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	**Postal code**	**Plan number/ other description**		
INNISFIL				

B. Individual who reviews and takes responsibility for design activities

Name		Firm		
MICHAEL O'ROURKE		**HVAC DESIGNS LTD.**		
Street address			**Unit no.**	**Lot/con.**
375 FINLEY AVE			**202**	**N/A**
Municipality	**Postal code**	**Province**	**E-mail**	
AJAX	**L1S 2E2**	**ONTARIO**	**info@hvacdesigns.ca**	
Telephone number	**Fax number**		**Cell number**	
(905) 619-2300	**(905) 619-2375**		( )	

C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]

☐ House	☒ HVAC – House	☐ Building Structural
☐ Small Buildings	☐ Building Services	☐ Plumbing – House
☐ Large Buildings	☐ Detection, Lighting and Power	☐ Plumbing – All Buildings
☐ Complex Buildings	☐ Fire Protection	☐ 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:** TH-6E **Project:** ALCONA

D. Declaration of Designer

I **MICHAEL O'ROURKE** declare that (choose one as appropriate):
(print name)

☐ 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: _____

☒ 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 Di vision C, of the Building Code.

Individual BCIN: 19669
Basis for exemption from registration and qualification: O.B.C SENTENCE 3.2.4.1 (4)

☐ 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 14, 2018
Date

Signature of Designer

NOTE:

1. 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.
2. 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.

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SITE NAME: ALCONA
BUILDER: BAYVIEW WELLINGTON TYPE: TH-6E GFA: 1802 DATE: Jun-18 LO# 78874

WINTER NATURAL AIR CHANGE RATE 0.348 HEAT LOSS ΔT °F. 83 CSA-F280-12
SUMMER NATURAL AIR CHANGE RATE 0.081 HEAT GAIN ΔT °F. 10 SB-12 PACKAGE A1

ROOM USE			MBR			ENS			WIC			BED-2			BED-3				BATH								
EXP. WALL			30			7			11			12			38				0								
CLG. HT.			9			9			9			9			9				9								
	FACTORS																										
GRS.WALL AREA	LOSS	GAIN	270			63			99			108			342				0								
GLAZING			LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN			LOSS	GAIN							
NORTH	23.3	15.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0										
EAST	23.3	40.8	0	0	0	0	0	0	0	0	0	22	513	898	22	513	898		0	0	0						
SOUTH	23.3	24.2	0	0	0	0	0	0	17	396	411	0	0	0	38	885	918		0	0	0						
WEST	23.3	40.8	28	652	1143	13	303	531	0	0	0	0	0	0	0	0	0		0	0	0						
SKYLT.	40.8	100.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0						
DOORS	27.6	3.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0						
NET EXPOSED WALL	4.9	0.6	242	1182	145	50	244	30	82	401	49	86	420	52	282	1378	169		0	0	0						
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0						
EXPOSED CLG	1.4	0.5	221	310	120	112	157	61	143	201	78	152	214	83	223	313	121		80	112	43						
NO ATTIC EXPOSED CLG	3.0	1.2	0	0	0	0	0	0	0	0	0	8	24	9	30	90	35		0	0	0						
EXPOSED FLOOR	2.8	0.3	0	0	0	0	0	0	0	0	0	160	447	55	20	56	7		50	140	17						
BASEMENT/CRAWL HEAT LOSS				0			0			0			0			0				0							
SLAB ON GRADE HEAT LOSS				0			0			0			0			0				0							
SUBTOTAL HT LOSS				2145			704			998			1617			3235				252							
SUB TOTAL HT GAIN					1408			622			538			1096			2149				61						
LEVEL FACTOR / MULTIPLIER			0.20	0.28		0.20	0.28		0.20	0.28		0.20	0.28		0.20	0.28			0.20	0.28							
AIR CHANGE HEAT LOSS				600			197			279			452			904				70							
AIR CHANGE HEAT GAIN					58			26			22			45			89				3						
DUCT LOSS				0			0			0			207			414				32							
DUCT GAIN					0			0			0			186			295				6						
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240		0		0						
HEAT GAIN APPLIANCES/LIGHTS					476			0			0			476			476				0						
TOTAL HT LOSS BTU/H				2745			901			1276			2276			4553				355							
TOTAL HT GAIN x 1.3 BTU/H					3149			841			728			2656			4223				90						

