

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]				
☐ 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: 4005 THE EDGEBROOK OPT 5 BED Project: PINE VALLEY & TESTON		
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.				
January 24, 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 BUILDER: GOLD PARK HOMES			OPT 5 BED			DATE: Jan-18			WINTER NATURAL AIR CHANGE RATE			HEAT LOSS ΔT °F.			CSA-F280-42 SB-12 PACKAGE A1		
TYPE: 4005 THE EDGEBROOK			GFA: 3481			LO# 7462			ENS-3/4			BED-5			BATH		
ROOM USE			WIC			BED-2			BED-3			BED-4			ENS-3/4		
MBR			ENS			BED-2			BED-3			BED-4			ENS-3/4		
EXP. WALL			28			13			13			13			8		
CLG. HT.			9			9			9			9			9		
FACTORS			73			118			118			118			73		
GRS.WALL AREA			255			118			118			118			73		
LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN		
GLAZING			LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN			LOSS GAIN		
NORTH			0			0			0			0			0		
EAST			0			0			0			0			0		
SOUTH			0			0			0			0			0		
WEST			0			0			0			0			0		
SKYL.T.			0			0			0			0			0		
DOORS			0			0			0			0			0		
NET EXPOSED WALL			223			99			99			99			65		
NET EXPOSED BSMT WALL ABOVE GR			315			443			443			443			289		
EXPOSED CLG			88			113			208			267			133		
NO A T T I C EXPOSED CLG			239			481			239			267			133		
EXPOSED FLOOR			0			0			0			0			0		
BASEMENT/CRAWL HEAT LOSS			0			0			0			0			0		
SLAB ON GRADE HEAT LOSS			0			0			0			0			0		
SUBTOTAL HT LOSS			1922			1148			1171			1114			624		
SUB TOTAL HT GAIN			1419			551			728			714			348		
LEVEL FACTOR / MULTIPLIER			0.20			0.20			0.20			0.20			0.20		
AIR CHANGE HEAT LOSS			688			411			419			389			223		
AIR CHANGE HEAT GAIN			157			61			80			79			39		
DUCT LOSS			0			156			159			0			0		
DUCT GAIN			0			163			182			0			0		
HEAT GAIN PEOPLE			2			1			240			240			0		
HEAT GAIN APPLANCES/LIGHTS			776			776			776			776			776		
TOTAL HT LOSS BTU/H			2510			1714			1748			1513			847		
TOTAL HT GAIN x 1.3 BTU/H			2050			2328			2605			2352			502		

ROOM USE EXP. WALL CLG. HT.	FACTORS		GRDN 31 12	K/MG 76 12	LAUN 23 12	WIR 8 12	FOY 61 12	BAS 198 9
	LOSS	GAIN						
GRS.WALL AREA	372							
GLAZING	LOSS	GAIN						
NORTH	21.3	16.8	0	0	0	0	0	1208
EAST	21.3	42.4	0	0	0	0	0	255
SOUTH	21.3	25.7	46	979	1184	0	0	202
WEST	21.3	42.4	0	0	0	0	0	0
SKYL.T.	37.2	103.0	0	0	0	0	0	0
DOORS	25.2	5.2	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.9	326	1455	302	0	0	20
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0	605
EXPOSED CLG	1.3	0.6	0	0	0	0	0	105
NO A/TIC EXPOSED CLG	2.7	1.4	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.5	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0
SUB TOTAL HT LOSS	2434		1466	5391	485	546	5522	6784
SUB TOTAL HT GAIN								
LEVEL FACTOR / MUL TIPLIER	0.30	0.44			0.30	0.44	0.30	0.50
AIR CHANGE HEAT LOSS	1071			2812	792	240	2478	127
AIR CHANGE HEAT GAIN			165		54	29		12323
DUCT LOSS	0	0		0	0	0	0	83
DUCT GAIN			0	0	0	0	0	0
HEAT GAIN PEOPLE	240		0	0	0	0	0	0
HEAT GAIN APPLIANCES			776	776	776	0	0	0
TOTAL HT LOSS BTU/H	3505		3155	3203	2590	766	8110	22004
TOTAL HT GAIN x 1.3 BTU/H			3553	10494	1710	379	4563	2093

