

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information

Building number, street name		Unit no.	Lot/con.
Municipality VAUGHAN	Postal code	Plan number/ other description	

B. Individual who reviews and takes responsibility for design activities

Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 375 FINLEY AVE		Unit no. 202	Lot/con. N/A
Municipality AJAX	Postal code L1S 2E2	Province ONTARIO	E-mail info@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: 25-2

Project: KLEINBURG GLEN

D. Declaration of Designer

I MICHAEL O'ROURKE declare that (choose one as appropriate):

(print name)

☐ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories.

Individual BCIN: _____

Firm BCIN: _____

☒ I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code.

Individual BCIN: 19669

Basis for exemption from registration and qualification: O.B.C SENTENCE 3.2.4.1 (4)

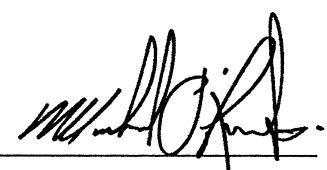
☐ The design work is exempt from the registration and qualification requirements of the Building Code.

Basis for exemption from registration and qualification: _____

I certify that:

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

January 14, 2016
Date


Signature of Designer

NOTE:

1. For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d) of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
2. Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

SITE NAME: KLEINGBURG GLEN BUILDER: GOLD PARK HOMES										TYPE: 26-2		DATE: Jan-16 LO# 68856		WINTER NATURAL AIR CHANGE RATE 0.322 SUMMER NATURAL AIR CHANGE RATE 0.095		HEAT LOSS AT °F. 76 HEAT GAIN AT °F. 16		CSA-F280-1 SB-12 PACKAGE 9	
ROOM USE EXP. WALL CLG. HT.		MBR 42 10		ENS 23 9		BED-2 12 9		BED-3 32 9		BATH 7 9									
FACTORS		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN									
GRS.WALL AREA		420		207		108		288		63									
GLAZING		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN									
NORTH		24.1 17.5		0 0		0 0		0 0		0 0									
EAST		24.1 43.0		14 337 603		0 0		0 0		0 0									
SOUTH		24.1 26.4		0 0		24 578 633		0 0		7 169 185									
WEST		24.1 43.0		0 0		0 0		0 0		0 0									
SKYLT.		24.1 88.1		0 0		0 0		31 747 1334		0 0									
DOORS		25.2 5.3		0 0		0 0		0 0		0 0									
NET EXPOSED WALL		3.5 0.7		396 1368 288		193 667 140		84 290 61		267 888 187									
NET EXPOSED BSMT WALL ABOVE GR		6.3 1.3		0 0		0 0		0 0		0 0									
EXPOSED CLG		1.5 0.8		330 502 261		120 182 91		177 269 135		184 280 140									
NO ATTIC EXPOSED CLG		2.5 1.2		0 0		0 0		0 0		24 59 29									
EXPOSED FLOOR		2.5 0.5		0 0		0 0		0 0		80 195 41									
BASEMENT/CRAWL HEAT LOSS		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									
SUB TOTAL HT LOSS		2448		1186		1137		2169		511									
SUB TOTAL HT GAIN		1572		834		829		1732		300									
LEVEL FACTOR / MULTIPLIER		0.20 0.24		0.20 0.24		0.20 0.24		0.20 0.24		0.20 0.24									
AIR CHANGE HEAT LOSS		584		283		271		517		122									
AIR CHANGE HEAT GAIN		87		46		46		96		17									
DUCT LOSS		0 0		0 0		0 0		269		0 0									
DUCT GAIN		240		0 0		1 240 1		256		0 0									
HEAT GAIN PEOPLE		2		480 0		492		240		0 0									
HEAT GAIN APPLIANCES/LIGHTS		492		0		1409		492		633									
TOTAL HT LOSS BTU/H		3032		1469		2088		2955		412									
TOTAL HT GAIN x 1.3 BTU/H		3420		1145		1724		3660		595									

