

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 VAUGHAN	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@hvacdsgns.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]

☐ House ☐ Small Buildings ☐ Large Buildings ☐ Complex Buildings	☒ HVAC – House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection	☐ Building Structural ☐ Plumbing – House ☐ Plumbing – All Buildings ☐ On-site Sewage Systems
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Description of designer's work
HEAT LOSS / GAIN CALCULATIONS
DUCT SIZING
RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY
RESIDENTIAL SYSTEM DESIGN per CSA-F280-12

Model: 38-3

Project: KLEINBURG GLEN

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 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)

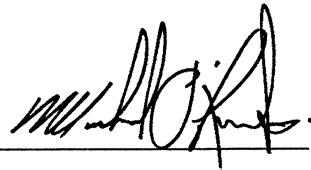
☐ The design work is exempt from the registration and qualification requirements of the Building Code.

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.

January 27, 2016
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.

SITE NAME: KLEINBURG GLEN

DATE: Jan-16
LO# 67008
TYPE: 38-3
GFA: 2575
WINTER NATURAL AIR CHANGE RATE 0.322
SUMMER NATURAL AIR CHANGE RATE 0.098
HEAT LOSS AT °F. 76
HEAT GAIN AT °F. 16
CSA-F280-12
SB-12 PACKAGE J

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	LAUN	ENS-2
GRS.WALL AREA	288	216	216	216	90	162	351	252	54	81	54
GLAZING	0	0	0	0	0	0	0	0	0	0	0
NORTH	24.1	17.5	0	0	0	0	0	0	0	0	0
EAST	24.1	43.0	32	337	603	0	0	0	0	0	0
SOUTH	24.1	26.4	0	0	0	24	578	633	0	0	0
WEST	24.1	43.0	0	0	0	0	0	0	0	0	0
SKYLT.	24.1	88.1	0	0	0	0	35	843	1506	35	843
DOORS	25.2	5.3	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.7	256	688	147	138	477	100	308	1064	224
NET EXPOSED BSMT WALL ABOVE GR	6.3	1.3	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.5	0.8	252	383	192	144	219	109	90	137	68
NO ATTIC EXPOSED CLG	2.5	1.2	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.5	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	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
SUBTOTAL HT LOSS	2039	1254	859	1755	448	1411	2456	1909	638	645	440
SUB TOTAL HT GAIN	0.20	0.26	0.20	0.26	0.20	0.26	0.20	0.26	0.20	0.26	0.20
LEVEL FACTOR / MULTIPLIER	526	323	49	101	8	364	52	110	164	166	114
AIR CHANGE HEAT LOSS	385	142	0	0	0	0	0	276	80	81	0
DUCT LOSS	2	480	0	0	0	1	240	1	0	0	0
HEAT GAIN PEOPLE	240	500	0	0	0	500	500	500	500	500	500
HEAT GAIN APPLIANCES/LIGHTS	2949	1577	563	1181	1774	3089	3259	882	893	1105	554
TOTAL HT LOSS BTU/H	3871	1181	1577	1181	563	1774	3089	3259	882	893	554
TOTAL HT GAIN x 1.3 BTU/H											

ROOM USE	EXP. WALL	CLG. HT.	DIN	KIT/GRIT	MUD	PWD	FOY	BAS
GRS.WALL AREA	310	670	310	670	210	160	360	972
GLAZING	0	0	0	0	0	0	0	0
NORTH	0	15	361	282	8	193	140	72
EAST	0	93	2241	4003	0	0	0	52
SOUTH	28	675	739	0	0	0	0	258
WEST	0	0	0	0	0	0	0	79
SKYLT.	0	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0	0
NET EXPOSED WALL	282	974	205	582	182	629	132	20
NET EXPOSED BSMT WALL ABOVE GR	6.3	1.3	0	0	0	0	0	0
EXPOSED CLG	1.5	0.8	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.5	1.2	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.5	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	1649	4543	944	4673	1326	718	2365	10664
SUB TOTAL HT GAIN	0.30	0.43	0.30	0.43	0.30	0.43	0.30	0.50
LEVEL FACTOR / MULTIPLIER	703	1937	54	269	566	305	1009	7535
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0
DUCT LOSS	1	240	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	500	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	2352	6481	7387	1170	1892	1024	3374	18199
TOTAL HT LOSS BTU/H	3871	1181	1577	1181	563	1774	3089	554
TOTAL HT GAIN x 1.3 BTU/H								