ROOM USE					KT/FM				LAUN			W/R			FOY			MUD					LOD		BAS	
EXP. WALL					58				0			7			29			21					25		112	
CLG. HT.					10				9			12			12			10					9		9	
	FACTORS																									
GRS.WALL AREA	LOSS	GAIN			580				0			84			348			210					225		822	
GLAZING					LOSS	GAIN			LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN				LOSS	GAIN	LOSS	GAIN
NORTH	23.3	15.2			0	0	0		0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0
EAST	23.3	40.8			0	0	0		0	0	0	0	0	0	12	280	490	0	0	0			0	0	0	0
SOUTH	23.3	24.2			28	652	677		0	0	0	12	280	290	0	0	0	0	0	0			0	0	0	0
WEST	23.3	40.8			87	2027	3552		0	0	0	0	0	0	0	0	0	0	0	0			26	606	1061	0
SKYLT.	40.8	100.3			0	0	0		0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	0
DOORS	27.6	3.4			0	0	0		0	0	0	0	0	0	20	553	68	20	553	68			0	0	0	0
NET EXPOSED WALL	4.9	0.6			465	2272	279		0	0	0	72	352	43	316	1544	189	190	928	114			0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.5			0	0	0		0	0	0	0	0	0	0	0	0	0	0	0			124	488	60	186
EXPOSED CLG	1.4	0.5			0	0	0		64	90	35	0	0	0	0	0	0	0	0	0			0	0	0	0
NO ATTIC EXPOSED CLG	3.0	1.2			0	0	0		0	0	0	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
BASEMENT/CRAWL HEAT LOSS						0				0			0			0			0						3735	
SLAB ON GRADE HEAT LOSS						0				0			0			0			0				0			
SUBTOTAL HT LOSS						4951				90			631			2376			1481				1094		5020	
SUB TOTAL HT GAIN							4507				35			333			747			182				1121		158
LEVEL FACTOR / MULTIPLIER					0.30	0.40			0.20	0.28		0.30	0.40		0.30	0.40		0.30	0.40				0.50	1.03		
AIR CHANGE HEAT LOSS						1988				25			254			954			595						6318	
AIR CHANGE HEAT GAIN							187				1			14			31			8						53
DUCT LOSS						0				0			0			0			0						0	
DUCT GAIN							0				0			0			0			0						0
HEAT GAIN PEOPLE	240				0		0		0		0	0		0	0		0	0		0			0		0	
HEAT GAIN APPLIANCES/LIGHTS							476				476			0			0			476				0		476
TOTAL HT LOSS BTU/H						6939				115			885			3330			2076				1094		11338	
TOTAL HT GAIN x 1.3 BTU/H							6720				666			451			1011			864				1458		892

TOTAL HEAT GAIN BTU/H: 23925 TONS: 1.99 LOSS DUE TO VENTILATION LOAD BTU/H: 1429 STRUCTURAL HEAT LOSS: 37883 TOTAL COMBINED HEAT LOSS BTU/H: 39312

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE

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SITE NAME: ALCONA
BUILDER: BAYVIEW WELLINGTON

TYPE: TH-6E DATE: Jun-18 GFA: 1802 LO# 78874

HEATING CFM	800	COOLING CFM	800
TOTAL HEAT LOSS	37,883	TOTAL HEAT GAIN	23,750
AIR FLOW RATE CFM	21.12	AIR FLOW RATE CFM	33.68

furnace pressure	0.6
furnace filter	0.05
a/c coil pressure	0.2
available pressure for s/a & r/a	0.35
plenum pressure s/a	0.18
max s/a dif press. loss	0.02
min adjusted pressure s/a	0.16
r/a pressure	0.17
r/a grille press. Loss	0.02
adjusted pressure r/a	0.15

