

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 BRAMPTON	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: 7001 OPT IN-LAW Project: VALES OF HUMBER SOUTH	
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.			
April 7, 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: VALES OF HUMBER SOUTH										OPT IN-LAW						DATE Apr-22				WINTER NATURAL AIR CHANGE RATE 0.241								HEAT LOSS ΔT °F. 74				CSA-F280-12							
BUILDER: ROYAL PINE HOMES										TYPE: 7001						GFA: 5543				LO# 95296				SUMMER NATURAL AIR CHANGE RATE 0.078								HEAT GAIN AT °F. 11				SB-12 PERFORMANCE			
ROOM USE				GREAT		KIT		PANT		DIN		LIV		FOY		IN-LAW		PWD-1		PWD-2		MD/LN																	
EXP. WALL				48		32		20		26		30		20		22		3		8		33																	
CLG. HT.				21		11		11		11		11		23		11		11		11		12																	
FACTORS																																							
GRS.WALL AREA		LOSS GAIN		1008		352		220		286		330		460		242		33		88		396																	
GLAZING				LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN																	
NORTH		20.8	15.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25	519	387														
EAST		20.8	41.0	0	0	0	0	0	0	0	0	0	41	852	1683	56	1163	2299	41	852	1683	0	0	0	0	0	0												
SOUTH		20.8	24.4	0	0	0	0	0	0	0	0	39	810	951	0	0	0	0	0	0	0	0	0	0	0	0	0												
WEST		20.8	41.0	192	3989	7881	107	2223	4392	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
SKYLT.		34.1	100.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
DOORS		24.7	3.7	0	0	0	20	493	73	0	0	0	0	0	0	45	1109	164	0	0	0	0	40	986	146														
NET EXPOSED WALL		3.5	0.5	816	2829	419	225	780	116	220	763	113	247	856	127	289	1002	149	359	1245	185	201	697	103	33	114	17												
NET EXPOSED BSMT WALL ABOVE GR		3.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
EXPOSED CLG		1.3	0.6	503	630	280	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
NO ATTIC EXPOSED CLG		2.7	1.2	10	27	12	0	0	0	0	0	0	0	0	0	80	215	95	0	0	0	0	0	0	0	0	0												
EXPOSED FLOOR		2.5	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0												
BASEMENT/CRAWL HEAT LOSS																																							
SLAB ON GRADE HEAT LOSS																																							
SUBTOTAL HT LOSS					7475			3496			763			1667			1854			3732			1549			114													
SUB TOTAL HT GAIN						8593			4581			113		1078			1832			2743			1786			17													
LEVEL FACTOR / MULTIPLIER				0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37		0.30	0.37													
AIR CHANGE HEAT LOSS					2735			1279			279			610			678			1365			567			42													
AIR CHANGE HEAT GAIN						425			227			6		53			91			136			88			1													
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			1			240			0													
HEAT GAIN APPLIANCES/LIGHTS						1367			1367			0		1367			1367			0			1367			0													
TOTAL HT LOSS BTU/H					10210			4775			1042			2276			2532			5098			2115			156													
TOTAL HT GAIN x 1.3 BTU/H						13501			8027			154		3249			4276			3743			4526			23													

ROOM USE																							
EXP. WALL																							
CLG. HT.																							
FACTORS																							
GRS.WALL AREA	LOSS	GAIN																					
GLAZING																							
NORTH	20.8	15.5	0	0	0																		
EAST	20.8	41.0	0	0	0																		
SOUTH	20.8	24.4	0	0	0																		
WEST	20.8	41.0	0	0	0																		
SKYLT.	34.1	100.3	0	0	0																		
DOORS	24.7	3.7	0	0	0																		
NET EXPOSED WALL	3.5	0.5	121	420	62																		
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	0	0	0																		
EXPOSED CLG	1.3	0.6	0	0	0																		
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0																		
EXPOSED FLOOR	2.5	0.4	0	0	0																		
BASEMENT/CRAWL HEAT LOSS			0																				
SLAB ON GRADE HEAT LOSS			0																				
SUBTOTAL HT LOSS																							
SUB TOTAL HT GAIN				420																			
LEVEL FACTOR / MULTIPLIER	0.30	0.37																					
AIR CHANGE HEAT LOSS																							
AIR CHANGE HEAT GAIN																							
DUCT LOSS			0																				
DUCT GAIN			0																				
HEAT GAIN PEOPLE	240		0																				
HEAT GAIN APPLIANCES/LIGHTS																							
TOTAL HT LOSS BTU/H				573																			
TOTAL HT GAIN x 1.3 BTU/H					85																		

