

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 KLEINBURG	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@hvacdsgns.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
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Description of designer's work
HEAT LOSS / GAIN CALCULATIONS **Model: 25-9**
DUCT SIZING
RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY **Project: HUNTINGTON & NASHVILLE**
RESIDENTIAL SYSTEM DESIGN per CSA-F280-12

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)

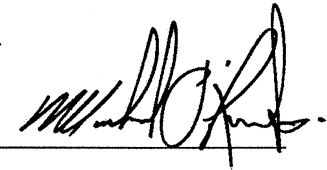
☐ The design work is exempt from the registration and qualification requirements of the Building Code.

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.

June 16, 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: HUNTINGTON + NASHVILLE
BUILDING: GOLD PARK HOMES
TYPE: 25-9
DATE: Jun-16
LOF: 68889
GFA: 1759
WINTER NATURAL AIR CHANGE RATE 0.322
HEAT LOSS AT °F: 76
CSA-F280-12
SB-12 PACKAGE J

ROOM USE	MBR	ENS	KTIFM	LAUN	WIR	FOY	BATH	HEAT GAIN AT °F: 16	HEAT LOSS AT °F: 76	CSA-F280-12 SB-12 PACKAGE J
EXP. WALL CLG. HT.	33 10	22 9	84 10	12 9	18 11	34 10	10 9			
GRS.WALL AREA GLAZING	330 17.4	198 0	840 0	108 0	198 0	340 0	90 0			
FACTORS										
LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN			
NORTH	0	0	0	0	0	0	0			
EAST	24	14	20	0	0	0	0			
SOUTH	578	337	482	0	0	0	0			
WEST	1031	602	526	0	0	0	0			
SKYLT.	0	0	0	0	0	0	0			
DOORS	0	0	0	0	0	0	0			
NET EXPOSED WALL	306	184	736	108	20	40	90			
NET EXPOSED BSMT WALL ABOVE GR	220	132	529	373	178	294	311			
EXPOSED CLG	191	85	0	0	0	0	65			
NO ATTIC EXPOSED CLG	252	112	0	0	0	0	0			
EXPOSED FLOOR	0	0	0	0	0	0	0			
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0			
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0			
SUBTOTAL HT LOSS	2018	1143	736	108	20	40	532			
SUB TOTAL HT GAIN	1442	818	0	0	0	0	159			
LEVEL FACTOR / MULTIPLIER	0.20	0.29	0.30	0.20	0.30	0.30	0.20			
AIR CHANGE HEAT LOSS	584	331	1894	469	420	814	154			
AIR CHANGE HEAT GAIN	149	84	0	75	0	0	16			
DUCT LOSS	0	0	0	0	0	0	0			
DUCT GAIN	0	0	0	0	0	0	0			
HEAT GAIN PEOPLE	2	0	0	0	0	0	72			
HEAT GAIN APPLIANCES/LIGHTS	541	0	0	1	0	0	0			
TOTAL HT LOSS BTU/H	2603	1474	6943	2088	1540	2985	755			
TOTAL HT GAIN x 1.3 BTU/H	3395	1174	7393	2053	939	974	1025			

ROOM USE	WOD	BAS	WIR	LAUN	KTIFM	FOY	BATH	HEAT GAIN AT °F: 16	HEAT LOSS AT °F: 76	CSA-F280-12 SB-12 PACKAGE J
EXP. WALL CLG. HT.	25 9	136 9	18 11	12 9	84 10	34 10	10 9			
GRS.WALL AREA GLAZING	225	891	198	108	840	340	90			
FACTORS										
LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN			
NORTH	0	0	0	0	0	0	0			
EAST	10	0	0	0	0	0	0			
SOUTH	241	0	0	0	0	0	0			
WEST	430	0	0	0	0	0	0			
SKYLT.	0	0	0	0	0	0	0			
DOORS	0	0	0	0	0	0	0			
NET EXPOSED WALL	0	0	0	0	0	0	0			
NET EXPOSED BSMT WALL ABOVE GR	0	0	0	0	0	0	0			
EXPOSED CLG	0	0	0	0	0	0	0			
NO ATTIC EXPOSED CLG	0	0	0	0	0	0	0			
EXPOSED FLOOR	0	0	0	0	0	0	0			
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0			
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0			
SUBTOTAL HT LOSS	0	0	0	0	0	0	0			
SUB TOTAL HT GAIN	0	0	0	0	0	0	0			
LEVEL FACTOR / MULTIPLIER	0	0	0	0	0	0	0			
AIR CHANGE HEAT LOSS	140	0.50	420	0.20	1894	814	0.50			
AIR CHANGE HEAT GAIN	184	5215	0	158	0	0	5215			
DUCT LOSS	0	0	0	0	0	0	0			
DUCT GAIN	0	0	0	0	0	0	0			
HEAT GAIN PEOPLE	0	0	0	0	0	0	0			
HEAT GAIN APPLIANCES/LIGHTS	0	0	0	0	0	0	0			
TOTAL HT LOSS BTU/H	1128	5352	1540	705	6943	2985	755			
TOTAL HT GAIN x 1.3 BTU/H	798	13325	939	2053	7393	974	1025			