TOTAL HEAT GAIN BTU/H: 33068

TONS: 2.76

LOSS DUE TO VENTILATION LOAD BTU/H: 2651

STRUCTURAL HEAT LOSS: 48864

TOTAL COMBINED HEAT LOSS BTU/H: 51515

SITE NAME: KLEINBURG GLEN
BUILDER: GOLD PARK HOMES

TYPE: 3B-3 DATE: Jan-16 GFA: 2575 LO# 67008

HEATING CFM	1100	COOLING CFM	1100
TOTAL HEAT LOSS	48,864	TOTAL HEAT GAIN	32,510
AIR FLOW RATE CFM	22.51	AIR FLOW RATE CFM	33.84

LENNOX
EL195UH070XE36B 70
FAN SPEED
LOW 0
MEDIUM 995
HIGH 1100

AFUE = 95.0 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = 63,000
DESIGN CFM = 1100
CFM @ 8" E.S.P.

4th	3rd	2nd	1st	Bas
0	0	12	7	4
0	0	4	2	1

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

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

ROOM #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	BED-3	BED-4	MBR	LAUN	ENS-2	DIN	KIT/GRT	KIT/GRT	KIT/GRT	MUD	PWD	FOY	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	1.47	1.58	0.56	1.77	1.54	1.63	0.88	1.54	1.63	1.47	0.89	0.55	2.35	2.16	2.16	2.16	1.89	1.02	3.37	4.55	4.55	4.55	4.55	4.55
CFM PER RUN HEAT	33	36	13	40	35	37	20	35	37	33	20	12	53	49	49	49	43	23	76	102	102	102	102	102
RM GAIN MBH	1.94	1.18	0.18	2.21	1.94	1.97	1.42	1.94	1.97	1.94	1.10	0.38	2.26	2.46	2.46	2.46	1.17	0.44	1.50	0.39	0.39	0.39	0.39	0.39
CFM PER RUN COOLING	65	40	6	75	66	67	48	66	67	65	37	13	76	83	83	83	40	15	51	13	13	13	13	13
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	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	0.16	0.16
EQUIVALENT LENGTH	130	140	110	170	130	130	130	150	140	140	190	120	120	140	110	110	130	130	110	140	110	130	130	120
TOTAL EFFECTIVE LENGTH	173	187	128	222	182	168	161	206	181	178	227	160	157	172	133	149	145	165	146	171	134	166	155	155
ADJUSTED PRESSURE	0.1	0.09	0.13	0.08	0.09	0.1	0.11	0.08	0.1	0.1	0.08	0.11	0.11	0.09	0.12	0.11	0.12	0.1	0.12	0.09	0.12	0.1	0.1	0.1
ROUND DUCT SIZE	5	4	4	5	5	5	4	5	5	5	4	4	5	5	5	5	4	4	4	6	5	6	6	6
HEATING VELOCITY (ft/min)	242	413	149	294	257	272	229	257	272	242	229	138	389	360	360	360	493	264	558	520	749	520	520	520
COOLING VELOCITY (ft/min)	477	459	69	551	485	492	551	485	492	477	424	149	558	609	609	609	459	172	374	66	95	66	66	66
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	4X10	4X10
TRUNK	B	A	C	A	D	E	E	D	E	B	E	A	A	B	B	A	C	D	D	A	B	A	A	D

