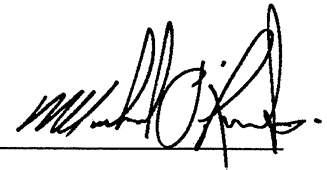


Schedule 1: Designer Information

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 BRAMPTON	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]				
☐ 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				
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12			Model: 38-4 Project: ENCORE	
D. Declaration of Designer				
I, <u>MICHAEL O'ROURKE</u> 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: <u>19669</u> Basis for exemption from registration and qualification: <u>O.B.C SENTENCE 3.2.4.1 (4)</u> ☐ 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.				
<u>March 7, 2017</u> 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: ENCORE
BUILDER: GOLD PARK HOMES
TYPE: 38-4
DATE: Mar-17
LO# 72701
GFA: 2457
WINTER NATURAL AIR CHANGE RATE 0.324
SUMMER NATURAL AIR CHANGE RATE 0.115
HEAT LOSS AT °F. 74
HEAT GAIN AT °F. 14
CSA-F280-12
SB-12 PACKAGE A1

ROOM USE EXP. WALL CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-2	ENS-2
GRS.WALL AREA	330	216	54	108	430	144	180	54	54
GLAZING	0	0	0	0	0	0	0	0	0
NORTH	20.7	16.3	0	0	0	0	0	0	0
EAST	20.7	41.9	32	663	1340	21	435	880	0
SOUTH	20.7	25.2	0	0	0	0	0	0	0
WEST	20.7	41.9	0	0	0	0	0	0	0
SKYLT.	20.7	86.9	0	0	0	0	0	0	0
DOORS	24.6	4.7	0	0	0	0	0	0	0
NET EXPOSED WALL	4.3	0.8	298	1295	245	195	847	160	54
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0
EXPOSED CLG	1.2	0.6	270	337	164	140	175	85	114
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.5	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2295	1457	377	926	3164	1668	1646	430	238
SUB TOTAL HT GAIN	1750	0.20	0.23	0.20	0.23	0.20	0.23	0.20	0.23
LEVEL FACTOR / MULTIPLIER	518	329	85	209	714	376	371	97	14
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	100	64	7	0	149	57	89	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	499	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	2813	1786	462	1135	3878	2249	2219	527	328
TOTAL HT GAIN x 1.3 BTU/H	3677	1546	156	1750	4539	2569	2359	328	328

ROOM USE EXP. WALL CLG. HT.	DIN	KT/IFM	LAUN	WIR	FOY	BAS
GRS.WALL AREA	170	880	63	210	420	984
GLAZING	0	0	0	0	0	0
NORTH	0	0	0	0	0	0
EAST	0	0	0	0	0	0
SOUTH	31	642	782	0	0	6
WEST	0	0	0	0	0	3
SKYLT.	0	0	0	0	0	62
DOORS	20	492	93	0	0	76
NET EXPOSED WALL	119	517	98	786	3415	646
NET EXPOSED BSMT WALL ABOVE GR	0	0	0	0	0	0
EXPOSED CLG	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	0	0	0	0	0	0
EXPOSED FLOOR	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0
SUBTOTAL HT LOSS	1651	5390	4597	542	598	8062
SUB TOTAL HT GAIN	0.30	0.38	0.30	0.38	0.30	0.38
LEVEL FACTOR / MULTIPLIER	622	2029	126	399	1190	7066
AIR CHANGE HEAT LOSS	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	56	263	9	31	34	43
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
HEAT GAIN APPLIANCES/LIGHTS	499	0	0	0	0	0
TOTAL HT LOSS BTU/H	2273	7419	6965	1459	4351	15123
TOTAL HT GAIN x 1.3 BTU/H	1986	6965	944	745	1470	1674

SITE NAME: ENCORE
BUILDING: GOLD PARK HOMES

TYPE: 38-4

DATE: Mar-17

GFA: 2457 LO# 72701

HEATING CFM	995	COOLING CFM	995
TOTAL HEAT LOSS	46,455	TOTAL HEAT GAIN	30,710
AIR FLOW RATE CFM	21.42	AIR FLOW RATE CFM	32.4

