

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.
Municipality VAUGHAN (WOODBIDGE)			Postal code
Plan number/ other description			Lot/con.
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			
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: 5013 - RIVERVIEW OPT 5 BED Project: PINE VALLEY PH 2	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> (print name)		declare that (choose one as appropriate):	
☐ 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.			
May 4, 2022 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.

Application for a Permit Construct or Demolish – Effective January 1, 2015

SITE NAME: PINE VALLEY PH 2										DATE May-22										CSA-F280-12									
BUILDER: GOLD PARK HOMES										LO# 9624										SP-12 PACKAGE A1									
TYPE: 5013 - RIVERVIEW										GFA: 4447										HEAT LOSS AT °F. 76									
OPT 5 BED										WINTER NATURAL AIR CHANGE RATE 0.340										HEAT GAIN AT °F. 13									
ROOM USE										ENS-2										ENS-3									
EXP. WALL										LOST										LOST									
CLG. HT.										ENS-4										ENS-5									
FACTORS										LOST										LOST									
GRS.WALL AREA										LOST										LOST									
GLAZING										LOST										LOST									
NORTH										LOST										LOST									
EAST										LOST										LOST									
SOUTH										LOST										LOST									
WEST										LOST										LOST									
SKYL.T.										LOST										LOST									
DOORS										LOST										LOST									
NET EXPOSED WALL										LOST										LOST									
NET EXPOSED BSMT WALL ABOVE GR										LOST										LOST									
NO ATTIC EXPOSED CLG										LOST										LOST									
EXPOSED FLOOR										LOST										LOST									
BASEMENT/CRAWL HEAT LOSS										LOST										LOST									
SLAB ON GRADE HEAT LOSS										LOST										LOST									
SUBTOTAL HT LOSS										LOST										LOST									
SUB TOTAL HT GAIN										LOST										LOST									
LEVEL FACTOR / MULTIPLIER										LOST										LOST									
AIR CHANGE HEAT LOSS										LOST										LOST									
DUCT LOSS										LOST										LOST									
DUCT GAIN										LOST										LOST									
HEAT GAIN PEOPLE										LOST										LOST									
HEAT GAIN APPLIANCES/LIGHTS										LOST										LOST									
TOTAL HT LOSS BTU/H										LOST										LOST									
TOTAL HT GAIN x 1.3 BTU/H										LOST										LOST									

SITE NAME: PINE VALLEY PH 2				OPT 5 BED				DATE: May-22				FURNACE 1			
BUILDER: GOLD PARK HOMES				TYPE: 5013 - RIVERVIEW				GFA: 4447				LO# 98524			
HEATING CFM 1110				COOLING CFM 1110				furnace pressure 0.6				FURNACE HEAT LOSS +			
TOTAL HEAT LOSS 58,963				TOTAL HEAT GAIN 34,155				furnace filter 0.05				HRV / ERV HEAT LOSS			
AIR FLOW RATE CFM 18.83				AIR FLOW RATE CFM 32.5				alc coil pressure 0.2				= 62041 BTUH			
								available pressure for s/a & r/a 0.35							
plenum pressure s/a 0.18				r/a pressure 0.17											
max s/a dif press. loss 0.03				r/a grille press. loss 0.02											
min adjusted pressure s/a 0.15				adjusted pressure r/a 0.15											

RUN #		19	20	21	22	23	24
ROOM NAME		FOY	GRT	GRT	GRT	GRT	DIN
RM LOSS MBH		3.08	2.37	2.37	2.37	2.37	3.01
CFM PER RUN HEAT		58	45	45	45	45	57
RM GAIN MBH		1.87	3.30	3.30	3.30	3.30	2.63
CFM PER RUN COOLING		61	107	107	107	107	85
ADJUSTED PRESSURE		0.17	0.15	0.15	0.15	0.15	0.16
ACTUAL DUCT LGH		47	56	49	45	38	27
EQUIVALENT LENGTH		100	110	150	130	150	140
TOTAL EFFECTIVE LENGTH		147	166	199	175	188	167
ADJUSTED PRESSURE		0.12	0.09	0.08	0.09	0.08	0.1
ROUND DUCT SIZE		5	6	6	6	6	5
HEATING VELOCITY (ft/min)		426	229	229	229	229	419
COOLING VELOCITY (ft/min)		448	546	546	546	546	624
OUTLET GRILL SIZE		3X10	4X10	4X10	4X10	4X10	3X10
TRUNK		F	D	D	D	D	F