ROOM #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	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
RM LOSS MBH	1.47	1.58	0.56	1.77	1.54	1.63	0.88	1.54	1.63	1.47	0.89	0.55	2.35	2.16	2.16	2.16	1.89	1.02	3.37	4.55	4.55	4.55	4.55	4.55
CFM PER RUN HEAT	33	36	13	40	35	37	20	35	37	33	20	12	53	49	49	49	43	23	76	102	102	102	102	102
RM GAIN MBH	1.94	1.18	0.18	2.21	1.94	1.97	1.42	1.94	1.97	1.94	1.10	0.38	2.26	2.46	2.46	2.46	1.17	0.44	1.50	0.39	0.39	0.39	0.39	0.39
CFM PER RUN COOLING	65	40	6	75	66	67	48	66	67	65	37	13	76	83	83	83	40	15	51	13	13	13	13	13
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	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	0.16	0.16
EQUIVALENT LENGTH	130	140	110	170	130	130	130	150	140	140	190	120	120	140	110	110	130	130	110	140	110	130	130	120
TOTAL EFFECTIVE LENGTH	173	187	128	222	182	168	161	206	181	178	227	160	157	172	133	149	145	165	146	171	134	166	155	155
ADJUSTED PRESSURE	0.1	0.09	0.13	0.08	0.09	0.1	0.11	0.08	0.1	0.1	0.08	0.11	0.11	0.09	0.12	0.11	0.12	0.1	0.12	0.09	0.12	0.1	0.1	0.1
ROUND DUCT SIZE	5	4	4	5	5	5	4	5	5	5	4	4	5	5	5	5	4	4	4	6	5	6	6	6
HEATING VELOCITY (ft/min)	242	413	149	294	257	272	229	257	272	242	229	138	389	360	360	360	493	264	558	520	749	520	520	520
COOLING VELOCITY (ft/min)	477	459	69	551	485	492	551	485	492	477	424	149	558	609	609	609	459	172	374	66	95	66	66	66
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	4X10	4X10
TRUNK	B	A	C	A	D	E	E	D	E	B	E	A	A	B	B	A	C	D	D	A	B	A	A	D

ROOM #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	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
RM LOSS MBH	1.47	1.58	0.56	1.77	1.54	1.63	0.88	1.54	1.63	1.47	0.89	0.55	2.35	2.16	2.16	2.16	1.89	1.02	3.37	4.55	4.55	4.55	4.55	4.55
CFM PER RUN HEAT	33	36	13	40	35	37	20	35	37	33	20	12	53	49	49	49	43	23	76	102	102	102	102	102
RM GAIN MBH	1.94	1.18	0.18	2.21	1.94	1.97	1.42	1.94	1.97	1.94	1.10	0.38	2.26	2.46	2.46	2.46	1.17	0.44	1.50	0.39	0.39	0.39	0.39	0.39
CFM PER RUN COOLING	65	40	6	75	66	67	48	66	67	65	37	13	76	83	83	83	40	15	51	13	13	13	13	13
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	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	0.16	0.16
EQUIVALENT LENGTH	130	140	110	170	130	130	130	150	140	140	190	120	120	140	110	110	130	130	110	140	110	130	130	120
TOTAL EFFECTIVE LENGTH	173	187	128	222	182	168	161	206	181	178	227	160	157	172	133	149	145	165	146	171	134	166	155	155
ADJUSTED PRESSURE	0.1	0.09	0.13	0.08	0.09	0.1	0.11	0.08	0.1	0.1	0.08	0.11	0.11	0.09	0.12	0.11	0.12	0.1	0.12	0.09	0.12	0.1	0.1	0.1
ROUND DUCT SIZE	5	4	4	5	5	5	4	5	5	5	4	4	5	5	5	5	4	4	4	6	5	6	6	6
HEATING VELOCITY (ft/min)	242	413	149	294	257	272	229	257	272	242	229	138	389	360	360	360	493	264	558	520	749	520	520	520
COOLING VELOCITY (ft/min)	477	459	69	551	485	492	551	485	492	477	424	149	558	609	609	609	459	172	374	66	95	66	66	66
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	4X10	4X10
TRUNK	B	A	C	A	D	E	E	D	E	B	E	A	A	B	B	A	C	D	D	A	B	A	A	D

TYPE: 38-3
SITE NAME: KLEINBURG GLEN

LO # 67008

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	<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>5</u> @ 10.6 cfm	<u>53.0</u> cfm
Table 9.32.3.A.	TOTAL	<u>180.2</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
More than 5 - Part 6	TOTAL	<u>79.5</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>180.2</u>	cfm
Less Principal Ventil. Capacity	<u>95</u>	cfm
Required Supplemental Capacity	<u>85.2</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 50H	Location: BSMT
<u>95.0</u> cfm	<u>3.0</u> sones
☒ HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION					
CFM		ΔT °F		FACTOR	% LOSS
95.0 CFM	X	76 F	X	1.08	X
					0.34