LENNOX
EL196UH045XE24B 45
FAN SPEED
LOW 0
MEDLOW 0
MEDIUM 685
MEDIUM HIGH 800
HIGH 890

AFUE = 96 %
INPUT (BTU/H) = 44,000
OUTPUT (BTU/H) = 42,000
DESIGN CFM = 800
CFM @ .6 " E.S.P.
TEMPERATURE RISE 49 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	9	6	3
R/A	0	0	4	1	1

All S/A diffusers 4"x10" unless noted otherwise on layout.
All S/A runs 5"Ø unless noted otherwise on layout.

RUN #	1	2	3	4	5	6	7	10	14	15	16	17	18	19	20	21	22	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-3	BATH	MBR	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	MUD	BAS	BAS	BAS
RM LOSS MBH.	1.37	0.90	1.28	2.28	2.28	2.28	0.35	1.37	2.31	2.31	2.31	0.12	0.88	3.33	2.08	4.14	4.14	4.14
CFM PER RUN HEAT	29	19	27	48	48	48	7	29	49	49	49	2	19	70	44	88	88	88
RM GAIN MBH.	1.57	0.84	0.73	2.66	2.11	2.11	0.09	1.57	2.24	2.24	2.24	0.67	0.45	1.01	0.86	0.78	0.78	0.78
CFM PER RUN COOLING	53	28	25	89	71	71	3	53	75	75	75	22	15	34	29	26	26	26
ADJUSTED PRESSURE	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
ACTUAL DUCT LGH.	60	55	25	50	53	57	31	53	22	29	9	43	35	36	18	15	29	27
EQUIVALENT LENGTH	185	170	210	140	150	165	130	165	100	110	120	185	140	130	180	90	100	150
TOTAL EFFECTIVE LENGTH	245	225	235	190	203	222	161	218	122	139	129	228	175	166	198	105	129	177
ADJUSTED PRESSURE	0.07	0.08	0.07	0.09	0.08	0.08	0.11	0.08	0.14	0.12	0.13	0.08	0.1	0.1	0.09	0.15	0.13	0.09
ROUND DUCT SIZE	5	4	4	**6**	5	5	4	5	5	5	5	4	4	5	4	**6**	**6**	**6**
HEATING VELOCITY (ft/min)	213	218	310	245	352	352	80	213	360	360	360	23	218	514	505	449	449	449
COOLING VELOCITY (ft/min)	389	321	287	454	521	521	34	389	551	551	551	252	172	250	333	133	133	133
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10
TRUNK	A	A	D	D	C	C	D	A	A	A	B	D	C	C	D	B	B	C

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	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)		TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK A	175	0.07	7.5	8	x	8	394	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	400	0.07	10.3	12	x	8	600	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	273	0.08	8.6	8	x	8	614	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	401	0.07	10.3	12	x	8	602	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	0	0.00	0	0	x	8	0	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	x	8	0

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK O	0	0.05	0	0	x	8	0
TRUNK P	0	0.05	0	0	x	8	0
TRUNK Q	0	0.05	0	0	x	8	0
TRUNK R	0	0.05	0	0	x	8	0
TRUNK S	0	0.05	0	0	x	8	0
TRUNK T	0	0.05	0	0	x	8	0
TRUNK U	0	0.05	0	0	x	8	0
TRUNK V	0	0.05	0	0	x	8	0
TRUNK W	0	0.05	0	0	x	8	0
TRUNK X	800	0.05	14.5	24	x	8	600
TRUNK Y	0	0.05	0	0	x	8	0
TRUNK Z	0	0.05	0	0	x	8	0
DROP	800	0.05	14.5	24	x	10	480