RUN #		25	26	27	28	29	30	31	32	33	34	35	36
ROOM NAME		KT/BF	KT/BF	KT/BF	OFF	OFF	MUD	BAS	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH		2.58	2.58	2.58	1.68	1.68	3.07	4.87	4.87	4.87	4.87	4.87	4.87
CFM PER RUN HEAT		49	49	49	32	32	58	92	92	92	92	92	92
RM GAIN MBH		3.03	3.03	3.03	2.20	2.20	0.49	0.42	0.42	0.42	0.42	0.42	0.42
CFM PER RUN COOLING		98	98	98	71	71	16	14	14	14	14	14	14
ADJUSTED PRESSURE		0.16	0.16	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH		34	39	31	65	31	21	51	37	32	16	15	49
EQUIVALENT LENGTH		100	140	170	130	120	140	130	130	130	130	130	130
TOTAL EFFECTIVE LENGTH		134	179	201	195	180	161	161	177	162	146	145	179
ADJUSTED PRESSURE		0.12	0.09	0.08	0.09	0.1	0.11	0.1	0.09	0.1	0.11	0.11	0.09
ROUND DUCT SIZE		6	6	6	5	5	5	6	6	6	6	6	6
HEATING VELOCITY (ft/min)		250	250	250	235	235	426	469	469	469	469	469	469
COOLING VELOCITY (ft/min)		500	500	500	521	521	117	71	71	71	71	71	71
OUTLET GRILL SIZE		4X10	4X10	4X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10
TRUNK		E	E	E	F	F	F	D	D	E	E	F	F

SUPPLY AIR TRUNK SIZE		TRUNK A	TRUNK B	TRUNK C	TRUNK D	TRUNK E	TRUNK F
CFM		0	0	0	0	0	0
VELOCITY (ft/min)		0	0	0	0	0	0
RECT DUCT		0	0	0	0	0	0
ROUND DUCT		0	0	0	0	0	0
STATIC PRESS.		0.00	0.00	0.00	0.00	0.00	0.00
TRUNK G		0	0	0	0	0	0
TRUNK H		0	0	0	0	0	0
TRUNK I		0	0	0	0	0	0
TRUNK J		0	0	0	0	0	0
TRUNK K		0	0	0	0	0	0
TRUNK L		0	0	0	0	0	0
RETURN AIR TRUNK SIZE		TRUNK O	TRUNK P	TRUNK Q	TRUNK R	TRUNK S	TRUNK T
CFM		0	0	0	0	0	0
VELOCITY (ft/min)		0	0	0	0	0	0
RECT DUCT		0	0	0	0	0	0
ROUND DUCT		0	0	0	0	0	0
STATIC PRESS.		0.07	0.07	0.07	0.07	0.07	0.07
TRUNK U		0	0	0	0	0	0
TRUNK V		0	0	0	0	0	0
TRUNK W		0	0	0	0	0	0
TRUNK X		0	0	0	0	0	0
TRUNK Y		0	0	0	0	0	0
TRUNK Z		0	0	0	0	0	0
DROP		1110	15.1	15.1	15.1	15.1	15.1

RETURN AIR #		6	7
AIR VOLUME		0	0
PLENUM PRESSURE		0.15	0.15
ACTUAL DUCT LGH		1	1
EQUIVALENT LENGTH		0	0
TOTAL EFFECTIVE LH		1	1
ADJUSTED PRESSURE		14.80	14.80
ROUND DUCT SIZE		0	0
INLET GRILL SIZE		0	0
INLET GRILL SIZE		0	0

SITE NAME: PINE VALLEY PH 2
BUILDER: GOLD PARK HOMES

OPT 5 BED

TYPE: 5013 - RIVERVIEW

DATE: May-22

GFA: 4447

LO# 96524

FURNACE 2

HEATING CFM 980 COOLING CFM 980
TOTAL HEAT LOSS 25,639 TOTAL HEAT GAIN 28,359
AIR FLOW RATE CFM 38.22 AIR FLOW RATE CFM 34.56

FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 28717 BTUH

ML196UH045XE36B 45
FAN SPEED LOW 620
MEDIUM 980
HIGH 1110

AFUE = 96 %
INPUT (BTUH) = 44,000
OUTPUT (BTUH) = 42,800
DESIGN CFM = 980
CFM @ .6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	20	0	0
R/A	0	0	6	0	0

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
ROOM NAME	PBR	PBR	ENS	ENS	WIC	ENS-5	BED-2	BED-2	BED-3	BED-3	ENS-4	BED-4	BED-4	LOFT	ENS-2	ENS-3	BED-5	LND
RM LOSS MBH	1.82	1.82	1.00	1.00	0.88	0.82	1.05	1.05	1.42	1.42	1.13	1.67	1.67	1.90	1.05	1.76	0.79	0.32
CFM PER RUN HEAT	70	70	38	38	34	32	40	40	54	54	43	64	64	73	40	67	30	12
RM GAIN MBH	2.59	2.59	0.68	0.68	0.39	0.40	1.33	1.33	1.71	1.71	0.37	1.85	1.85	2.12	0.41	1.07	2.12	1.57
CFM PER RUN COOLING	90	90	24	24	14	14	46	46	59	59	13	64	64	73	14	37	73	54
ADJUSTED PRESSURE	0.16	0.16	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
ACTUAL DUCT LGH	52	63	48	16	51	19	72	77	78	69	69	66	73	84	65	64	75	46
EQUIVALENT LENGTH	210	190	255	130	245	120	170	180	200	190	180	190	170	190	180	180	160	130
TOTAL EFFECTIVE LENGTH	262	253	303	146	296	139	242	257	278	259	249	256	243	274	235	244	235	176
ADJUSTED PRESSURE	0.06	0.06	0.06	0.12	0.06	0.12	0.07	0.07	0.06	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.1
ROUND DUCT SIZE	6	5	5	4	5	4	5	5	6	6	5	6	6	6	5	6	6	5
HEATING VELOCITY (ft/min)	357	357	279	436	250	367	294	294	275	316	326	326	326	372	294	342	153	88
COOLING VELOCITY (ft/min)	459	459	176	275	103	161	338	338	301	301	95	326	326	372	189	372	372	396
OUTLET GRILL SIZE	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	4X10	4X10	4X10	3X10	4X10	4X10	3X10
TRUNK	C	C	C	C	C	C	B	B	A	A	A	A	A	B	B	A	A	B