EL296UH070XE36B	70	AFUE = 96 %
FAN SPEED	LOW	INPUT (BTU/H) = 66,000
MEDIUM	MEDIUM	OUTPUT (BTU/H) = 64,000
HIGH	HIGH	DESIGN CFM = 995
		CFM @ .6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	6	4
R/A	0	0	4	2	1

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

RUN #	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	BATH	BED-3	MBR	ENS		DIN	KT/FM	KT/FM	LAUN			FOY	KT/FM	BAS	BAS	BAS	BAS
RM LOSS MBH	1.41	1.79	0.46	1.14	1.94	2.25	1.11	1.11	1.94	1.41	0.53		2.27	2.47	2.47	0.76	1.46	1.46	4.35	2.47	3.78	3.78	3.78	3.78
CFM PER RUN HEAT	30	38	10	24	42	48	24	24	42	30	11		49	53	53	16	31	31	93	53	81	81	81	81
RM GAIN MBH	1.84	1.55	0.16	1.75	2.27	2.57	1.18	1.18	2.27	1.84	0.33		1.99	2.32	2.32	0.94	0.75	1.47	2.32	0.42	0.42	0.42	0.42	0.42
CFM PER RUN COOLING	60	50	5	57	74	83	38	38	74	60	11		64	75	75	31	24	48	75	14	14	14	14	14
ADJUSTED PRESSURE	0.17	0.17	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	0.16	0.16	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	47	61	36	50	64	42	65	60	55	40	40		46	33	26	31	44	50	40	40	27	37	24	44
EQUIVALENT LENGTH	140	140	130	150	180	190	150	140	190	190	150		140	140	180	160	190	170	170	160	160	170	130	200
TOTAL EFFECTIVE LENGTH	187	201	166	200	244	232	215	200	245	230	190		186	173	206	191	234	220	200	187	207	154	244	244
ADJUSTED PRESSURE	0.09	0.09	0.1	0.09	0.07	0.07	0.08	0.09	0.07	0.07	0.09		0.09	0.1	0.08	0.09	0.09	0.07	0.07	0.09	0.09	0.08	0.11	0.07
ROUND DUCT SIZE	5	4	4	5	5	6	4	4	5	5	4		5	5	5	4	4	6	5	5	5	5	5	6
HEATING VELOCITY (ft/min)	220	436	115	176	308	245	275	275	308	220	126		360	389	389	184	356	474	389	595	595	595	595	413
COOLING VELOCITY (ft/min)	441	574	370	419	543	423	436	436	543	441	126		470	551	551	356	275	245	551	103	103	103	103	71
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10		3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	4X10
TRUNK	C	D	B	D	A	B	B	B	A	D	D		D	C	C	B	A	A	D	C	D	B	A	A

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										RETURN AIR TRUNK SIZE										VELOCITY (ft/min)	
TRUNK	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)		
TRUNK A	289	0.07	9.1	10	8	520	0	TRUNK G	0	0.00	0	0	0	8	TRUNK O	0	0.05	0	0	8	
TRUNK B	492	0.07	11.1	14	8	633	0	TRUNK H	0	0.00	0	0	0	8	TRUNK P	0	0.05	0	0	8	
TRUNK C	217	0.08	7.9	8	8	488	0	TRUNK I	0	0.00	0	0	0	8	TRUNK Q	0	0.05	0	0	8	
TRUNK D	286	0.07	9.1	10	8	515	0	TRUNK J	0	0.00	0	0	0	8	TRUNK R	0	0.05	0	0	8	
TRUNK E	503	0.07	11.2	14	8	647	0	TRUNK K	0	0.00	0	0	0	8	TRUNK S	0	0.05	0	0	8	
TRUNK F	0	0.00	0	0	8	0	0	TRUNK L	0	0.00	0	0	0	8	TRUNK T	0	0.05	0	0	8	

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
AIR VOLUME	85	135	75	85	320	135	0	0	0	0	0	0	0	0	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	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
EQUIVALENT LGH	51	53	78	76	44	49	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TOTAL EFFECTIVE LENGTH	185	235	195	185	265	270	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED PRESSURE	0.06	0.05	0.05	0.06	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
ROUND DUCT SIZE	6	7.5	6	8	10.3	7.5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
INLET GRILL SIZE	14	14	14	14	30	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14