TOTAL HEAT GAIN BTU/H: 76760

TONS: 6.40

LOSS DUE TO VENTILATION LOAD BTU/H: 6010

STRUCTURAL HEAT LOSS: 85163

TOTAL COMBINED HEAT LOSS BTU/H: 91173



ROOM USE				ENS-4			SHARED																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
----------	--	--	--	-------	--	--	--------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

TOTAL COMBINED HEAT LOSS BTU/H: 91173

SITE NAME: VALES OF HUMBER SOUTH
BUILDER: ROYAL PINE HOMES

OPT IN-LAW
TYPE: 7001

DATE: Apr-22

GFA: 5543 LO# 95296

FURNACE 1

HEATING CFM 1370 COOLING CFM 1370
TOTAL HEAT LOSS 60,034 TOTAL HEAT GAIN 42,086
AIR FLOW RATE CFM 22.82 AIR FLOW RATE CFM 32.55

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure
for s/a & r/a 0.35

FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 63039 BTUH

#CARRIER

59SP5A-80-16

FAN SPEED

LOW 0

MEDLOW 975

MEDIUM 1200

MEDIUM HIGH 1370

HIGH 1540

AFUE = 97 %
INPUT (BTU/H) = 80,000
OUTPUT (BTU/H) = 78,000

DESIGN CFM = 1370
CFM @ .6" E.S.P.

TEMPERATURE RISE 53 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	21	8
R/A	0	0	0	5	1

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	19	20	21	22	23	24
ROOM NAME	GREAT	GREAT	GREAT	GREAT	GREAT	KIT	KIT	KIT	PANT	DIN	DIN	LIV	LIV	FOY	FOY	IN-LAW	IN-LAW	PWD-1	PWD-2	MD/LN	BAS	BAS	BAS	BAS
RM LOSS MBH.	2.04	2.04	2.04	2.04	2.04	1.59	1.59	1.59	1.04	1.14	1.14	1.27	1.27	2.55	2.55	1.06	1.06	0.16	0.42	3.62	3.40	3.40	3.40	3.40
CFM PER RUN HEAT	47	47	47	47	47	36	36	36	24	26	26	29	29	58	58	24	24	4	10	83	78	78	78	78
RM GAIN MBH.	2.70	2.70	2.70	2.70	2.70	2.68	2.68	2.68	0.15	1.62	1.62	2.14	2.14	1.87	1.87	2.26	2.26	0.02	0.06	2.74	0.21	0.21	0.21	0.21
CFM PER RUN COOLING	88	88	88	88	88	87	87	87	5	53	53	70	70	61	61	74	74	1	2	89	7	7	7	7
ADJUSTED PRESSURE	0.16	0.16	0.16	0.16	0.16	0.16	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	0.16	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	31	25	21	23	28	35	47	53	55	50	62	78	74	78	82	81	87	31	11	18	53	38	21	25
EQUIVALENT LENGTH	100	100	120	140	120	110	90	110	100	120	110	100	120	150	130	120	130	120	170	140	110	100	130	130
TOTAL EFFECTIVE LENGTH	131	125	141	163	148	145	137	163	155	170	172	178	194	228	212	201	217	151	181	158	163	138	151	155
ADJUSTED PRESSURE	0.12	0.13	0.11	0.1	0.11	0.11	0.12	0.1	0.11	0.1	0.1	0.1	0.09	0.08	0.08	0.09	0.08	0.11	0.1	0.11	0.12	0.11	0.11	0.11
ROUND DUCT SIZE	6	6	6	6	6	6	6	6	4	5	5	5	5	5	5	6	6	4	4	6	5	5	5	5
HEATING VELOCITY (ft/min)	240	240	240	240	240	184	184	184	275	191	191	213	213	426	426	122	122	46	115	423	573	573	573	573
COOLING VELOCITY (ft/min)	449	449	449	449	449	444	444	444	57	389	389	514	514	448	448	377	377	11	23	454	51	51	51	51
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10
TRUNK	F	F	F	E	E	E	E	D	D	C	C	A	A	A	B	B	B	E	E	F	D	E	E	F