TOTAL HEAT GAIN BTU/H: 46865 TONS: 3.91 LOSS DUE TO VENTILATION LOAD BTU/H: 3181

STRUCTURAL HEAT LOSS: 658411

TOTAL COMBINED HEAT LOSS BTU/H: 69021

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

OPT 5 BED
TYPE: 4005 THE EDGEBROOK

DATE: Jan-18

GFA: 3481

LO# 77462

HEATING CFM 1525 COOLING CFM 1525
TOTAL HEAT LOSS 65,841 TOTAL HEAT GAIN 46,203
AIR FLOW RATE CFM 23.16 AIR FLOW RATE CFM 33.01

AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 85,000

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

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

DESIGN CFM = 1525
CFM @ 6" E.S.P.
TEMPERATURE RISE 52 °F

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	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	ENS-3/4	BED-5	BED-5	MBR	BATH	GRDN	K/M/G	K/M/G	K/M/G	LAUN	W/R	FOY	FOY	BED-5	BED-5	BAS	BAS
RM LOSS MBH	1.85	2.61	0.59	1.71	1.75	1.51	0.85	2.02	2.02	1.85	0.85	3.50	2.30	2.30	2.30	2.59	0.78	4.06	4.06	2.02	2.30	4.40	4.40
CFM PER RUN HEAT	43	60	14	40	40	35	20	47	47	43	20	81	53	53	53	60	18	94	94	47	53	102	102
RM GAIN MBH	2.26	2.05	0.18	2.33	2.61	2.35	0.50	2.61	2.61	2.26	1.35	3.16	2.62	2.62	2.62	1.71	0.38	2.33	2.33	2.61	2.62	0.42	0.42
CFM PER RUN COOLING	75	68	6	77	86	78	17	86	86	75	44	104	87	87	87	56	13	77	77	86	87	14	14
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.16	0.16	0.17	0.17	0.16	0.16	0.16	0.16	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	64	42	87	52	15	38	22	40	43	79	31	12	42	48	57	67	6	36	25	46	63	36	54
EQUIVALENT LENGTH	150	130	190	170	180	140	170	165	150	130	180	165	140	130	100	180	180	100	120	160	120	150	140
TOTAL EFFECTIVE LENGTH	214	172	277	222	195	178	192	205	193	209	211	177	182	178	157	247	186	136	145	206	183	186	194
ADJUSTED PRESSURE	0.08	0.1	0.06	0.08	0.08	0.1	0.09	0.08	0.08	0.08	0.08	0.09	0.09	0.09	0.09	0.07	0.09	0.12	0.11	0.08	0.09	0.09	0.08
ROUND DUCT SIZE	5	5	4	5	6	5	4	6	6	5	4	6	5	5	5	5	4	5	5	6	5	6	6
HEATING VELOCITY (ft/min)	316	441	161	294	204	257	229	240	240	316	229	413	389	389	389	441	207	690	690	240	389	520	520
COOLING VELOCITY (ft/min)	551	499	69	565	438	573	195	438	438	551	505	530	639	639	639	411	149	565	565	438	639	71	71
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	4X10	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	B	C	A	D	C	C	C	D	D	A	D	C	B	B	B	A	C	D	D	D	A	B	A