ROOM USE EXP. WALL CLG. HT.		FACTORS		LOSS GAIN		LIV		KIT		FAM		LAUN		WIR		FOY		BAS	
GRS.WALL AREA		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
GLAZING		24.1 17.5		0 0		0 0		0 0		0 0		0 0		0 0		0 0		0 0	
NORTH		24.1 43.0		0 0		0 0		63 1518 2712		0 0		0 0		0 0		0 0		6 145 258	
EAST		24.1 26.4		0 0		24 578 633		0 0		24 578 633		9 217 237		9 217 237		0 0		6 145 158	
SOUTH		24.1 43.0		0 0		0 0		0 0		0 0		0 0		0 0		0 0		0 0	
WEST		24.1 88.1		0 0		0 0		0 0		0 0		0 0		0 0		0 0		0 0	
SKYLT.		25.2 5.3		0 0		0 0		0 0		0 0		0 0		0 0		0 0		0 0	
DOORS		3.6 0.7		286 988 208		377 1302 274		216 746 167		306 1057 223		151 522 110		263 874 184		47 1187 260		20 505 106	
NET EXPOSED WALL		3.6 0.7		0 0		0 0		0 0		0 0		0 0		0 0		0 0		0 0	
NET EXPOSED BSMT WALL ABOVE GR		6.3 1.3		0 0		0 0		0 0		0 0		0 0		0 0		0 0		0 0	
EXPOSED CLG		1.5 0.8		0 0		0 0		0 0		0 0		192 292 146		0 0		0 0		321 2034 428	
NO ATTIC EXPOSED CLG		2.5 1.2		0 0		0 0		0 0		0 0		0 0		0 0		0 0		0 0	
EXPOSED FLOOR		2.5 0.5		0 0		0 0		0 0		0 0		108 265 56		0 0		0 0		0 0	
BASEMENT/CRAWL HEAT LOSS		0 0		0 0		0 0		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		0 0		0 0		5116	
SUB TOTAL HT LOSS		2071		948		1324		790		662		347		2051		434		7944	
SUB TOTAL HT GAIN		0.30 0.37		0.30 0.37		0.30 0.37		0.30 0.37		0.20 0.24		0.30 0.37		0.30 0.37		0.30 0.37		0.60 0.70	
LEVEL FACTOR / MULTIPLIER		763		53		488		166		44		37		19		24		5634	
AIR CHANGE HEAT LOSS		0 0		0 0		0 0		0 0		0 0		227		0 0		0 0		0 0	
AIR CHANGE HEAT GAIN		0 0		0 0		0 0		0 0		0 0		119		0 0		0 0		0 0	
DUCT LOSS		0 0		492		492		492		492		492		1010		2820		13478	
DUCT GAIN		240		1939		4736		3859		1812		2494		477		595		1305	
HEAT GAIN PEOPLE		240		2834		4736		3859		1812		2494		477		595		1305	
TOTAL HT LOSS BTU/H		2834		492		492		3859		1812		2494		477		595		1305	
TOTAL HT GAIN x 1.3 BTU/H		1939		4736		4736		3859		1812		2494		477		595		1305	

SITE NAME: KLEINGBURG GLEN
BUILDER: GOLD PARK HOMES

TYPE: 25-2 DATE: Jan-16 GFA: 1861 LO# 66855

HEATING CFM 700 COOLING CFM 700
TOTAL HEAT LOSS 37,805 TOTAL HEAT GAIN 23,202
AIR FLOW RATE CFM 18.52 AIR FLOW RATE CFM 30.17

AFUE = 95.0 %
INPUT (BTU/H) = 44,000
OUTPUT (BTU/H) = 42,000

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

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	4	5	7
ROOM NAME	MBR	ENS	BED-2	BED-3	BATH
RM LOSS MBH	3.03	1.47	1.41	2.96	0.63
CFM PER RUN HEAT	56	27	26	55	12
RM GAIN MBH	3.42	1.14	2.09	3.66	0.41
CFM PER RUN COOLING	103	35	63	110	12
ADJUSTED PRESSURE	0.16	0.17	0.17	0.15	0.17
ACTUAL DUCT LGH	60	45	29	40	19
EQUIVALENT LENGTH	170	180	180	130	170
TOTAL EFFECTIVE LENGTH	230	225	209	170	189
ADJUSTED PRESSURE	0.07	0.08	0.08	0.09	0.09
ROUND DUCT SIZE	6	4	5	6	4
HEATING VELOCITY (ft/min)	286	310	191	280	138
COOLING VELOCITY (ft/min)	525	402	463	561	138
OUTLET GRILL SIZE	4X10	3X10	3X10	4X10	3X10
TRUNK	A	A	B	B	B