RUN #	25	26	27	28	29
ROOM NAME	BAS	BAS	BAS	BAS	I-ENS
RM LOSS MBH.	3.40	3.40	3.40	3.40	0.57
CFM PER RUN HEAT	78	78	78	78	13
RM GAIN MBH.	0.21	0.21	0.21	0.21	0.08
CFM PER RUN COOLING	7	7	7	7	3
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	52	58	71	78	60
EQUIVALENT LENGTH	110	110	110	100	120
TOTAL EFFECTIVE LENGTH	162	168	181	178	180
ADJUSTED PRESSURE	0.11	0.1	0.1	0.1	0.1
ROUND DUCT SIZE	5	5	5	5	4
HEATING VELOCITY (ft/min)	573	573	573	573	149
COOLING VELOCITY (ft/min)	51	51	51	51	34
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10
TRUNK	C	C	A	B	B

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE									
TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC
CFM	PRESS.	DUCT	DUCT	(ft/min)		CFM	PRESS.	DUCT	DUCT	(ft/min)		CFM	PRESS.	DUCT	DUCT	(ft/min)		CFM	PRESS.
TRUNK A	194	0.08	7.6	8	x	8	437	TRUNK G	0	0.00	0	0	x	8	0	TRUNK O	0	0.06	0
TRUNK B	197	0.08	7.6	8	x	8	443	TRUNK H	0	0.00	0	0	x	8	0	TRUNK P	0	0.06	0
TRUNK C	599	0.08	11.6	16	x	8	674	TRUNK I	0	0.00	0	0	x	8	0	TRUNK Q	0	0.06	0
TRUNK D	138	0.10	6.3	8	x	8	311	TRUNK J	0	0.00	0	0	x	8	0	TRUNK R	0	0.06	0
TRUNK E	1073	0.08	14.4	24	x	8	805	TRUNK K	0	0.00	0	0	x	8	0	TRUNK S	0	0.06	0
TRUNK F	302	0.10	8.5	10	x	8	544	TRUNK L	0	0.00	0	0	x	8	0	TRUNK T	0	0.06	0

RETURN AIR #	1	2	3	4	5	BR									
AIR VOLUME	330	155	360	130	130	0	0	0	0	0	0	0	0	0	265
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	15	55	55	63	60	1	1	1	1	1	1	1	1	1	16
EQUIVALENT LENGTH	145	205	200	205	165	0	0	0	0	0	0	0	0	0	185
TOTAL EFFECTIVE LH	160	260	255	268	225	1	1	1	1	1	1	1	1	1	201
ADJUSTED PRESSURE	0.09	0.06	0.06	0.06	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.07
ROUND DUCT SIZE	9	7.5	10.3	7	6.8	0	0	0	0	0	0	0	0	0	8.8
INLET GRILL SIZE	8	8	8	8	8	0	0	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	30	14	30	14	14	0	0	0	0	0	0	0	0	0	30

