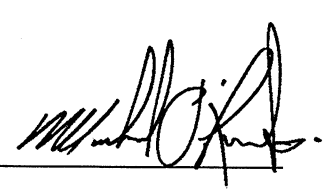


Schedule 1: Designer Information

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: SD-8 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
BUILDING: GOLD PARK HOMES
TYPE: SD-8
DATE: Mar-17
LO# 72737
GFA: 2046
WINTER NATURAL AIR CHANGE RATE 0.396
SUMMER NATURAL AIR CHANGE RATE 0.136
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	BATH	FOY	WOB	BAS
GRS.WALL AREA	135		135	189	45	108	330	72			
GLAZING											
NORTH	20.8	16.3	0	0	0	0	0	0	0	0	0
EAST	20.8	41.9	0	0	0	0	0	0	0	0	0
SOUTH	20.8	25.2	0	0	0	0	0	0	0	0	0
WEST	20.8	41.9	24	145	177	16	332	404	0	0	0
SKYLT.	36.4	102.1	0	0	0	0	0	0	0	0	0
DOORS	24.7	4.7	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.4	0.8	111	168	732	138	45	196	37	92	401
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	316	396	192	110	138	67	50	63	30
EXPOSED FLOOR	2.7	1.3	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	2.5	0.5	0	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS											
SUBTOTAL HT LOSS	1378		1378	1306	259	914	2397	288	549	0.20	0.46
SUB TOTAL HT GAIN	1289		1289	988	67	567	1832	253	30	0	0
LEVEL FACTOR / MULTIPLIER	0.20	0.46	0.20	0.46	0.20	0.46	0.20	0.46	0.20	0.46	0.20
AIR CHANGE HEAT LOSS	635		635	601	119	421	1104	193	0	0	0
AIR CHANGE HEAT GAIN	136		136	102	7	60	0	0	0	0	0
DUCT LOSS	0		0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	2		480	0	0	1	240	1	240	557	557
HEAT GAIN APPLIANCES/LIGHTS	557		557	0	0	557	3501	802	1139	0	0
TOTAL HT LOSS BTU/H	2013		2013	1907	378	1334	3501	802	1139	2881	1480
TOTAL HT GAIN x 1.3 BTU/H	3200		3200	1391	97	1851	3668	1139	1480	427	1480

ROOM USE	EXP. WALL	CLG. HT.	LIV	KIT	FAM	LAUN	WIR	FOY	WOB	BAS
GRS.WALL AREA	180		180	420	195	60	156	192		
GLAZING										
NORTH	20.8	16.3	0	0	0	0	0	0	0	0
EAST	20.8	41.9	0	0	0	0	0	0	0	0
SOUTH	20.8	25.2	40	831	1009	0	0	0	0	0
WEST	20.8	41.9	0	0	0	0	0	0	0	0
SKYLT.	36.4	102.1	0	0	0	0	0	0	0	0
DOORS	24.7	4.7	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.4	0.8	140	610	115	53	231	44	148	645
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.7	1.3	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	2.5	0.5	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS										
SUBTOTAL HT LOSS	1441		1441	2782	2741	376	811	1960	571	3997
SUB TOTAL HT GAIN	1124		1124	2727	2703	220	457	1091	2310	5709
LEVEL FACTOR / MULTIPLIER	0.30	0.46	0.30	0.46	0.30	0.46	0.30	0.46	0.30	0.46
AIR CHANGE HEAT LOSS	670		670	1293	1273	175	377	911	328	0.50
AIR CHANGE HEAT GAIN	118		118	287	284	23	48	115	0.50	0.98
DUCT LOSS	0		0	0	401	0	0	0	0	0
HEAT GAIN PEOPLE	0		0	0	355	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	557		557	557	557	557	557	557	557	557
TOTAL HT LOSS BTU/H	2111		2111	4075	4416	551	1188	2871	2881	13539
TOTAL HT GAIN x 1.3 BTU/H	2340		2340	4954	5069	1041	656	1568	427	1480

