

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	☒ HVAC – House	☐ Building Structural
☐ Small Buildings	☐ Building Services	☐ Plumbing – House
☐ Large Buildings	☐ Detection, Lighting and Power	☐ Plumbing – All Buildings
☐ Complex Buildings	☐ Fire Protection	☐ On-site Sewage Systems

Description of designer's work
HEAT LOSS / GAIN CALCULATIONS
DUCT SIZING

Model: 38-7 OPT. 2ND

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY
RESIDENTIAL SYSTEM DESIGN per CSA-F280-12

Project: ENCORE

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: _____

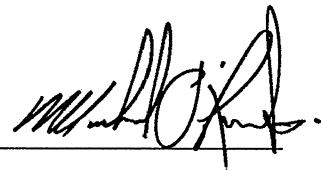
I certify that:

- The information contained in this schedule is true to the best of my knowledge.
- I have submitted this application with the knowledge and consent of the firm.

March 7, 2017

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: 38-7		DATE: Mar-17 LO# 72708		GFA: 3849		WINTER NATURAL AIR CHANGE RATE 0.409		HEAT LOSS AT °F: 74 HEAT GAIN AT °F: 14		CSA-F280-12 SB-12 PACKAGE A1	
ROOM USE	EXP. WALL	CLG. HT.	ENR	MBR	ENS	BED-2	BED-3	BED-4	BATH	BED-5	HALL	ENS-2	REC-1	REC-2
FACTORS			32	10	9	10	14	37	0	29	7	12	63	44
GRS.WALL AREA			320	320	288	90	126	370	0	290	63	108	567	396
GLAZING			0	0	0	0	0	0	0	0	0	0	0	0
NORTH			0	0	8	0	0	0	0	0	0	8	0	0
EAST			32	663	18	0	0	0	0	0	0	166	0	0
SOUTH			0	0	373	0	332	0	0	0	0	0	85	1761
WEST			0	0	754	16	332	404	0	0	0	0	0	3560
SKYL.T.			0	0	0	0	27	559	1131	0	0	0	0	0
DOORS			0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL			4.3	0.8	288	74	322	61	83	361	55	100	435	82
NET EXPOSED BSMT WALL ABOVE GR			3.5	0.7	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG			1.2	0.6	240	210	262	128	60	153	96	113	141	69
NO A TIC EXPOSED CLG			2.7	1.3	0	0	60	161	78	40	107	52	0	0
EXPOSED FLOOR			2.5	0.5	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			0	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	0
SUBTOTAL HT LOSS			2214	1723	1940	915	1459	2785	62	2181	525	741	3856	2048
SUB TOTAL HT GAIN			0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.10	0.18	0.30	0.88
LEVEL FACTOR / MULTIPLIER			396	347	347	164	261	498	11	390	94	133	3382	1796
AIR CHANGE HEAT LOSS			0	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	0
DUCT LOSS			0	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN			0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE			2	480	0	1	240	1	0	1	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			444	444	0	1	444	444	0	240	0	0	0	0
TOTAL HT LOSS BTU/H			2611	3565	2287	1079	1720	3284	74	2571	619	874	7237	3845
TOTAL HT GAIN x 1.3 BTU/H			3565	1684	1684	1702	3227	3153	42	3556	602	386	6005	1694