RETURN AIR #	1	2	3	4	5											BR
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
AIR VOLUME	85	75	95	95	340	0	0	0	0	0	0	0	0	0	0	
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	42	41	49	52	34	1	1	1	1	1	1	1	1	1	1	110
EQUIVALENT LENGTH	195	230	155	175	120	0	0	0	0	0	0	0	0	0	0	20
TOTAL EFFECTIVE LH	237	271	204	227	154	1	1	1	1	1	1	1	1	1	1	180
ADJUSTED PRESSURE	0.06	0.05	0.07	0.07	0.10	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	200
ROUND DUCT SIZE	6	6	6	6	8.9	0	0	0	0	0	0	0	0	0	0	0.07
INLET GRILL SIZE	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	6.3
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	8
INLET GRILL SIZE	14	14	14	14	30	0	0	0	0	0	0	0	0	0	0	X
																14

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE

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TYPE: TH-6E LO # 78874
SITE NAME: ALCONA

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	2	@ 10.6 cfm	21.2	cfm
Kitchen & Bathrooms	4	@ 10.6 cfm	42.4	cfm
Other Rooms	4	@ 10.6 cfm	42.4	cfm
Table 9.32.3.A.		TOTAL	148.4	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	63.6	cfm

SUPPLEMENTAL VENTILATION CAPACITY — 9.32.3.5.

Total Ventilation Capacity	148.4	cfm
Less Principal Ventil. Capacity	63.6	cfm
Required Supplemental Capacity	84.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANEE 65H Location: BSMT

63.6 cfm 3.0 sones [✓] HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

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

SUPPLEMENTAL FANS

NUTONE

Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	✓	0.3
BATH	QTXEN050C	50	✓	0.3
W/R	QTXEN050C	50	✓	0.3

HEAT RECOVERY VENTILATOR — 9.32.3.11.

Model: VANEE 65H

155 cfm high 64 cfm low

75 % Sensible Efficiency @ 32 deg F (0 deg C) [✓] 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.

Name: HVAC Designs Ltd.

Signature: Michael O'Rourke.

HRAI # 001820

Date: June-18

I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

INDIVIDUAL BCIN: 19669 Michael O'Rourke. MICHAEL O'ROURKE

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HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: TH-6E
SFQT: 1802 **LO#** 78874
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)	74

BUILDING DATA

ATTACHMENT:	ATTACHED	# 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 (ft^3):	24399.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD ($Btu/h/ft^2$):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 51.0 ft	WIDTH: 20.5 ft	EXPOSED PERIMETER:	112.0 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	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

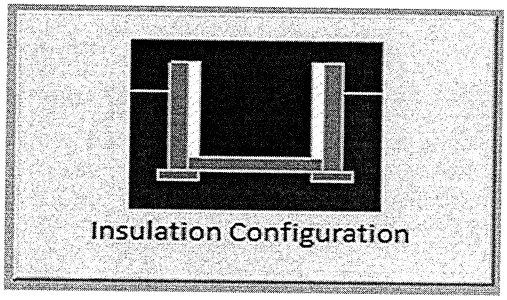
Michael O'Rourke

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

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):	15.5	 Insulation Configuration
Floor Width (m):	6.2	
Exposed Perimeter (m):	34.1	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m^2):	2.4	
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):	**1094**

