


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@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]			
<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: 4002 THE VALLEYVIEW 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.			
October 5, 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: 4002 THE VALLEYVIEW GFA: 2568 DATE: Oct-18 LOW: 77457 WINTER NATURAL AIR CHANGE RATE: 0.340 SUMMER NATURAL AIR CHANGE RATE: 0.118 HEAT LOSS AT °F: 76 HEAT GAIN AT °F: 14 CSA-F280-12 SB-12 PACKAGE A1

ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	ENS-2/3	COMP	ENS-4	LOD	BAS
GRS.WALL AREA	LOSS GAIN	400	225	64	342	330	117	99	128	64	420	1470
GLAZING	LOSS GAIN	0	0	0	0	0	0	0	0	0	0	0
NORTH	21.3 16.3	0	0	0	0	0	18	0	0	8	0	0
EAST	21.3 41.8	0	0	0	45	1064	383	0	0	170	0	0
SOUTH	21.3 25.2	0	14	0	9	227	0	24	0	0	0	0
WEST	21.3 41.8	36	20	0	0	0	0	0	21	0	0	0
SKYLT.	37.2 102.0	0	0	0	0	0	0	0	0	0	0	0
DOORS	25.2 4.6	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.6 0.8	364	191	862	1286	227	99	75	106	46	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.6 0.7	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3 0.6	320	166	200	262	102	280	163	186	120	0	0
NO ATTIC EXPOSED CLG	2.7 1.3	10	27	0	60	82	0	0	0	0	0	0
EXPOSED FLOOR	2.6 0.5	0	0	0	30	14	0	163	390	20	0	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0
SUB TOTAL HT LOSS	2829	2007	1776	333	2538	3117	1169	1432	1131	661	1260	7407
SUB TOTAL HT GAIN	0.20 0.26	730	488	86	768	804	289	370	292	160	0	0
LEVEL FACTOR / MUL TIPLIER	165	0	0	0	370	392	0	180	0	- 73	0	0
AIR CHANGE HEAT LOSS	0	0	0	0	1	1	1	0	0	0	0	0
AIR CHANGE HEAT GAIN	240	2	480	0	0	0	0	0	0	0	0	0
DUCT GAIN	683	3569	2234	419	4065	4313	1467	1982	1423	803	1260	5803
HEAT GAIN PEOPLE	4335	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	240	2	480	0	0	0	0	0	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H	4335	0	0	0	0	0	0	0	0	0	0	0

ROOM USE	EXP. WALL CLG. HT.	DIN	KT/GT	LAUN	PWD	FOY	LOD	BAS
GRS.WALL AREA	LOSS GAIN	143	980	276	78	495	420	1470
GLAZING	LOSS GAIN	0	0	0	0	0	0	0
NORTH	21.3 16.3	26	0	10	0	0	0	0
EAST	21.3 41.8	0	0	0	0	35	0	0
SOUTH	21.3 25.2	0	24	0	8	0	0	0
WEST	21.3 41.8	0	117	0	170	0	0	0
SKYLT.	37.2 102.0	0	0	0	0	0	20	0
DOORS	25.2 4.6	0	0	0	0	0	0	0
NET EXPOSED WALL	4.6 0.8	117	849	206	312	57	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.6 0.7	0	0	0	0	0	0	0
EXPOSED CLG	1.3 0.6	0	0	0	0	0	232	0
NO ATTIC EXPOSED CLG	2.7 1.3	0	10	0	0	0	0	0
EXPOSED FLOOR	2.6 0.5	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0
SUB TOTAL HT LOSS	1075	0	6817	1616	483	3213	0	5803
SUB TOTAL HT GAIN	517	0	6200	454	258	1912	1260	7407
LEVEL FACTOR / MUL TIPLIER	0.30 0.44	0.30	0.30	0.30	0.30	0.30	0.30	0.30
AIR CHANGE HEAT LOSS	475	0	3011	802	213	1419	0	9866
AIR CHANGE HEAT GAIN	42	0	509	37	21	167	0	116
DUCT LOSS	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	683	0	683	683	0	0	0	0
TOTAL HT LOSS BTU/H	1550	0	9827	2617	696	4633	1260	17274
TOTAL HT GAIN x 1.3 BTU/H	1616	0	9609	1626	363	2590	1260	695