ROOM NAME	LAUN	FAM	KIT	LIV	13	14	15	16	17	18	19	21	22	24
RM LOSS MBH	2.49	1.81	1.93	2.83	52	36	36	34	46	1.01	2.82	4.49	4.49	4.49
CFM PER RUN HEAT	46	34	36	52	194	237	237	237	51	14	52	83	83	83
RM GAIN MBH	1.70	1.72	1.94	59	71	71	71	71	51	14	18	0.44	0.44	0.44
CFM PER RUN COOLING	170	170	170	170	170	170	170	170	170	170	170	170	170	170
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
ACTUAL DUCT LGH	34	23	41	13	150	120	110	130	170	120	90	100	130	110
EQUIVALENT LENGTH	170	130	161	161	144	134	134	153	204	134	111	133	152	126
TOTAL EFFECTIVE LENGTH	230	153	161	161	144	134	134	153	204	134	111	133	152	126
ADJUSTED PRESSURE	0.11	0.12	0.11	0.12	0.11	0.12	0.11	0.12	0.11	0.12	0.11	0.12	0.11	0.13
ROUND DUCT SIZE	5	4	5	4	5	5	5	4	5	4	4	5	5	5
HEATING VELOCITY (ft/min)	390	264	264	597	264	264	264	390	338	218	597	609	609	609
COOLING VELOCITY (ft/min)	597	521	521	677	521	521	521	597	374	161	207	95	95	95
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	A	A	A	A	A	A	B	B	B	A	A	B

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	407	0.07	10.4	12	611	TRUNK G	0	0.00	0	0	0
TRUNK B	293	0.08	8.9	10	527	TRUNK H	0	0.00	0	0	0
TRUNK C	0	0.00	0	0	0	TRUNK I	0	0.00	0	0	0
TRUNK D	0	0.00	0	0	0	TRUNK J	0	0.00	0	0	0
TRUNK E	0	0.00	0	0	0	TRUNK K	0	0.00	0	0	0
TRUNK F	0	0.00	0	0	0	TRUNK L	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 A	407	0.07	10.4	12	611	TRUNK G	0	0.00	0	0	0
TRUNK B	293	0.08	8.9	10	527	TRUNK H	0	0.00	0	0	0
TRUNK C	0	0.00	0	0	0	TRUNK I	0	0.00	0	0	0
TRUNK D	0	0.00	0	0	0	TRUNK J	0	0.00	0	0	0
TRUNK E	0	0.00	0	0	0	TRUNK K	0	0.00	0	0	0
TRUNK F	0	0.00	0	0	0	TRUNK L	0	0.00	0	0	0

TYPE: 25-2
SITE NAME: KLEINGBURG GLEN

LO # 66855

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	3 @ 10.6 cfm	31.8 cfm
Table 9.32.3.A.	TOTAL	137.8 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	137.8	cfm
Less Principal Ventil. Capacity	77	cfm
Required Supplemental Capacity	60.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANE 40H+	Location: BSMT
77.0 cfm	3.0 sones
☒ HVI Approved	

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

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

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANE 40H+		
77 cfm high	42 cfm low	
66 % Sensible Efficiency @ 32 deg F (0 deg C)	☒ HVI Approved	

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:	January-16

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 25-2	BUILDER: GOLD PARK HOMES
SFQT: 1861	LO# 66855
	SITE: KLEINGBURG GLEN

DESIGN ASSUMPTIONS

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

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	WEST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	25276.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.8 ft
LENGTH: 54.0 ft	WIDTH: 19.0 ft	EXPOSED PERIMETER:	146.0 ft

2012 OBC - COMPLIANCE PACKAGE

Component	Compliance Package
	J
Ceiling with Attic Space Minimum RSI (R)-Value	50
Ceiling Without Attic Space Minimum RSI (R)-Value	31
Exposed Floor Minimum RSI (R)-Value	31
Walls Above Grade Minimum RSI (R)-Value	22
Basement Walls Minimum RSI (R)-Value	12
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10
Windows and Sliding Glass Doors Maximum U-Value	1.8
Skylights Maximum U-Value	2.8
Space Heating Equipment Minimum AFUE	0.94
HRV Minimum Efficiency	60%
Domestic Hot Water Heater Minimum EF	0.67

