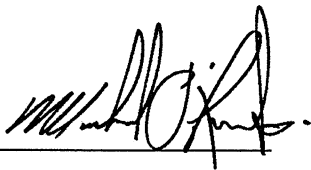


Schedule 1: Designer Information

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: 38-3 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: 3B-3
DATE: Mar-17
LO# 72700
GFA: 2394
WINTER NATURAL AIR CHANGE RATE 0.319
HEAT LOSS AT °F. 74
CSA-F280-12
HEAT GAIN AT °F. 14
SB-12 PACKAGE A1

ROOM USE	EXP. WALL	CLG. HT.	FACTORS	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-2
GRS WALL AREA	33	10	330	279	117	150	153	153	153	180	108
GLAZING	0	0	0	0	0	0	0	0	0	0	0
NORTH	20.7	16.3	0	0	0	0	0	0	0	0	0
EAST	20.7	41.9	32	580	1173	0	0	0	0	0	0
SOUTH	20.7	25.2	0	0	0	0	0	0	0	0	0
WEST	20.7	41.9	0	0	0	0	0	0	0	0	0
SKYLT.	20.7	86.9	0	0	0	0	0	0	0	0	0
DOORS	24.6	4.7	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.3	0.8	298	1295	245	251	1091	206	101	439	83
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.2	0.6	270	337	164	158	197	96	154	167	81
NO ATTIC EXPOSED CLG	2.7	1.3	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	2295	1750	1868	1475	998	597	1830	1446	551	1269	806
SUB TOTAL HT GAIN	0.20	0.21	0.20	0.21	0.20	0.21	0.20	0.21	0.20	0.21	0.20
LEVEL FACTOR / MULTIPLIER	479	97	82	208	33	102	302	31	34	168	20
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	2	480	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	483	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	2774	3653	2258	2024	1206	483	2613	1923	483	1687	1071
TOTAL HT GAIN x 1.3 BTU/H											531

ROOM USE	EXP. WALL	CLG. HT.	FACTORS	DIN	KTIFM	LAUN	WIR	FOY	BAS
GRS WALL AREA	300	790	243	200	200	200	200	460	1040
GLAZING	24	497	391	0	0	0	0	0	3
NORTH	0	0	0	0	0	0	0	0	62
EAST	0	0	0	0	0	0	0	0	124
SOUTH	0	0	0	0	0	0	0	0	62
WEST	0	0	0	0	0	0	0	0	76
SKYLT.	0	0	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	276	1199	227	686	2981	564	390	1721	20
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	492
EXPOSED CLG	1.2	0.6	0	0	0	0	0	0	93
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	400
EXPOSED FLOOR	2.5	0.5	0	0	0	0	0	0	1402
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0	265
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	1697	5236	2060	1438	485	3416	390	1695	5179
SUB TOTAL HT GAIN	0.30	0.34	0.20	0.21	0.30	0.34	0.30	0.34	7321
LEVEL FACTOR / MULTIPLIER	582	1796	422	493	27	1172	36	0	0.50
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0.92
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	6738
DUCT LOSS	0	0	0	0	0	0	0	0	41
DUCT GAIN	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	483	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	2279	7032	2445	1931	666	4587	483	14059	483
TOTAL HT GAIN x 1.3 BTU/H									1636

SITE NAME: ENCORE
BUILDER: GOLD PARK HOMES

TYPE: 38-3

DATE: Mar-17

GFA: 2394 LO# 72700

HEATING CFM 995 COOLING CFM 995
TOTAL HEAT LOSS 46,168 TOTAL HEAT GAIN 30,216
AIR FLOW RATE CFM 21.55 AIR FLOW RATE CFM 32.93

AFUE = 96 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = 64,000

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

DESIGN CFM = 995
CFM @ .5" E.S.P.