ROOM USE			LIV	DIN	KTIFM	ENT	LAUN	WIR	FOY	MUD	BAS		
EXP. WALL			38	14	79	12	9	6	31	30	162		
CLG. HT.			10	10	10	10	10	15	15	9	9		
FACTORS			380	140	790	120	90	60	465	270	972		
GRS.WALL AREA			380	140	790	120	90	60	465	270	LOSS GAIN		
GLAZING			0	0	0	0	0	0	0	0	0		
NORTH			0	0	16	0	0	0	5	0	0		
EAST			0	0	110	0	0	0	0	0	6		
SOUTH			0	0	2279	0	0	0	0	0	124		
WEST			69	767	4808	0	0	0	0	0	251		
SKYL.T.			20.7	25.2	934	12	249	303	0	10	3		
DOORS			20.7	25.2	0	0	0	0	0	207	62		
NET EXPOSED WALL			4.3	0.8	2885	0	0	0	31	0	0		
NET EXPOSED BSMT WALL ABOVE GR			3.5	0.7	0	0	0	0	642	0	0		
EXPOSED CLG			1.2	0.6	0	0	0	0	0	0	0		
NO A TIC 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			3439	1343	5496	1331	585	457	3015	1944	5580		
SUB TOTAL HT GAIN			0.20	0.29	0.20	0.29	0.20	0.29	0.20	0.30	7961		
LEVEL FACTOR / MULTIPLIER			1007	393	1610	390	171	134	883	1705	0.40		
AIR CHANGE HEAT LOSS			0	0	0	0	0	0	0	0	1.15		
AIR CHANGE HEAT GAIN			180	57	298	14	6	19	100	32	9178		
DUCT LOSS			0	0	0	0	0	0	0	0	0		
DUCT GAIN			389	154	0	0	76	0	0	0	41		
HEAT GAIN PEOPLE			0	0	0	0	56	0	0	0	0		
HEAT GAIN APPLIANCES/LIGHTS			444	444	444	0	444	0	444	444	0		
TOTAL HT LOSS BTU/H			4891	1911	7106	1721	832	591	3898	3649	0		
TOTAL HT GAIN x 1.3 BTU/H			5570	2209	8004	2209	802	469	3059	1375	17139		

TOTAL HEAT GAIN BTU/H: 48992

TOTAL HEAT LOSS BTU/H: 70715

STRUCTURAL HEAT LOSS: 67937

TOTAL COMBINED HEAT LOSS BTU/H: 70715

SITE NAME: ENCORE				OPT. 2ND				DATE: Mar-17				GFA: 3849				LO# 72708			
BUILDER: GOLD PARK HOMES				TYPE: 38-7				furnace pressure				0.6				furnace filter			
HEATING CFM				1525				COOLING CFM				1525				COOLING CFM			
TOTAL HEAT LOSS				67,937				TOTAL HEAT GAIN				48,466				TOTAL HEAT GAIN			
AIR FLOW RATE CFM				22.45				AIR FLOW RATE CFM				31.47				AIR FLOW RATE CFM			

RUN COUNT				4th				3rd				2nd				1st			
S/A				0				11				10				4			
S/A				0				4				2				2			

All S/A diffusers 4"x10" unless noted otherwise on layout.
All S/A runs 5'x2" unless noted otherwise on layout.

ROOM NAME				ENS				BATH				MBR				BED-2			
RM LOSS MBH				2.29				0.07				1.31				1.08			
CFM PER RUN HEAT				51				29				24				37			
RM GAIN MBH				1.68				0.04				1.78				1.70			
CFM PER RUN COOLING				53				1				56				54			
ADJUSTED PRESSURE				0.17				0.17				0.17				0.17			
ACTUAL DUCT LGH				81				48				62				42			
EQUIVALENT LENGTH				200				190				200				200			
TOTAL EFFECTIVE LENGTH				281				238				262				242			
ADJUSTED PRESSURE				0.06				0.07				0.06				0.07			
ROUND DUCT SIZE				5				5				5				5			
HEATING VELOCITY (ft/min)				374				23				213				176			
COOLING VELOCITY (ft/min)				389				11				411				396			
OUTLET GRILL SIZE				3X10				3X10				3X10				3X10			

RUN #				25				26				27				28			
ROOM NAME				BAS				BAS				BAS				LIV			
RM LOSS MBH				4.28				4.28				4.28				2.45			
CFM PER RUN HEAT				96				96				96				55			
RM GAIN MBH				0.25				0.25				0.25				2.78			
CFM PER RUN COOLING				8				8				8				88			
ADJUSTED PRESSURE				0.16				0.16				0.16				0.16			
ACTUAL DUCT LGH				18				31				45				37			
EQUIVALENT LENGTH				120				110				90				150			
TOTAL EFFECTIVE LENGTH				138				141				135				187			
ADJUSTED PRESSURE				0.11				0.11				0.12				0.08			
ROUND DUCT SIZE				5				5				5				6			
HEATING VELOCITY (ft/min)				705				705				705				280			
COOLING VELOCITY (ft/min)				59				59				59				449			
OUTLET GRILL SIZE				3X10				3X10				3X10				4X10			

SUPPLY AIR TRUNK SIZE				TRUNK				STATIC				ROUND				RECT			
TRUNK A				292				0.06				9.5				10			
TRUNK B				158				0.06				7.2				8			
TRUNK C				450				0.06				11.6				14			
TRUNK D				532				0.10				10.5				14			
TRUNK E				1275				0.06				16.5				32			
TRUNK F				250				0.07				8.5				8			

