


Schedule 1: Designer Information

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

A. Project Information			
Building number, street name		Unit no.	Lot/con.
Municipality INNISFIL	Postal code	Plan number/ other description	
B. Individual who reviews and takes responsibility for design activities			
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 375 FINLEY AVE		Unit no. 202	Lot/con. N/A
Municipality AJAX	Postal code L1S 2E2	Province ONTARIO	E-mail info@hvacdesigns.ca
Telephone number (905) 619-2300	Fax number (905) 619-2375	Cell number ()	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]			
<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 HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: 48-1 Project: ALCONA	
D. Declaration of Designer			
I, MICHAEL O'ROURKE (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: 19669 Basis for exemption from registration and qualification: O.B.C SENTENCE 3.2.4.1 (4)			
<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.			
June 22, 2017 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.

[illegible]

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

SITE NAME: ALCONA
BUILDER: BAYVIEW WELLINGTON

TYPE: 48-1

DATE: Jun-17

GFA: 3103 L# 74600

LENNOX

EL269H090XE48C

FAN SPEED

MEDIUM

HIGH

1525

1105

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HEATING CFM	COOLING CFM	TOTAL HEAT GAIN	TOTAL HEAT LOSS	AIR FLOW RATE CFM	AIR FLOW RATE CFM
1105	36,646	30,15	61,363	18,01	1105
4th	3rd	2nd	1st	Bas	5
0	0	0	0	0	0
R/A	0	0	0	0	0
S/A	0	0	0	0	0
Bas	1st	2nd	3rd	4th	5

All S/A diffusers 4"x10" unless noted otherwise on layout.

All S/A runs 5"Ø unless noted otherwise on layout.

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35
plenium pressure s/a 0.18
max s/a diff press. loss 0.02
min adjusted pressure s/a 0.16r/a pressure 0.17
r/a grille press. loss 0.02
adjusted pressure r/a 0.15EL269H090XE48C
FAN SPEED
MEDIUM
HIGH
1525

LENNOX

FAN SPEED
MEDIUM
HIGH
1525FAN SPEED
MEDIUM
HIGH
1525FAN SPEED
MEDIUM
HIGH
1525FAN SPEED
MEDIUM
HIGH
1525

RUN #	ROOM NAME	RM LOSS MBH	CFM PER RM HEAT	CFM PER RM 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
1	MBR	1.43	26	2.15	0.81	24	65	69	0.09	5	272	477	3X10	A
2	ENS	2.05	37	2.15	0.81	24	65	69	0.09	5	272	477	3X10	B
3	BED-3	1.58	28	2.06	0.53	62	150	150	0.09	5	272	448	3X10	C
4	BED-2	2.07	37	2.02	0.53	61	150	150	0.09	5	272	448	3X10	D
5	BED-3	1.58	28	2.06	0.53	62	150	150	0.09	5	272	448	3X10	E
6	BED-4	1.39	25	1.71	0.17	51	40	40	0.09	4	206	287	3X10	D
7	BATH	1.12	20	0.50	0.17	48	170	170	0.08	4	229	184	3X10	E
8	BED-3	1.58	28	2.06	0.53	62	150	150	0.08	5	206	455	3X10	E
9	BED-4	1.39	25	1.71	0.17	51	40	40	0.1	4	287	587	3X10	D
10	MBR	2.05	37	2.15	0.81	24	65	69	0.07	5	272	477	3X10	B
11	ENS-3	1.78	32	1.16	0.09	35	192	192	0.09	4	367	402	3X10	C
12	LV/DN	2.58	47	2.12	0.17	64	140	140	0.08	5	345	470	3X10	D
13	LV/DN	2.58	47	2.12	0.17	64	140	140	0.09	5	345	470	3X10	D
14	KT/FM	3.27	59	2.87	0.16	86	50	50	0.09	5	433	631	3X10	A
15	KT/FM	3.27	59	2.87	0.16	86	50	50	0.09	5	433	631	3X10	A
16	KT/FM	3.27	59	2.87	0.16	86	50	50	0.1	4	92	356	3X10	C
17	LAUN	0.42	8	1.01	0.17	31	140	140	0.1	4	92	356	3X10	C
18	W/R	0.56	10	0.08	0.17	2	120	120	0.1	4	115	23	3X10	A
19	FOY	3.57	64	3.08	0.17	26	63	63	0.12	5	470	191	3X10	D
20	ENS	1.43	26	2.15	0.81	24	65	69	0.09	5	272	477	3X10	B
21	WIC-2	0.76	14	0.90	0.17	27	16	16	0.09	4	161	310	3X10	D
22	BATH	1.12	20	0.53	0.17	48	170	170	0.09	4	229	184	3X10	C
23	MUD	1.65	30	1.06	0.17	32	130	130	0.11	4	344	367	3X10	C
24	BAS	4.09	74	4.04	0.17	13	52	52	0.11	5	543	95	3X10	A

TYPE: 48-1
SITE NAME: ALCONA

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

LO # 74600

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	<u>2</u>	@ 21.2 cfm	<u>42.4</u>	cfm
Other Bedrooms	<u>3</u>	@ 10.6 cfm	<u>31.8</u>	cfm
Kitchen & Bathrooms	<u>5</u>	@ 10.6 cfm	<u>53</u>	cfm
Other Rooms	<u>6</u>	@ 10.6 cfm	<u>63.6</u>	cfm
Table 9.32.3.A.		TOTAL	<u>190.8</u>	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
TOTAL	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5.