TYPE: 38-4
SITE NAME: ENCORE

LO # 72701

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>4</u> @ 10.6 cfm	<u>42.4</u> cfm
Table 9.32.3.A.	TOTAL	<u>169.6</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>169.6</u>	cfm
Less Principal Ventil. Capacity	<u>139</u>	cfm
Required Supplemental Capacity	<u>30.6</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 60H-V+	Location: BSMT
<u>139.0</u> cfm	<u>3.0</u> sones
☒	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION					
CFM	ΔT °F	FACTOR	% LOSS		
139.0 CFM	X 74 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
ENS-2	QTXEN050C	50	☒	0.3
W/R	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 60H-V+		
<u>139</u> cfm high	<u>50</u> cfm low	
<u>75</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:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	March-17

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 38-4	BUILDER: GOLD PARK HOMES
SFQT: 2457	LO# 72701
	SITE: ENCORE

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

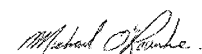
ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	WEST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	32932.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED 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: 50.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	164.0 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	-

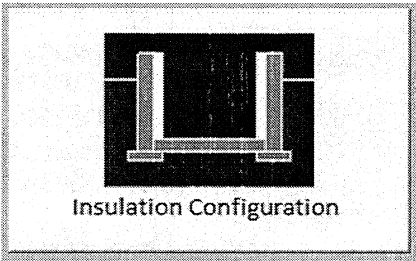
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	15.2	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	0.8	
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):		1658

