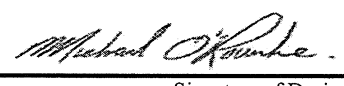


Schedule 1: Designer Information

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 (WOODBIDGE)	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]				
<input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection <input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> 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: 5004 THE BEAUMONT Project: PINE VALLEY & TESTON		
D. Declaration of Designer				
I, <u>MICHAEL O'ROURKE</u> (print name)		declare that (choose one as appropriate):		
<input type="checkbox"/> 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: _____				
<input checked="" type="checkbox"/> 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>				
<input type="checkbox"/> 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.				
September 10, 2018 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 & TESTON BUILDERS: GOLD PARK HOMES TYPE: 5004 THE BEAUMONT DATE: Sep-18 WINTER NATURAL AIR CHANGE RATE 0.340 CSAF280-12
HEAT LOSS AT °F. 76 HEAT GAIN AT °F. 16 SB-12 PACKAGE A1

ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	DRESS	BED-2	BED-3	BED-4	ENS-2	WIC-2	ENS-3	LOSS GAIN
GRS.WALL AREA	190	190	342	108	99	162	430	0	117	182	LOSS GAIN
GLAZING	0	0	0	0	18	0	0	0	0	0	0
NORTH	21.3	16.8	0	0	333	303	0	0	0	0	0
EAST	21.3	42.4	0	0	0	0	63	1341	2671	0	13
SOUTH	21.3	26.7	0	0	0	0	0	0	0	0	277
WEST	21.3	42.4	9	85	103	0	9	192	232	0	551
SKYLT.	37.2	103.0	28	0	0	0	0	0	0	0	0
DOORS	25.2	5.2	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	148	306	1351	81	361	1611	335	0	117	522
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0	0	0	0	109
EXPOSED CLG	1.3	0.6	468	601	299	312	400	199	78	100	50
NO ATTIC EXPOSED CLG	2.7	1.4	0	0	0	0	0	0	78	189	41
BASEMENT/CRAWL HEAT LOSS	2.6	0.5	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	2155	2216	2549	842	1461	2622	3885	223	821	1237	779
SUB TOTAL HT GAIN	0.20	0.35	0.20	0.35	0.20	0.35	0.20	0.35	0.20	0.35	0.20
LEVEL FACTOR / MULTPLIER	749	866	171	293	508	912	1351	77	286	430	70
AIR CHANGE HEAT LOSS	0	0	0	0	187	353	524	30	111	167	85
AIR CHANGE HEAT GAIN	0	0	0	0	1	240	1	0	0	0	0
DUCT LOSS	2904	770	3435	2167	3887	5760	8894	330	1217	1834	1216
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLANCES	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN SLOTHS	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	2904	770	3435	2167	3887	5760	8894	330	1217	1834	1216
TOTAL HT GAIN x 1.3 BTU/H	4766	2893	2091	11562	2374	6176	8894	121	311	1216	1216

ROOM USE	EXP. WALL CLG. HT.	LIBR	DIN	KIT	GREAT	LAUN	ENS-4	FOY	MUD	LOD	LOSS GAIN
GRS.WALL AREA	297	297	187	1221	896	0	54	407	234	510	LOSS GAIN
GLAZING	0	0	0	39	26	0	0	0	0	0	0
NORTH	21.3	16.8	0	830	563	0	0	0	0	0	0
EAST	21.3	42.4	0	0	0	0	0	35	1484	0	0
SOUTH	21.3	26.7	24	511	28	0	8	170	206	0	0
WEST	21.3	42.4	0	111	1213	0	0	0	0	0	0
SKYLT.	37.2	103.0	0	0	57	0	0	0	0	0	0
DOORS	25.2	5.2	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.9	244	1089	787	0	45	352	1571	20	605
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0	0	0	0	105
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.7	1.4	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	2.6	0.5	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	2217	2273	1238	8386	6722	375	453	2821	1480	1543	10172
SUB TOTAL HT GAIN	0.30	0.38	0.30	0.38	0.30	0.35	0.20	0.38	0.30	0.38	0.60
LEVEL FACTOR / MULTPLIER	840	840	469	3176	2565	130	157	1068	553	1270	14451
AIR CHANGE HEAT LOSS	0	0	0	0	0	61	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLANCES	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN SLOTHS	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	3056	4222	1707	11562	9336	556	610	3889	2013	1543	24524
TOTAL HT GAIN x 1.3 BTU/H	4222	2091	2091	10531	7690	1306	406	2714	1431	1651	1104

TOTAL HEAT GAIN BTU/H: 59847 TONS: 4.99 LOSS DUE TO VENTILATION LOAD BTU/H: 3181 STRUCTURAL HEAT LOSS: 81565 TOTAL COMBINED HEAT LOSS BTU/H: 84746

Michael O'Rourke

77477

AFUE = 96 %
INPUT (BTU/H) = 110,000
OUTPUT (BTU/H) = 106,000

DESIGN CFM = 1955
CFM @ 6" E.S.P.