SITE NAME: VALES OF HUMBER SOUTH
BUILDER: ROYAL PINE HOMES

OPT IN-LAW
TYPE: 7001

DATE: Apr-22

GFA: 5543 LO# 95296

FURNACE 2

HEATING CFM 1040 COOLING CFM 1040
TOTAL HEAT LOSS 25,129 TOTAL HEAT GAIN 34,229
AIR FLOW RATE CFM 41.39 AIR FLOW RATE CFM 30.38

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure
for s/a & r/a 0.35

**FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 28134 BTUH**
#*CARRIER
59SP5A-40-12 40
FAN SPEED
LOW 0
MEDLOW 0
MEDIUM 0
MEDIUM HIGH 770
HIGH 1040

AFUE = 97 %
INPUT (BTU/H) = 40,000
OUTPUT (BTU/H) = **39,000**

DESIGN CFM = **1040**
CFM @ .6" E.S.P.

TEMPERATURE RISE 35 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	21	0	0
R/A	0	0	7	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	19	20	21
ROOM NAME	PRI	PRI	PRI	ENS	ENS	DRESS	BED-2	BED-2	ENS-2	BED-3	BED-3	BED-3	BED-3	ENS-3	BED-4	BED-4	ENS-4	BED-5	BED-5	SHARED	RETR
RM LOSS MBH.	1.10	1.10	1.10	2.10	0.70	0.96	1.00	1.00	0.89	1.61	1.61	1.61	1.61	0.76	1.52	1.52	0.27	1.33	1.33	0.63	1.39
CFM PER RUN HEAT	45	45	45	87	29	40	41	41	37	66	66	66	66	32	63	63	11	55	55	26	57
RM GAIN MBH.	1.99	1.99	1.99	1.98	0.66	0.46	1.64	1.64	0.34	2.07	2.07	2.07	2.07	0.15	2.63	2.63	0.08	2.34	2.34	0.40	2.67
CFM PER RUN COOLING	61	61	61	60	20	14	50	50	10	63	63	63	63	5	80	80	2	71	71	12	81
ADJUSTED PRESSURE	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	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16
ACTUAL DUCT LGH.	84	69	63	90	85	85	43	38	33	41	37	42	49	39	64	58	39	94	88	80	92
EQUIVALENT LENGTH	190	200	210	160	170	200	180	180	110	110	120	130	130	120	190	220	110	170	170	170	190
TOTAL EFFECTIVE LENGTH	274	269	273	250	255	285	223	218	143	151	157	172	179	159	254	278	149	264	258	250	282
ADJUSTED PRESSURE	0.06	0.06	0.06	0.06	0.07	0.06	0.08	0.08	0.12	0.11	0.11	0.1	0.1	0.11	0.07	0.06	0.12	0.07	0.07	0.07	0.06
ROUND DUCT SIZE	6	6	6	6	4	5	5	5	4	5	5	5	5	4	6	6	4	6	6	4	6
HEATING VELOCITY (ft/min)	229	229	229	444	333	294	301	301	424	485	485	485	485	367	321	321	126	280	280	298	291
COOLING VELOCITY (ft/min)	311	311	311	306	229	103	367	367	115	463	463	463	463	57	408	408	23	362	362	138	413
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	4X10	4X10	3X10	4X10
TRUNK	A	A	A	A	A	A	B	B	B	D	D	B	B	B	C	C	D	C	C	C	C