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



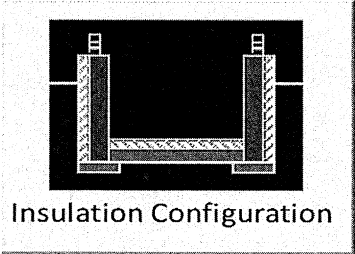
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario ▼			
Region:	Vaughan (Woodbridge) ▼			
Weather Station Location:	Open flat terrain, grass ▼			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest ▼			
Walls:	Heavy ▼			
Flue:	Heavy ▼			
Highest Ceiling Height (m):	6.71			
Building Configuration				
Type:	Detached ▼			
Number of Stories:	Two ▼			
Foundation:	Full ▼			
House Volume (m ³):	715.7			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (ACH=3.57) ▼			
Custom BDT Data:	ELA @ 10 Pa. ▼ 716.42 cm² 3.57 ACH @ 50 Pa			
Mechanical Ventilation (L/s):	Total Supply:		Total Exhaust:	
	0		0	
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Change Rate (ACH/H):		0.322		
Cooling Air Change Rate (ACH/H):		0.098		

Residential Foundation Thermal Load Calculator

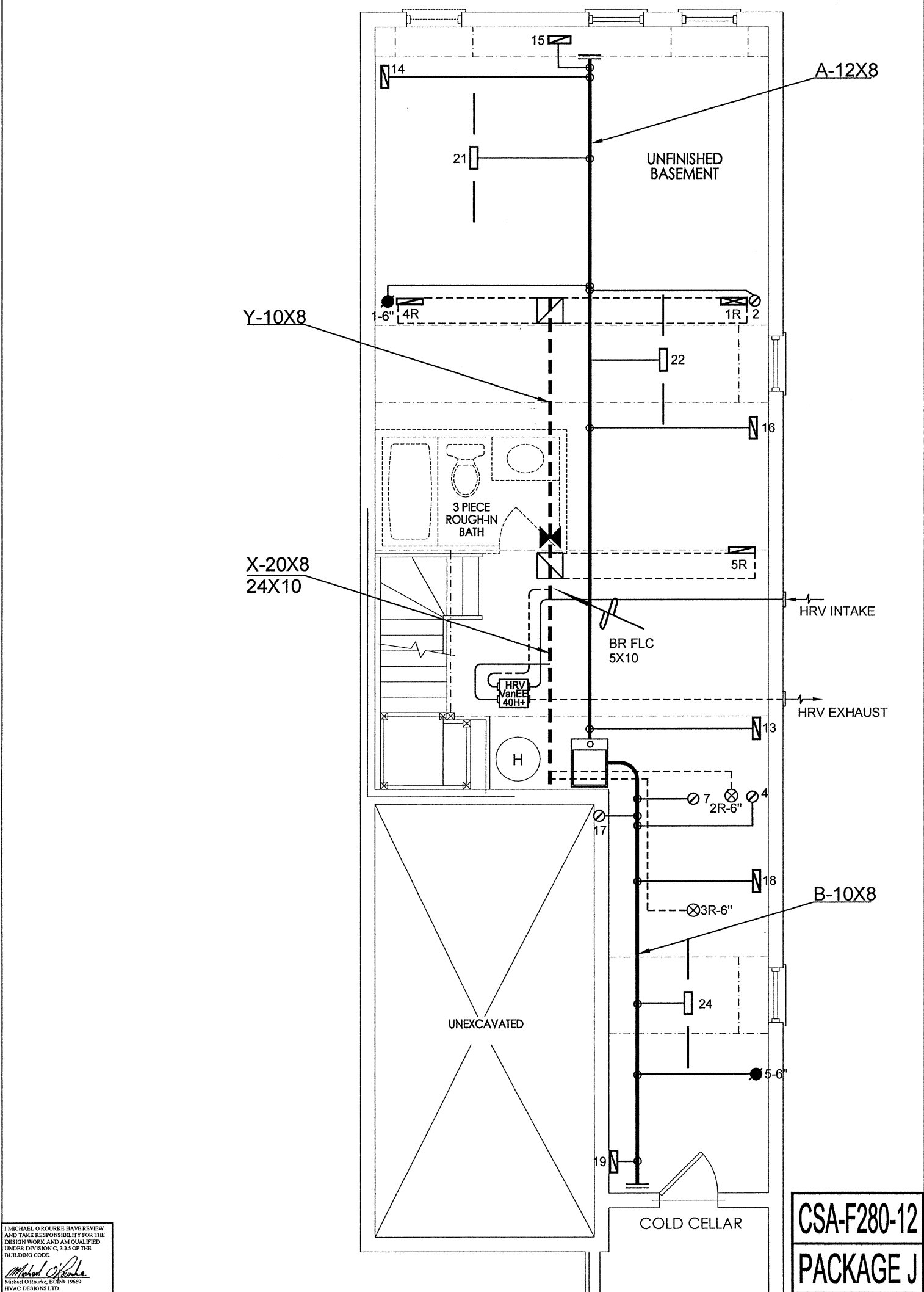
Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	▼
Region:	Vaughan (Woodbridge)	▼
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	▼
Water Table:	Normal (7-10 m, 23-33 Ft)	▼
Foundation Dimensions		
Floor Length (m):	16.5	
Floor Width (m):	5.8	
Exposed Perimeter (m):	0	
Wall Height (m):	2.7	
Depth Below Grade (m):	2.1	
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):	1499	