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	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-2	DIN	KT/FM	KT/FM	KT/FM	KT/FM	LAUN	WIR	FOY	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	1.39	2.26	0.30	1.21	1.31	1.92	0.84	0.84	1.31	1.39	1.07	2.28	2.34	2.34	2.34	2.34	2.44	1.93	4.59	3.51	3.51	3.51	3.51	3.51
CFM PER RUN HEAT	30	49	7	26	28	41	18	18	28	30	23	49	51	51	51	51	53	42	99	76	76	76	76	76
RM GAIN MBH	1.83	2.02	0.10	1.76	1.90	1.87	0.46	0.46	1.90	1.83	0.53	1.48	2.27	2.27	2.27	2.27	3.46	0.67	1.52	0.41	0.41	0.41	0.41	0.41
CFM PER RUN COOLING	60	67	3	58	63	61	15	15	63	60	17	49	75	75	75	75	114	22	50	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	0.15	0.17	0.16	0.17	0.17	0.17	0.17	0.17
EQUIVALENT LENGTH	140	150	190	180	120	190	34	51	43	44	23	16	28	25	33	33	44	16	31	35	27	14	33	33
TOTAL EFFECTIVE LENGTH	186	192	217	215	160	224	231	231	174	168	173	146	178	145	173	173	174	186	181	165	167	154	173	173
ADJUSTED PRESSURE	0.09	0.09	0.08	0.08	0.11	0.08	0.07	0.08	0.1	0.1	0.1	0.12	0.1	0.12	0.1	0.12	0.09	0.09	0.09	0.1	0.1	0.1	0.11	0.1
ROUND DUCT SIZE	5	5	4	5	5	5	4	4	5	5	4	4	5	5	5	5	6	4	6	5	5	5	5	5
HEATING VELOCITY (ft/min)	220	360	80	191	206	301	207	207	206	220	264	562	374	374	374	374	571	482	505	558	558	558	558	558
COOLING VELOCITY (ft/min)	441	492	34	426	463	448	172	172	463	441	195	562	551	551	551	551	581	581	555	95	95	95	95	95
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10
TRUNK	C	E	E	B	E	E	E	E	D	C	B	E	E	E	D	C	A	B	A	E	C	B	B	A

RUN #	ROOM NAME	RM LOSS MBH	CFM PER RUN HEAT	RM GAIN MBH	CFM PER RUN COOLING	ADJUSTED PRESSURE	EQUIVALENT LENGTH	TOTAL EFFECTIVE LENGTH	ADJUSTED PRESSURE	ROUND DUCT SIZE	HEATING VELOCITY (ft/min)	COOLING VELOCITY (ft/min)	OUTLET GRILL SIZE
1	TRUNK A	228	0.09	7.8	8	0.15	180	180	0.15	180	180	180	180
2	TRUNK B	395	0.08	9.9	12	0.15	25	25	0.15	25	25	25	25
3	TRUNK C	187	0.09	7.3	6	0.15	30	30	0.15	30	30	30	30
4	TRUNK D	661	0.08	12	16	0.15	180	180	0.15	180	180	180	180
5	TRUNK E	337	0.07	9.6	10	0.15	180	180	0.15	180	180	180	180
6	TRUNK F	0	0.00	0	0	0.15	180	180	0.15	180	180	180	180

RUN #	ROOM NAME	RM LOSS MBH	CFM PER RUN HEAT	RM GAIN MBH	CFM PER RUN COOLING	ADJUSTED PRESSURE	EQUIVALENT LENGTH	TOTAL EFFECTIVE LENGTH	ADJUSTED PRESSURE	ROUND DUCT SIZE	HEATING VELOCITY (ft/min)	COOLING VELOCITY (ft/min)	OUTLET GRILL SIZE
1	TRUNK A	228	0.09	7.8	8	0.15	180	180	0.15	180	180	180	180
2	TRUNK B	395	0.08	9.9	12	0.15	25	25	0.15	25	25	25	25
3	TRUNK C	187	0.09	7.3	6	0.15	30	30	0.15	30	30	30	30
4	TRUNK D	661	0.08	12	16	0.15	180	180	0.15	180	180	180	180
5	TRUNK E	337	0.07	9.6	10	0.15	180	180	0.15	180	180	180	180
6	TRUNK F	0	0.00	0	0	0.15	180	180	0.15	180	180	180	180