SITE NAME: ENCORE
BUILDER: GOLD PARK HOMES

TYPE: SD-8
DATE: Mar-17
GFA: 2046
LO# 72737

HEATING CFM 995
TOTAL HEAT LOSS 41,566
AIR FLOW RATE CFM 23.94

COOLING CFM 995
TOTAL HEAT GAIN 28,881
AIR FLOW RATE CFM 34.45

EL296UH070XE36B
FAN SPEED 70
AFUE = 96 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = 64,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	6	8	5
R/A	0	0	3	2	1

plenum pressure s/a 0.18
max s/a diff press. loss 0.03
min adjusted pressure s/a 0.15
r/a pressure 0.17
r/a grille press. loss 0.02
adjusted pressure r/a 0.15

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

ROOM NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
BATH																								
BED-3																								
BED-2																								
WIC																								
ENS																								
MBR																								
RM LOSS MBH	2.01	1.91	0.38	1.33	3.50																			
CFM PER RUN HEAT	48	46	9	32	84																			
RM GAIN MBH	3.20	1.39	0.10	1.85	3.67																			
CFM PER RUN COOLING	110	48	3	64	126																			
ADJUSTED PRESSURE	0.15	0.17	0.17	0.17	0.15																			
ACTUAL DUCT LGH.	66	41	23	17	37																			
EQUIVALENT LENGTH	130	150	170	170	130																			
TOTAL EFFECTIVE LENGTH	196	191	193	187	167																			
ADJUSTED PRESSURE	0.08	0.09	0.09	0.09	0.09																			
ROUND DUCT SIZE	6	4	4	5	6																			
HEATING VELOCITY (ft/min)	245	528	103	235	428																			
COOLING VELOCITY (ft/min)	580	551	34	470	642																			
OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	4X10																			
TRUNK	B	C	C	C	A																			

ROOM NAME	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
BAS																								
RM LOSS MBH	3.28																							
CFM PER RUN HEAT	79																							
RM GAIN MBH	0.38																							
CFM PER RUN COOLING	13																							
ADJUSTED PRESSURE	0.17																							
ACTUAL DUCT LGH.	46																							
EQUIVALENT LENGTH	160																							
TOTAL EFFECTIVE LENGTH	206																							
ADJUSTED PRESSURE	0.08																							
ROUND DUCT SIZE	5																							
HEATING VELOCITY (ft/min)	580																							
COOLING VELOCITY (ft/min)	95																							
OUTLET GRILL SIZE	3X10																							
TRUNK	B																							

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	436	0.08	10.3	12	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK B	304	0.08	9	10	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK C	562	0.08	11.3	14	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK D	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK E	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK F	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	0

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 G	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK H	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK I	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK J	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK K	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	0
TRUNK L	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	0

TYPE: SD-8
SITE NAME: ENCORE

LO # 72737

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	5 @ 10.6 cfm	53.0 cfm
Table 9.32.3.A.	TOTAL	159.0 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	63.6 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	159	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	20.0	cfm

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

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
139.0 CFM	74 F	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 60H-V+		
139 cfm high	50 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: 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