EMPERATURE RISE 50

All shaft units 3-7A unless otherwise indicated.	RUN #																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	MBR	ENS	DRESS	BED-2	BED-3	BED-4	ENS-2	WIC-2	ENS-4	MBR	ENS-3	LIBR	DIN	KIT	KIT	GREAT	LAWN	KIT	FOY	MUD	BAS	BAS	BAS	BAS
	ROOM NAME																							
	RM LOSS MBH	1.45	1.65	1.13	2.17	1.30	1.92	1.22	0.61	1.45	1.83	1.53	1.71	2.89	2.89	3.11	0.56	2.89	3.89	2.01	3.27	3.27	3.27	3.27
	CFM PER RUN HEAT	35	39	27	52	31	46	8	29	15	35	44	37	41	69	69	13	69	93	48	78	78	78	78
	CFM PER RUN COOLING	2.38	1.30	1.49	2.37	2.06	2.30	0.12	0.31	0.41	2.38	1.21	2.11	2.09	2.83	2.83	2.56	1.31	2.83	2.71	1.43	0.34	0.34	0.34
	ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.16	0.16	0.17	0.17	0.17	0.17
	ACTUAL DUCT LGH	46	62	29	34	38	50	28	31	43	54	41	41	27	40	32	49	26	36	24	16	50	39	30
	EQUIVALENT LENGTH	190	140	180	180	120	150	160	150	190	180	160	180	80	140	150	130	150	140	150	130	130	140	100
	TOTAL EFFECTIVE LENGTH	236	202	209	214	158	200	188	181	233	234	201	221	107	180	182	179	176	176	174	142	180	190	132
	ADJUSTED PRESSURE	0.07	0.09	0.08	0.08	0.11	0.09	0.09	0.1	0.07	0.07	0.09	0.08	0.16	0.09	0.09	0.09	0.1	0.09	0.09	0.12	0.1	0.09	0.12
	ROUND DUCT SIZE	6	4	5	5	5	5	4	4	4	6	4	5	5	5	5	5	4	5	6	4	5	5	5
	HEATING VELOCITY (ft/min)	178	447	198	352	228	338	92	333	172	178	505	272	301	507	507	551	149	507	474	551	573	573	573
	COOLING VELOCITY (ft/min)	403	493	360	573	499	558	46	115	149	403	459	514	507	639	639	624	493	639	459	539	81	81	81
	OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10
	TRUNKS	A	B	C	D	F	F	D	D	E	B	F	E	F	C	C	A	D	B	E	D	A	A	C

25	26	27	28	29	30	31	32	33	34	35	36	37	38
RUN #	BAS	BAS	BAS	ENS	ENS	BED-3	BED-3	BED-4	BED-4	LIBR	KIT	GREAT	GREAT
ROOM NAME													
RM LOSS MBH	3.27	3.27	3.27	1.65	1.30	1.30	1.92	1.92	1.92	1.53	2.89	3.11	3.11
CFM PER RUN HEAT	78	78	78	39	3	31	31	46	46	37	69	75	75
RM GAIN MBH	0.34	0.34	0.34	1.30	0.10	2.06	2.06	2.30	2.30	2.11	2.63	2.56	2.56
CFM PER RUN COOLING	11	11	11	43	3	68	68	76	76	70	87	85	85
ADJUSTED PRESSURE	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.	37	23	17	31	34	42	48	47	40	35	28	39	64
EQUIVALENT LENGTH	120	80	120	140	140	130	140	150	130	140	150	150	150
TOTAL EFFECTIVE LENGTH	157	103	137	181	173	172	186	197	170	175	178	189	214
ADJUSTED PRESSURE	0.11	0.17	0.13	0.1	0.1	0.1	0.09	0.09	0.1	0.1	0.09	0.09	0.08
ROUND DUCT SIZE	5	5	5	4	4	5	5	5	5	5	5	5	6
HEATING VELOCITY (ft/min)	573	573	573	447	34	228	228	338	338	272	507	551	382
COOLING VELOCITY (ft/min)	81	81	81	493	34	499	499	558	558	514	639	624	433
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10
TRUNK	R	D	F	D	D	F	F	F	F	F	R	A	A

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE									
TRUNK		STATIC PRESS.		ROUND DUCT		RECT DUCT		VELOCITY (ft/min)		TRUNK CFM		STATIC PRESS.		ROUND DUCT		RECT DUCT		VELOCITY (ft/min)	
TRUNK A	381	0.08	9.8	12				8	X	8	TRUNK G	0	0.00	0				8	X
TRUNK B	667	0.07	12.5	18				8	X	8	TRUNK H	0	0.00	0				8	X
TRUNK C	333	0.09	9	10				8	X	8	TRUNK I	0	0.00	0				8	X
TRUNK D	1237	0.07	15.7	28				8	X	8	TRUNK J	0	0.00	0				8	X
TRUNK E	398	0.07	10.3	12				8	X	8	TRUNK K	0	0.00	0				8	X
TRUNK F	714	0.07	12.8	20				8	X	8	TRUNK L	0	0.00	0				8	X