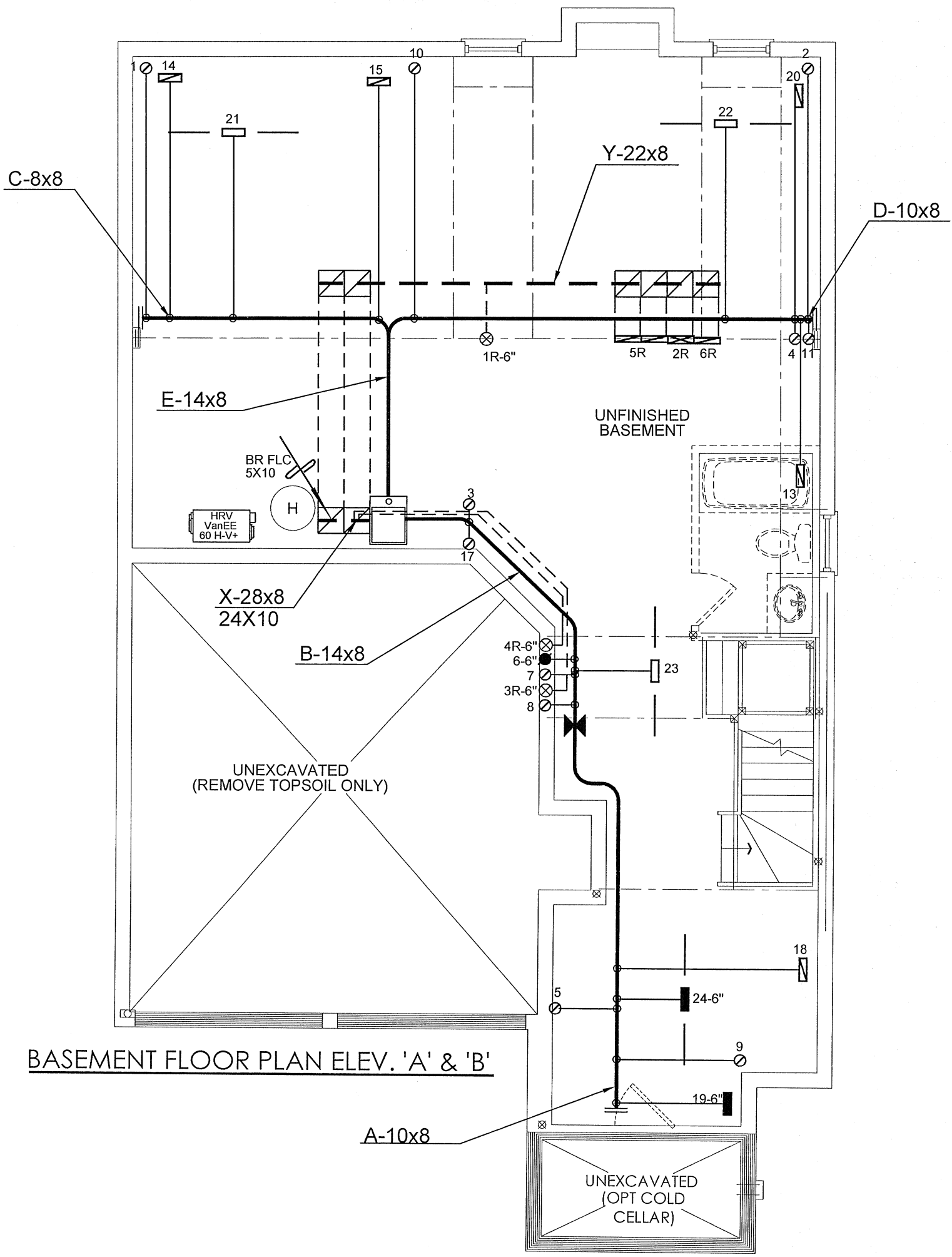
TYPE: 38-4
LO# 72701

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Brampton			
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):	932.5			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1243.1 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):	0.324			