44.6

2.6 119.32

118.52



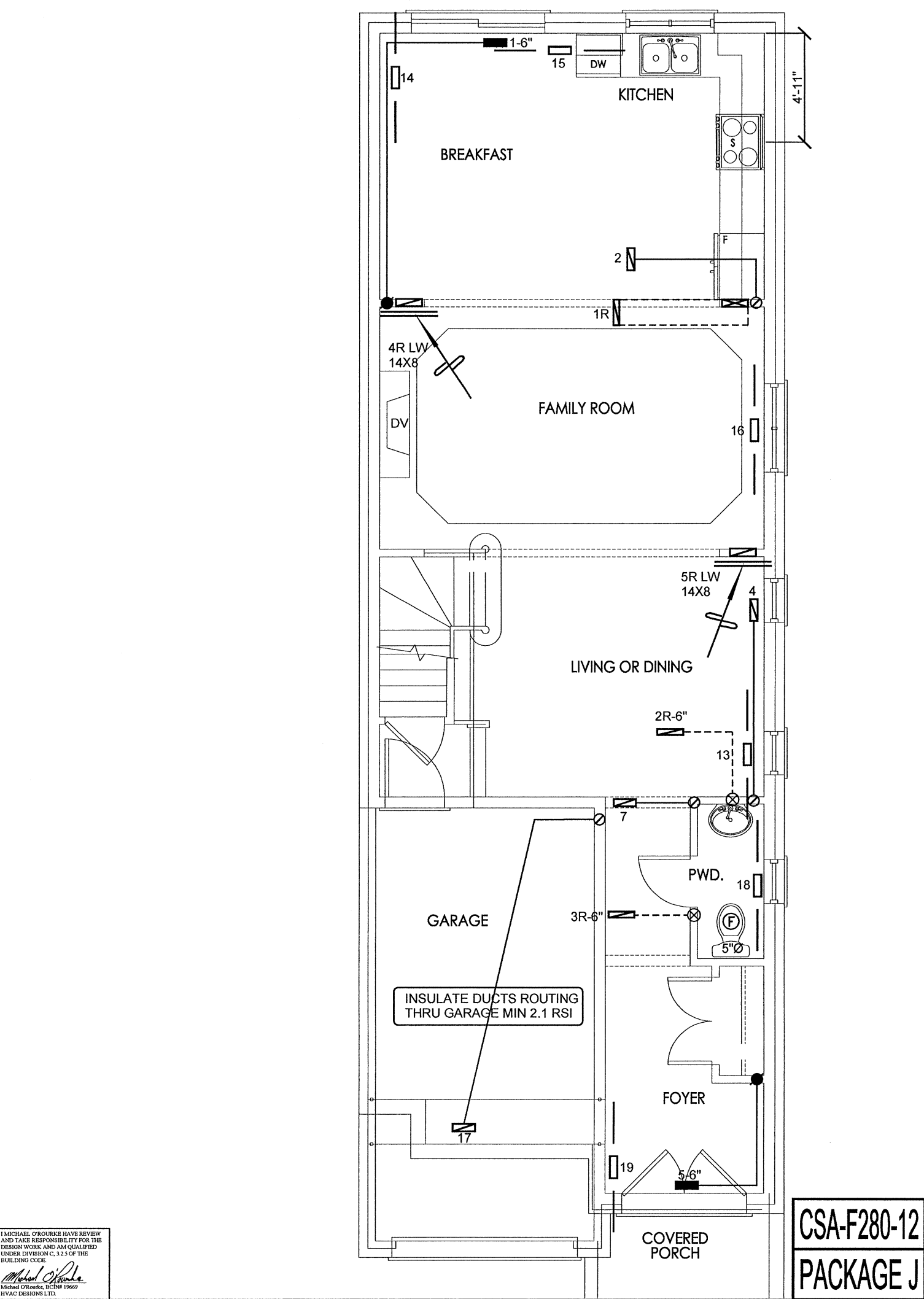
1. MICHAEL O'ROURKE HAVE REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