TYPE: TH-6E
LO# 78874

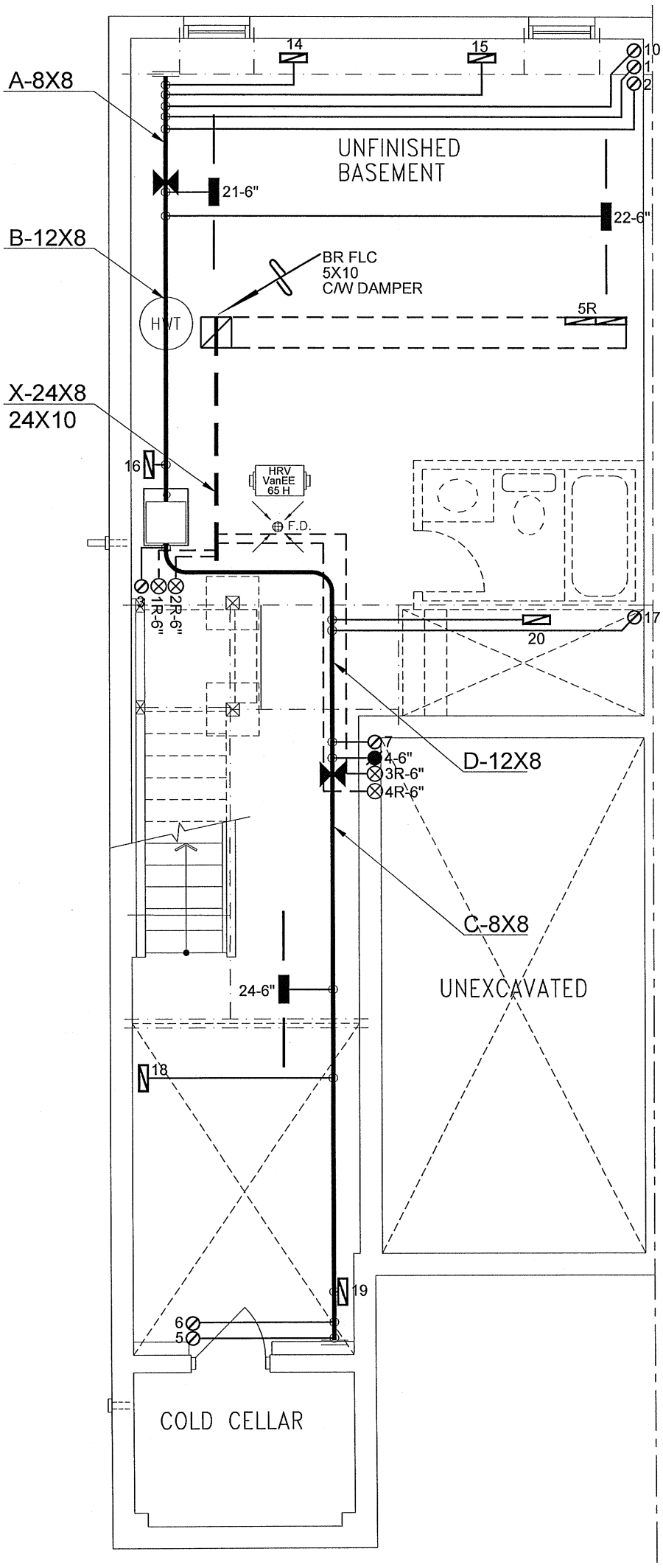
HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
905-619-2300

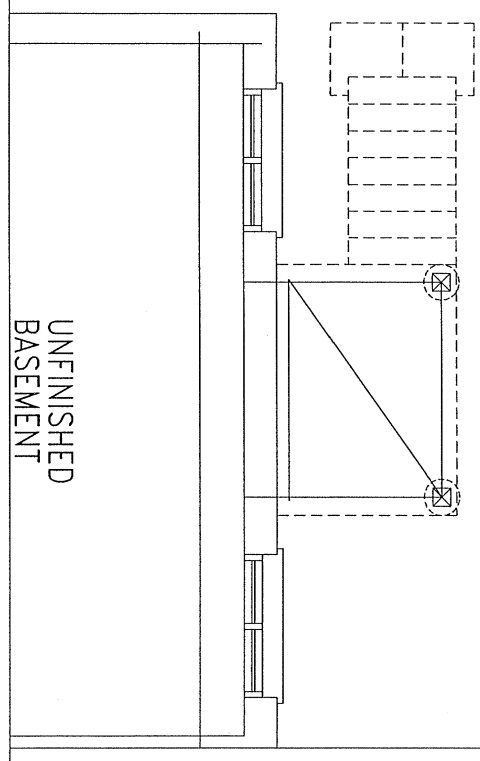
Air Infiltration Residential Load Calculator