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																															
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																															
LO#: 72737	Model: SD-8	Builder: GOLD PARK HOMES	Date: 3/7/2017																																																												
Volume Calculation		Air Change & Delta T Data																																																													
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>House Volume</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> <tr> <td>Level</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Bsmt</td> <td>900</td> <td>9</td> <td>8100</td> </tr> <tr> <td>First</td> <td>1142</td> <td>10</td> <td>11420</td> </tr> <tr> <td>Second</td> <td>1142</td> <td>9</td> <td>10278</td> </tr> <tr> <td>Third</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td>Fourth</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td>Total:</td> <td></td> <td></td> <td>29,798.0 ft³</td> </tr> <tr> <td></td> <td></td> <td></td> <td>843.8 m³</td> </tr> </table>		House Volume	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Level				Bsmt	900	9	8100	First	1142	10	11420	Second	1142	9	10278	Third	0	9	0	Fourth	0	9	0	Total:			29,798.0 ft³				843.8 m³	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="4">Design Temperature Difference</th> </tr> <tr> <th></th> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> </tr> <tr> <td>Winter DTDh</td> <td>22</td> <td>-19</td> <td>41</td> </tr> <tr> <td>Summer DTDc</td> <td>22</td> <td>30</td> <td>8</td> </tr> <tr> <td></td> <td></td> <td></td> <td>74</td> </tr> <tr> <td></td> <td></td> <td></td> <td>14</td> </tr> </table>		Design Temperature Difference					Tin °C	Tout °C	ΔT °C	Winter DTDh	22	-19	41	Summer DTDc	22	30	8				74				14
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6.2.6 Sensible Gain due to Air Leakage																																																															
$HG_{satb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																																															
0.396	x	234.38	x																																																												
		8 °C	x																																																												
		1.2	=																																																												
			298 W																																																												
			=																																																												
			1017 Btu/h																																																												
6.2.7 Sensible heat Gain due to Ventilation																																																															
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																															
139 CFM	x	14 °F	x																																																												
		1.08	x																																																												
		0.25	=																																																												
			525 Btu/h																																																												
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																															
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$																																																															
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5	0		0	0.000																																																											

*HLairbv = Air leakage heat loss + ventilation heat loss

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

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: SD-8	BUILDER: GOLD PARK HOMES
SFQT: 2046	LO# 72737 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

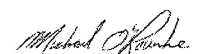
BUILDING DATA

ATTACHMENT:	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 (ft³):	29798.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.40	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 24.0 ft	WIDTH: 48.0 ft	EXPOSED PERIMETER:	123.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	56.0 ft

2012 OBC - COMPLIANCE PACKAGE

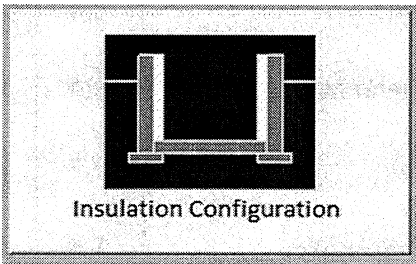
Component	Compliance Package A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.8
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 ci	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

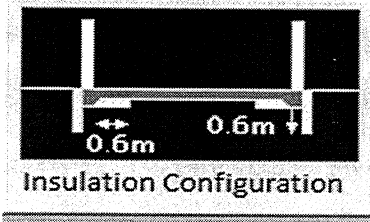
Supplemental tool for CAN/CSA-F280

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):	7.3	 Insulation Configuration
Floor Width (m):	14.6	
Exposed Perimeter (m):	37.5	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	1.9	
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):		1171

TYPE: SD-8
LO# 72737

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		
Length (m):	6.7	 Insulation Configuration
Width (m):	3.7	
Exposed Perimeter (m):	17.1	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		167