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	228	0.09	7.8	8	513	TRUNK G	0	0.00	0	0
TRUNK B	395	0.08	9.9	12	593	TRUNK H	0	0.00	0	0
TRUNK C	187	0.09	7.3	6	561	TRUNK I	0	0.00	0	0
TRUNK D	661	0.08	12	16	744	TRUNK J	0	0.00	0	0
TRUNK E	337	0.07	9.6	10	607	TRUNK K	0	0.00	0	0
TRUNK F	0	0.00	0	0	0	TRUNK L	0	0.00	0	0
RETURN AIR #	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
1	155	0.15	0.15	0.15	0.15	TRUNK M	0	0.00	0	0
2	155	0.15	0.15	0.15	0.15	TRUNK N	0	0.00	0	0
3	155	0.15	0.15	0.15	0.15	TRUNK O	0	0.00	0	0
4	155	0.15	0.15	0.15	0.15	TRUNK P	0	0.00	0	0
5	155	0.15	0.15	0.15	0.15	TRUNK Q	0	0.00	0	0
6	155	0.15	0.15	0.15	0.15	TRUNK R	0	0.00	0	0
7	155	0.15	0.15	0.15	0.15	TRUNK S	0	0.00	0	0
8	155	0.15	0.15	0.15	0.15	TRUNK T	0	0.00	0	0
9	155	0.15	0.15	0.15	0.15	TRUNK U	0	0.00	0	0
10	155	0.15	0.15	0.15	0.15	TRUNK V	0	0.00	0	0
11	155	0.15	0.15	0.15	0.15	TRUNK W	0	0.00	0	0
12	155	0.15	0.15	0.15	0.15	TRUNK X	660	12.9	20	8
13	155	0.15	0.15	0.15	0.15	TRUNK Y	180	7.9	8	8
14	155	0.15	0.15	0.15	0.15	TRUNK Z	0	0.00	0	0
15	155	0.15	0.15	0.15	0.15	DROP	995	15	24	10

TYPE: 38-3
SITE NAME: ENCORE

LO # 72700

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:** 38-3**BUILDER:** GOLD PARK HOMES**SFQT:** 2394**LO#** 72700**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

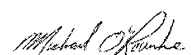
ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	WEST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	31906.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.5 ft
LENGTH: 47.0 ft	WIDTH: 33.0 ft	EXPOSED PERIMETER:	160.0 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	-

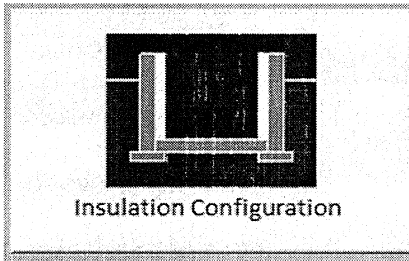
INDIVIDUAL BCIN: 19669

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):	14.3	
Floor Width (m):	10.1	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	2.0	
Window Area (m ²):	1.1	
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):	1517	