RUN #	37	38
ROOM NAME	BED-3	BED-4
RM LOSS MBH	1.42	1.67
CFM PER RUN HEAT	54	64
RM GAIN MBH	1.71	1.85
CFM PER RUN COOLING	59	64
ADJUSTED PRESSURE	0.17	0.17
ACTUAL DUCT LGH	67	71
EQUIVALENT LENGTH	190	170
TOTAL EFFECTIVE LENGTH	257	241
ADJUSTED PRESSURE	0.07	0.07
ROUND DUCT SIZE	6	6
HEATING VELOCITY (ft/min)	275	326
COOLING VELOCITY (ft/min)	301	326
OUTLET GRILL SIZE	4X10	4X10
TRUNK	A	A

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	494	0.06	11.6	16	8	556	0	0	0	8
TRUNK B	699	0.06	13.2	22	8	572	0	0	0	8
TRUNK C	981	0.06	15	26	8	679	0	0	0	8
TRUNK D	0	0.00	0	0	8	0	0.00	0	0	8
TRUNK E	0	0.00	0	0	8	0	0.00	0	0	8
TRUNK F	0	0.00	0	0	8	0	0.00	0	0	8

RETURN AIR #	1	2	3	4	5	8
AIR VOLUME	155	115	115	115	335	0
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0
ACTUAL DUCT LGH	62	78	79	75	69	1
EQUIVALENT LENGTH	170	235	195	245	230	0
TOTAL EFFECTIVE LENGTH	232	313	274	320	299	1
ADJUSTED PRESSURE	0.06	0.05	0.05	0.05	0.05	0
ROUND DUCT SIZE	7.5	7	7	7	10.5	0
INLET GRILL SIZE	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	30	0

TYPE: 5013 - RIVERVIEW
SITE NAME: PINE VALLEY PH 2

LO # 96524
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	7 @ 10.6 cfm	74.2 cfm
Other Rooms	5 @ 10.6 cfm	53.0 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
TOTAL	95.4	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	212	cfm
Less Principal Ventil. Capacity	150	cfm
Required Supplemental Capacity	62.0	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE V150H	Location: BSMT
150.0 cfm	☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION					
CFM		ΔT °F	FACTOR	% LOSS	
150.0 CFM	X	76 F	X	1.08	X 0.25

SUPPLEMENTAL FANS		BY INSTALLING CONTRACTOR		
Location	Model	cfm	HVI	Sones
ENS	BY INSTALLING CONTRACTOR	50	☒	3.5
ENS-2	BY INSTALLING CONTRACTOR	50	☒	3.5
ENS-3	BY INSTALLING CONTRACTOR	50	☒	3.5
ENS-4	BY INSTALLING CONTRACTOR	50	☒	3.5

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE V150H	INSTALL 2 HRV / ERV's	
150 cfm high	35 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:	May-22

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																											
Formula Sheet (For Air Leakage / Ventilation Calculation)																																											
LO#: 96524		Model: 5013 - RIVERVIEW		Builder: GOLD PARK HOMES		Date: 2022-05-04																																					
Air Change & Delta T Data																																											
House Volume		WINTER NATURAL AIR CHANGE RATE		SUMMER NATURAL AIR CHANGE RATE																																							
		0.340		0.114																																							
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th>Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> <tr> <td>Bsmt</td> <td>2106</td> <td>10</td> <td>21060</td> </tr> <tr> <td>First</td> <td>2106</td> <td>11</td> <td>23166</td> </tr> <tr> <td>Second</td> <td>2740</td> <td>9</td> <td>24660</td> </tr> <tr> <td>Third</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Fourth</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td colspan="2">Total:</td> <td colspan="2">68,886.0 ft³</td> </tr> <tr> <td colspan="2">Total:</td> <td colspan="2">1950.6 m³</td> </tr> </table>		Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	2106	10	21060	First	2106	11	23166	Second	2740	9	24660	Third	0	0	0	Fourth	0	9	0	Total:		68,886.0 ft³		Total:		1950.6 m³		Design Temperature Difference		Tin °C		Tout °C		ΔT °C		ΔT °F	
		Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)																																						
		Bsmt	2106	10	21060																																						
		First	2106	11	23166																																						
Second	2740	9	24660																																								
Third	0	0	0																																								
Fourth	0	9	0																																								
Total:		68,886.0 ft³																																									
Total:		1950.6 m³																																									
Winter DTDh		22		-20		42		76																																			
Summer DTDc		24		31		7		13																																			
6.2.6 Sensible Gain due to Air Leakage																																											
$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																											
0.340		x		541.84		x		7 °C		x 1.2 = 529 W																																	
										= 1803 Btu/h																																	
6.2.7 Sensible heat Gain due to Ventilation																																											
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																											
300 CFM		x		13 °F		x		1.08		x 0.25 = 1,037 Btu/h																																	
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																											
$HL_{airrr} = Level Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgr}) \div (HL_{agcleve} + HL_{bgcleve})\}$																																											
Level		Level Factor (LF)		HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)		Level Conductive Heat Loss: (HL _{cleve})		Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)																																			
1		0.5		31,853		13,293		1.198																																			
2		0.3				20,187		0.473																																			
3		0.2				18,234		0.349																																			
4		0				0		0.000																																			
5		0				0		0.000																																			
*HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairve = 0																																											