TYPE: SD-8

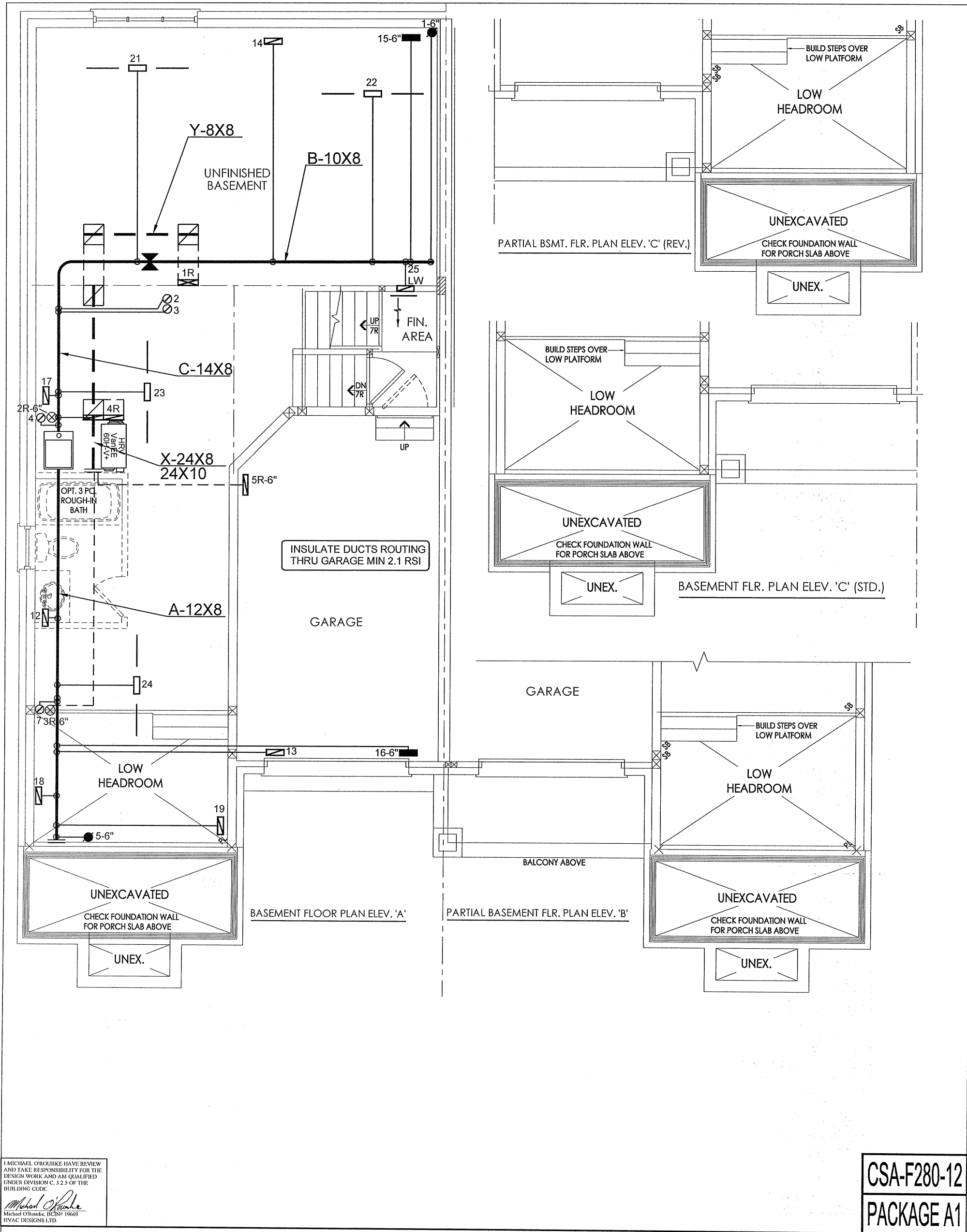
LO# 72737

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):	8.53			
Building Configuration				
Type:	Semi			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	843.8			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1124.8 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):	0.396			
Cooling Air Leakage Rate (ACH/H):	0.136			

