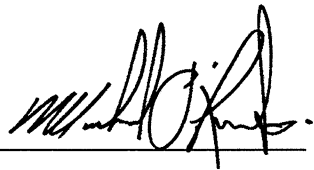


Schedule 1: Designer Information

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: 42-2 – OPT 5 BED	
			Project: KLEINBURG GLEN	
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>January 29, 2016</u>		 Signature of Designer		
Date				

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: KLEINBURG GLEN
BUILDER: GOLD PARK HOMES
DATE: Jan-16
LO# 67108
GFA: 3166
OPT 5 BED
TYPE 42-2
WINTER NATURAL AIR CHANGE RATE 0.322
SUMMER NATURAL AIR CHANGE RATE 0.098
HEAT LOSS AT °F. 76
HEAT GAIN AT °F. 16
CSA-F280-12
SB-12 PACKAGE J

ROOM USE	EXP. WALL CLG. HT.	FACTORS	ENS	WIC	BED-2	BED-4	BED-3	BATH	WIC-2	BED-5	ENS2
GRS. WALL AREA	370	234	234	99	135	135	342	126	117	99	64
GLAZING	0	0	0	0	0	0	0	0	0	0	0
NORTH	24.1	17.5	7	169	122	145	105	169	122	16	0
EAST	24.1	43.0	28	675	1205	0	0	0	0	0	0
SOUTH	24.1	26.4	0	0	0	0	0	0	0	0	0
WEST	24.1	43.0	0	0	0	16	385	422	0	0	0
SKYLIT.	24.1	88.1	0	0	0	0	24	578	1033	0	0
DOORS	25.2	5.3	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.7	338	1168	246	119	411	87	342	72	318
NET EXPOSED BSMT WALL ABOVE GR	6.3	1.3	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.5	0.8	322	489	245	168	256	128	176	268	148
NO A TITC EXPOSED CLG	2.5	1.2	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	2428	1786	0.20	0.29	1786	1600	610	206	1161	691	1984
SUB TOTAL HT GAIN	1868	0.20	0.29	0.20	0.29	0.20	0.29	0.20	0.29	0.20	0.29
LEVEL FACTOR / MULTIPLIER	696	512	612	176	333	568	593	272	211	274	111
AIR CHANGE HEAT LOSS	122	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	144	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	469	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	144	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	2	480	0	0	1	240	1	240	0	1	240
HEAT GAIN APPLIANCES/LIGHTS	416	0	0	0	0	416	0	416	0	0	0
TOTAL HT LOSS BTU/H	3593	2298	784	285	1494	2807	2663	1343	1042	1230	496
TOTAL HT GAIN x 1.3 BTU/H	3939	2216	784	285	1810	3554	2876	1148	1322	1620	341

ROOM USE	EXP. WALL CLG. HT.	FACTORS	DIN	KIT/GT	DEN	LAUN	FOY	MUD	BAS
GRS. WALL AREA	220	120	700	120	120	180	330	110	1080
GLAZING	0	0	0	0	0	0	0	0	15
NORTH	24.1	17.5	0	0	0	8	0	0	361
EAST	24.1	43.0	0	0	0	0	0	0	262
SOUTH	24.1	26.4	22	530	475	0	0	0	0
WEST	24.1	43.0	0	0	0	0	0	0	0
SKYLIT.	24.1	88.1	0	0	0	0	0	0	0
DOORS	25.2	5.3	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.7	198	684	144	98	339	71	0
NET EXPOSED BSMT WALL ABOVE GR	6.3	1.3	0	0	0	0	0	0	0
EXPOSED CLG	1.5	0.8	0	0	0	0	0	0	0
NO A TITC EXPOSED CLG	2.5	1.2	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	1214	869	6071	5343	786	1223	2012	816	11563
SUB TOTAL HT GAIN	725	0.30	0.47	0.30	0.47	0.30	0.47	0.30	0.81
LEVEL FACTOR / MULTIPLIER	569	407	2375	350	368	573	942	382	9369
AIR CHANGE HEAT LOSS	47	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	416	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	1783	1275	7446	416	1154	1795	2954	1198	20922
TOTAL HT GAIN x 1.3 BTU/H	1544	1443	7942	5343	1301	1034	1127	778	1360