Michael O'Rourke
BCIN# 19669

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 5013 - RIVERVIEW	OPT 5 BED	BUILDER: GOLD PARK HOMES
SFQT: 4447	LO# 96524	SITE: PINE VALLEY PH 2

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75
		WINDOW SHGC	0.50

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):	68886.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.75	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 70.0 ft	WIDTH: 43.0 ft	EXPOSED PERIMETER:	226.0 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	29.80
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	-

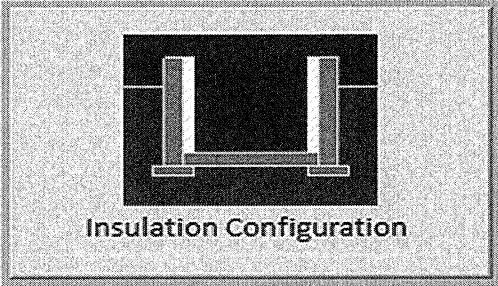
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	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):	21.3	 Insulation Configuration
Floor Width (m):	13.1	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	2.5	
Door Area (m ²):	0.0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		2345

TYPE: 5013 - RIVERVIEW
LO# 96524

OPT 5 BED

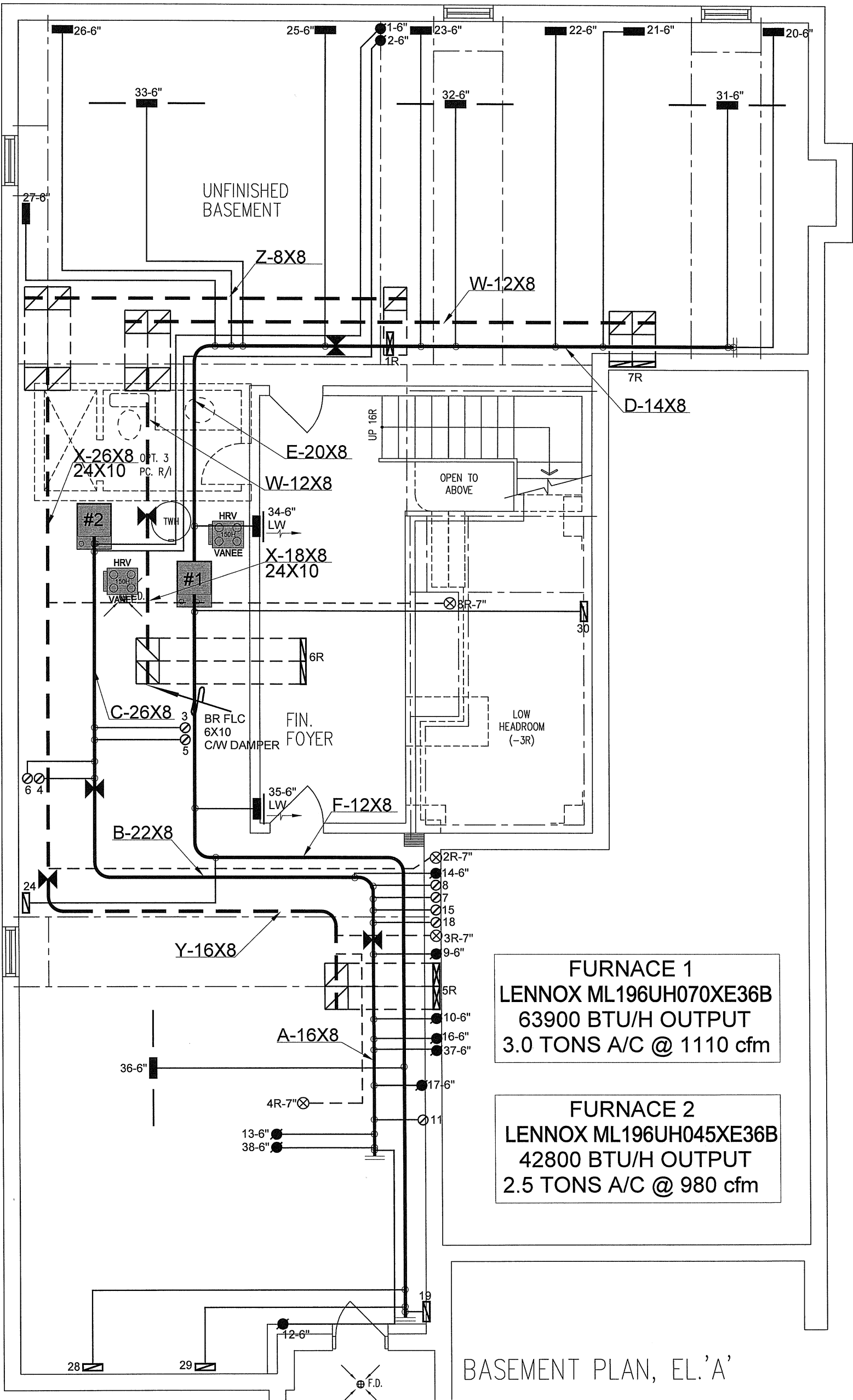
Air Infiltration Residential Load Calculator