[illegible]

TYPE: 5004 THE BEAUMONT
SITE NAME: PINE VALLEY & TESTON

LO # 77477

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES		9.32.3.1(1)
a) <input checked="" type="checkbox"/>	Direct vent (sealed combustion) only	
b) <input type="checkbox"/>	Positive venting induced draft (except fireplaces)	
c) <input type="checkbox"/>	Natural draft, B-vent or induced draft gas fireplace	
d) <input type="checkbox"/>	Solid Fuel (including fireplaces)	
e) <input type="checkbox"/>	No Combustion Appliances	

HEATING SYSTEM	
<input checked="" type="checkbox"/>	Forced Air
<input type="checkbox"/>	Non Forced Air
<input type="checkbox"/>	Electric Space Heat

HOUSE TYPE		9.32.1(2)
<input checked="" type="checkbox"/>	I Type a) or b) appliance only, no solid fuel	
<input type="checkbox"/>	II Type I except with solid fuel (including fireplaces)	
<input type="checkbox"/>	III Any Type c) appliance	
<input type="checkbox"/>	IV Type I, or II with electric space heat	
<input type="checkbox"/>	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
<input type="checkbox"/>	1 Exhaust only/Forced Air System	
<input type="checkbox"/>	2 HRV with Ducting/Forced Air System	
<input checked="" type="checkbox"/>	3 HRV Simplified/connected to forced air system	
<input type="checkbox"/>	4 HRV with Ducting/non forced air system	
<input type="checkbox"/>	Part 6 Design	

TOTAL VENTILATION CAPACITY		9.32.3.3(1)
Basement + Master Bedroom	2 @ 21.2 cfm	42.4 cfm
Other Bedrooms	3 @ 10.6 cfm	31.8 cfm
Kitchen & Bathrooms	6 @ 10.6 cfm	63.6 cfm
Other Rooms	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A.	TOTAL	201.4 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	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	201.4	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	46.4	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 65H
Location:	BSMT
155.0 cfm	3.0 sones
<input checked="" type="checkbox"/>	HVI Approved

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

SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
ENS-2	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
ENS-3	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
ENS-4	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 65H	
155 cfm high	64 cfm low	
75 % Sensible Efficiency	<input checked="" type="checkbox"/> 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:	September-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations									
Formula Sheet (For Air Leakage / Ventilation Calculation)									
LO#: 77477		Model: 5004 THE BEAUMONT		Builder: GOLD PARK HOMES		Date: 9/10/2018			
Volume Calculation						Air Change & Delta T Data			
House Volume		Floor Area (ft²)		Floor Height (ft)		Volume (ft³)		WINTER NATURAL AIR CHANGE RATE	
Level									SUMMER NATURAL AIR CHANGE RATE
Bsmt	2007	10	20070					0.340	0.124
First	2007	11	22077						
Second	2262	9	20358						
Third	0	9	0						
Fourth	0	9	0						
Total:		62,505.0 ft³							
Total:		1769.9 m³							
Design Temperature Difference									
		Tin °C		Tout °C		ΔT °C		ΔT °F	
Winter DTDh		22		-20		42		76	
Summer DTDc		22		31		9		16	
6.2.6 Sensible Gain due to Air Leakage									
$HG_{satb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$									
0.340	x	491.65	x	42 °C	x	1.2	=	8471 W	
								=	28902 Btu/h
5.2.3.1 Heat Loss due to Air Leakage									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$									
0.340	x	491.65	x	42 °C	x	1.2	=	8471 W	
								=	28902 Btu/h
5.2.3.2 Heat Loss due to Mechanical Ventilation									
$HL_{p-airb} = PVC \times DTD_h \times 1.08 \times (1 - E)$									
155 CFM	x	76 °F	x	1.08	x	0.25	=	3181 Btu/h	
								=	661 Btu/h
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)									
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{qgr} + HL_{pgr}) \div (HL_{qclvl} + HL_{bgclvl})\}$									
Level		Level Factor (LF)		HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)		Level Conductive Heat Loss: (HL_{clvl})		Air Leakage Heat Loss Multiplier (LF x HLairbv / HLclvl)	
1	0.5					11,716		1.234	
2	0.3					22,893		0.379	
3	0.2			28,902		16,622		0.348	
4	0					0		0.000	
5	0					0		0.000	
<p>*HLairbv = Air leakage heat loss + ventilation heat loss</p> <p>*For a balanced or supply only ventilation system HLairve = 0</p>									

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 5004 THE BEAUMONT**BUILDER:** GOLD PARK HOMES**SFQT:** 4184**LO#** 77477**SITE:** PINE VALLEY & TESTON**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 (ft ³):	62505.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.35	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 74.0 ft	WIDTH: 41.0 ft	EXPOSED PERIMETER:	230.0 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	-