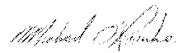
SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	☒	0.3
BATH	QTXEN050C	50	☒	0.3
ENS-2	QTXEN050C	50	☒	0.3
PWD	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 50H		
<u>95</u>	cfm high	<u>48</u> cfm low
<u>66</u>	% Sensible Efficiency	☒ HVI Approved
@ 32 deg F (0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER:		GOLD PARK 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:	
HRAI #	001820
Date:	January-16

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 38-3
SFQT: 2575**LO#** 67008**BUILDER:** GOLD PARK HOMES
SITE: KLEINBURG GLEN**DESIGN ASSUMPTIONS**

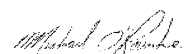
HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	WEST	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):	34417.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.35	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 52.0 ft	WIDTH: 29.0 ft	EXPOSED PERIMETER:	162.0 ft

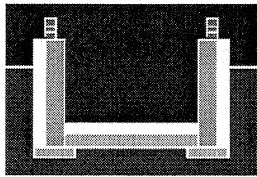
2012 OBC - COMPLIANCE PACKAGE

Component	Compliance Package
	J
Ceiling with Attic Space Minimum RSI (R)-Value	50
Ceiling Without Attic Space Minimum RSI (R)-Value	31
Exposed Floor Minimum RSI (R)-Value	31
Walls Above Grade Minimum RSI (R)-Value	22
Basement Walls Minimum RSI (R)-Value	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
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10
Windows and Sliding Glass Doors Maximum U-Value	1.8
Skylights Maximum U-Value	2.8
Space Heating Equipment Minimum AFUE	0.94
HRV Minimum Efficiency	60%
Domestic Hot Water Heater Minimum EF	0.67

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	▼
Region:	Vaughan (Woodbridge)	▼
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	▼
Water Table:	Normal (7-10 m, 23-33 Ft)	▼
Foundation Dimensions		
Floor Length (m):	15.8	 Insulation Configuration
Floor Width (m):	8.8	
Exposed Perimeter (m):	0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	0.7	
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):	1990	