RUN #	25	26	27
ROOM NAME	BAS	BAS	BAS
RM LOSS MBH	4.40	4.40	4.40
CFM PER RUN HEAT	102	102	102
RM GAIN MBH	0.42	0.42	0.42
CFM PER RUN COOLING	14	14	14
ADJUSTED PRESSURE	0.16	0.16	0.16
ACTUAL DUCT LGH	44	11	39
EQUIVALENT LENGTH	110	130	160
TOTAL EFFECTIVE LENGTH	154	141	199
ADJUSTED PRESSURE	0.11	0.11	0.08
ROUND DUCT SIZE	6	6	6
HEATING VELOCITY (ft/min)	520	520	520
COOLING VELOCITY (ft/min)	71	71	71
OUTLET GRILL SIZE	4X10	4X10	4X10
TRUNK	B	C	D

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	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)					
TRUNK A	0.06	9.3	10	8	272	0.00	0	0	8	TRUNK O	0	0.05	0	8					
TRUNK B	0.06	13	20	8	678	0.00	0	0	8	TRUNK P	0	0.05	0	8					
TRUNK C	0.06	15.3	28	8	1034	0.00	0	0	8	TRUNK Q	0	0.05	0	8					
TRUNK D	0.08	10.7	14	8	491	0.00	0	0	8	TRUNK R	0	0.05	0	8					
TRUNK E	0.00	0	0	8	0	0.00	0	0	8	TRUNK S	0	0.05	0	8					
TRUNK F	0.00	0	0	8	0	0.00	0	0	8	TRUNK T	0	0.05	0	8					

RETURN AIR #									
AIR VOLUME	1	2	3	4	5	6	7	8	9
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH	79	59	46	35	46	41	45	1	1
EQUIVALENT LENGTH	230	225	190	145	185	185	225	0	0
TOTAL EFFECTIVE LH	309	284	236	180	231	226	270	1	1
ADJUSTED PRESSURE	0.05	0.05	0.06	0.08	0.06	0.07	0.05	0.05	0.05
ROUND DUCT SIZE	7.5	7.5	7	6.5	7	9.9	10	0	0
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8
	X	X	X	X	X	X	X	X	X
	14	14	14	14	14	30	30	0	0

TYPE: 4005 THE EDGEBROOK
SITE NAME: PINE VALLEY & TESTON

LO # 77462
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	4	@ 10.6 cfm	42.4	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	95.4	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 ☒ 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	✓	0.3
ENS-3/4	QTXEN050C	50	✓	0.3
BATH	QTXEN050C	50	✓	0.3
W/R	QTXEN050C	50	✓	0.3

HEAT RECOVERY VENTILATOR

9.32.3.11.

Model: VANEE 65H

155 cfm high 64 cfm low

75 % Sensible Efficiency @ 32 deg F (0 deg C) ☒ HVI Approved

LOCATION OF INSTALLATION

Lot: Concession

Township: Plan:

Address:

Roll # Building Permit #

BUILDER: GOLD PARK HOMES

Name:

Address:

City:

Telephone #:

Fax #:

INSTALLING CONTRACTOR

Name:

Address:

City:

Telephone #:

Fax #:

DESIGNER CERTIFICATION

I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.

Name: HVAC Designs Ltd.

Signature:



HRAI #

001820

Date:

January-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																												
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																												
LO#: 77462		Model: 4005 THE EDGEBROOK		Builder: GOLD PARK HOMES		Date: 1/24/2018																																																						
Volume Calculation				Air Change & Delta T Data																																																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> </thead> <tbody> <tr> <td>Bsmt</td> <td>1573</td> <td>9</td> <td>14314.3</td> </tr> <tr> <td>First</td> <td>1573</td> <td>12</td> <td>18876</td> </tr> <tr> <td>Second</td> <td>2026</td> <td>9</td> <td>18436.6</td> </tr> <tr> <td>Third</td> <td>0</td> <td>9</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></td> <td>51,626.9 ft³</td> </tr> <tr> <td colspan="2">Total:</td> <td></td> <td>1461.9 m³</td> </tr> </tbody> </table>				Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	1573	9	14314.3	First	1573	12	18876	Second	2026	9	18436.6	Third	0	9	0	Fourth	0	9	0	Total:			51,626.9 ft³	Total:			1461.9 m³	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th></th> <th>T_{in} °C</th> <th>T_{out} °C</th> <th>ΔT °C</th> <th>ΔT °F</th> </tr> </thead> <tbody> <tr> <td>Winter DTDh</td> <td>22</td> <td>-20</td> <td>42</td> <td>76</td> </tr> <tr> <td>Summer DTDc</td> <td>22</td> <td>31</td> <td>9</td> <td>16</td> </tr> </tbody> </table>						Design Temperature Difference					T _{in} °C	T _{out} °C	ΔT °C	ΔT °F	Winter DTDh	22	-20	42	76	Summer DTDc	22	31	9	16
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6.2.6 Sensible Gain due to Air Leakage																																																												
$HG_{salb} = LR_{aire} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																																												
0.351		x		406.09		x		1.2		=		548 W																																																
										=		1869 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		16 °F		x		1.08		x		0.25		=		661 Btu/h																																												
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																												
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{aqer} + HL_{bger}) \div (HL_{aqlevel} + HL_{bglevel})\}$																																																												
Level		Level Factor (LF)		HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)		Level Conductive Heat Loss: (HL _{clevel})		Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)																																																				
1		0.5		24,645		9,682		1.273																																																				
2		0.3				16,801		0.440																																																				
3		0.2				13,769		0.358																																																				
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

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 4005 THE EDGEBROOK	OPT 5 BED	BUILDER: GOLD PARK HOMES
SFQT: 3481	LO# 77462	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):	51626.9	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.1 ft
LENGTH: 67.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	198.0 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	-

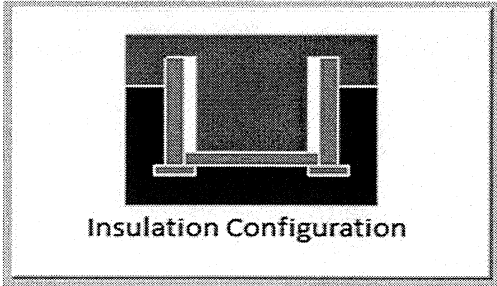
INDIVIDUAL BCIN: 19669

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):	20.4	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.8	
Depth Below Grade (m):	1.86	
Window Area (m ²):	1.1	
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):		1988