TYPE: SD-8
LO# 72737



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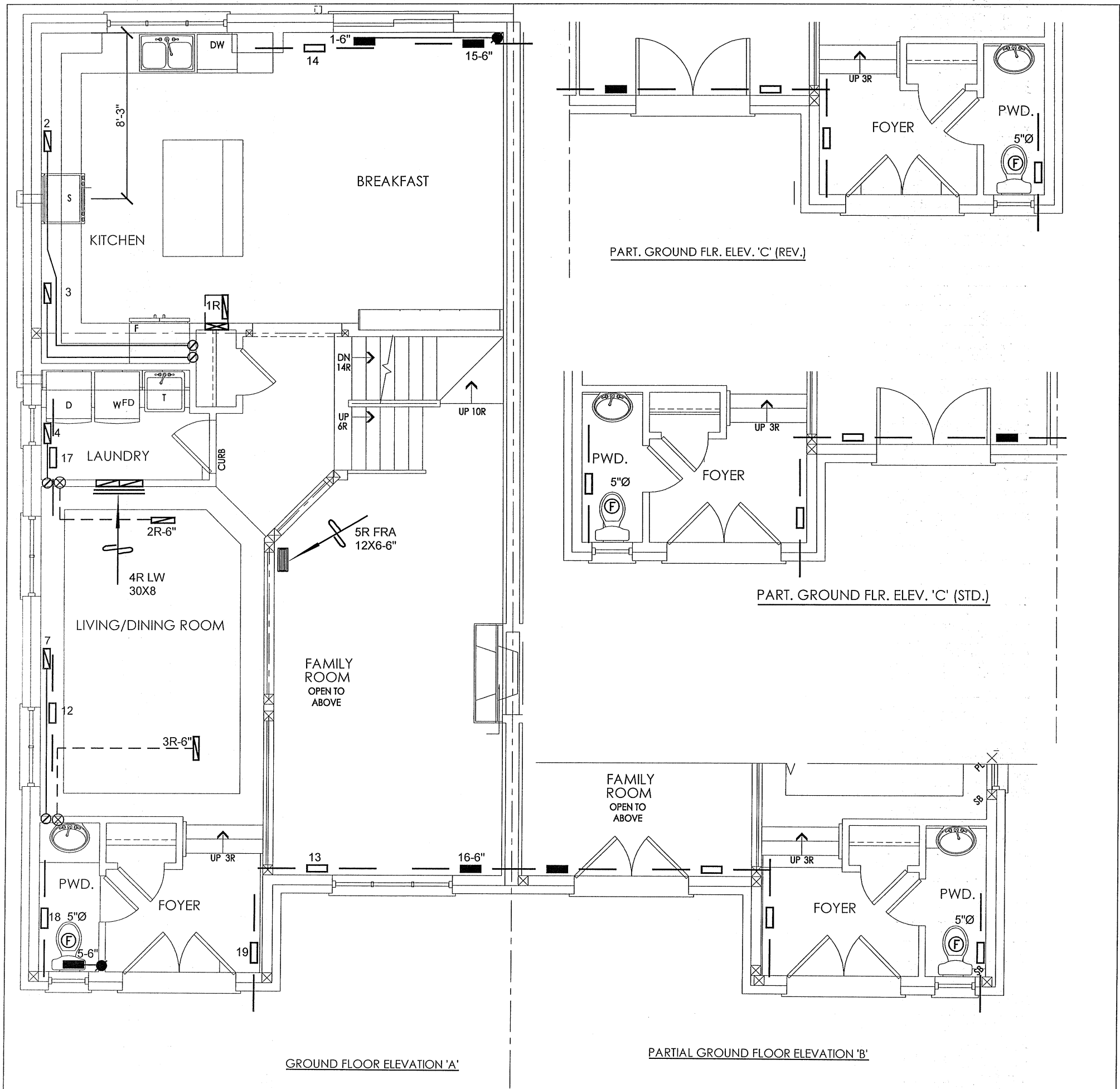
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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		

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Client		HVACDESIGNS 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 44351 BTU/H		# OF RUNS		S/A		R/A		FANS		Sheet Title	
GOLD PARK HOMES			UNIT DATA		3RD FLOOR						BASEMENT HEATING LAYOUT			
Project Name			MAKE		LENNOX		2ND FLOOR		6	3	2			
ENCORE			MODEL		EL296UH070XE36B		1ST FLOOR		8	2	2			
BRAMPTON, ONTARIO			INPUT		66 MBTU/H		BASEMENT		5	1	0	Date MAR/2017		
SD-8			OUTPUT		64 MBTU/H		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"	
2046 sqft			COOLING		2.5 TONS								BCIN# 19669	
			FAN SPEED		995 cfm @ 0.6" w.c.								LO# 72737	