TOTAL HEAT GAIN BTU/H: 36133

TONS: 3.01

LOSS DUE TO VENTILATION LOAD BTU/H: 2815

STRUCTURAL HEAT LOSS: 56278

TOTAL COMBINED HEAT LOSS BTU/H: 59094



SITE NAME: KLEINBURG GLEN
BUILDER: GOLD PARK HOMES

TYPE: 42-2
OPT 5 BED

DATE: Jan-16
LO# 67108
GFA: 3166

HEATING CFM 1100
TOTAL HEAT LOSS 56,278
AIR FLOW RATE CFM 19.55

COOLING CFM 1100
TOTAL HEAT GAIN 35,540
AIR FLOW RATE CFM 30.95

EL195UH070XE30B
FAN SPEED
LOW
MEDIUM
HIGH

AFUE = 95.0 %
INPUT (BTU/H) = 66,000
OUTPUT (BTU/H) = 63,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	9	5
R/A	0	0	4	3	1

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

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

ROOM #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	ENS2	BED-3	BED-5	BATH	WIC-2	ENS	MBR	BED-2	LIV	DIN	KT/GT	KT/GT	DEN	LAUN	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.80	1.15	0.78	0.50	2.66	1.23	1.34	1.04	1.15	1.80	1.49	1.78	1.28	2.48	2.48	1.15	1.80	2.95	1.20	4.18	4.18	4.18	4.18
CFM PER RUN HEAT	35	22	15	10	52	24	26	20	22	35	29	35	25	49	49	23	35	58	23	82	82	82	82
RM GAIN MBH	1.97	1.11	0.29	0.34	2.88	1.52	1.15	1.32	1.11	1.97	1.81	1.54	1.44	2.65	2.65	1.30	1.03	1.13	0.78	0.27	0.27	0.27	0.27
CFM PER RUN COOLING	61	34	9	11	89	47	36	41	34	61	56	48	45	82	82	40	32	35	24	8	8	8	8
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	43	50	30	25	49	40	37	47	49	40	15	21	9	36	31	9	25	34	27	25	42	7	10
EQUIVALENT LENGTH	160	150	200	100	160	130	180	130	170	210	120	110	140	120	130	150	120	110	110	140	100	100	110
TOTAL EFFECTIVE LENGTH	203	200	230	125	209	170	217	227	179	210	135	131	149	156	161	159	145	144	137	165	142	107	120
ADJUSTED PRESSURE	0.08	0.09	0.07	0.14	0.08	0.1	0.08	0.08	0.1	0.08	0.13	0.13	0.12	0.1	0.1	0.11	0.12	0.12	0.13	0.1	0.11	0.15	0.14
ROUND DUCT SIZE	5	4	4	4	6	4	4	4	4	5	4	4	4	5	5	4	4	4	4	5	5	5	5
HEATING VELOCITY (ft/min)	257	252	172	115	265	275	298	229	252	257	333	402	287	360	360	264	402	665	264	602	602	602	602
COOLING VELOCITY (ft/min)	448	390	103	126	454	539	413	470	390	448	642	551	516	602	602	459	367	402	275	59	59	59	59
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	A	B	D	C	B	D	D	A	E	E	C	E	A	B	D	B	C	B	B	A	E	D