TOTAL HEAT GAIN BTU/H: 23159
TONS: 1.93
LOSS DUE TO VENTILATION LOAD BTU/H: 2612
STRUCTURAL HEAT LOSS: 35452
TOTAL COMBINED HEAT LOSS BTU/H: 38064

SITE NAME: HUNTINGTON + NASHVILLE
BUILDER: GOLD PARK HOMES

TYPE: 25-9		DATE: Jun-16		GFA: 1759		LO# 68889	
furnace pressure 0.6		furnace filter 0.5		EL195UH045XE24B		LENNOX 45	
a/c coil pressure 0.2		available pressure for s/a & r/a 0.35		FAN SPEED		AFUE = 95.0 %	
plenum pressure s/a 0.18		max s/a dif press. loss 0.03		r/a pressure 0.17		INPUT (BTU/H) = 44,000	
min adjusted pressure s/a 0.15		r/a grille press. loss 0.02		r/a adjusted pressure r/a 0.15		OUTPUT (BTU/H) = 42,000	
r/a pressure 0.17		r/a grille press. loss 0.02		r/a adjusted pressure r/a 0.15		DESIGN CFM = 700	
max s/a dif press. loss 0.03		min adjusted pressure s/a 0.15		r/a pressure 0.17		CFM @ .8" E.S.P.	
r/a grille press. loss 0.02		r/a adjusted pressure r/a 0.15		r/a pressure 0.17		TEMPERATURE RISE 56	
min adjusted pressure s/a 0.15		r/a grille press. loss 0.02		r/a adjusted pressure r/a 0.15		°F	

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
BATH																							
MBR	2.60	1.47	2.09	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91	1.91
RM LOSS MBH	51	29	41	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38
CFM PER RUN HEAT	3.40	1.17	2.05	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44	3.44
RM GAIN MBH	105	36	64	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107	107
CFM PER RUN COOLING	0.16	0.17	0.17	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
ADJUSTED PRESSURE	0.16	0.17	0.17	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	50	28	57	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72	72
EQUIVALENT LENGTH	130	150	170	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
TOTAL EFFECTIVE LENGTH	180	178	227	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232
ADJUSTED PRESSURE	0.09	0.1	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07
ROUND DUCT SIZE	6	4	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
HEATING VELOCITY (f/min)	260	333	301	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194	194
COOLING VELOCITY (f/min)	535	413	470	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546	546
OUTLET GRILL SIZE	4X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10
TRUNK	A	A	A	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B	B

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
RM LOSS MBH																							
CFM PER RUN HEAT																							
RM GAIN MBH																							
CFM PER RUN COOLING																							
ADJUSTED PRESSURE																							
ACTUAL DUCT LGH																							
EQUIVALENT LENGTH																							
TOTAL EFFECTIVE LENGTH																							
ADJUSTED PRESSURE																							
ROUND DUCT SIZE																							
HEATING VELOCITY (f/min)																							
COOLING VELOCITY (f/min)																							
OUTLET GRILL SIZE																							
TRUNK																							