49.2

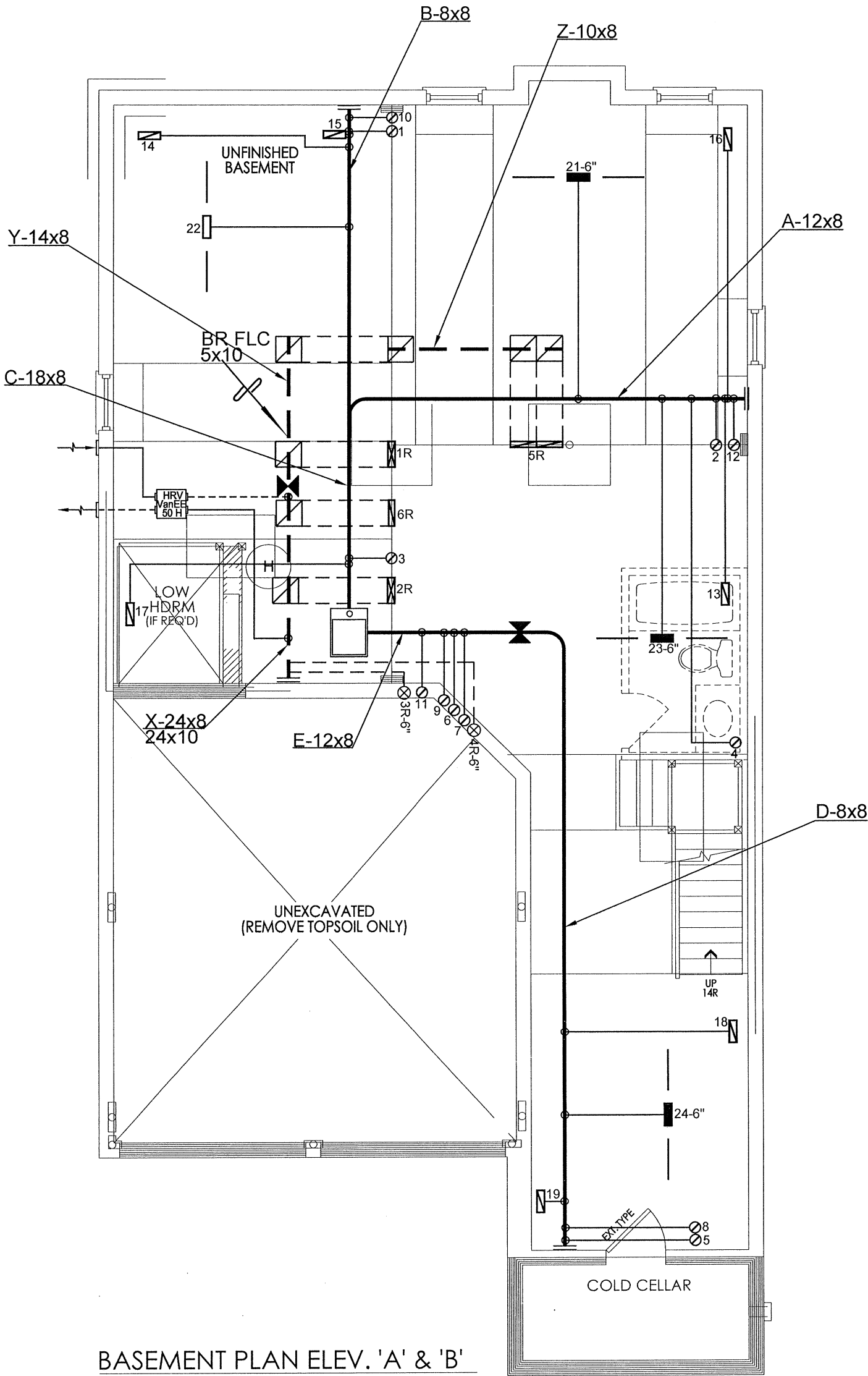
2.6 132.14

130.94

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
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):	974.6			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (ACH=3.57)			
Custom BDT Data:	ELA @ 10 Pa	716.42 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply:	Total Exhaust:		