RUN #	ROOM NAME	RM LOSS MBH.	CFM PER RUN HEAT	RM GAIN MBH.	CFM PER RUN COOLING	ADJUSTED PRESSURE	ACTUAL DUCT LGH.	EQUIVALENT LENGTH	TOTAL EFFECTIVE LENGTH	ADJUSTED PRESSURE	ROUND DUCT SIZE	HEATING VELOCITY (ft/min)	COOLING VELOCITY (ft/min)	OUTLET GRILL SIZE	TRUNK
1	PRI	1.10	45	1.99	61	0.17	84	190	274	0.06	6	229	311	4X10	A
2	PRI	1.10	45	1.99	61	0.17	69	200	269	0.06	6	229	311	4X10	A
3	PRI	1.10	45	1.99	61	0.17	63	210	273	0.06	6	229	311	4X10	A
4	ENS	2.10	87	1.98	60	0.16	90	160	250	0.06	6	444	306	4X10	A
5	ENS	0.70	29	0.66	20	0.17	85	170	255	0.07	4	333	229	3X10	A
6	DRESS	0.96	40	0.46	14	0.17	85	200	285	0.06	5	294	103	3X10	A
7	BED-2	1.00	41	1.64	50	0.17	43	180	223	0.08	5	301	367	3X10	B
8	BED-2	1.00	41	1.64	50	0.17	38	180	218	0.08	5	301	367	3X10	B
9	ENS-2	0.89	37	0.34	10	0.17	33	110	143	0.12	4	424	115	3X10	B
10	BED-3	1.61	66	2.07	63	0.17	41	110	151	0.11	5	485	463	3X10	D
11	BED-3	1.61	66	2.07	63	0.17	37	120	157	0.11	5	485	463	3X10	D
12	BED-3	1.61	66	2.07	63	0.17	42	130	172	0.1	5	485	463	3X10	B
13	BED-3	1.61	66	2.07	63	0.17	49	130	179	0.1	5	485	463	3X10	B
14	ENS-3	0.76	32	0.15	5	0.17	39	120	159	0.11	4	367	57	3X10	B
15	BED-4	1.52	63	2.63	80	0.17	64	190	254	0.07	6	321	408	4X10	C
16	BED-4	1.52	63	2.63	80	0.17	58	220	278	0.06	6	321	408	4X10	C
17	ENS-4	0.27	11	0.08	2	0.17	39	110	149	0.12	4	126	23	3X10	D
18	BED-5	1.33	55	2.34	71	0.17	94	170	264	0.07	6	280	362	4X10	C
19	BED-5	1.33	55	2.34	71	0.17	88	170	258	0.07	6	280	362	4X10	C
20	SHARED	0.63	26	0.40	12	0.17	80	170	250	0.07	4	298	138	3X10	C
21	RETR	1.39	57	2.67	81	0.16	92	190	282	0.06	6	291	413	4X10	C

SUPPLY AIR TRUNK SIZE															RETURN AIR TRUNK SIZE														
TRUNK		STATIC	ROUND	RECT	VELOCITY			TRUNK		STATIC	ROUND	RECT	VELOCITY			TRUNK		STATIC	ROUND	RECT	VELOCITY								
CFM	PRESS.	DUCT	DUCT			(ft/min)	CFM	PRESS.	DUCT	DUCT			(ft/min)	CFM	PRESS.	DUCT	DUCT			(ft/min)									
TRUNK A	291	0.06	9.5	10	x	8	524	TRUNK G	0	0.00	0	0	x	8	0	TRUNK O	0	0.05	0	0	x	8	0						
TRUNK B	574	0.06	12.2	18	x	8	574	TRUNK H	0	0.00	0	0	x	8	0	TRUNK P	0	0.05	0	0	x	8	0						
TRUNK C	319	0.06	9.8	14	x	8	410	TRUNK I	0	0.00	0	0	x	8	0	TRUNK Q	0	0.05	0	0	x	8	0						
TRUNK D	462	0.06	11.3	18	x	8	462	TRUNK J	0	0.00	0	0	x	8	0	TRUNK R	0	0.05	0	0	x	8	0						
TRUNK E	0	0.00	0	0	x	8	0	TRUNK K	0	0.00	0	0	x	8	0	TRUNK S	0	0.05	0	0	x	8	0						
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	x	8	0	TRUNK T	0	0.05	0	0	x	8	0						