Cooling Air Leakage Rate (ACH/H):	0.115			

TYPE: 38-4
LO# 72701



BASEMENT FLOOR 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.

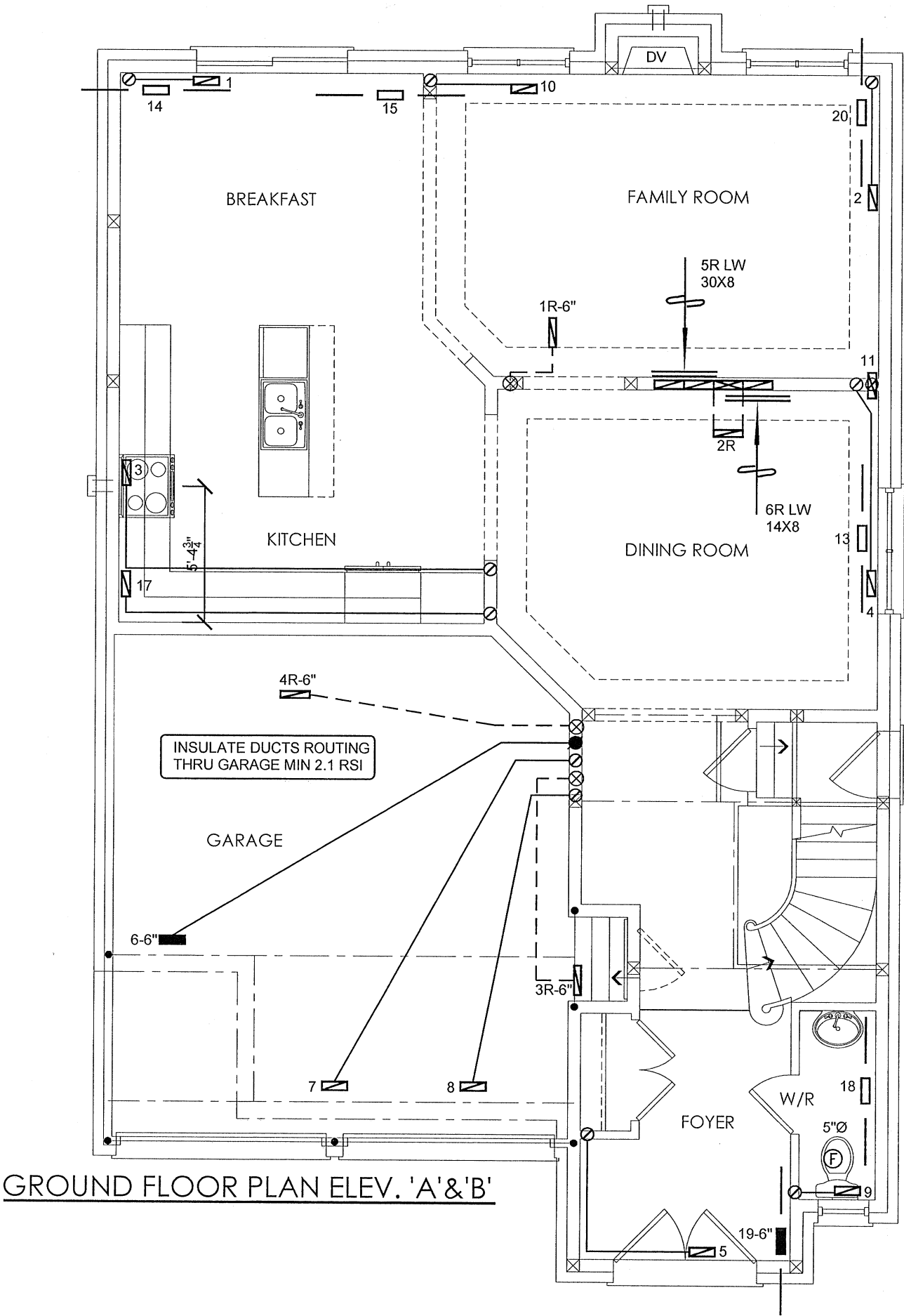
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