TOTAL HEAT GAIN BTU/H: 41511 TONS: 3.46 LOSS DUE TO VENTILATION LOAD BTU/H: 3161 STRUCTURAL HEAT LOSS: 58114 TOTAL COMBINED HEAT LOSS BTU/H: 61295

Michael O'Rourke

**SITE NAME: PINE VALLEY & TESTON
BUILDER: GOLD PARK HOMES**

TYPE: 4002 THE VALLEYVIEW

DATE: Oct-18

GFA: 2988 LO# 77457

HEATING CFM	1255	COOLING CFM	1255		
TOTAL HEAT LOSS	58,114	TOTAL HEAT GAIN	40,934		
AIR FLOW/RATE CFM	21.6	AIR FLOW/RATE CFM	30.66		
RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	12	8
R/A	0	0	0	5	2
					1

EL296UH090XE48C
FAN SPEED
LOW 0
MEDIUM 1105
HIGH 1255
AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,000
DESIGN CFM = 1255
CFM @ 6" E.S.P.
TEMPERATURE RISE 63 °F

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure for s/a & r/a 0.35
plenum pressure s/a 0.18
max s/a diff press. loss 0.02
min adjusted pressure s/a 0.16

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
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	ENS-2/3	COMP	BED-2	MBR	ENS-4	DIN	KT/GT	KT/GT	KT/GT	KT/GT	LAUN	PWD	FOY	BED-3	BAS	BAS	BAS	BAS
RM LOSS MBH	1.78	2.23	0.42	2.03	2.16	1.46	1.98	1.42	2.03	1.78	0.80	1.55	2.46	2.46	2.46	2.46	2.62	0.70	4.83	2.16	3.71	3.71	3.71	3.71
CFM PER RUN HEAT	38	48	9	44	47	31	43	31	44	38	17	33	53	53	53	53	57	15	100	47	80	80	80	80
RM GAIN MBH	2.17	2.02	0.12	2.64	2.63	1.95	1.90	1.89	2.64	2.17	0.39	1.62	2.40	2.40	2.40	2.40	1.53	0.36	2.89	2.63	0.40	0.40	0.40	0.40
CFM PER RUN COOLING	66	62	4	81	81	60	58	58	81	66	12	50	74	74	74	74	47	11	82	81	12	12	12	12
ADJUSTED PRESSURE	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.17
EQUIVALENT LENGTH	210	150	150	180	170	180	140	190	190	120	180	130	130	130	150	130	200	210	140	160	140	170	120	150
TOTAL EFFECTIVE LENGTH	260	208	208	241	221	218	188	232	257	155	227	140	171	178	190	160	211	258	184	217	180	197	148	178
ADJUSTED PRESSURE	0.07	0.08	0.08	0.07	0.07	0.08	0.09	0.09	0.06	0.11	0.08	0.12	0.1	0.1	0.09	0.11	0.08	0.07	0.09	0.07	0.1	0.09	0.12	0.1
ROUND DUCT SIZE	5	5	4	6	6	5	5	5	6	5	4	4	5	5	5	5	5	5	4	6	5	5	5	5
HEATING VELOCITY (ft/min)	279	352	103	224	240	228	316	228	224	279	195	379	389	389	389	389	419	172	510	240	587	587	587	587
COOLING VELOCITY (ft/min)	485	455	46	413	413	441	426	426	413	485	138	574	543	543	543	543	345	126	413	413	88	88	88	88
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10
TRUNK	A	A	A	C	D	B	D	D	C	B	D	B	A	A	A	A	B	C	C	D	A	A	B	B

All S/A diffusers 4"x10" unless noted otherwise on layout.
All S/A runs 5'Ø unless noted otherwise on layout.