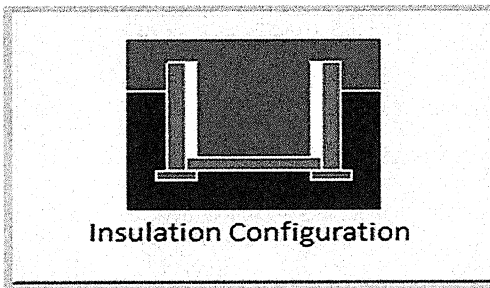
INDIVIDUAL BCIN: 19669

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):	22.6	 Insulation Configuration
Floor Width (m):	12.5	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	3.4	
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):		2353

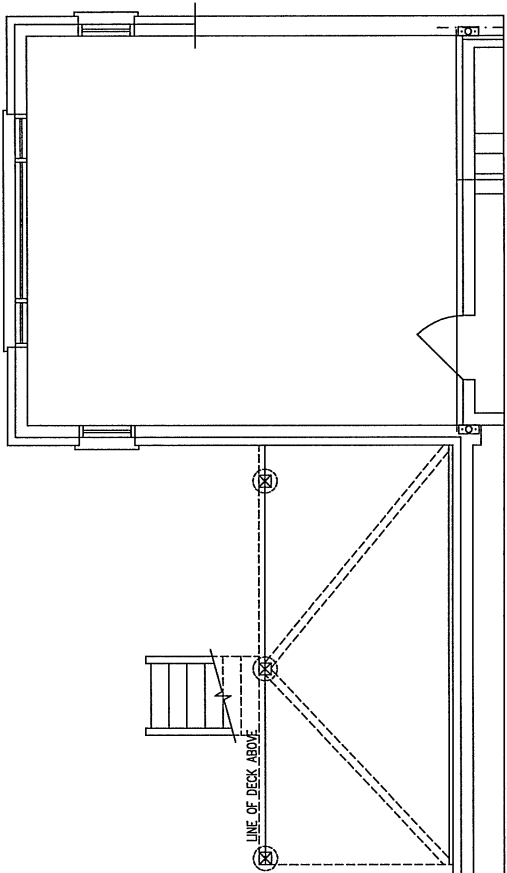
TYPE: 5004 THE BEAUMONT
LO# 77477

Air Infiltration Residential Load Calculator

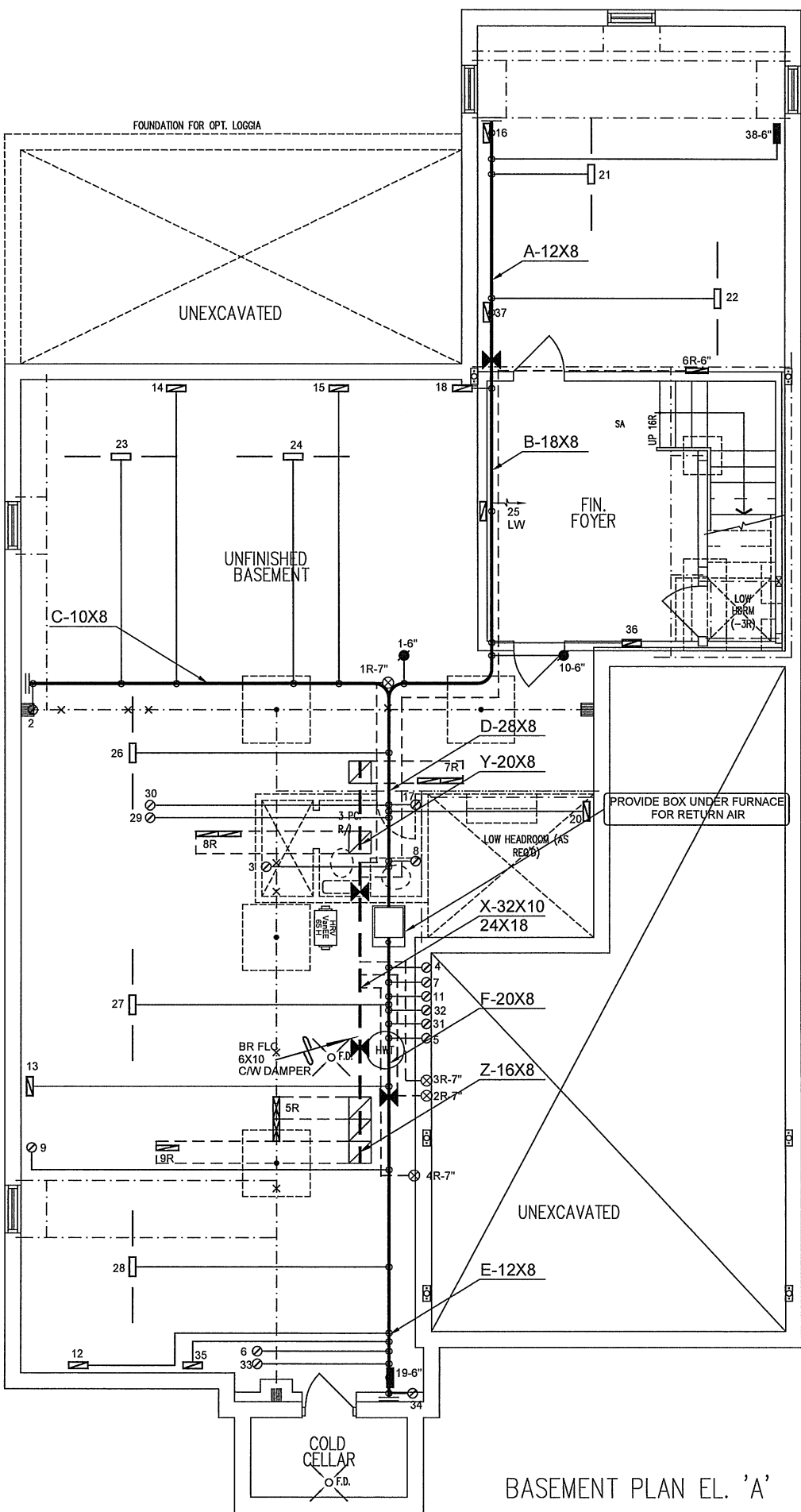
Supplemental tool for CAN/CSA-F280