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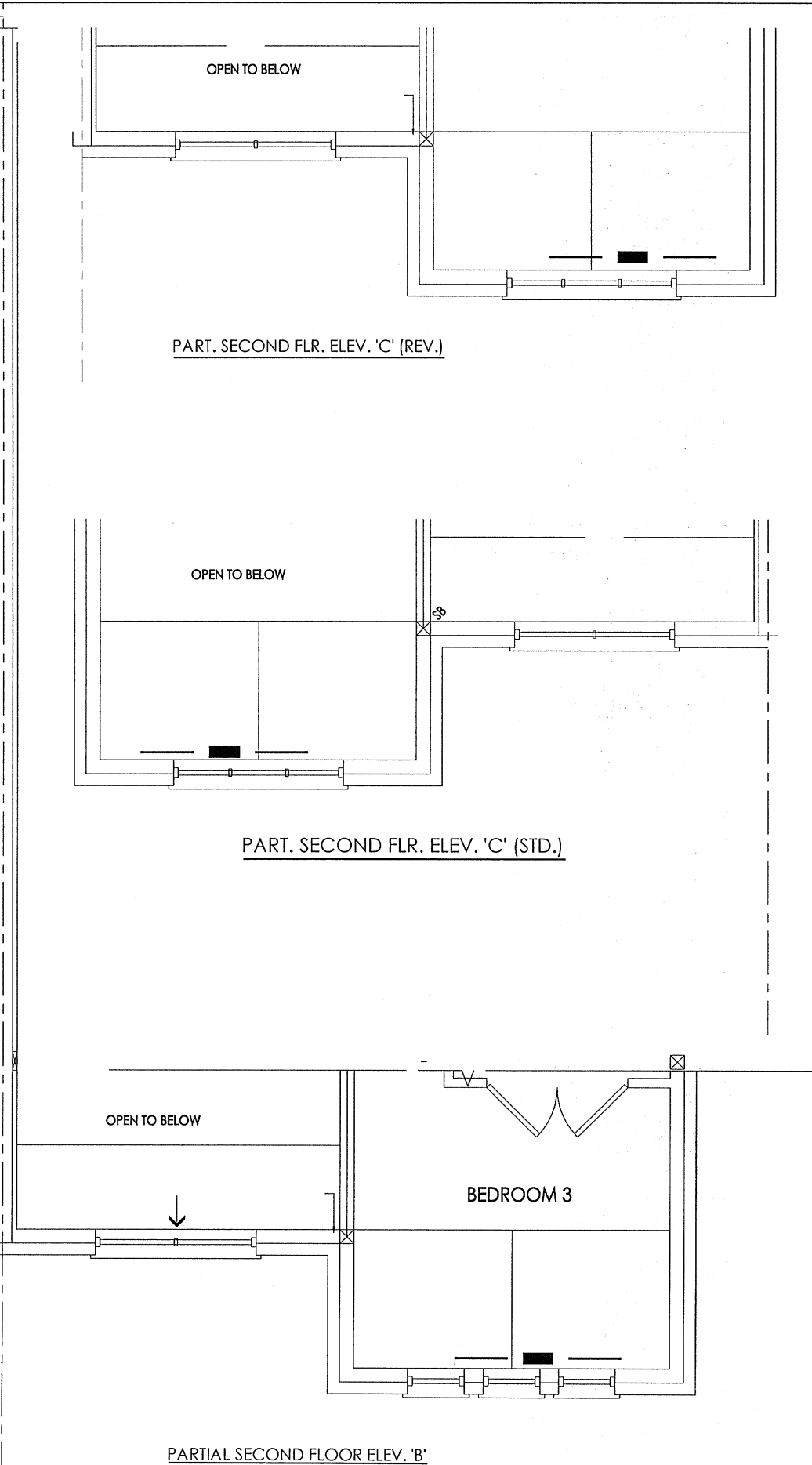
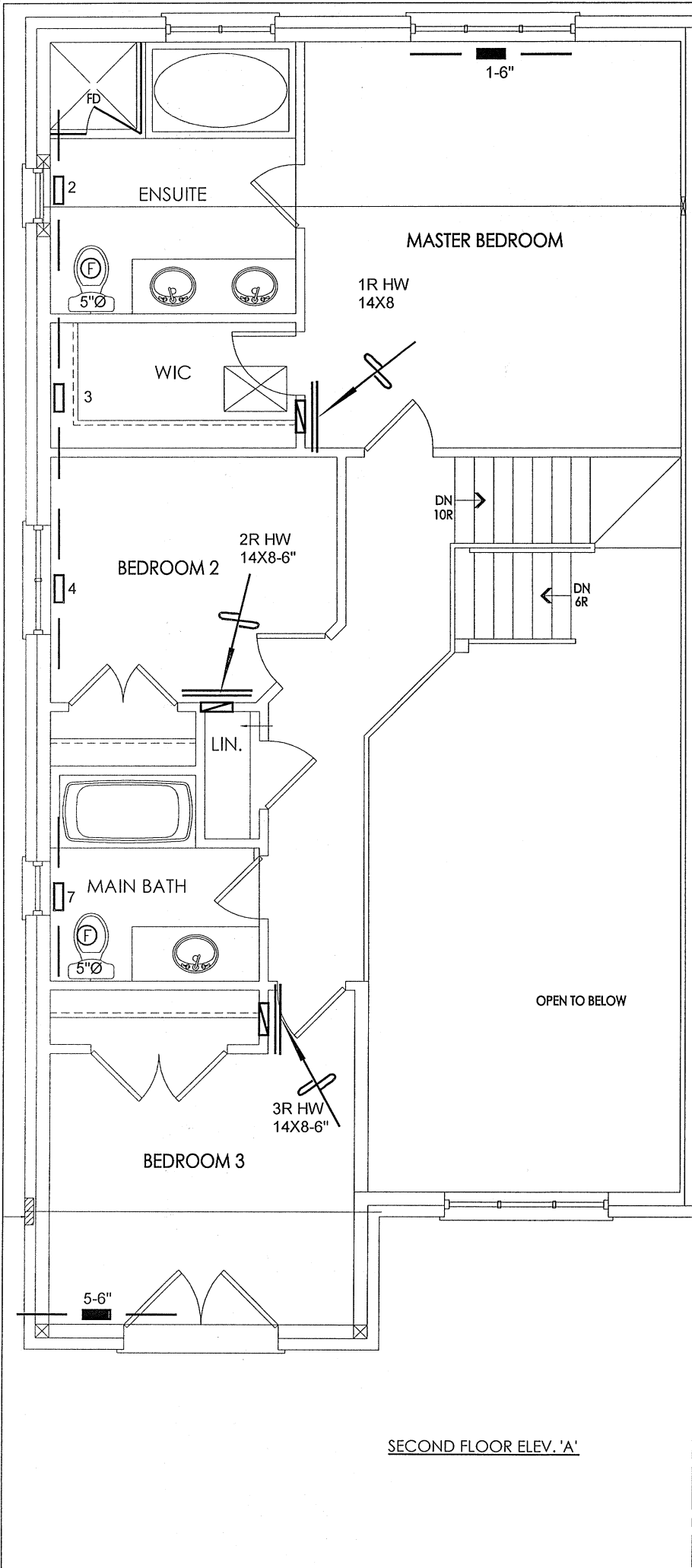
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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		

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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	
ENCORE BRAMPTON, ONTARIO			MAR/2017	
SD-8			Scale	
2046 sqft		3/16" = 1'-0"		
		BCIN# 19669		
		LO#	72737	



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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		

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GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name ENCORE BRAMPTON, ONTARIO			Date	MAR/2017
			Scale	3/16" = 1'-0"
		BCIN# 19669		
SD-8	2046 sqft	LO# 72737		