RUN #	25	BAS
ROOM NAME	BAS	
RM LOSS MBH	3.71	
CFM PER RUN HEAT	80	
RM GAIN MBH	0.40	
CFM PER RUN COOLING	12	
ADJUSTED PRESSURE	0.17	
EQUIVALENT LENGTH	43	
TOTAL EFFECTIVE LENGTH	150	
ADJUSTED PRESSURE	0.09	
ROUND DUCT SIZE	5	
HEATING VELOCITY (ft/min)	587	
COOLING VELOCITY (ft/min)	88	
OUTLET GRILL SIZE	3X10	
TRUNK	C	

RUN #	25	BAS
ROOM NAME	BAS	
RM LOSS MBH	3.71	
CFM PER RUN HEAT	80	
RM GAIN MBH	0.40	
CFM PER RUN COOLING	12	
ADJUSTED PRESSURE	0.17	
EQUIVALENT LENGTH	43	
TOTAL EFFECTIVE LENGTH	150	
ADJUSTED PRESSURE	0.09	
ROUND DUCT SIZE	5	
HEATING VELOCITY (ft/min)	587	
COOLING VELOCITY (ft/min)	88	
OUTLET GRILL SIZE	3X10	
TRUNK	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)	RETURN AIR TRUNK SIZE	TRUNK	CFM	STATIC PRESS	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	414	0.07	10.4	12		8	621	0	0.00	0	0	0	TRUNK O	0	0.05	0	0	0	8
TRUNK B	786	0.07	13.2	20		8	707	0	0.00	0	0	0	TRUNK P	0	0.05	0	0	0	8
TRUNK C	283	0.06	9.4	10		8	509	0	0.00	0	0	0	TRUNK Q	0	0.05	0	0	0	8
TRUNK D	468	0.06	11.3	14		8	602	0	0.00	0	0	0	TRUNK R	0	0.05	0	0	0	8
TRUNK E	0	0.00	0	0		8	0	0	0.00	0	0	0	TRUNK S	0	0.05	0	0	0	8
TRUNK F	0	0.00	0	0		8	0	0	0.00	0	0	0	TRUNK T	0	0.05	0	0	0	8
TRUNK G	0	0.00	0	0		8	0	0	0.00	0	0	0	TRUNK U	0	0.05	0	0	0	8
TRUNK H	0	0.00	0	0		8	0	0	0.00	0	0	0	TRUNK V	0	0.05	0	0	0	8
TRUNK I	0	0.00	0	0		8	0	0	0.00	0	0	0	TRUNK W	0	0.05	0	0	0	8
TRUNK J	0	0.00	0	0		8	0	0	0.00	0	0	0	TRUNK X	1255	0.05	17.2	28	0	10
TRUNK K	0	0.00	0	0		8	0	0	0.00	0	0	0	TRUNK Y	475	0.05	11.9	16	0	8
TRUNK L	0	0.00	0	0		8	0	0	0.00	0	0	0	TRUNK Z	610	0.05	13.1	20	0	8
TRUNK M	0	0.00	0	0		8	0	0	0.00	0	0	0	DROP	1255	0.05	17.2	24	0	12

RETURN AIR #	TRUNK	CFM	STATIC PRESS	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK	CFM	STATIC PRESS	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
1	135	0.15	110	120	120	175	0	0	0	0	0	0
2	51	0.15	58	57	34	35	1	1	0.15	1	1	18
3	235	0.205	205	165	185	185	1	1	0	0	0	215
4	286	0.05	263	222	219	220	1	1	14.80	14.80	14.80	0.06
5	7.5	6.6	6.6	6.6	6.6	7.5	0	0	0	0	0	8
6	8	8	8	8	8	8	0	0	0	0	0	8
7	14	14	14	14	14	14	0	0	0	0	0	24

TYPE: 4002 THE VALLEYVIEW
SITE NAME: PINE VALLEY & TESTON

LO # 77457

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	5 @ 10.6 cfm	53 cfm
Other Rooms	5 @ 10.6 cfm	53.0 cfm
Table 9.32.3.A. TOTAL		180.2 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
TOTAL		79.5 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	180.2	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	25.2	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
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-2/3	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-4	QTXEN050C	50	<input checked="" type="checkbox"/>
PWD	QTXEN050C	50	<input checked="" type="checkbox"/>