RETURN AIR #	1	2	3	4	5	6	7	BR
AIR VOLUME	280	95	230	115	115	75	130	0
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	46	42	54	66	89	60	53	1
EQUIVALENT LENGTH	175	165	245	205	210	215	205	0
TOTAL EFFECTIVE LH	221	207	299	271	299	275	258	1
ADJUSTED PRESSURE	0.07	0.07	0.05	0.05	0.05	0.05	0.06	14.80
ROUND DUCT SIZE	9	6	9.1	7	7	6	7	0
INLET GRILL SIZE	8	8	8	8	8	8	8	0
INLET GRILL SIZE	X	X	X	X	X	X	X	X
INLET GRILL SIZE	30	14	30	14	14	14	14	0

TYPE: 7001
SITE NAME: VALES OF HUMBER SOUTH

LO # 95296
OPT IN-LAW

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	<u>2</u> @ 21.2 cfm	<u>42.4</u> cfm
Other Bedrooms	<u>5</u> @ 10.6 cfm	<u>53</u> cfm
Kitchen & Bathrooms	<u>9</u> @ 10.6 cfm	<u>95.4</u> cfm
Other Rooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Table 9.32.3.A.	TOTAL	<u>254.4</u> cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED		9.32.3.4.(1)
6 Bedrooms		
As Per Ashrea 62.2 Dwelling- Unit Ventilation		
4.1.1 Total Ventilation Rate		
$Q_{tot}=0.03A_{floor}+7.5(N_{br}+1)$		
TOTAL		<u>218.8</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>254.4</u>	cfm
Less Principal Ventil. Capacity	<u>150</u>	cfm
Required Supplemental Capacity	<u>104.4</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE V150H
Location:	BSMT
<u>150.0</u> cfm	☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION				
CFM	ΔT °F	FACTOR	% LOSS	
150.0 CFM	X 74 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
<u>150</u>	cfm high	<u>35</u> cfm low
<u>75</u>	% Sensible Efficiency @ 32 deg F (0 deg C)	☒ HVI Approved

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER:	
ROYAL PINE 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:	April-22