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):	1769.9			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2359.4 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	73.2	73.2		
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):	0.124			

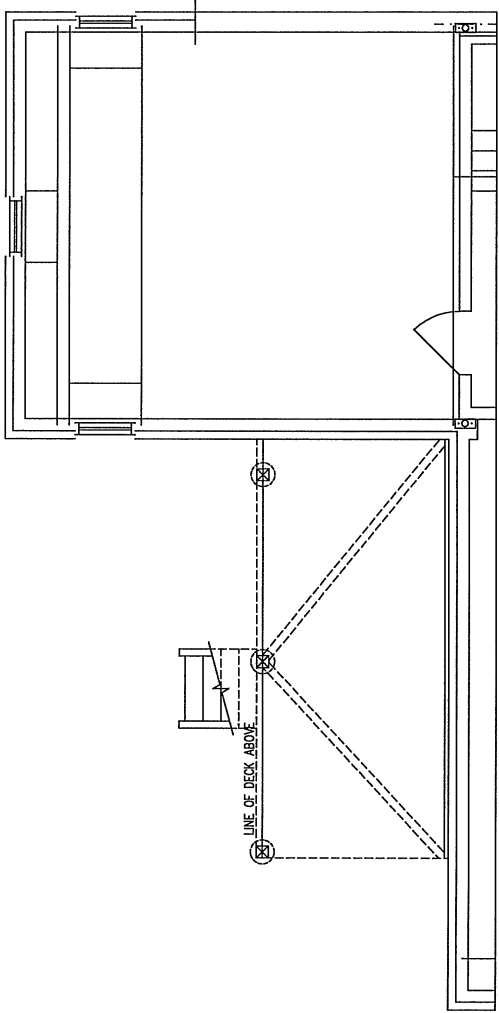
TYPE: 5004 THE BEAUMONT
LO# 77477



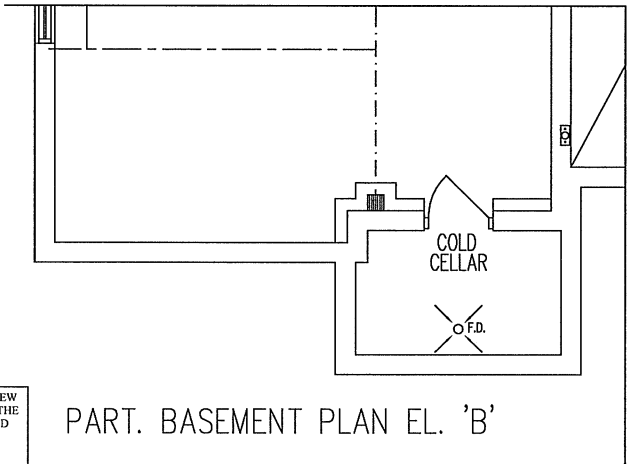
PART. BASEMENT PLAN ELEV. 'A', 'B' & 'C' - L.O.D. COND.



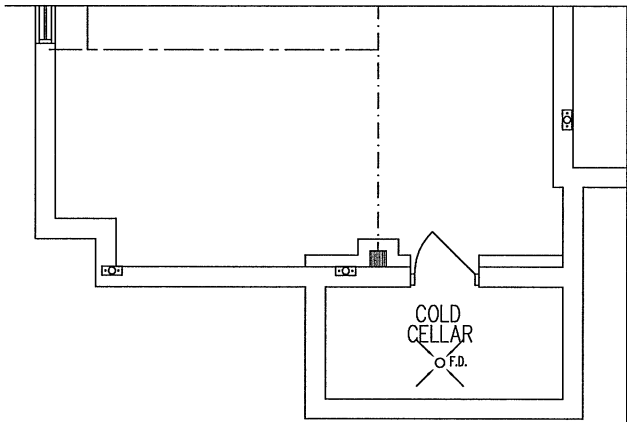
BASEMENT PLAN EL. 'A'



PART. BASEMENT PLAN ELEV. 'A', 'B' & 'C' - W.O.D. COND.