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):	6.71
Building Configuration	
Type:	Semi
Number of Stories:	Two
Foundation:	Full
House Volume (m^3):	690.9
Air Leakage/Ventilation	
Air Tightness Type:	Present (1961-) (3.57 ACH)
Custom BDT Data:	ELA @ 10 Pa. 921.0 cm^2
	3.57 ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply 30.0 / Total Exhaust 30.0
Flue Size	
Flue #:	#1 #2 #3 #4
Diameter (mm):	0 0 0 0
Natural Infiltration Rates	
Heating Air Leakage Rate (ACH/H):	**0.348**
Cooling Air Leakage Rate (ACH/H):	**0.081**

TYPE: TH-6E
LO# 78874





PARTIAL GROUND FLOOR PLAN WOD 9R COND. ELEV.'A'/'B'

BASEMENT PLAN ELEV. 'A'/'B'

CSA-F280-12
PACKAGE A1

I MICHAEL O'ROURKE HAVE REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER

No.	Description	Date
3.		
2.		
1.		

REVISIONS

Client
BAYVIEW WELLINGTON

Project Name
ALCONA
INNISFIL, ONTARIO

TH-6E 1802 sqft

HVAC DESIGNS LTD.
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.

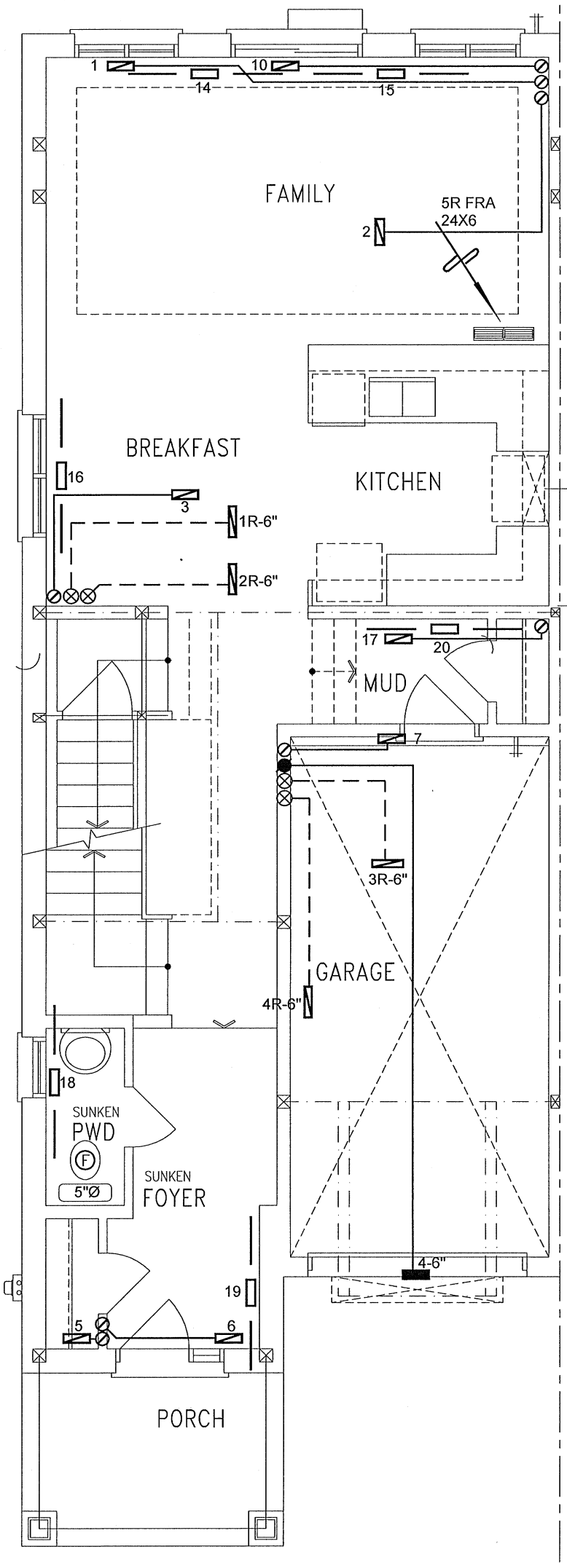
HEAT LOSS 39312 BTU/H	
UNIT DATA	
MAKE	LENNOX
MODEL	EL196UH045XE24B
INPUT	44 MBTU/H
OUTPUT	42 MBTU/H
COOLING	2.0 TONS
FAN SPEED	800 cfm @ 0.6" w.c.