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

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	HEAT LOSS 39954 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			MODEL	EL195UH045XE24B-45	2ND FLOOR		6	3	2				
KLEINBURG GLEN VAUGHAN, ONTARIO			INPUT	44 MBTU/H	1ST FLOOR		6	2	2	Date JAN/2016			
			OUTPUT	42 MBTU/H	BASEMENT		3	1	0	Scale 3/16" = 1'-0"			
25-2		COOLING	2.0 TONS	ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5" UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A								BCIN# 19669	
1861 sqft		FAN SPEED	700 cfm @ 0.6" w.c.									LO# 66855	



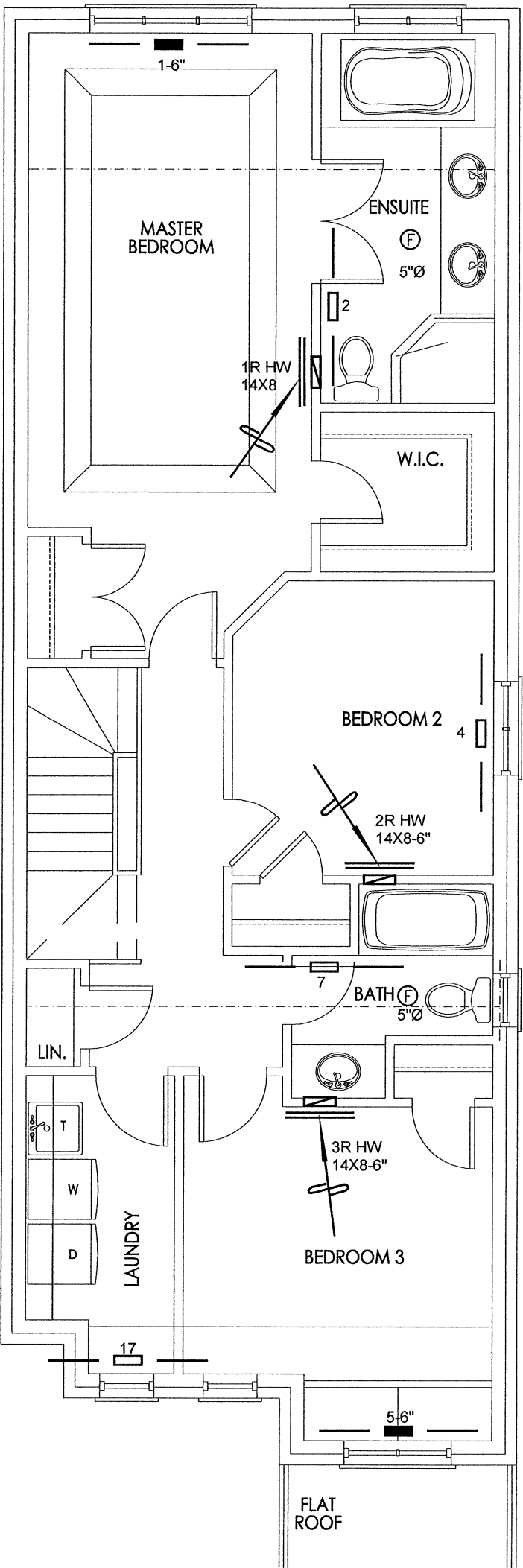
I MICHAEL O'BROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Brourke
Michael O'Brourke, 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

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	Sheet Title	
GOLD PARK HOMES			GROUND FLOOR HEATING LAYOUT	
Project Name		Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.	Date	
KLEINBURG GLEN VAUGHAN, ONTARIO			JAN/2016	
25-2		1861 sqft	Scale	
			3/16" = 1'-0"	
			BCIN# 19669	
			LO# 66855	



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

CSA-F280-12
PACKAGE J

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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		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.	Sheet Title SECOND FLOOR HEATING LAYOUT	
Project Name KLEINBURG GLEN VAUGHAN, ONTARIO			Date JAN/2016	
25-21861 sqft			Scale 3/16" = 1'-0"	BCIN# 19669
		LO#66855		