PART. BASEMENT PLAN EL. 'B'



PART. BASEMENT PLAN EL. 'C'

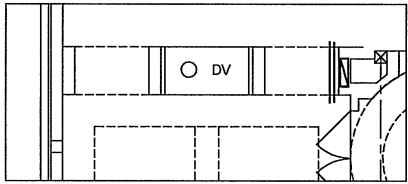
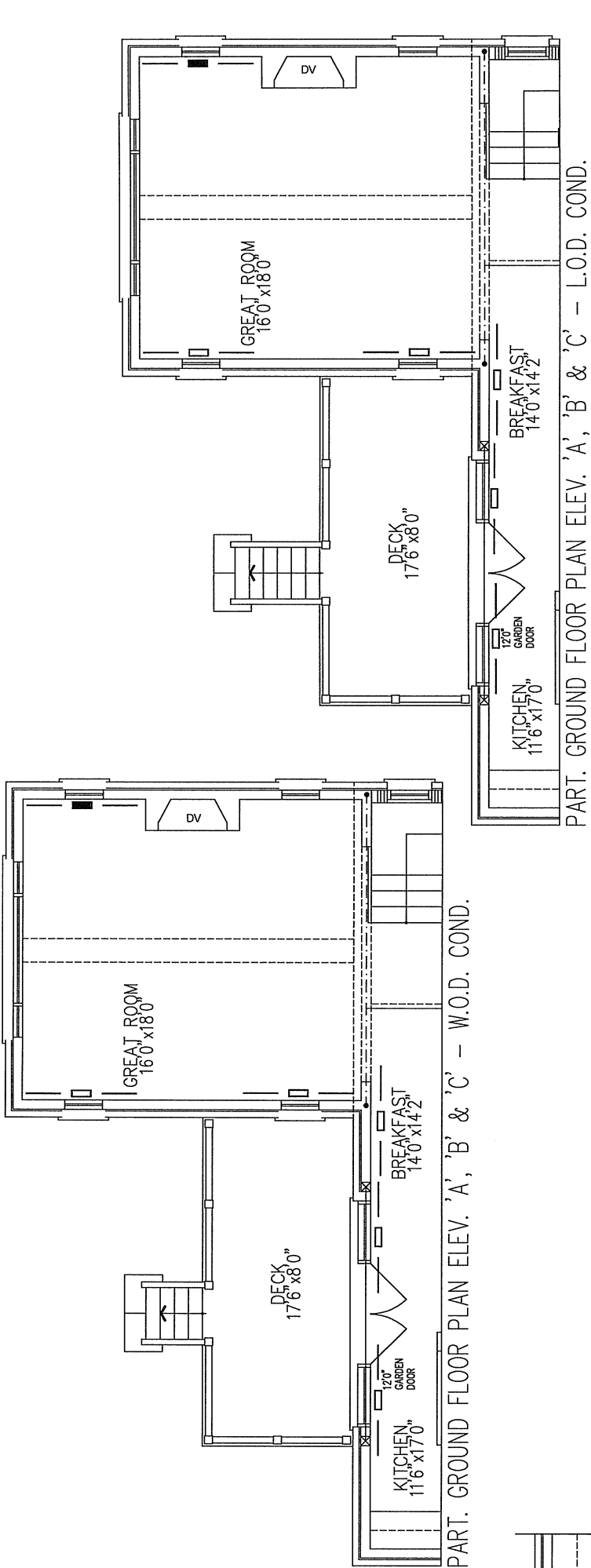
CSA-F280-12
PACKAGE A1

I MICHAEL O'ROURKE HAVE REVIEW
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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.