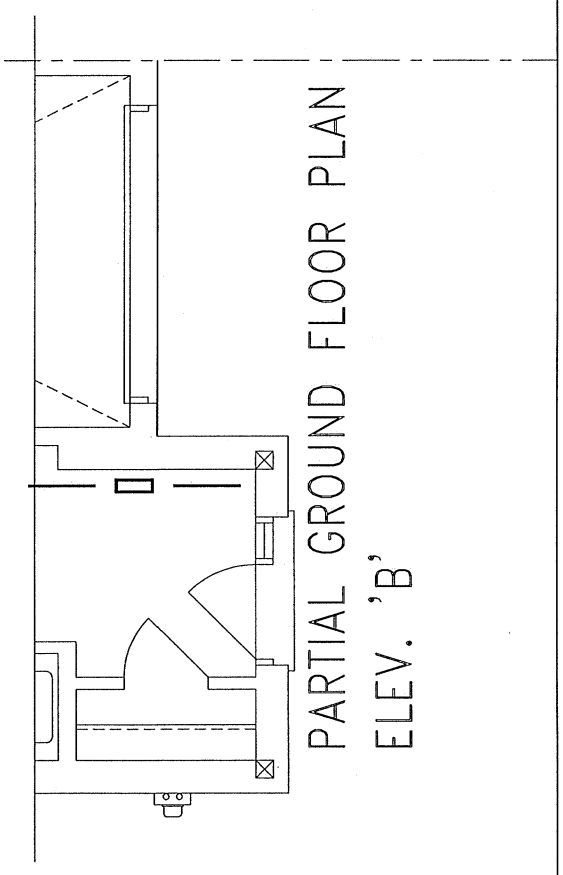
# OF RUNS	S/A	R/A	FANS
3RD FLOOR			
2ND FLOOR	9	4	3
1ST FLOOR	6	1	2
BASEMENT	3	1	0

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

Sheet Title
BASEMENT HEATING LAYOUT

Date JUNE/2018
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 78874





GROUND FLOOR PLAN ELEV. 'A'

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

CSA-F280-12
PACKAGE A1

HVAC LEGEND

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Project Name
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INNISFIL, ONTARIO