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:	October-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations									
Formula Sheet (For Air Leakage / Ventilation Calculation)									
LO#: 77457		Model: 4002 THE VALLEYVIEW		Builder: GOLD PARK HOMES		Date: 10/5/2018			
Air Change & Delta T Data									
House Volume		Level		Floor Area (ft²)		Floor Height (ft)		Volume (ft³)	
		Bsmt		1322		10		13220	
First		1322		11		14542		Winter DTDh Summer DTDc	
		1657		9		14913			
Second		0		0		0		Tin °C Tout °C ΔT °C ΔT °F	
		0		0		0			
Fourth		0		0		0		Winter DTDh Summer DTDc	
		0		0		0			
Total:		Total:		42,675.0 ft³		Total:		Winter DTDh Summer DTDc	
		Total:		1208.4 m³		Total:			
Design Temperature Difference									
Winter DTDh		Tin °C		Tout °C		ΔT °C		ΔT °F	
		22		-20		42			
Summer DTDc		23		31		8		76 14	
		23		31		8			
6.2.6 Sensible Gain due to Air Leakage									
$HG_{sdlb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$									
0.340		x		335.67		x		1.2	
=		0.118		x		8 °C		x 1.2 = 363 W	
=		19733 Btu/h		x		1.08		x 0.25 = 578 Btu/h	
6.2.7 Sensible heat Gain due to Ventilation									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$									
155 CFM		x		76 °F		x		1.08	
=		155 CFM		x		14 °F		x 0.25 = 578 Btu/h	
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)									
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{qgr} + HL_{bgr}) \div (HL_{qlevel} + HL_{blevel})\}$									
Level		Level Factor (LF)		HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)		Level Conductive Heat Loss: (HL _{level})		Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)	
1		0.5		19,733		8,668		1.138	
2		0.3				13,404		0.442	
3		0.2				15,294		0.258	
4		0				0		0.000	
5		0		0		0		0.000	
*HLairbv = Air leakage heat loss + ventilation heat loss									
*For a balanced or supply only ventilation system HLairve = 0									

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 4002 THE VALLEYVIEW**BUILDER:** GOLD PARK HOMES**SFQT:** 2968**LO#** 77457**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)	74

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):	42675.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 55.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	174.0 ft

2012 OBC - COMPLIANCE PACKAGE		Compliance Package	
Component		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	-

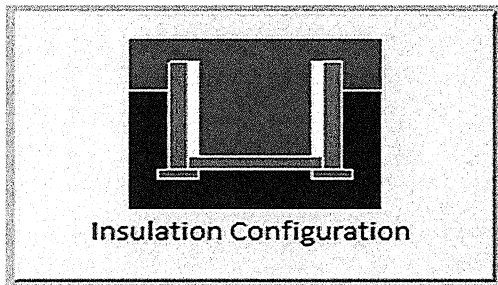
INDIVIDUAL BCIN: 19669

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):	16.8	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	2.4	
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):		1700