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

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																												
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																												
LO#: 95296	Model: 7001	Builder: ROYAL PINE HOMES	Date: 2022-04-07																																																									
Volume Calculation			Air Change & Delta T Data																																																									
House Volume <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>2786</td> <td>10</td> <td>27860</td> </tr> <tr> <td>First</td> <td>2786</td> <td>11</td> <td>30646</td> </tr> <tr> <td>Second</td> <td>3296</td> <td>10</td> <td>32960</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" style="text-align: right;">Total:</td> <td></td> <td>91,466.0 ft³</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>2590.0 m³</td> </tr> </tbody> </table>			Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	2786	10	27860	First	2786	11	30646	Second	3296	10	32960	Third	0	9	0	Fourth	0	9	0	Total:			91,466.0 ft³	Total:			2590.0 m³	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">WINTER NATURAL AIR CHANGE RATE</td> <td style="width: 20%;">0.241</td> </tr> <tr> <td>SUMMER NATURAL AIR CHANGE RATE</td> <td>0.078</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="5" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th></th> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> <th>ΔT °F</th> </tr> <tr> <td>Winter DTDh</td> <td>22</td> <td>-19</td> <td>41</td> <td>74</td> </tr> <tr> <td>Summer DTDc</td> <td>24</td> <td>30</td> <td>6</td> <td>11</td> </tr> </table>		WINTER NATURAL AIR CHANGE RATE	0.241	SUMMER NATURAL AIR CHANGE RATE	0.078	Design Temperature Difference						Tin °C	Tout °C	ΔT °C	ΔT °F	Winter DTDh	22	-19	41	74	Summer DTDc	24	30	6	11
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)																																																									
Bsmt	2786	10	27860																																																									
First	2786	11	30646																																																									
Second	3296	10	32960																																																									
Third	0	9	0																																																									
Fourth	0	9	0																																																									
Total:			91,466.0 ft³																																																									
Total:			2590.0 m³																																																									
WINTER NATURAL AIR CHANGE RATE	0.241																																																											
SUMMER NATURAL AIR CHANGE RATE	0.078																																																											
Design Temperature Difference																																																												
	Tin °C	Tout °C	ΔT °C	ΔT °F																																																								
Winter DTDh	22	-19	41	74																																																								
Summer DTDc	24	30	6	11																																																								
5.2.3.1 Heat Loss due to Air Leakage			6.2.6 Sensible Gain due to Air Leakage																																																									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ 0.241 x 719.45 x 41 °C x 1.2 = 8587 W = 29300 Btu/h			$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ = 0.078 x 719.45 x 6 °C x 1.2 = 414 W = 1412 Btu/h																																																									
5.2.3.2 Heat Loss due to Mechanical Ventilation			6.2.7 Sensible heat Gain due to Ventilation																																																									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E) \times 2 \text{ HRV / ERV's}$ 300 CFM x 74 °F x 1.08 x 0.25 = 6010 Btu/h			$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 300 CFM x 11 °F x 1.08 x 0.25 = 891 Btu/h																																																									
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																												
$HL_{airr} = Level \ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$ <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Level Factor (LF)</th> <th>HLairve Air Leakage + Ventilation Heat Loss (Btu/h)</th> <th>Level Conductive Heat Loss: (HL_{clevel})</th> <th>Air Leakage Heat Loss Multiplier (LF x HLairbv / HL_{clevel})</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.5</td> <td rowspan="5" style="text-align: center; vertical-align: middle;">29,300</td> <td>12,566</td> <td>1.166</td> </tr> <tr> <td>2</td> <td>0.3</td> <td>24,028</td> <td>0.366</td> </tr> <tr> <td>3</td> <td>0.2</td> <td>18,050</td> <td>0.325</td> </tr> <tr> <td>4</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> <tr> <td>5</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> </tbody> </table> *HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairve = 0					Level	Level Factor (LF)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{clevel})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HL _{clevel})	1	0.5	29,300	12,566	1.166	2	0.3	24,028	0.366	3	0.2	18,050	0.325	4	0	0	0.000	5	0	0	0.000																														
Level	Level Factor (LF)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{clevel})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HL _{clevel})																																																								
1	0.5	29,300	12,566	1.166																																																								
2	0.3		24,028	0.366																																																								
3	0.2		18,050	0.325																																																								
4	0		0	0.000																																																								
5	0		0	0.000																																																								
				Michael O'Rourke BCIN# 19669 																																																								

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 7001	OPT IN-LAW	BUILDER: ROYAL PINE HOMES
SFQT: 5543	LO# 95296	SITE: VALES OF HUMBER SOUTH

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75
		WINDOW SHGC	0.60

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	2.50	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft ³):	91466.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	7
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.85	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 63.0 ft	WIDTH: 62.0 ft	EXPOSED PERIMETER:	250.0 ft

2012 OBC - COMPLIANCE PACKAGE**Component****Compliance Package
SB-12 PERFORMANCE****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+1.5	21.40
Basement Walls Minimum RSI (R)-Value	20	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	1.6	-
Skylights Maximum U-Value	2.6	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.9	-

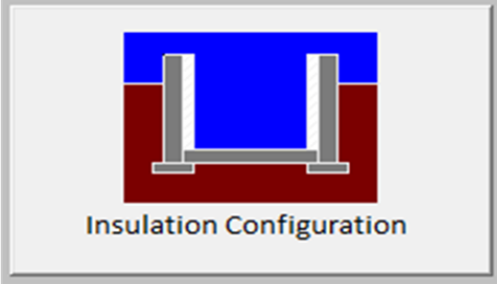
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	19.2	 Insulation Configuration
Floor Width (m):	18.9	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	2.2	
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):		2619

TYPE: 7001
LO# 95296

OPT IN-LAW

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Brampton			
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):	7.32			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	2590.0			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Detached (2.5 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2417.8 cm ²		
	2.50	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):	0.241			
Cooling Air Leakage Rate (ACH/H):	0.078			

TYPE: 7001
LO# 95296

OPT IN-LAW