SUPPLY AIR TRUNK SIZE	TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (f/min)	TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (f/min)	TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (f/min)	TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (f/min)
TRUNK A	408	0.09	9.7	12	12	8	612	0	0.00	0	0	0	TRUNK G	0	0.00	0	0	0	TRUNK O	0	0.05	0	0	8
TRUNK B	292	0.07	9.1	10	10	8	526	0	0.00	0	0	0	TRUNK H	0	0.00	0	0	0	TRUNK P	0	0.05	0	0	8
TRUNK C	0	0.00	0	0	0	8	0	0	0.00	0	0	0	TRUNK I	0	0.00	0	0	0	TRUNK Q	0	0.05	0	0	8
TRUNK D	0	0.00	0	0	0	8	0	0	0.00	0	0	0	TRUNK J	0	0.00	0	0	0	TRUNK R	0	0.05	0	0	8
TRUNK E	0	0.00	0	0	0	8	0	0	0.00	0	0	0	TRUNK K	0	0.00	0	0	0	TRUNK S	0	0.05	0	0	8
TRUNK F	0	0.00	0	0	0	8	0	0	0.00	0	0	0	TRUNK L	0	0.00	0	0	0	TRUNK T	0	0.05	0	0	8
RETURN AIR #	1	2	3	4	4	0	0	0	0	0	0	0	BR	700	0.05	13.8	22	22	TRUNK U	0	0.05	0	0	8
AIR VOLUME	75	85	95	385	385	0	0	0	0	0	0	0	TRUNK V	0	0.05	0	0	0	TRUNK W	0	0.05	0	0	8
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	TRUNK X	700	0.05	13.8	22	22	TRUNK Y	385	0.05	11	14	8
ACTUAL DUCT LGH	60	77	72	27	27	1	1	1	1	1	1	1	TRUNK Z	0	0.05	0	0	0	TRUNK Z	0	0.05	0	0	8
EQUIVALENT LENGTH	215	175	145	110	110	0	0	0	0	0	0	0	DROP	700	0.05	13.8	24	24	DROP	700	0.05	13.8	10	420
TOTAL EFFECTIVE LH	275	252	217	137	137	1	1	1	1	1	1	1	TRUNK Z	0	0.05	0	0	0	TRUNK Z	0	0.05	0	0	8
ADJUSTED PRESSURE	0.05	0.06	0.07	0.11	0.11	14.80	14.80	14.80	14.80	14.80	14.80	14.80	TRUNK Z	0	0.05	0	0	0	TRUNK Z	0	0.05	0	0	8
ROUND DUCT SIZE	6	6	6	8	8	0	0	0	0	0	0	0	TRUNK Z	0	0.05	0	0	0	TRUNK Z	0	0.05	0	0	8
INLET GRILL SIZE	8	8	8	8	8	0	0	0	0	0	0	0	TRUNK Z	0	0.05	0	0	0	TRUNK Z	0	0.05	0	0	8
INLET GRILL SIZE	14	14	14	30	30	0	0	0	0	0	0	0	TRUNK Z	0	0.05	0	0	0	TRUNK Z	0	0.05	0	0	8

TYPE: 25-9
SITE NAME: HUNTINGTON + NASHVILLE

LO # 68889

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	2 @ 10.6 cfm 21.2 cfm
Table 9.32.3.A	TOTAL 127.2 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	127.2 cfm
Less Principal Ventil. Capacity	86 cfm
Required Supplemental Capacity	41.2 cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 40H+
Location:	BSMT
86.0 cfm	3.0 sones
☒	HVI Approved
PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	ΔT °F
86.0 CFM	76 F
X	X
FACTOR	% LOSS
1.08	0.37
X	X

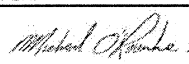
SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
W/R	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR 9.32.3.11.	
Model:	VANEE 40H+
86 cfm high	37 cfm low
63 % 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:	
HRAI #	001820
Date:	June-16

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 25-9	BUILDER: GOLD PARK HOMES
SFQT: 1759	LO# 68889
	SITE: HUNTINGTON + NASHVILLE

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:	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):	23820.0	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:	6.0 ft
LENGTH: 49.0 ft	WIDTH: 19.0 ft	EXPOSED PERIMETER:	136.0 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



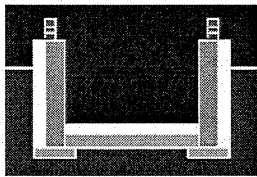
Air Infiltration Residential Load Calculator

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):	674.5			
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