TEMPERATURE RISE 53 °F

ROOM #	25	26	27
ROOM NAME	BED-4	KT/GT	BAS
RM LOSS MBH	2.81	2.48	4.18
CFM PER RUN HEAT	55	49	82
RM GAIN MBH	3.55	2.65	0.27
CFM PER RUN COOLING	110	82	8
ADJUSTED PRESSURE	0.15	0.16	0.16
ACTUAL DUCT LGH	55	47	29
EQUIVALENT LENGTH	170	100	100
TOTAL EFFECTIVE LENGTH	225	147	129
ADJUSTED PRESSURE	0.07	0.11	0.13
ROUND DUCT SIZE	6	5	5
HEATING VELOCITY (ft/min)	280	360	602
COOLING VELOCITY (ft/min)	561	602	59
OUTLET GRILL SIZE	4X10	3X10	3X10
TRUNK	D	A	C

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 CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	224	0.09	7.8	8	504	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK B	487	0.07	11.1	14	626	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK C	227	0.08	8	8	511	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK D	443	0.07	10.7	14	570	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK E	171	0.08	7.2	6	513	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK F	0	0.00	0	0	0	0	0.00	0	0	0	0	0.05	0	0	8

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	19	20	21	22	23	24
AIR VOLUME	175	95	75	75	195	145	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH	37	36	45	48	21	16	23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	175	185	225	230	135	215	230	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	212	221	270	278	156	231	253	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.07	0.07	0.05	0.05	0.09	0.06	0.06	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	7.5	6	6	6	7.4	7.3	7.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TYPE: 42-2
SITE NAME: KLEINBURG GLEN

LO # 67108
OPT 5 BED

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	98	cfm
Required Supplemental Capacity	114.0	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANE 60H Location: BSMT

98.0 cfm 3.0 sones ☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM	ΔT °F	FACTOR	% LOSS
98.0 CFM	X 76 F	X 1.08	X 0.35

SUPPLEMENTAL FANS NUTONE

Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	✓	0.3
BATH	QTXEN050C	50	✓	0.3
ENS2	QTXEN050C	50	✓	0.3
PWD	QTXEN050C	50	✓	0.3

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANE 60H

98 cfm high 50 cfm low

65 % 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: *Michael O'Rourke*

HRAI #: 001820

Date: January-16

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 42-2	OPT 5 BED	BUILDER: GOLD PARK HOMES
SFQT: 3166	LO# 67108	SITE: KLEINBURG 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):	42749.0	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: 57.0 ft	WIDTH: 33.0 ft	EXPOSED PERIMETER:	180.0 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



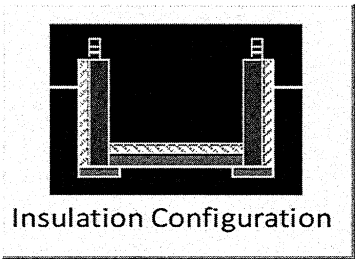
Air Infiltration Residential Load Calculator

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):	1210.5			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (ACH=3.57)			
Custom BDT Data:	ELA @ 10 Pa.	716.42	cm ²	
	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