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):	7.01			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1950.6			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2600.3 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	70.8	70.8		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.340			
Cooling Air Leakage Rate (ACH/H):	0.114			

TYPE: 5013 - RIVERVIEW
LO# 96524

OPT 5 BED



I 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.

LOD
WOD
CSA-F280-12
PACKAGE A1

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

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FURNACE 1
LENNOX ML196UH070XE36B
63900 BTU/H OUTPUT
3.0 TONS A/C @ 1110 cfm

FURNACE 2
LENNOX ML196UH045XE36B
42800 BTU/H OUTPUT
2.5 TONS A/C @ 980 cfm

BASEMENT PLAN, EL. 'A'

Client
GOLD PARK HOMES

Project Name
**PINE VALLEY PH 2
VAUGHAN, ONTARIO**

**RIVERVIEW - OPT 5 BED
5013 4447 sqft**

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.

	S/A	R/A	FANS
2ND	20	6	6
1ST	12	2	2
BAS	6	1	0

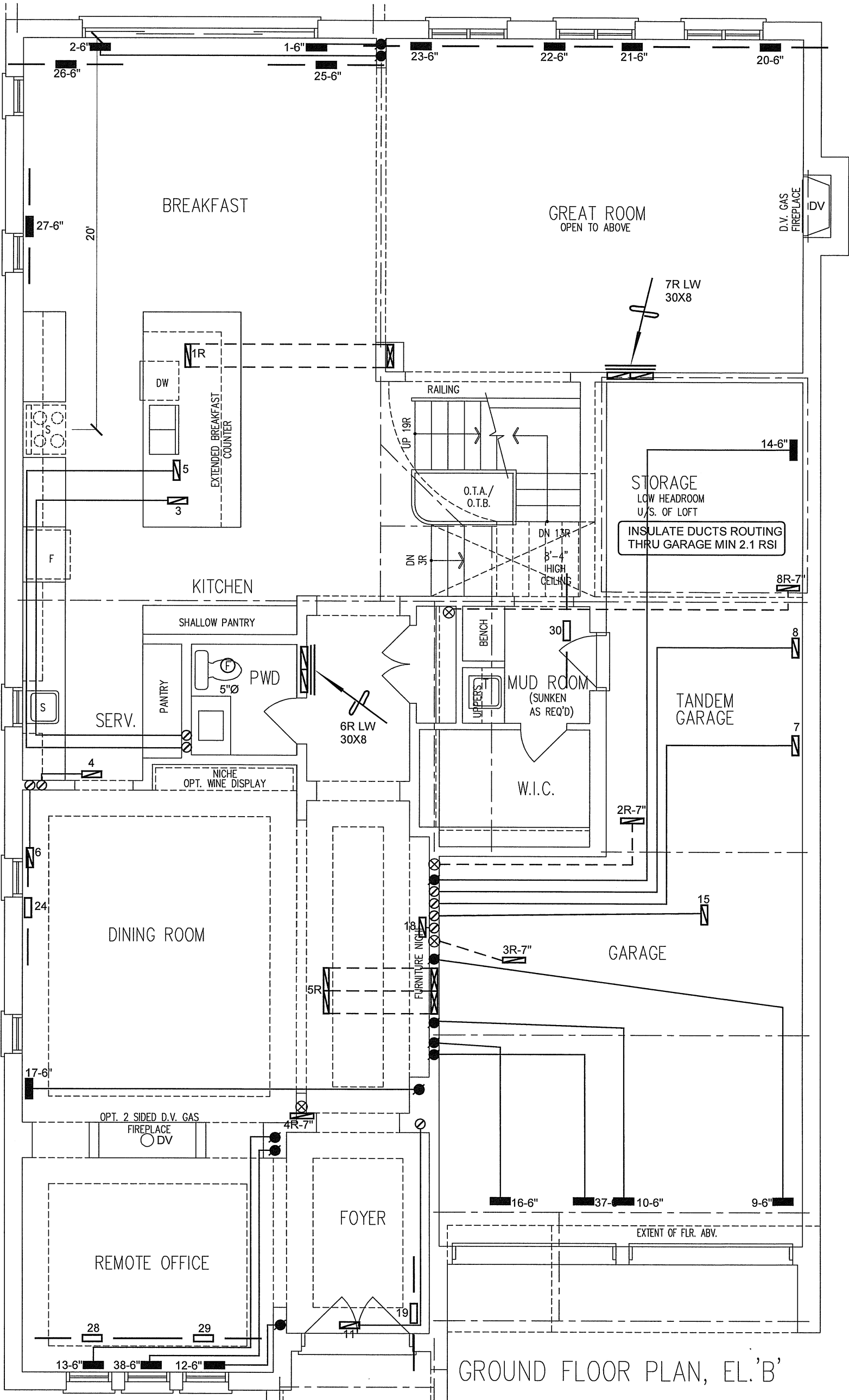
Sheet Title
**BASEMENT
HEATING
LAYOUT**

Date
MAY/2022

Scale
3/16" = 1'-0"

BCIN# 19669

LO# 96524



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

LOD

WOD

CSA-F280-12

PACKAGE A1

HVAC LEGEND			3.	
SYMBOL	DESCRIPTION	SYMBOL	2.	
	SUPPLY AIR GRILLE		1.	
	SUPPLY AIR GRILLE 6" BOOT		No.	Description
	SUPPLY AIR BOOT ABOVE			Date
			REVISIONS	

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Client
GOLD PARK HOMES

Project Name
**PINE VALLEY PH 2
VAUGHAN, ONTARIO**

**RIVERVIEW - OPT 5 BED
5013**

4447 sqft



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L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
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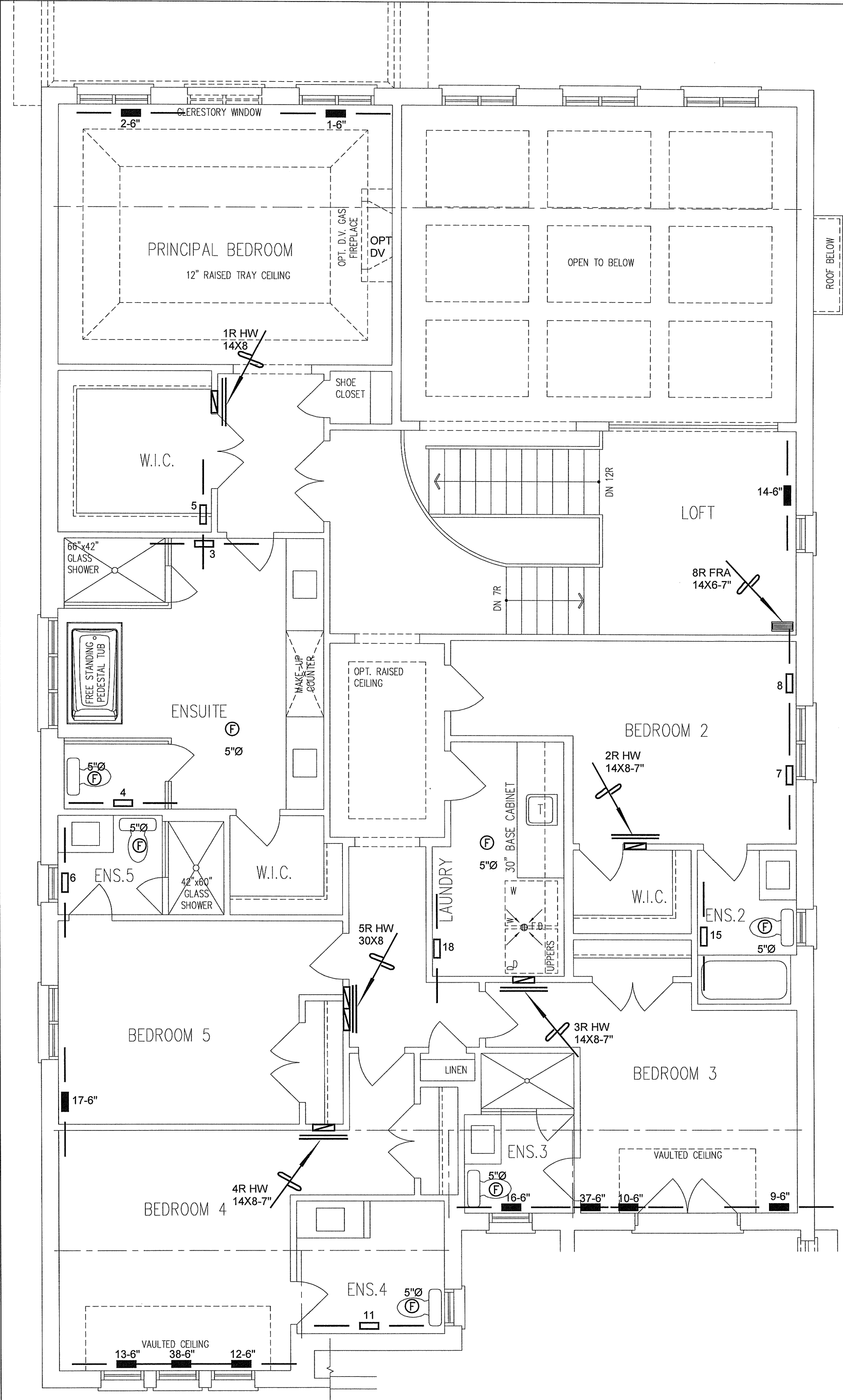
Sheet Title
**FIRST FLOOR
HEATING
LAYOUT**