RETURN AIR #				1				2				3				4			
AIR VOLUME				100				115				115				115			
PLENUM PRESSURE				0.14				0.14				0.14				0.14			
ACTUAL DUCT LGH				90				63				54				76			
EQUIVALENT LENGTH				290				195				145				265			
TOTAL EFFECTIVE LH				380				258				199				341			
ADJUSTED PRESSURE				0.04				0.06				0.07				0.04			
ROUND DUCT SIZE				7				6.7				6.5				7.4			
INLET GRILL SIZE				8				8				8				8			
INLET GRILL SIZE				14				14				14				14			

RETURN AIR TRUNK SIZE				TRUNK				STATIC				ROUND				RECT			
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																			
TRUNK Y																			
TRUNK Z																			

TYPE: 38-7
SITE NAME: ENCORE

LO # 72708
OPT. 2ND

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	4 @ 10.6 cfm	42.4 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	7 @ 10.6 cfm	74.2 cfm
Table 9.32.3.A.	TOTAL	212.0 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	95.4 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	212	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	73.0	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	1.08	X	0.25	

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
ENS-2	QTXEN050C	50	☒
W/R	QTXEN050C	50	☒

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

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 38-7	OPT. 2ND	BUILDER: GOLD PARK HOMES
SFQT: 3849	LO# 72708	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):	4
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):	42414.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
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: 49.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	162.0 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	-

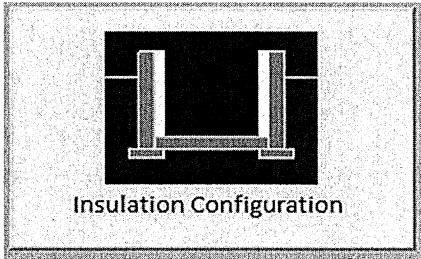
INDIVIDUAL BCIN: 19669

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):	14.9	 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):		1635

TYPE: 38-7
LO# 72708

OPT. 2ND

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):	9.45			
Building Configuration				
Type:	Detached			
Number of Stories:	Three			
Foundation:	Full			
House Volume (m ³):	1201.0			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1601.0 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):	0.409			
Cooling Air Leakage Rate (ACH/H):	0.145			

TYPE: 38-7
LO# 72708

OPT. 2ND

LOW
HEAD
ROOM

BASEMENT FLOOR ELEV. 'A' & 'B'