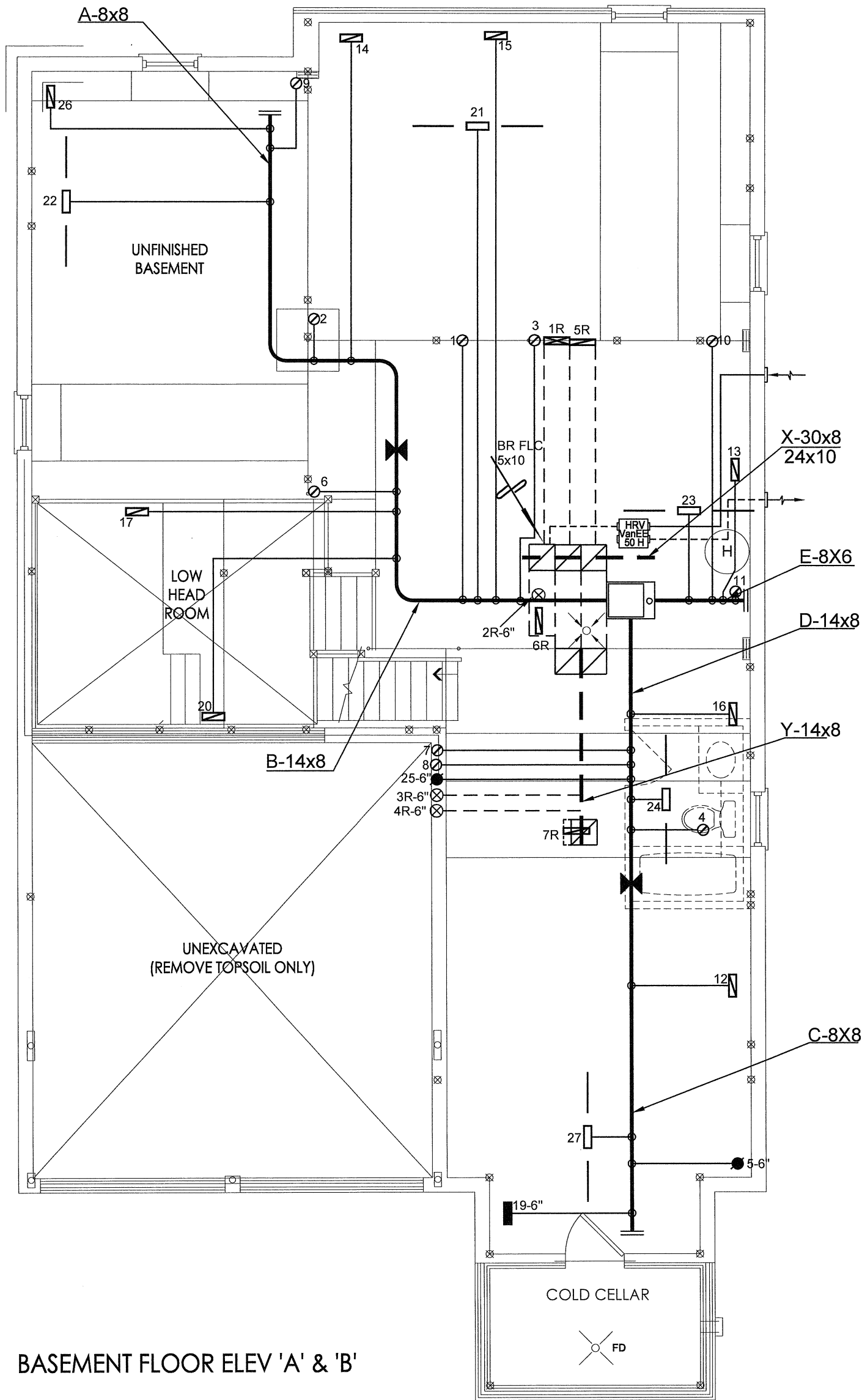
Supplemental tool for CAN/CSA-F280

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):	17.4	 Insulation Configuration
Floor Width (m):	10.1	
Exposed Perimeter (m):	0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	1.4	
Door Area (m ²):	0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):	2280	

55

2.6 147.1

148.5



BASEMENT FLOOR ELEV 'A' & 'B'