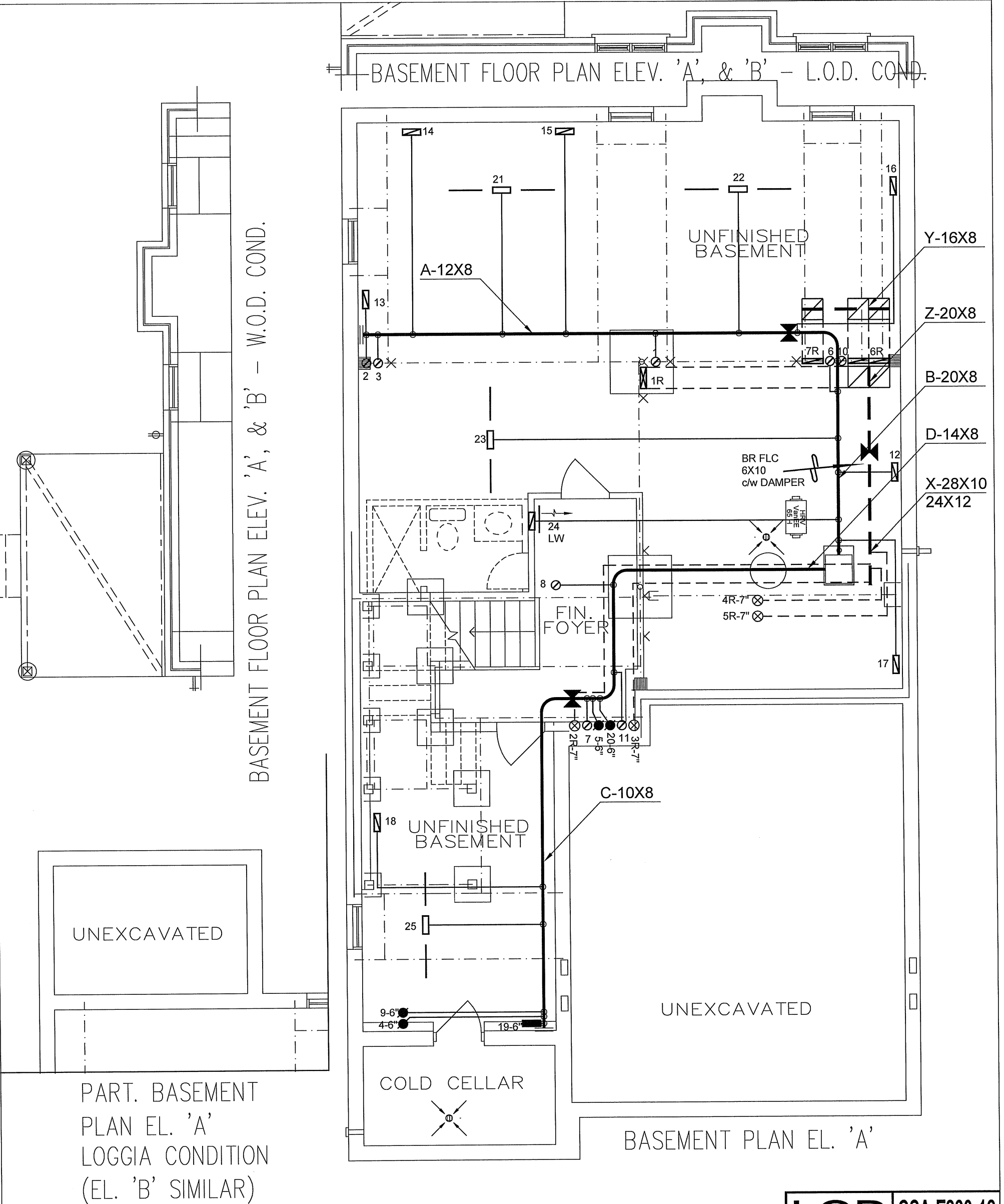
TYPE: 4002 THE VALLEYVIEW
LO# 77457

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):	1208.4			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1610.9 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):	0.118			

TYPE: 4002 THE VALLEYVIEW
LO# 77457



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.