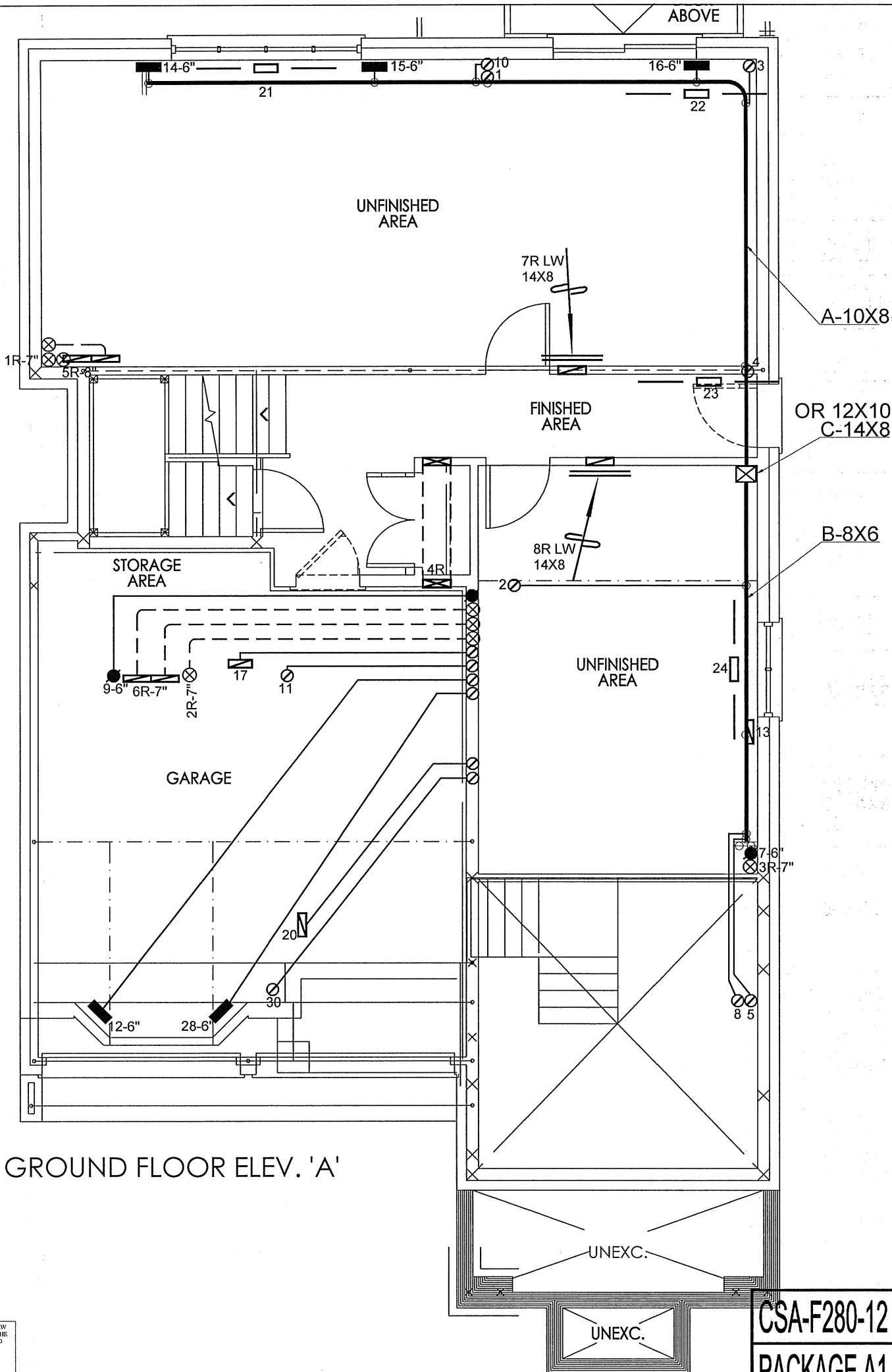
1 MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.3.2.5 OF THE BUILDING CODE
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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		
	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		 375 Finley Ave, Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: mike@hvacadesigns.ca Web: www.hvacadesigns.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 70715 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS		Sheet Title	
Project Name GOLD PARK HOMES ENCORE BRAMPTON, ONTARIO OPT. 2ND 38-7 3849 sqft						MAKE LENNOX		3RD FLOOR 11 4 3		BASEMENT HEATING LAYOUT	
						MODEL EL296UH090XE48C		2ND FLOOR 10 2 2		Date MAR/2017	
						INPUT 88 MBTU/H		1ST FLOOR 4 2 0		Scale 3/16" = 1'-0"	
						OUTPUT 85 MBTU/H		BASEMENT 4 1 0		BCIN# 19669	
		COOLING 4.0 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		LO# 72708					
		FAN SPEED 1525 cfm @ 0.5" w.c.									

HVAC DESIGNS LTD.

375 Finley Ave, Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: mike@hvacdesigns.ca
Web: www.hvacdesigns.ca
Specializing in Residential Mechanical Design Services

CSA-F280-12
PACKAGE A1



GROUND FLOOR ELEV. 'A'