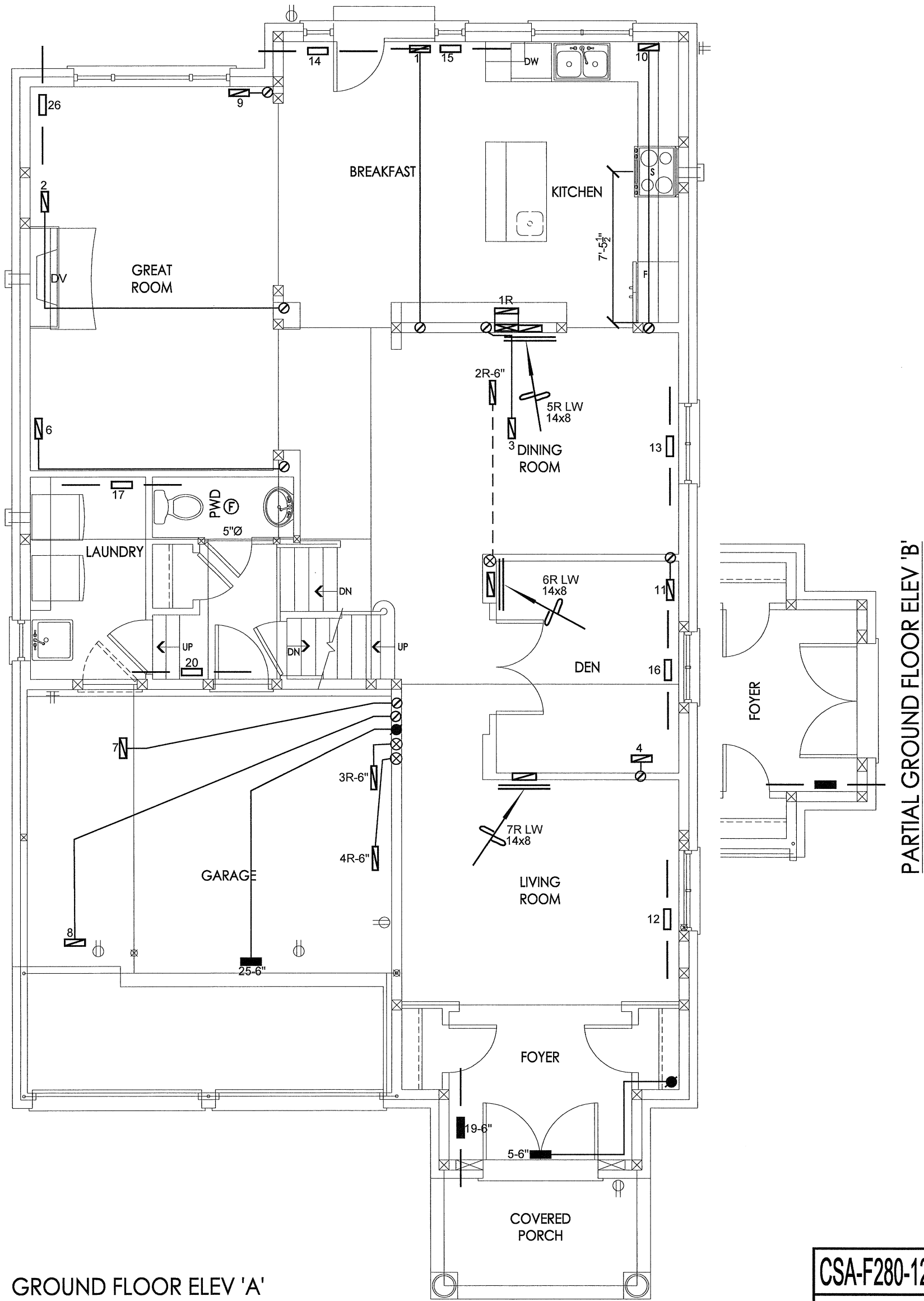
CSA-F280-12
PACKAGE J

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.

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.
	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		HVAC DESIGNS 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 59094 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 KLEINBURG GLEN VAUGHAN, ONTARIO			MODEL EL195UH070XE36B-70	2ND FLOOR		12	4		4
OPT 5 BED 42-2			INPUT 66 MBTU/H	1ST FLOOR		9	3		2
3166 sqft			OUTPUT 63 MBTU/H	BASEMENT		5	1	0	Date JAN/2016
			COOLING 3.0 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		Scale 3/16" = 1'-0"		BCIN# 19669	
			FAN SPEED 1100 cfm @ 0.6" w.c.			LO#		67108	



GROUND FLOOR ELEV 'A'

PARTIAL GROUND FLOOR 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.