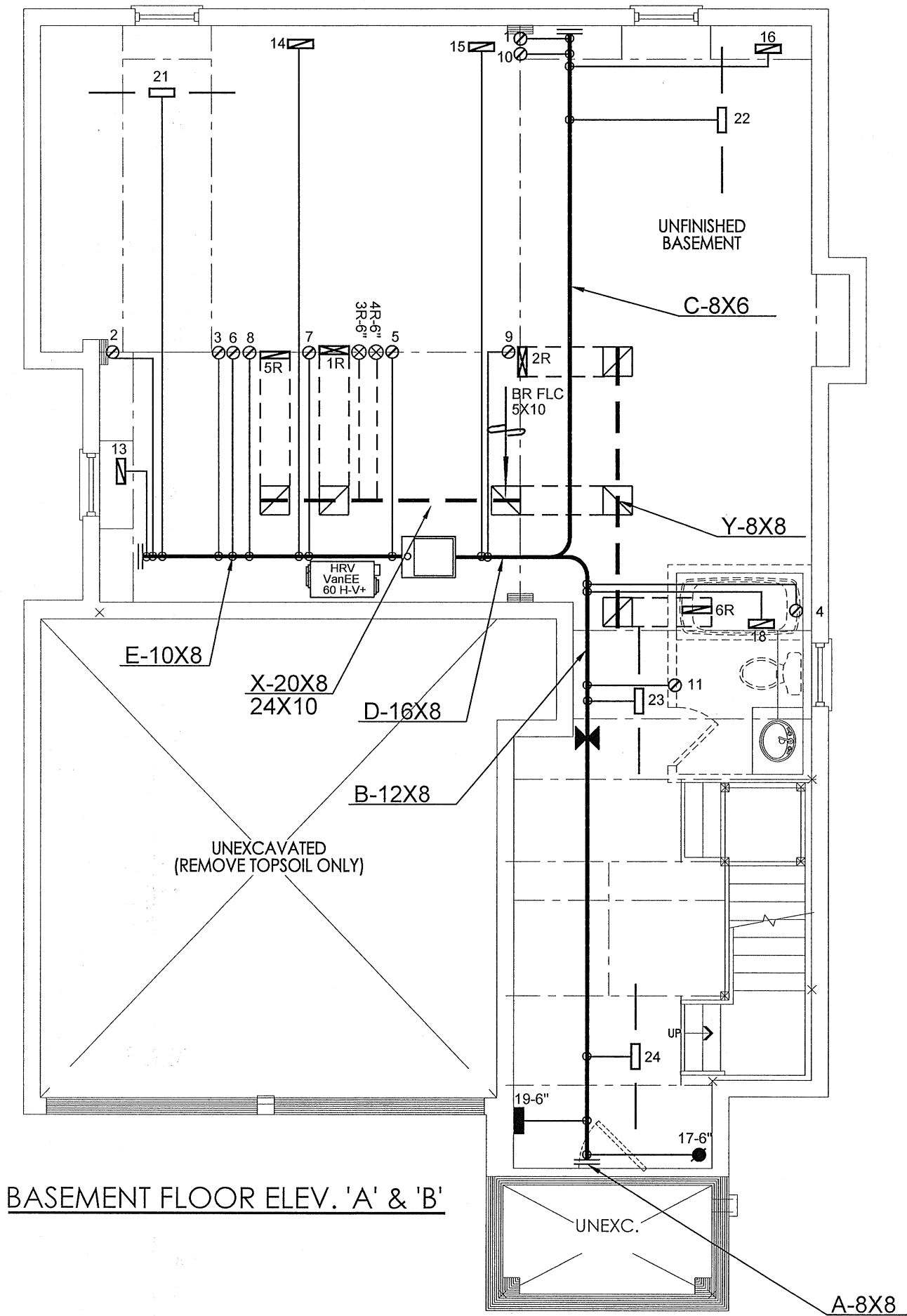
TYPE: 38-3
LO# 72700

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):	6.55			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	903.5			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1204.4 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):	0.319			
Cooling Air Leakage Rate (ACH/H):	0.113			

TYPE: 38-3
LO# 72700



BASEMENT FLOOR ELEV. 'A' & 'B'