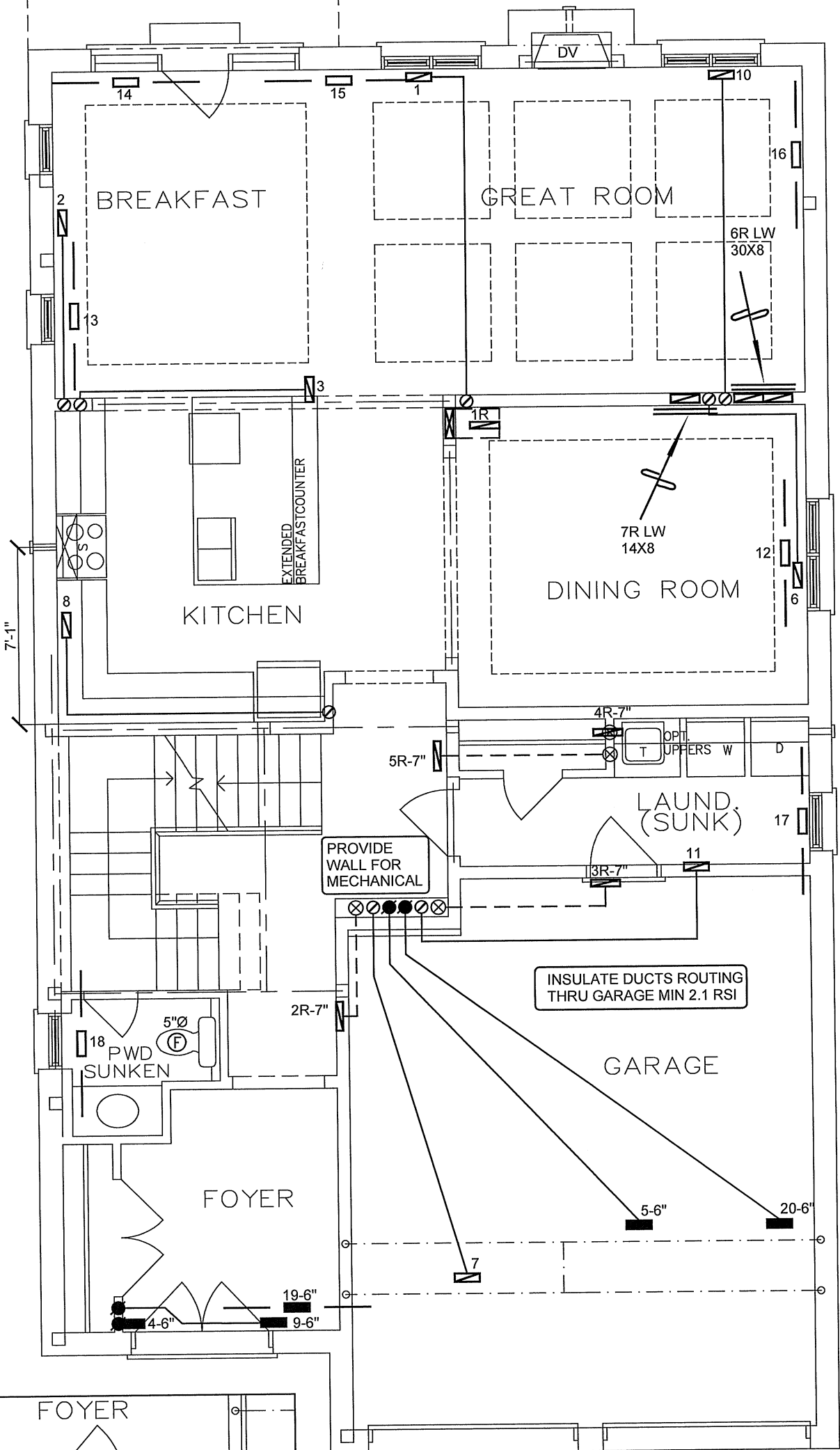
LOD	CSA-F280-12
WOD	PACKAGE A1

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	OCT/2018
	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		

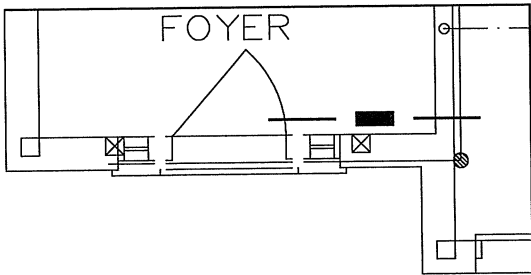
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Client		<div>HVACDESIGNS LTD.</div> <div>375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div>		HEAT LOSS 61295 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS		BASEMENT HEATING LAYOUT			
GOLD PARK HOMES				3RD FLOOR							
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO		MAKE LENNOX		2ND FLOOR		12	5			3	
		MODEL EL296UH090XE48C		1ST FLOOR		8	2			2	
THE VALLEYVIEW 4002 2968 sqft		INPUT 88 MBTU/H		BASEMENT		5	1	0	Date	JAN/2018	
		OUTPUT 85 MBTU/H		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"
		COOLING 3.5 TONS								BCIN# 19669	
		FAN SPEED 1255 cfm @ 0.6" w.c.								LO# 77457	

OPT. COVERED LOGGIA



PART. GROUND FLOOR
PLAN EL. 'A'
LOGGIA CONDITION
(EL. 'B' SIMILAR)




GROUND FLOOR PLAN EL. 'B'