Date
MAY/2022

Scale
3/16" = 1'-0"

BCIN# 19669

LO# 96524



OPT. 5 BEDROOM SECOND FLOOR PLAN, EL. 'A'

I MICHAEL O'ROURKE HAVE REVIEW
AND TAKE RESPONSIBILITY FOR THE
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UNDER DIVISION C, 3.2.5 OF THE
BUILDING CODE.

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

LOD
WOD
CSA-F280-12
PACKAGE A1

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

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Client
GOLD PARK HOMES

Project Name
**PINE VALLEY PH 2
VAUGHAN, ONTARIO**

**RIVERVIEW - OPT 5 BED
5013**

4447 sqft

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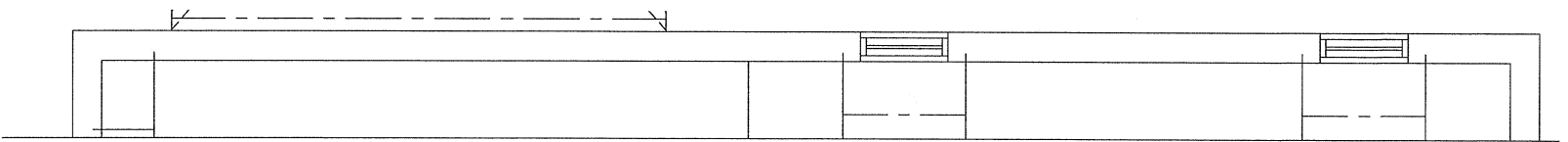
Sheet Title
**SECOND FLOOR
HEATING
LAYOUT**

Date
MAY/2022

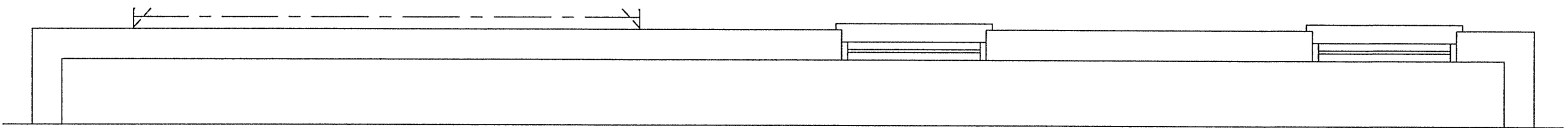
Scale
3/16" = 1'-0"