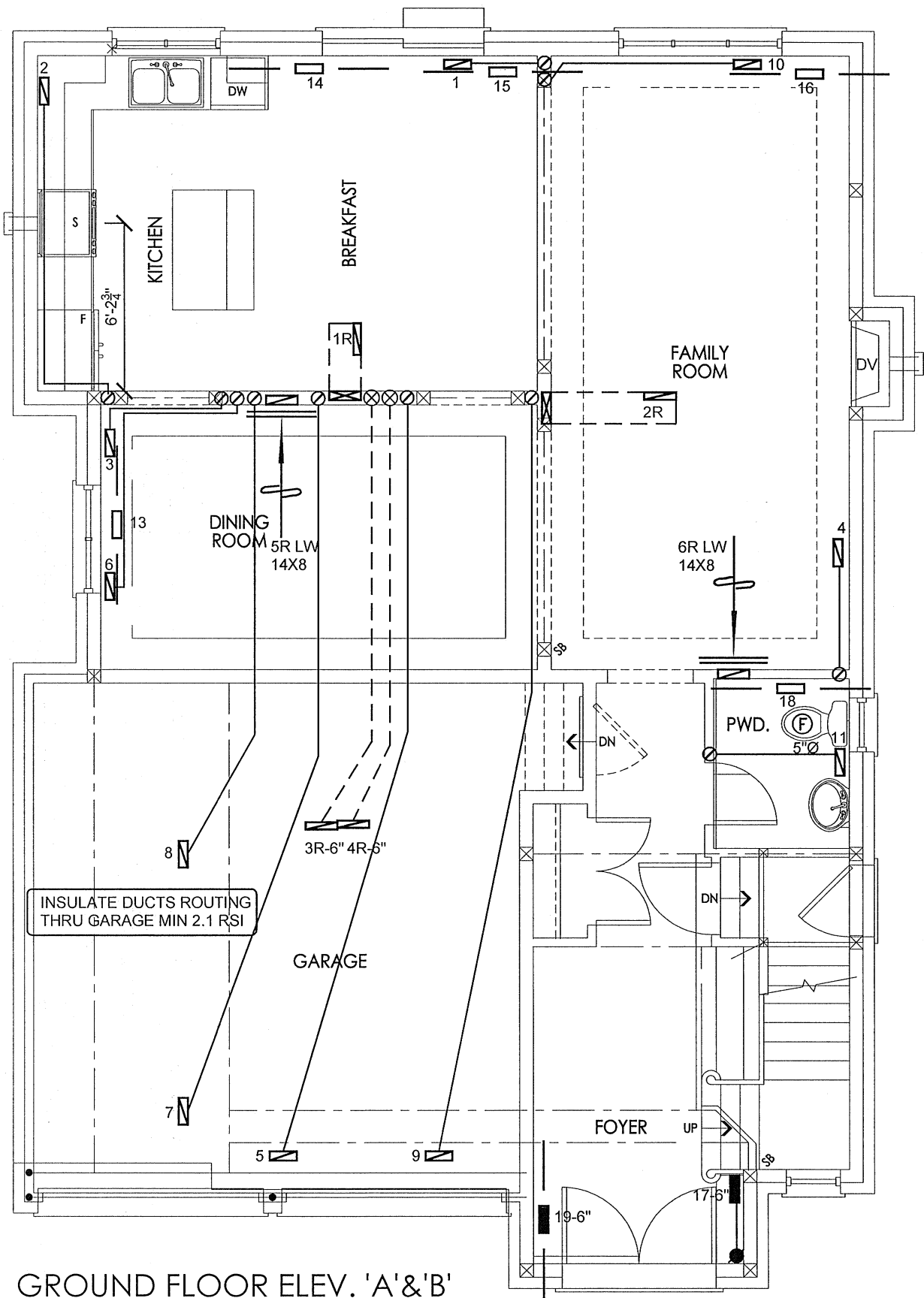
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.3.2.3 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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		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 48945 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 ENCORE BRAMPTON, ONTARIO			MODEL EL296UH070XE36B	2ND FLOOR		12	4	3	
			INPUT 66 MBTU/H	1ST FLOOR		6	2	2	
			OUTPUT 64 MBTU/H	BASEMENT		4	1	0	Date FEB/2017
		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						Scale 3/16" = 1'-0"
		FAN SPEED 995 cfm @ 0.5" w.c.							BCIN# 19669
38-3				LO# 72700					
2394 sqft									



GROUND FLOOR 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.