TYPE: 4005 THE EDGEBROOK
LO# 77462

OPT 5 BED

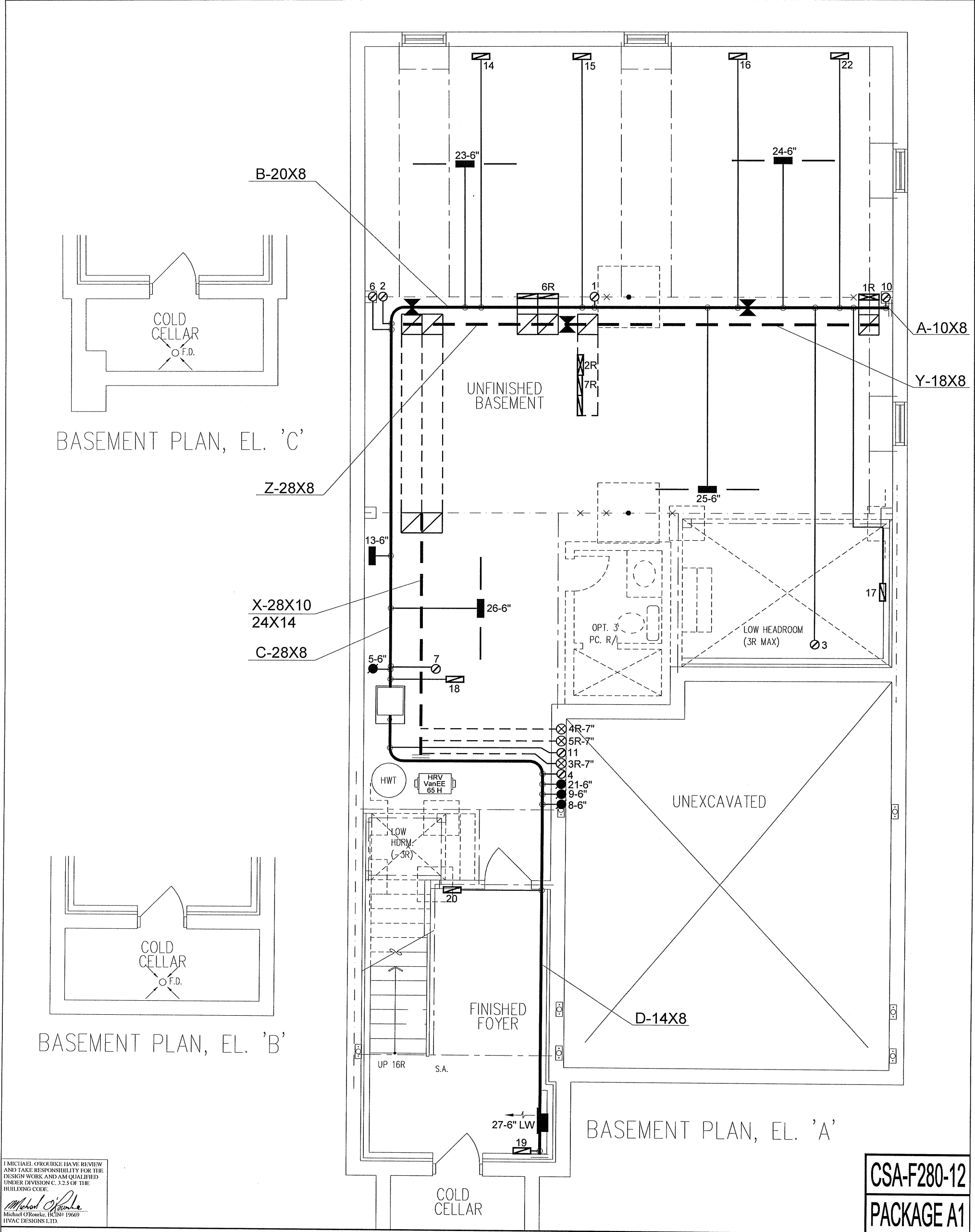
Air Infiltration Residential Load Calculator

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):	7.35			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1461.9			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1948.8 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):	0.351			
Cooling Air Leakage Rate (ACH/H):	0.128			

TYPE: 4005 THE EDGEBROOK
LO# 77462

OPT 5 BED



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, RCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

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		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.	HEAT LOSS 69021 BTU/H UNIT DATA		# OF RUNS	S/A	R/A	FANS	Sheet Title	
GOLD PARK HOMES			MAKE	LENNOX	3RD FLOOR				BASEMENT HEATING LAYOUT	
Project Name			MODEL	EL296UH090XE48C	2ND FLOOR	12	5	3		
PINE VALLEY & TESTON VAUGHAN, ONTARIO			INPUT	88 MBTU/H	1ST FLOOR	9	2	2		
			OUTPUT	85 MBTU/H	BASEMENT	5	1	0	Date	JAN/2018
			COOLING	4.0 TONS	ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A				Scale	3/16" = 1'-0"
			FAN SPEED	1525 cfm @ 0.6" w.c.					BCIN# 19669	
									LO#	77462
THE EDGEBROOK 4005 OPT 5 BED 3481 sqft										

GROUND FLOOR PLAN, EL. 'C'

GROUND FLOOR PLAN, EL. 'B'

GROUND FLOOR PLAN, EL. 'A'

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

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	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			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
THE EDGEBROOK 4005 OPT 5 BED 3481 sqft			BCIN# 19669	
			LO#	77462