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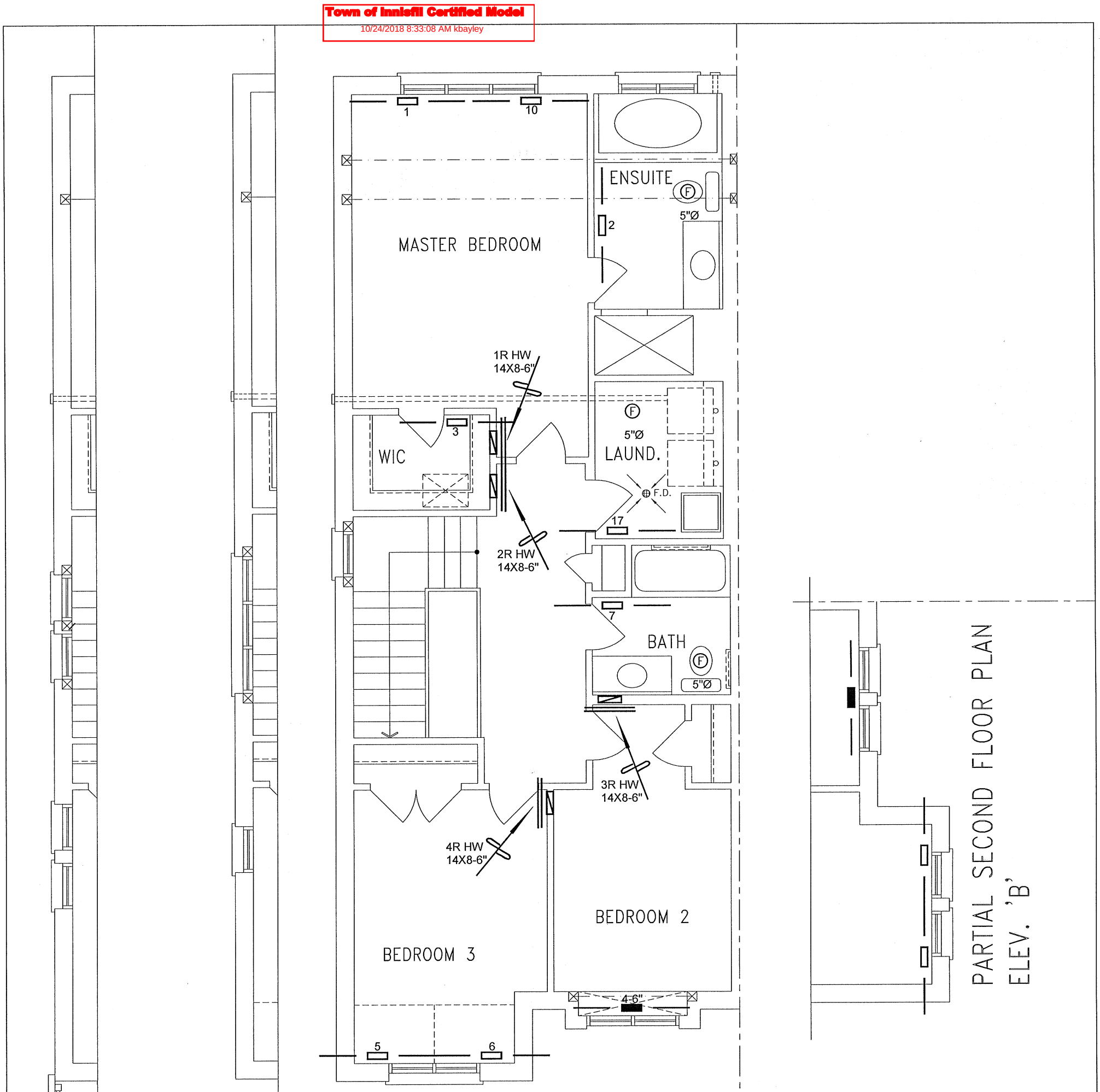
Sheet Title
FIRST FLOOR HEATING LAYOUT

Date JUNE/2018
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 78874

Town of Innisfil Certified Model
10/24/2018 8:33:08 AM kbayley



SECOND FLOOR PLAN ELEV. 'A'

PARTIAL SECOND FLOOR PLAN
ELEV. 'B'

SECOND FLOOR PLAN ELEV. 'A'
W/ SIDE UPGRADE BLOCK 147

SECOND FLOOR PLAN ELEV. 'B'
W/ SIDE UPGRADE BLOCK 149

I MICHAEL O'ROURKE HAVE REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
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CSA-F280-12
PACKAGE A1

HVAC LEGEND

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Sheet Title
SECOND FLOOR HEATING LAYOUT

Date JUNE/2018
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 78874