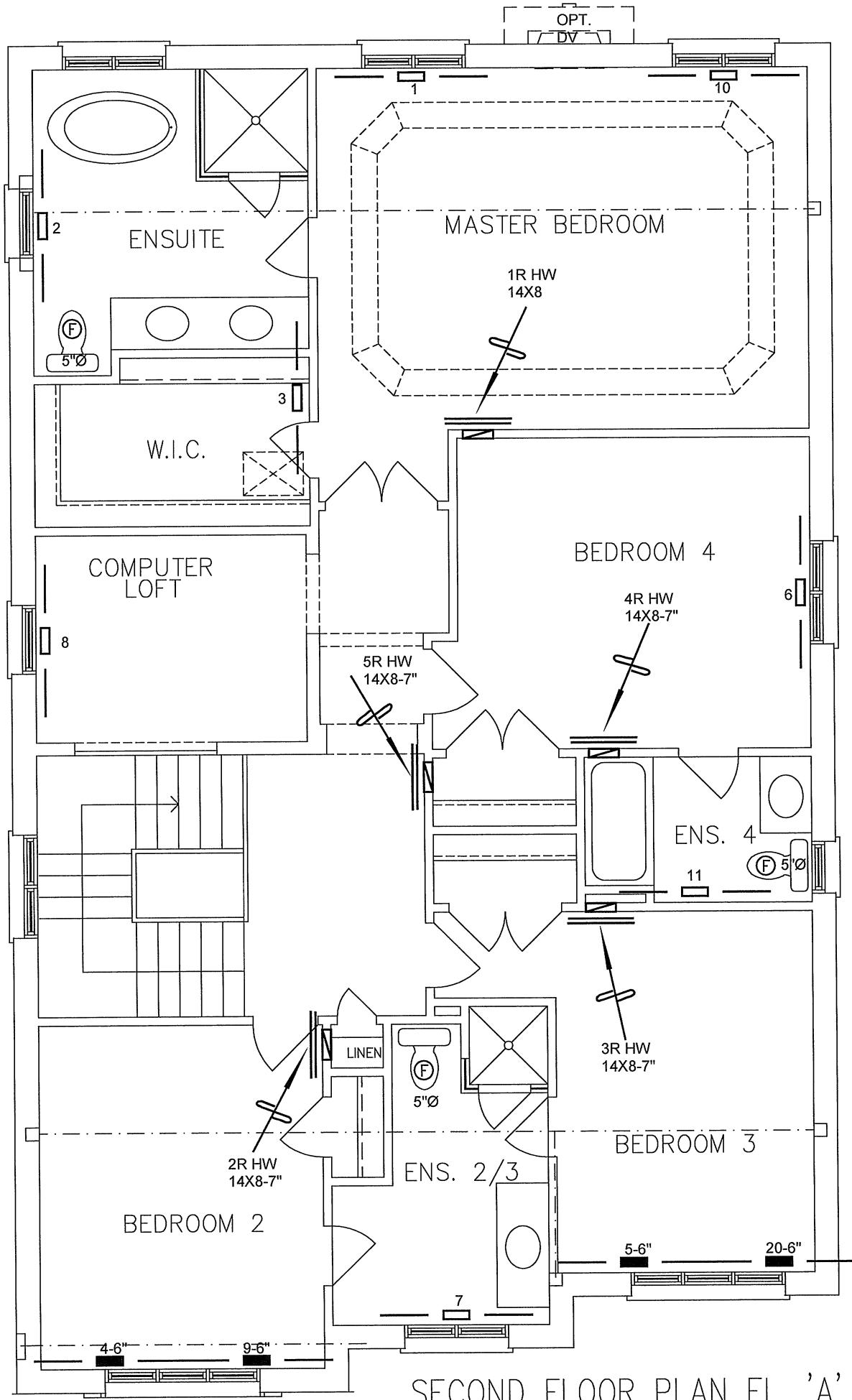
LOD CSA-F280-12
WOD PACKAGE A1

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AND TAKE RESPONSIBILITY FOR THE
DESIGN WORK AND AM QUALIFIED
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BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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Client		<div></div> <div>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</div> <div>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.</div>	Sheet Title	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
THE VALLEYVIEW 4002			BCIN# 19669	
2968 sqft		LO#	77457	



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.		
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GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
THE VALLEYVIEW 4002			BCIN# 19669	
2968 sqft		LO#	77457	