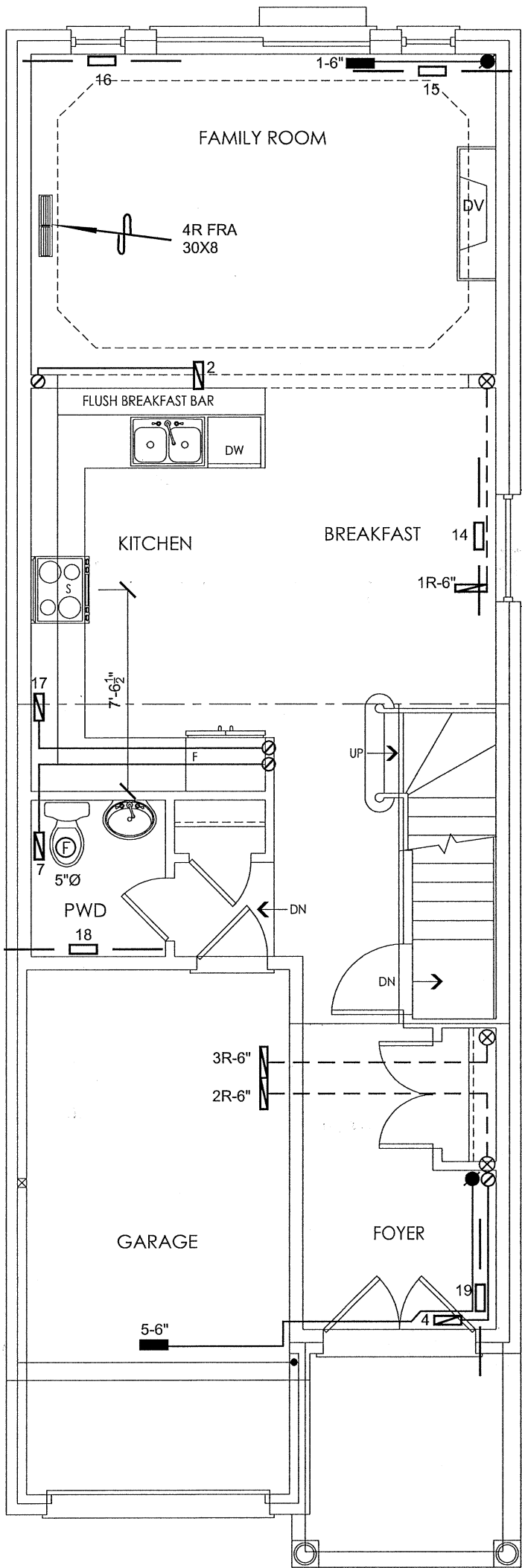
Supplemental tool for CAN/CSA-F280

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):	14.9	 Insulation Configuration
Floor Width (m):	5.8	
Exposed Perimeter (m):	0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	1.5	
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):	1568	

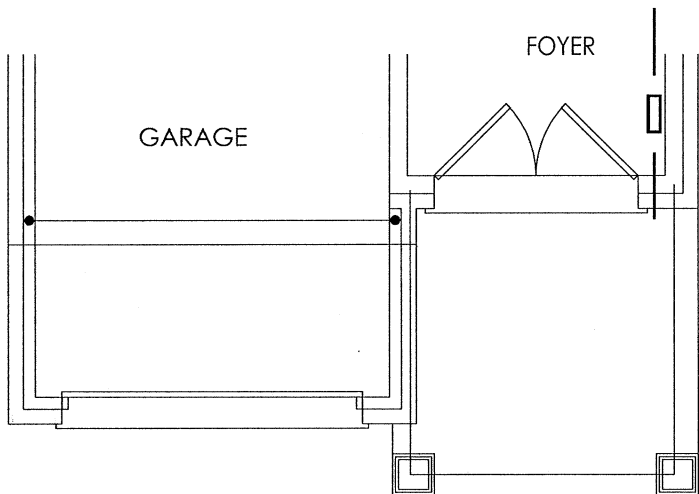
41.4

2.6 110.28

109.88



GROUND FLOOR PLAN ELEV. 'A'



PART. GROUND FLOOR PLAN 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.