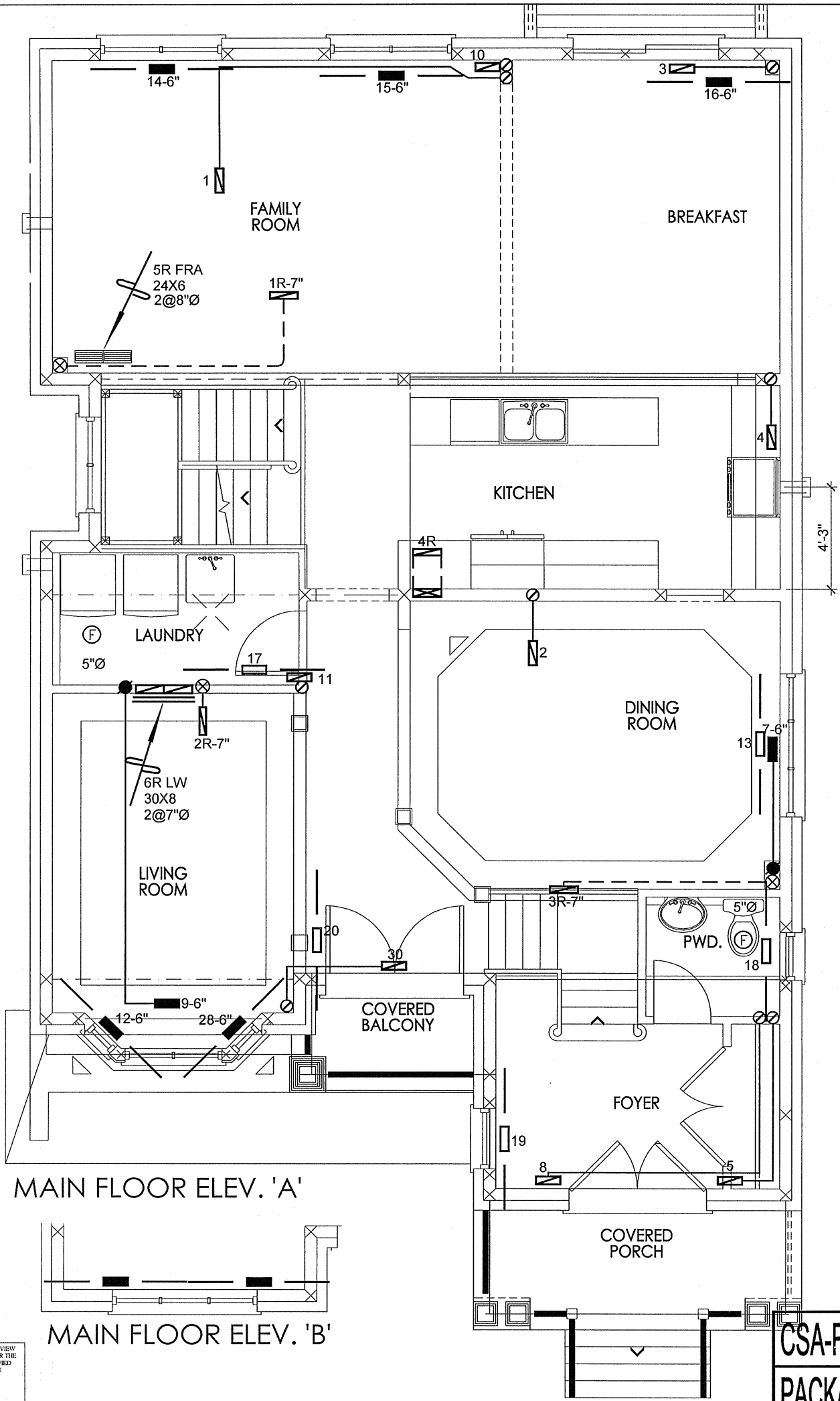
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK, AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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	

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Client GOLD PARK HOMES		HVACDESIGNSLTD. 375 Finley Ave, Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: mike@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			Date MAR/2017	Scale 3/16" = 1'-0"
OPT. 2ND 38-7 3849 sqft			BCIN# 19669	
			LO#	72708