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		

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 USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE 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.

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	HEAT LOSS 49232 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS				Sheet Title BASEMENT HEATING LAYOUT	
Project Name ENCORE BRAMPTON, ONTARIO			MAKE LENNOX		3RD FLOOR					Date FEB/2017
			MODEL EL296UH070XE36B		2ND FLOOR		12	4	4	
			INPUT 66 MBTU/H		1ST FLOOR		6	1	2	
			OUTPUT 64 MBTU/H		BASEMENT		4	1	0	Scale 3/16" = 1'-0"
		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				BCIN# 19669	
38-4			FAN SPEED 995 cfm @ 0.5" w.c.						LO#	
2457 sqft										



GROUND FLOOR PLAN ELEV. 'A' & 'B'

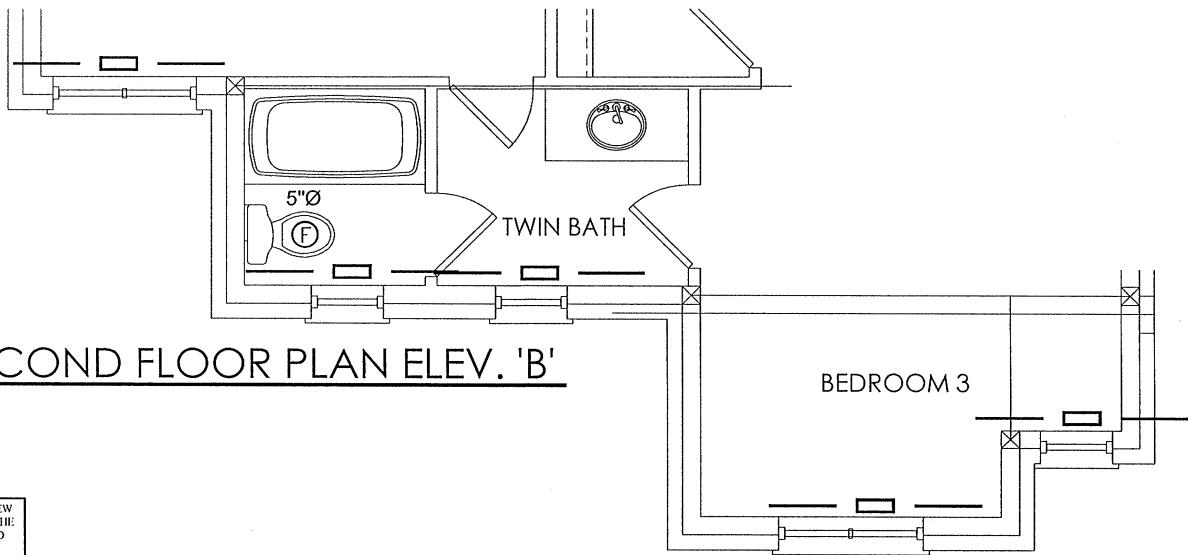
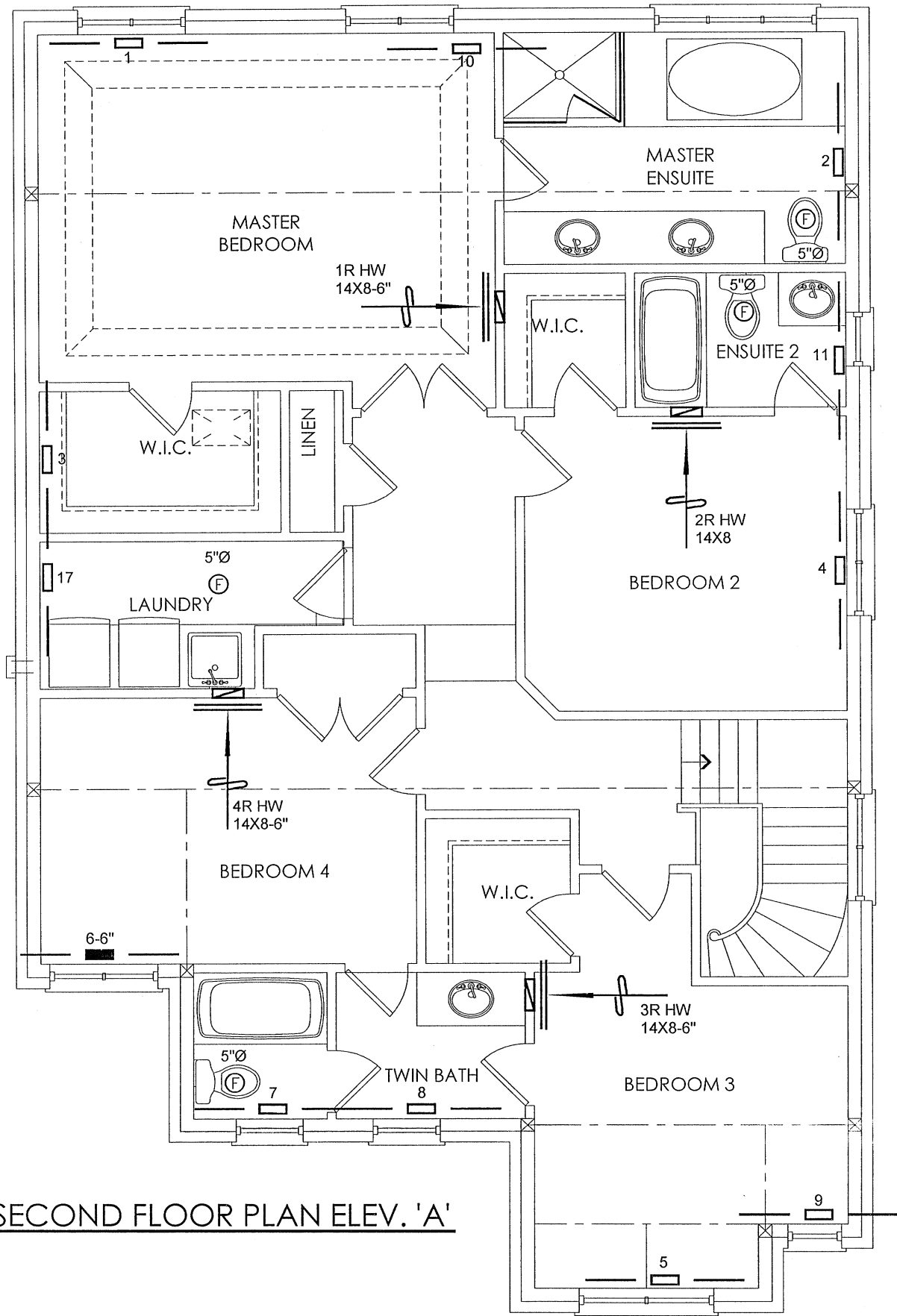
I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C. 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

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
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	Date	
							REVISIONS		

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 USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE 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.

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 FIRST FLOOR HEATING LAYOUT	
Project Name ENCORE BRAMPTON, ONTARIO	38-4	2457 sqft	Date FEB/2017	Scale 3/16" = 1'-0"
			BCIN# 19669	LO# 72701



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 A1

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		

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 USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE 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.

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			SECOND FLOOR HEATING LAYOUT	
Project Name ENCORE BRAMPTON, ONTARIO			Date	FEB/2017
38-4			Scale	3/16" = 1'-0"
2457 sqft			BCIN# 19669	
		LO#	72701	