	0	0		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Change Rate (ACH/H):		0.322		
Cooling Air Change Rate (ACH/H):		0.098		



BASEMENT PLAN ELEV. 'A' & '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.

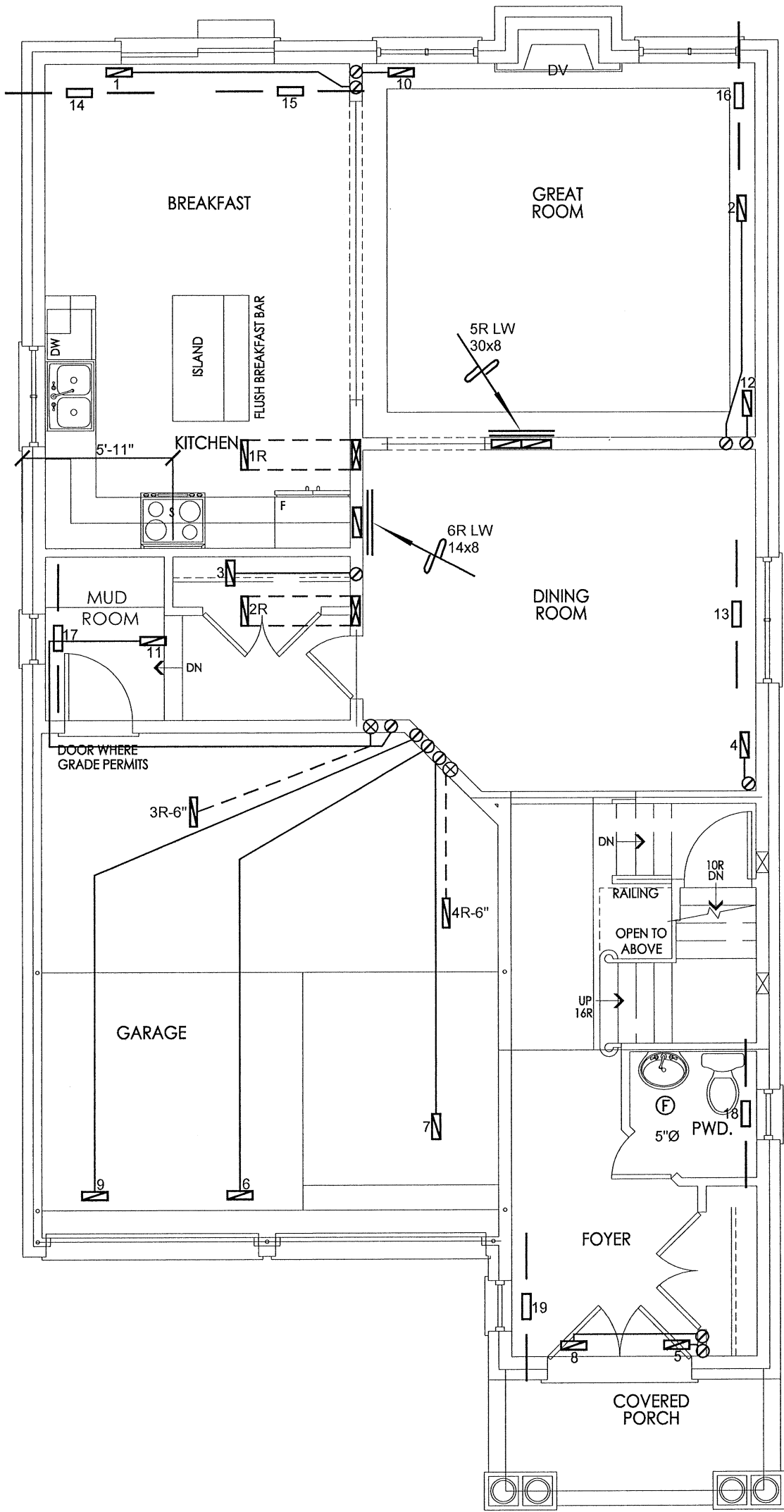
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE J