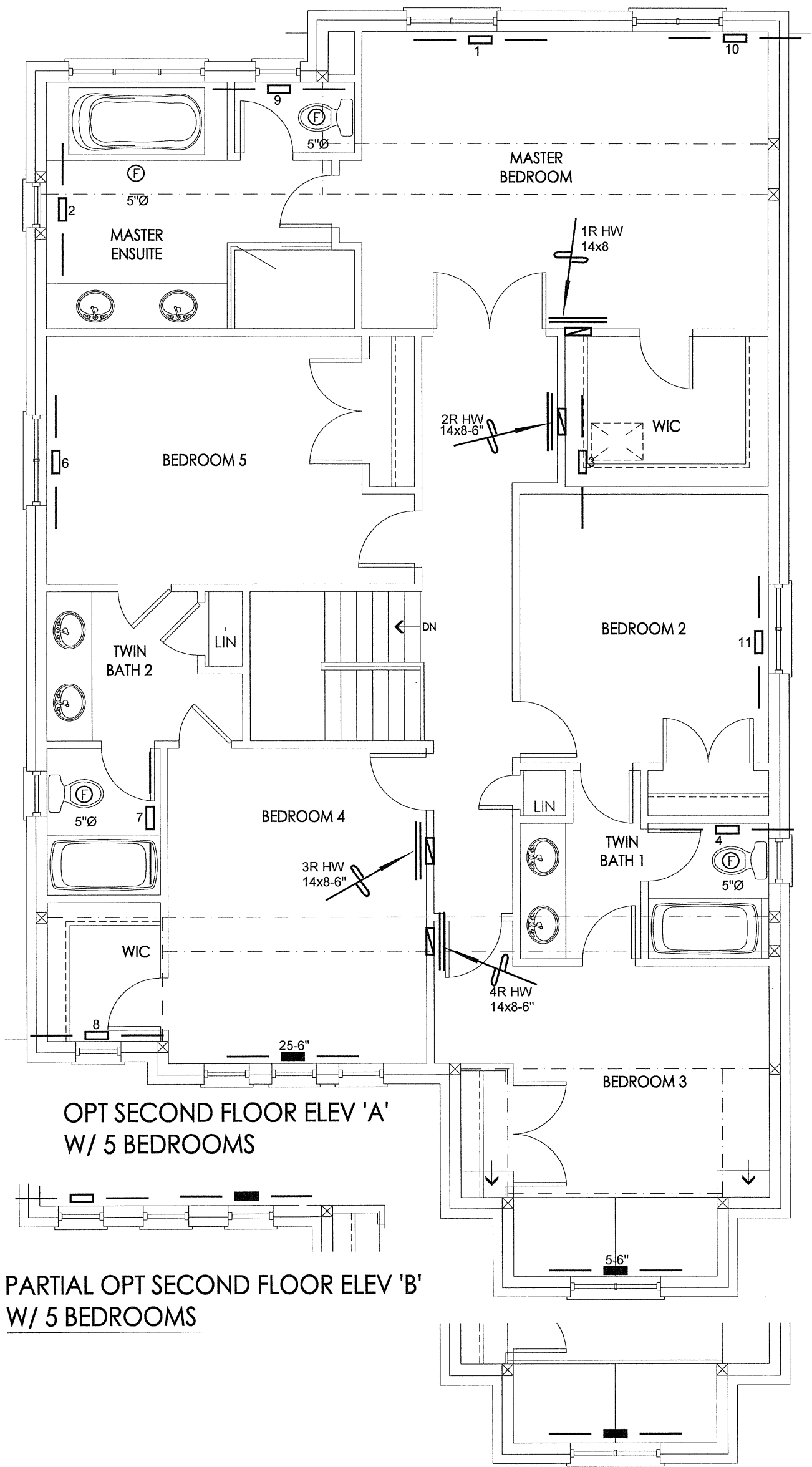
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE 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
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS	

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client		 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.	Sheet Title	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2016
KLEINBURG GLEN VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
OPT 5 BED 42-2			BCIN# 19669	
3166 sqft			LO#	67108



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 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		 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			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2016
KLEINBURG GLEN VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
OPT 5 BED 42-2		BCIN# 19669		
3166 sqft		LO#	67108	