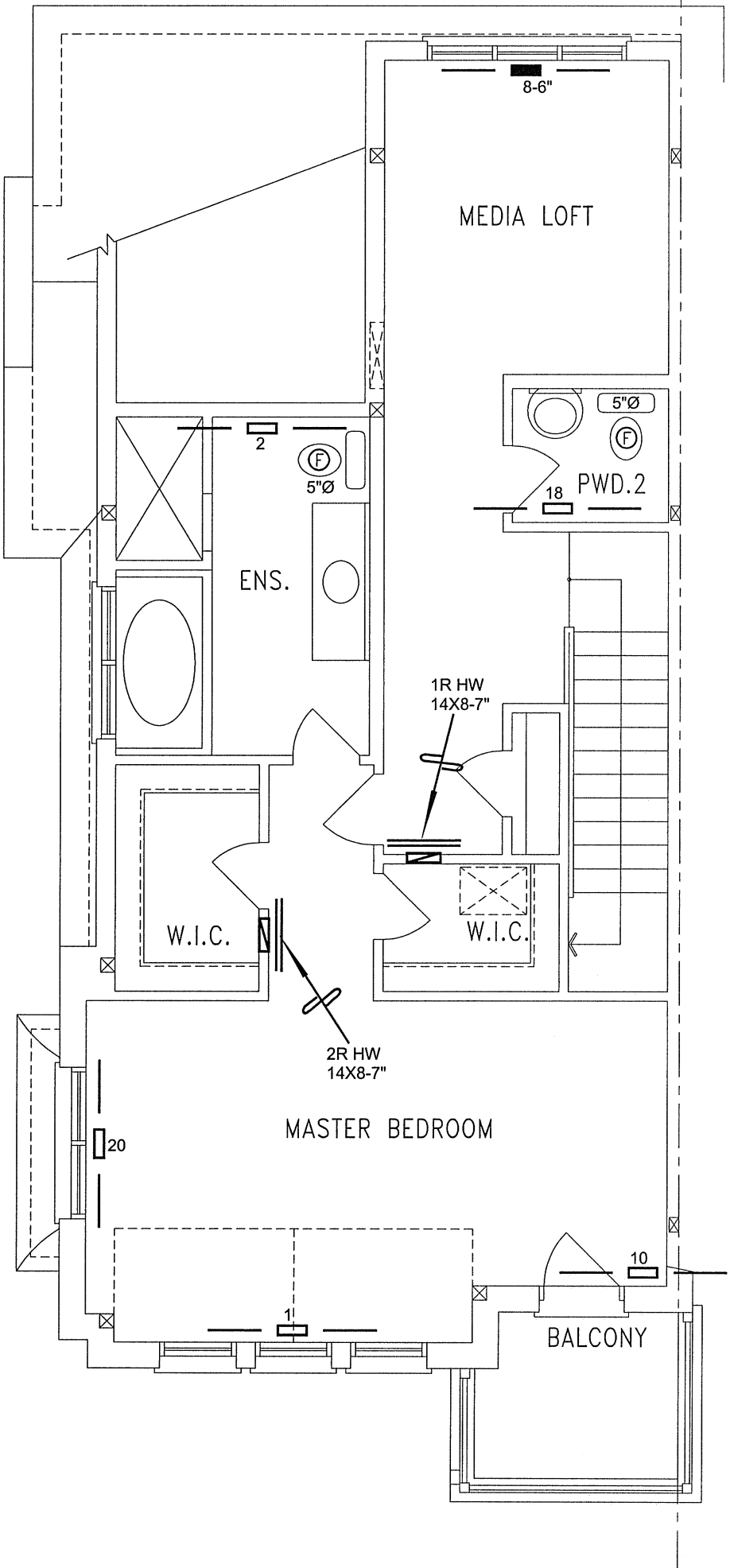
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CSA-F280-12  
PACKAGE A1

HVAC LEGEND								3.		
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	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
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BAYVIEW WELLINGTON HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name ALCONA INNISFIL, ONTARIO			Date	JUNE/2022
RL-6C		Scale		3/16" = 1'-0"
		BCIN# 19669		
		LO#	97837	
2842 sqft		Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.		



THIRD FLOOR PLAN ELEV. 'B'

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Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

CSA-F280-12  
PACKAGE A1

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Project Name ALCONA INNISFIL, ONTARIO			Date JUNE/2022	
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RL-6C	2842 sqft		LO#	97837