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR 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		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		HEAT LOSS 51515 BTU/H UNIT DATA		# OF RUNS		S/A		R/A		FANS		Sheet Title	
GOLD PARK HOMES				MAKE LENNOX		3RD FLOOR								BASEMENT HEATING LAYOUT	
Project Name		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.		MODEL EL195UH070XE36B-70		2ND FLOOR		12		4		3			
KLEINBURG GLEN VAUGHAN, ONTARIO				INPUT 66 MBTU/H		1ST FLOOR		7		2		2		Date JAN/2016	
				OUTPUT 63 MBTU/H		BASEMENT		4		1		0		Scale 3/16" = 1'-0"	
				COOLING 3.0 TONS										BCIN# 19669	
38-3				FAN SPEED 1100 cfm @ 0.6" w.c.										LO# 67008	
2575 sqft															



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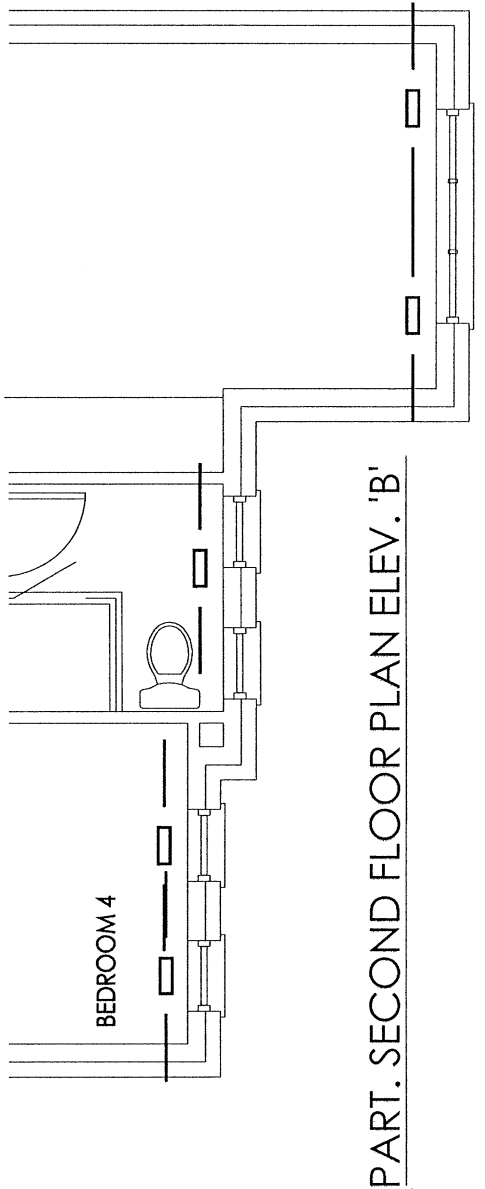
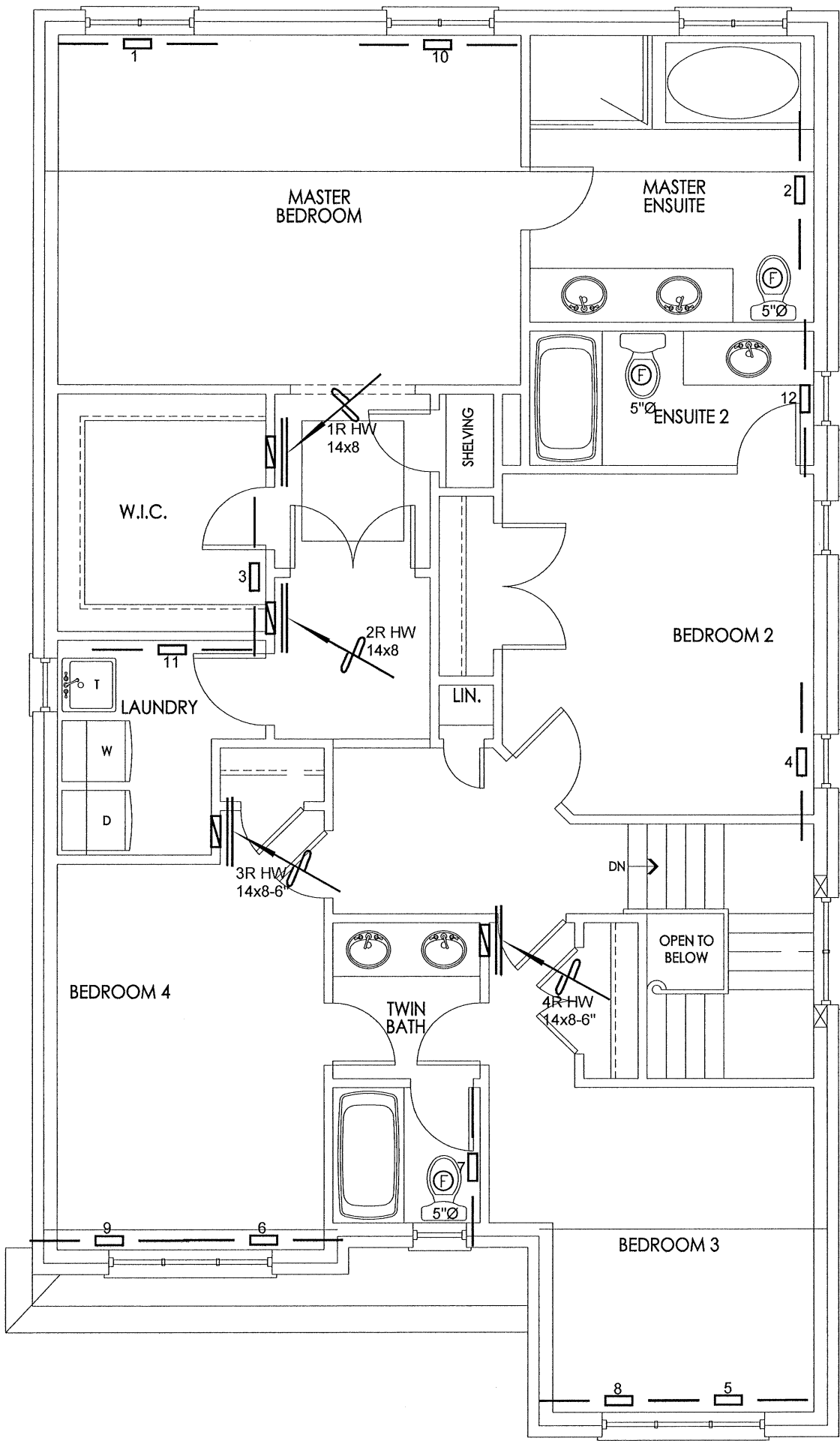
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE J

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR 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		 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.	Sheet Title	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2016
KLEINBURG GLEN VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
38-3			BCIN# 19669	
2575 sqft			LO#	67008



SECOND FLOOR PLAN ELEV. 'A'

CSA-F280-12
PACKAGE J

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

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR 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 GOLD PARK HOMES		 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.	Sheet Title SECOND FLOOR HEATING LAYOUT	
Project Name KLEINBURG GLEN VAUGHAN, ONTARIO			Date JAN/2016	
38-3			Scale 3/16" = 1'-0"	
2575 sqft			BCIN# 19669	
			LO# 67008	