BCIN# 19669

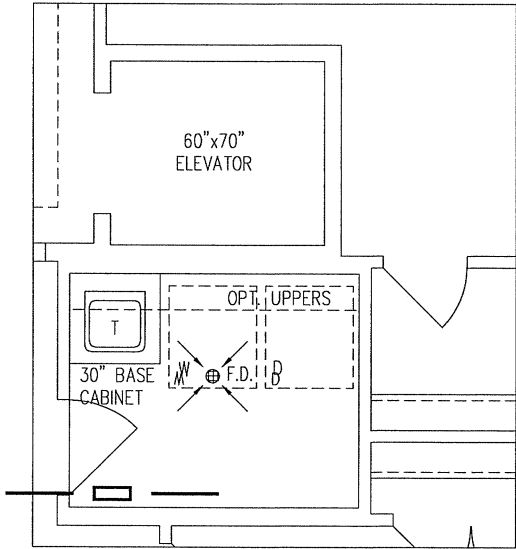
LO# 96524



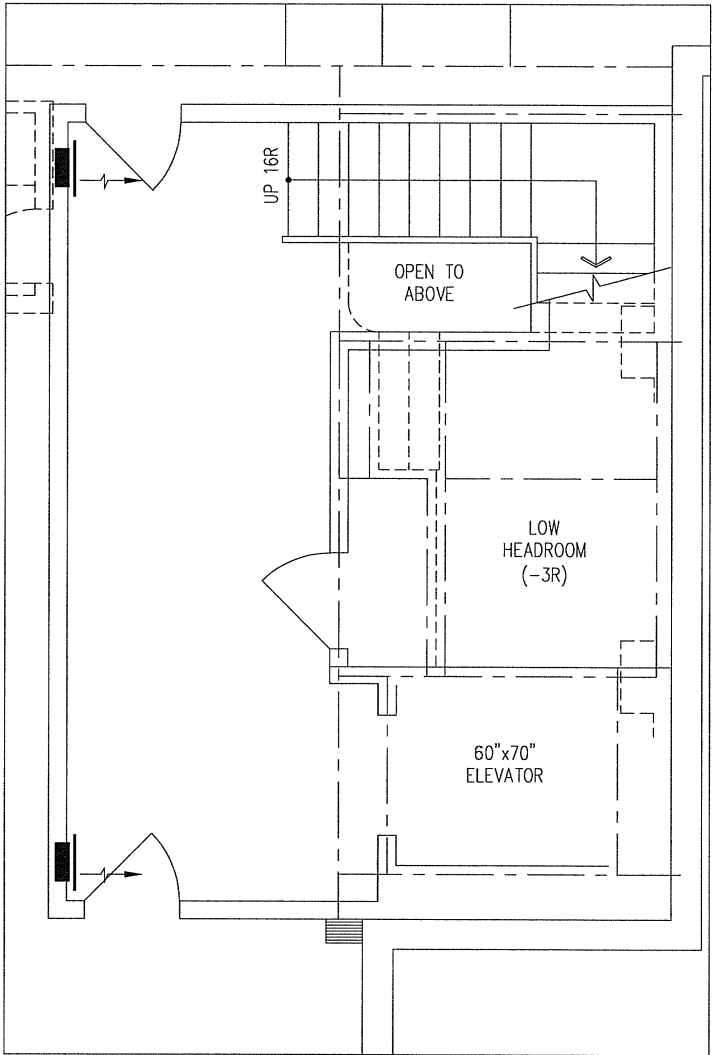
PART. BASEMENT PLAN ELEV. 'A' - W.O.D. COND.



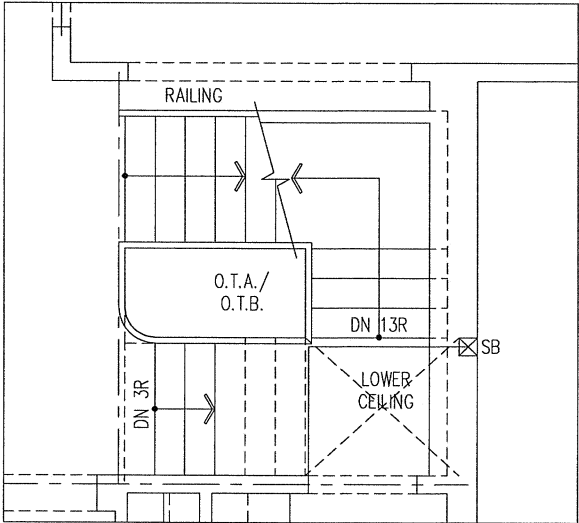
PART. BASEMENT PLAN ELEV. 'A' - L.O.D. COND.



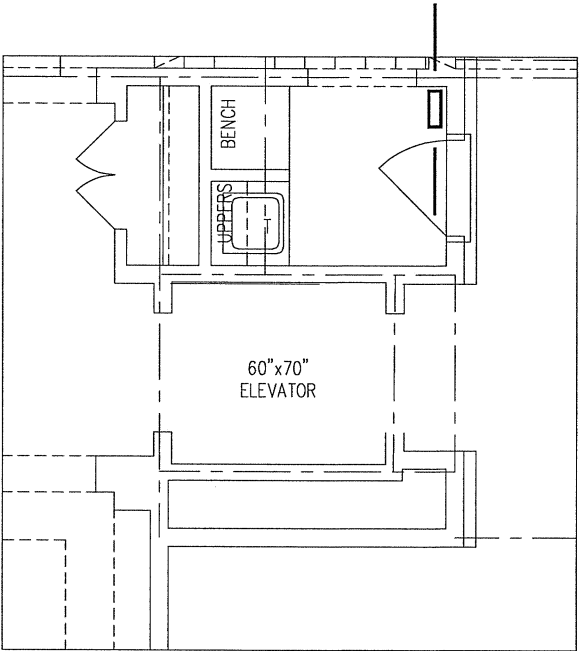
PART. OPT. 5 BEDROOM
SECOND FLOOR W/ ELEVATOR,
EL. 'A'



PART BASEMENT FLOOR PLAN, W/
OPT. ELEVATOR, EL. 'A'



PART. GROUND FLOOR PLAN, W/
NO LOFT CONDITION, EL. 'A'



PART. GROUND FLOOR PLAN, W/
OPT. ELEVATOR, EL. 'A'

I MICHAEL O'ROURKE HAVE REVIEW
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.

LOD
WOD
CSA-F280-12
PACKAGE A1

HVAC LEGEND				3.	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR STACK ABOVE		RETURN AIR STACK ABOVE
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		RETURN AIR STACK ABOVE
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		REDUCER
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		REDUCER
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				No.	Date

Client	GOLD PARK HOMES
Project Name	PINE VALLEY PH 2 VAUGHAN, ONTARIO
	RIVERVIEW - OPT 5 BED 5013 4447 sqft

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Sheet Title	STRIP PLAN HEATING LAYOUT
Date	MAY/2022
Scale	3/16" = 1'-0"
	BCIN# 19669
LO#	96524