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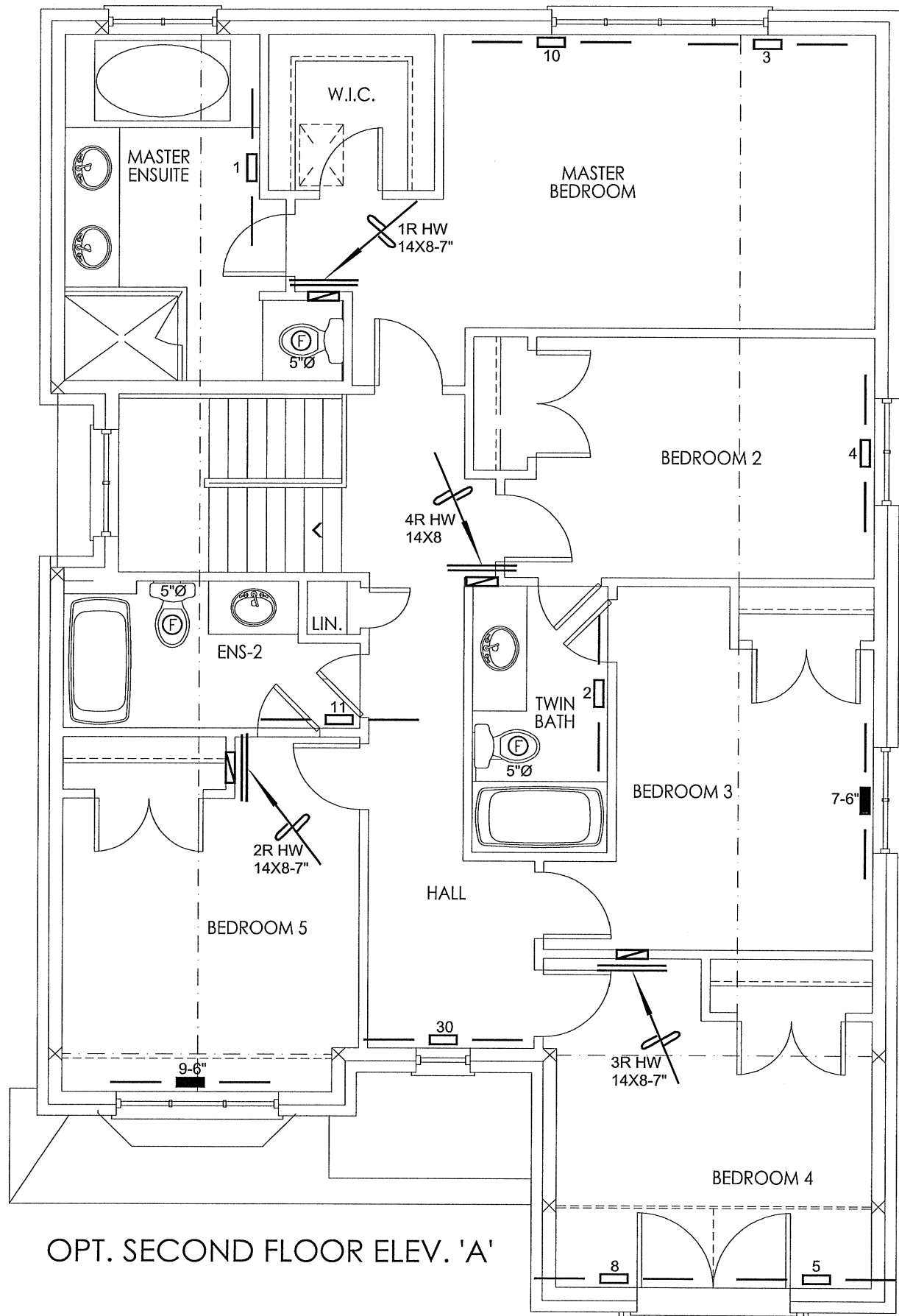
Michael O'Rourke
Michael O'Rourke, BCIN 19669
HVAC DESIGNS LTD.

CSA-F280-12
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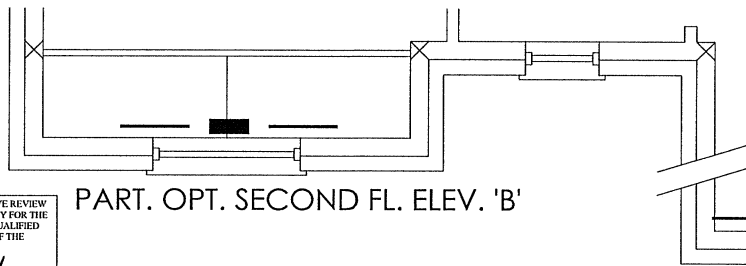
HVAC LEGEND								3.	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		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: mike@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	Sheet Title SECOND FLOOR HEATING LAYOUT	
Project Name ENCORE BRAMPTON, ONTARIO			Date MAR/2017	
OPT. 2ND 38-7		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.	Scale 3/16" = 1'-0"	
3849 sqft			BCIN# 19669	
			LO#	72708



OPT. SECOND FLOOR ELEV. 'A'



PART. OPT. SECOND FL. ELEV. '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									
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	3.	
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	2.	
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	1.	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	No.	Description
								Date	

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GOLD PARK HOMES			THIRD FLOOR HEATING LAYOUT	
Project Name			Date	MAR/2017
ENCORE BRAMPTON, ONTARIO			Scale	3/16" = 1'-0"
OPT. 2ND 38-7		BCIN# 19669		
3849 sqft		LO# 72708		