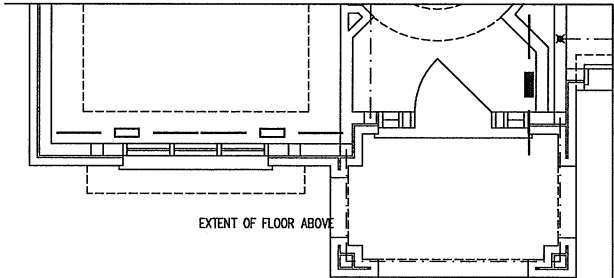
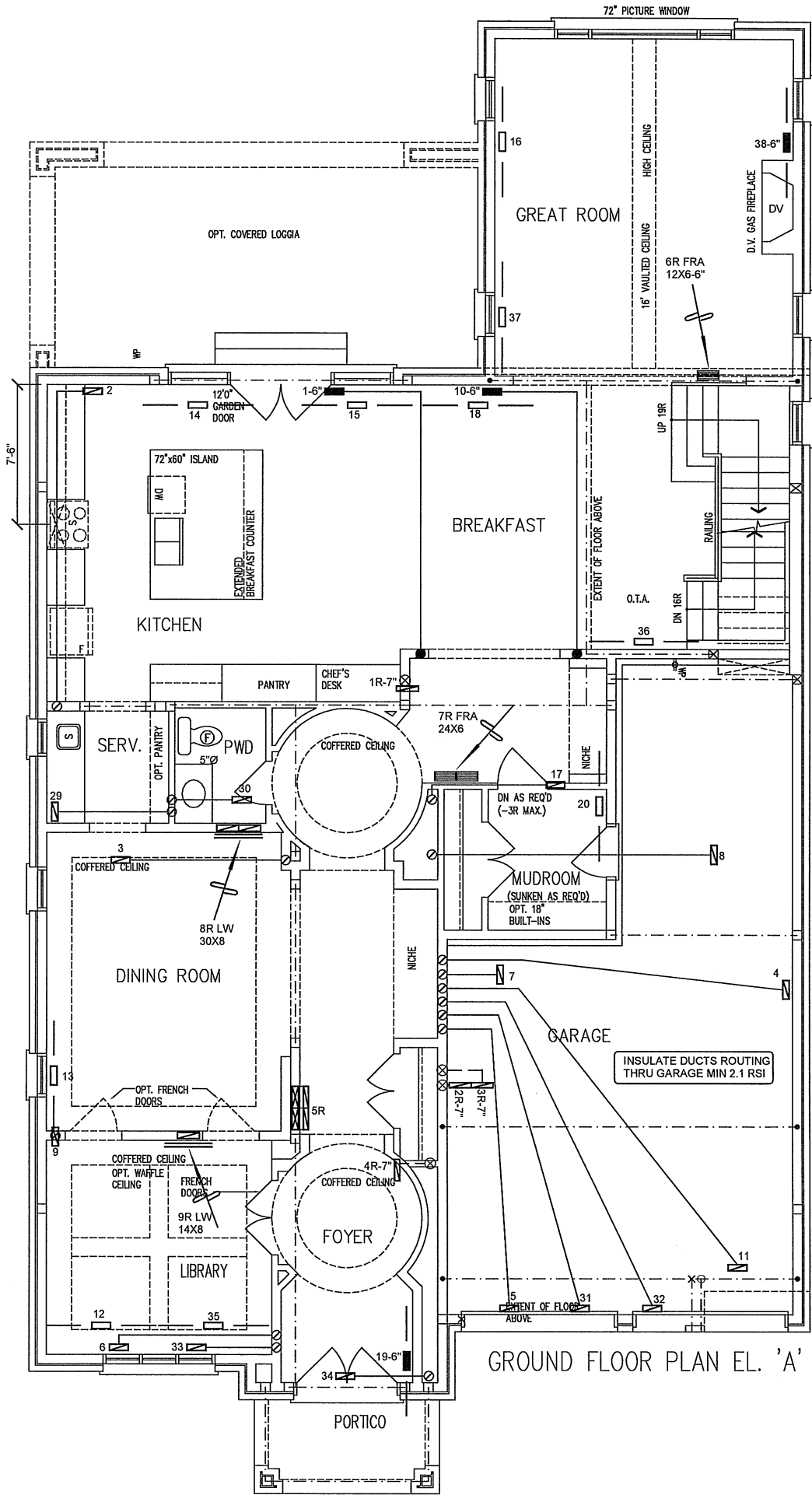
HVAC LEGEND							3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	DECK CONDITIONS ADDED
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR 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		

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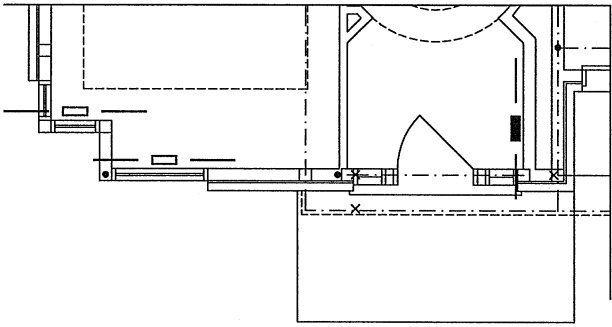
Client		<div><p>375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</p><p>Installation to comply with the latest Ontario Building Code. All supply 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.</p></div>	HEAT LOSS 84746 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GOLD PARK HOMES			MAKE LENNOX		3RD FLOOR			BASEMENT	
Project Name			MODEL EL296110XE60C		2ND FLOOR			HEATING	
PINE VALLEY & TESTON VAUGHAN, ONTARIO			INPUT 110 MBTU/H		1ST FLOOR			LAYOUT	
THE BEAUMONT			OUTPUT 106 MBTU/H		BASEMENT			Date	JAN/2018
5004			COOLING 5.0 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	1/8" = 1'-0"
4184 sqft			FAN SPEED 1955 cfm @ 0.6" w.c.					BCIN# 19669	
								LO#	77477



PART. OPT. LIBRARY GROUND FLOOR PLAN EL. 'A', 'B' & 'C'



PART. GROUND FLOOR PLAN EL. 'B'



PART. GROUND FLOOR PLAN EL. 'C'

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.