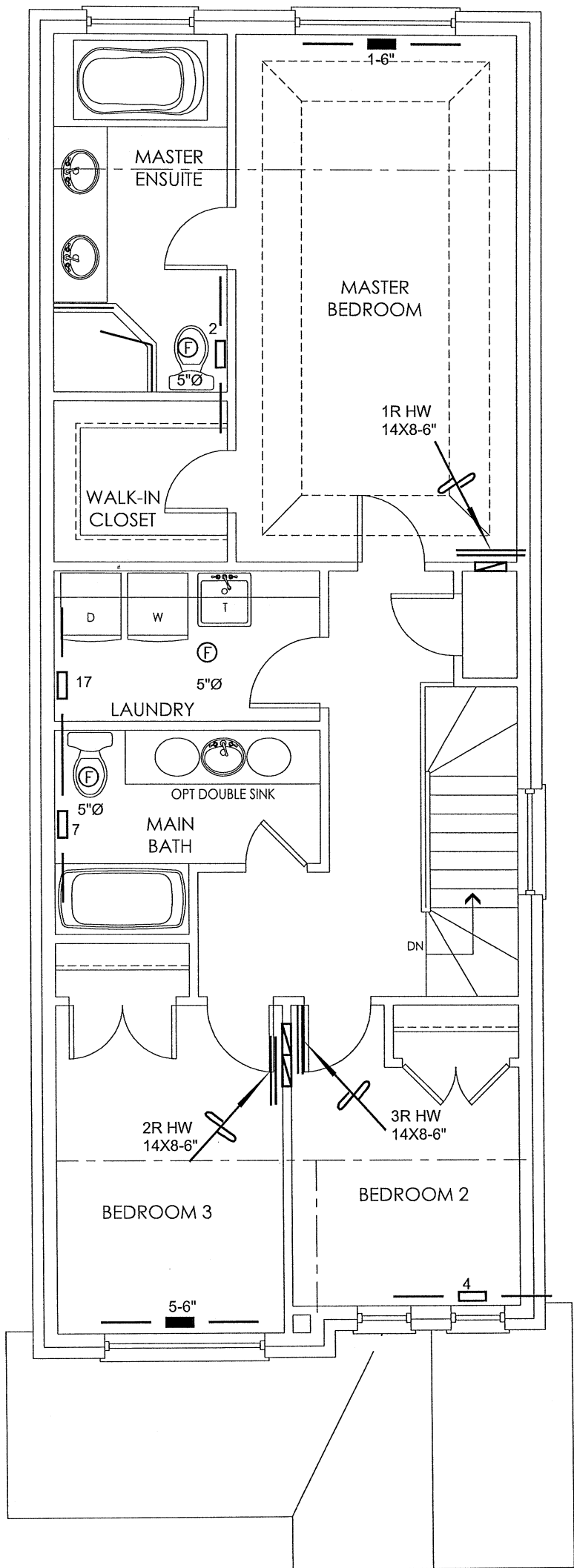
CSA-F280-12

PACKAGE J

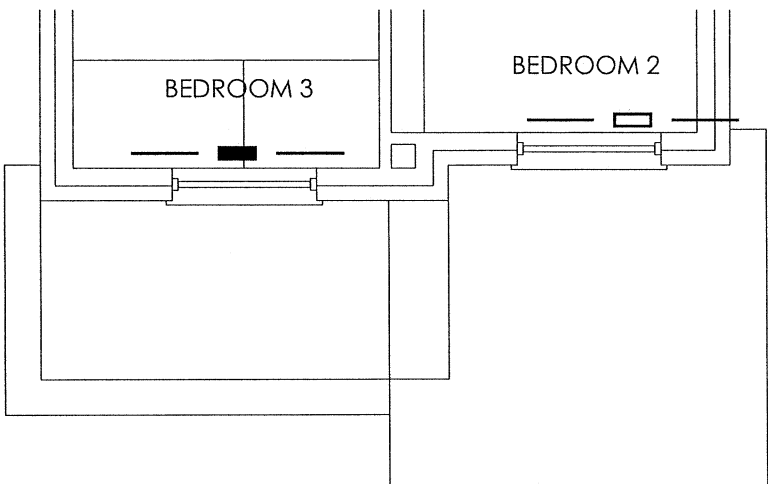
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	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	JUNE/2016
HUNTINGTON & NASHVILLE KLEINBURG, ONTARIO			Scale	3/16" = 1'-0"
25-9			BCIN# 19669	
1759 sqft			LO#	68889



SECOND FLOOR PLAN ELEV. 'A'



PART. SECOND FLOOR PLAN 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	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			Date	JUNE/2016
HUNTINGTON & NASHVILLE KLEINBURG, ONTARIO			Scale	3/16" = 1'-0"
25-9			BCIN# 19669	
1759 sqft			LO#	68889