Total Ventilation Capacity	<u>190.8</u>	cfm
Less Principal Vent. Capacity	<u>139</u>	cfm
Required Supplemental Capacity	<u>51.8</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model:	VANEE 60H-V+	Location:	BSMT
139.0	cfm	3.0	series
<input checked="" type="checkbox"/>			HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM	ΔT °F	FACTOR	% LOSS
139.0 CFM	X 83 °F	X 1.08	X 0.25

SUPPLEMENTAL FANS

Location	Model	cfm	HVI	Series
ENS	QTXEND50C	50	<input checked="" type="checkbox"/>	0.3
BATH	QTXEND50C	50	<input checked="" type="checkbox"/>	0.3
ENS-3	QTXEND50C	50	<input checked="" type="checkbox"/>	0.3
W/R	QTXEND50C	50	<input checked="" type="checkbox"/>	0.3

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model:	VANEE 60H-V+		
139	cfm high	50	cfm low
75	% Sensible Efficiency @ 32 deg F (0 deg C)	<input checked="" type="checkbox"/>	HVI Approved

LOCATION OF INSTALLATION

Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER:	BAYVIEW WELLINGTON
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.

HVAC Designs Ltd.

Signature:

Michael O'Rourke

HRAI #

001820

Date: June-17

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 48-1
SFOI: 3103

LO# 74600

BUILDER: BAYVIEW WELLINGTON
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)	72

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
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):	41847.0	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:	52.0 ft	WIDTH:	40.0 ft
		EXPOSED PERIMETER:	184.0 ft

2012 OBC - COMPLIANCE PACKAGE

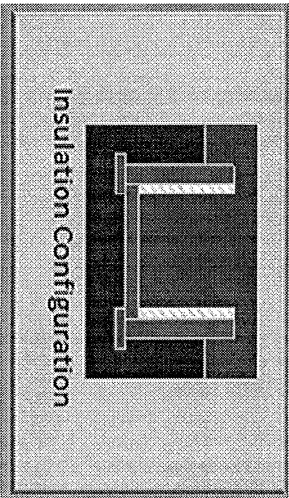
Component	Compliance Package	
	A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.8
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 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	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

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 dand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	15.8	 <p>Insulation Configuration</p>
Floor Width (m):	12.2	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	3.5	
Door Area (m ²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1933

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):	6.71			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1185.0			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.		1579.6 cm ²	
	3.57		ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply		Total Exhaust	
	65.6		65.6	
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.332			
Cooling Air Leakage Rate (ACH/H):	0.087			

TYPE: 48-1

LO# 74600

ALCONA

INNISFIL, ONTARIO

Client Name

BAYVIEW WELLINGTON

48-1

3103 sqft

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

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.

HVAC

DESIGNS

LTD.

HEAT LOSS 64486 BTU/H

OF RUNS S/A R/A FANS

3RD FLOOR

2ND FLOOR

1ST FLOOR

BASEMENT

5

1

0

MAKE

LENNOX

MODEL

EL296UH090XE48C

INPUT

88 MBTU/H

OUTPUT

85 MBTU/H

COOLING

3.0 TONS

FAN SPEED

1105 cfm @ 0.5" w.c.

Sheet Title

BASEMENT HEATING LAYOUT

Date

JUNE/2017

Scale

3/16" = 1'-0"

BCIN# 19669

LO# 74600

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.® AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

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

01/12/2017 4:19:18 PM kgareals

Town of Innisfil Certified Model

Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.
DESIGN WORK AND AM QUALIFIED
UNDER DIVISION C.3.5 OF THE
BUILDING CODE.
AND TAKE RESPONSIBILITY FOR THE

PARTIAL BASEMENT FLOOR PLAN WOD
9R AND MORE COND.

PARTIAL SUNKEN
MUD ROOM 1R

A-8X8

UNFINISHED
BASEMENT

24X10

X-32X8

BR FLC
5X10

WWT

HRV
VANE
60H-V+

27

28

13

21

9

6

19

COLD CELLAR

LOW HEADROOM

12

18

LOW HEADROOM

5R

14

24

15

10

16

20

B-10X8

26

UNEXCAVATED
(REMOVE TOP SOIL ONLY)

D-10X8

F-26X8

E-12X8

Y-14X8

C-18X8

LOW HEADROOM

1R-7"

3R-7"

2R-7"

7

8

5

22

23

2

25

17

6R

1

2

3

4

5

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27

28

BASEMENT FLOOR PLAN 'A&B'

PACKAGE A1

CSA-F280-12

48-1

3103 sqft

ALCONA

Project Name

BAYVIEW WELLINGTON

INNISFIL, ONTARIO

375 Finley Ave - Suite 202 - Ajax, Ontario

L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375

Email: info@hvacadesigns.ca

Web: www.hvacadesigns.ca

Specializing in Residential Mechanical Design Services

HVAC

DESIGNS LTD.

Installation to comply with the latest Ontario Building Code. All supply ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

Sheet Title

SECOND FLOOR

HEATING

LAYOUT

Date

JUNE/2017

Scale

3/16" = 1'-0"

BCIN# 19669

LO# 74600

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

CSA-F280-12

PACKAGE A1

Michael O'Rourke, BCIN# 19669

Michael O'Rourke

Michael O'Rourke, BCIN# 19669

DESIGN WORK AND AM QUALIFIED

UNDER DIVISION C, 3.2.5 OF THE

BUILDING CODE.

AND TAKE RESPONSIBILITY FOR THE

DESIGN WORK AND AM QUALIFIED

UNDER DIVISION C, 3.2.5 OF THE

BUILDING CODE.

HVAC DESIGNS LTD.

SECOND FLOOR PLAN 'A'

Town of Innisfil Certified Model

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PARTIAL SECOND FLOOR PLAN 'B'