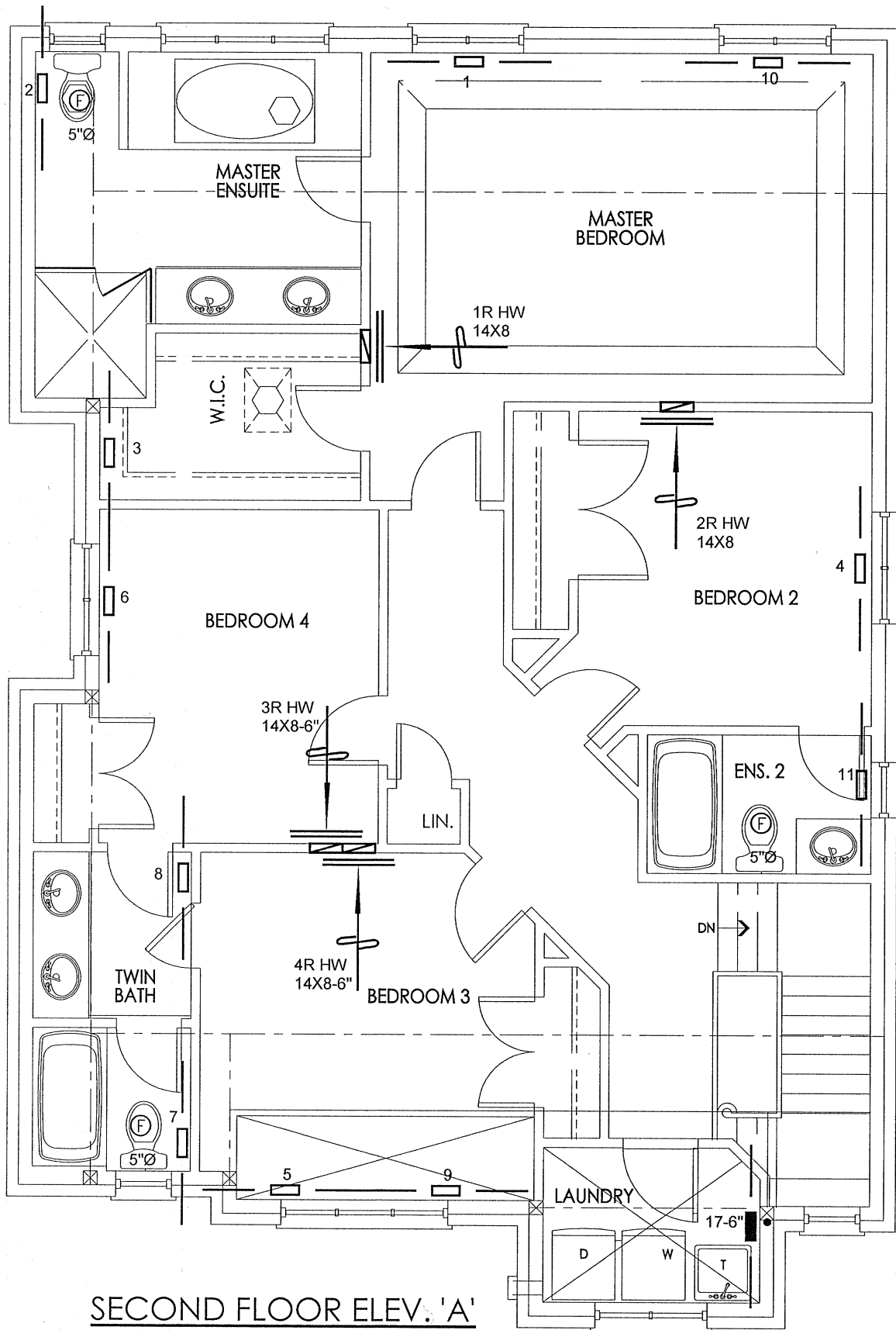
CSA-F280-12
PACKAGE A1

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	

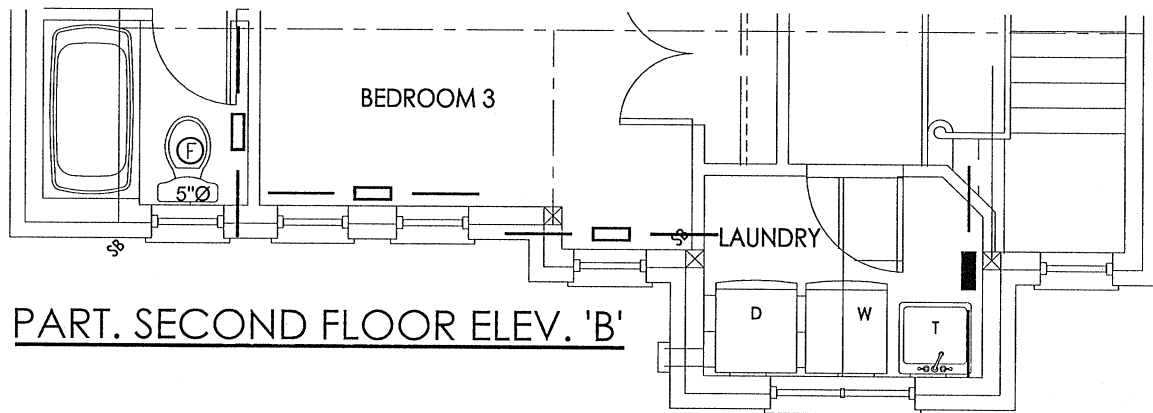
ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS 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	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name ENCORE BRAMPTON, ONTARIO			Date FEB/2017	Scale 3/16" = 1'-0"
38-32394 sqft		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.	BCIN# 19669	
			LO#	72700

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.



SECOND FLOOR ELEV. 'A'



PART. SECOND FLOOR ELEV. 'B'

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C. 12.5 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
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	FLOOR 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

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			Date	FEB/2017
ENCORE BRAMPTON, ONTARIO			Scale	3/16" = 1'-0"
			BCIN# 19669	
38-3	2394 sqft	LO#	72700	