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HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

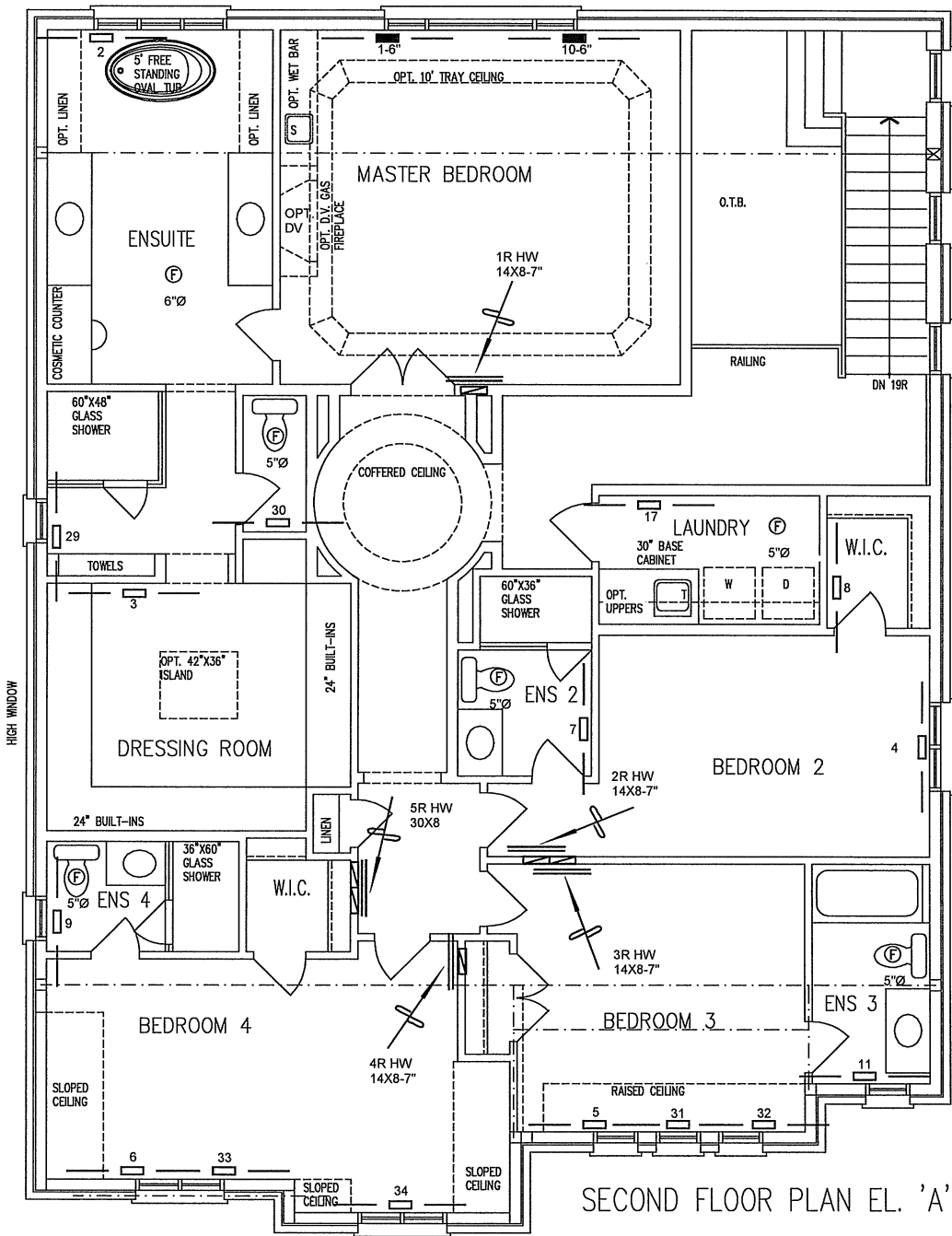
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Client
GOLD PARK HOMES
Project Name
**PINE VALLEY & TESTON
VAUGHAN, ONTARIO**
**THE BEAUMONT
5004** **4184 sqft**

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.

Sheet Title
**FIRST FLOOR
HEATING
LAYOUT**
Date
JAN/2018
Scale
1/8" = 1'-0"
BCIN# 19669
LO# 77477



PART. SECOND FLOOR PLAN EL. 'B'

PART. SECOND FLOOR PLAN EL. 'C'

CSA-F280-12
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GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO			Date JAN/2018	
THE BEAUMONT 5004 4184 sqft		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 1/8" = 1'-0"	
			BCIN# 19669	
			LO#	77477