


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]				
<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings </div> <div style="width: 30%;"> <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection </div> <div style="width: 30%;"> <input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> On-site Sewage Systems </div> </div>				
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 OPT. 5 BEDROOM Project: PINE VALLEY & TESTON		
D. Declaration of Designer				
I, <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate): (print name)				
<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		 Signature of Designer		
Date				

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
TYPE: 5004 THE BEAUMONT
DATE: Sep-18
LO# 77478
GFA: 4184
OPT. 5 BEDROOM
WINTER NATURAL AIR CHANGE RATE 0.340
SUMMER NATURAL AIR CHANGE RATE 0.124
HEAT LOSS AT °F. 76
HEAT GAIN AT °F. 16
CSA-P280-12
SB-12 PACKAGE A1

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	ENS-2	WIC-2	BED-5	ENS-3	LOD	BAS
GRS.WALL AREA	180		279	31	83	99	162	430	0	117	90	162		
GLAZING														
NORTH	21.3	18.8	0	0	0	18	0	0	0	0	0	0	0	0
EAST	21.3	42.4	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	25.7	0	8	170	0	53	1277	0	0	0	13	277	561
WEST	21.3	42.4	42	18	763	0	0	192	0	0	18	383	463	0
SKYLT.	37.2	103.0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	25.2	5.2	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.6	0.9	148	660	137	263	1129	235	65	245	51	81	361	1611
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	468	601	289	220	282	140	91	117	58	187	240	119
NO ATTIC EXPOSED CLG	2.7	1.4	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS														
SLAB ON GRADE HEAT LOSS														
SUBTOTAL HT LOSS	2155		1965		532	1461	2622	3885	223	821	935	1237		779
SUB TOTAL HT GAIN	2216		1344		315	595	3035	3496	77	200	645	779		779
LEVEL FACTOR / MULTIPLIER	0.20	0.35	0.20	0.35	0.20	0.35	0.20	0.35	0.20	0.35	0.20	0.35		0.20
AIR CHANGE HEAT LOSS	747		682		185	507	909	1348	77	285	324	429		429
AIR CHANGE HEAT GAIN	199		120		28	197	353	523	30	111	58	167		70
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	1	240	485	8	22	0	85		85
HEAT GAIN APPLIANCES	480		0		0	0	240	240	0	0	1	240		0
HEAT GAIN APPLIANCES	797		0		0	797	797	797	0	0	0	797		0
TOTAL HT LOSS BTU/H	2902		2645		717	2165	3884	5756	330	1217	1260	1832		1832
TOTAL HT GAIN x 1.3 BTU/H	4800		1904		446	2412	6213	6931	121	311	2362	1214		1214

ROOM USE	EXP. WALL	CLG. HT.	LIBR	DIN	KIT	GREAT	LAUN	ENS-4/5	FOY	MUD	LOD	BAS
GRS.WALL AREA	237		237	187	1221	896	0	54	407	234	510	1916
GLAZING												
NORTH	21.3	16.8	0	0	0	26	0	0	0	0	0	6
EAST	21.3	42.4	41	872	1738	0	0	0	0	0	0	128
SOUTH	21.3	25.7	12	255	309	24	511	618	10	213	257	101
WEST	21.3	42.4	0	0	0	0	0	0	0	0	0	0
SKYLT.	37.2	103.0	0	0	0	0	0	0	0	0	0	0
DOORS	25.2	5.2	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.6	0.9	244	1089	226	163	727	151	1061	4735	984	0
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.7	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	0	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	0
EXPOSED FLOOR	2.6	0.6	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS												
SLAB ON GRADE HEAT LOSS												
SUBTOTAL HT LOSS	2217		1238		8386	6772	375	453	2821	1460	1643	8016
SUB TOTAL HT GAIN	2273		769		6726	4720	131	287	1915	304	1270	10222
LEVEL FACTOR / MULTIPLIER	0.30	0.38	0.30	0.38	0.30	0.38	0.20	0.35	0.30	0.38	0.30	0.50
AIR CHANGE HEAT LOSS	840		469		3176	2565	130	157	1068	553	1011	123
AIR CHANGE HEAT GAIN	204		69		803	423	12	26	172	27	281	14451
DUCT LOSS	0		0		0	0	0	0	0	0	0	0
DUCT GAIN	0		0		0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240		0		0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES	797		0		0	797	797	797	0	0	0	0
TOTAL HT LOSS BTU/H	3056		1707		11562	9336	555	610	3889	2013	1643	24674
TOTAL HT GAIN x 1.3 BTU/H	4256		2126		10563	7723	1344	406	2713	430	1651	1175

TOTAL HEAT GAIN BTU/H: 59661

TONS: 4.97

LOSS DUE TO VENTILATION LOAD BTU/H: 3181

STRUCTURAL HEAT LOSS: 81666

TOTAL COMBINED HEAT LOSS BTU/H: 84837

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

OPT. 5 BEDROOM
TYPE: 5004 THE BEAUMONT

GFA: 4184 LO# 77478

DATE: Sep-18

HEATING CFM 1955 COOLING CFM 1955
TOTAL HEAT LOSS 81,656 TOTAL HEAT GAIN 59,000
AIR FLOW RATE CFM 23.94 AIR FLOW RATE CFM 33.14

AFUE = 96 %
INPUT (BTU/H) = 110,000
OUTPUT (BTU/H) = 106,000
DESIGN CFM = 1955
CFM @ 8" E.S.P. =

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	18	12	8
R/A	0	0	5	4	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	MBR	ENS	BED-5	BED-2	BED-3	BED-4	ENS-2	WIC-2	ENS-4/5	MBR	ENS-3	LIBR	DIN	KIT	KIT	GREAT	LAUN	KIT	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.45	1.32	1.26	1.26	1.29	1.92	0.33	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	3.28	3.28	3.28	3.28
CFM PER RUN	35	32	30	52	31	46	8	29	15	35	44	37	41	69	69	75	13	69	93	48	78	78	78	78
RM GAIN MBH	2.40	0.95	2.26	2.41	2.07	2.31	0.12	0.31	0.41	2.40	1.21	2.13	2.13	2.64	2.64	2.57	1.34	2.64	2.71	0.43	0.35	0.35	0.35	0.35
CFM PER RUN COOLING	80	32	75	80	69	77	4	10	13	80	40	71	70	88	88	85	45	88	90	14	12	12	12	12
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	0.17
EQUVALENT LENGTH	190	140	210	180	120	150	160	150	190	180	160	180	80	140	140	130	150	140	150	130	130	140	100	102
TOTAL EFFECTIVE LENGTH	236	202	249	214	158	200	188	181	233	234	201	221	107	180	182	179	176	176	174	146	180	190	139	132
ADJUSTED PRESSURE	0.07	0.09	0.07	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	0.13
ROUND DUCT SIZE	6	4	5	5	5	5	4	4	4	6	4	5	5	5	5	5	5	5	6	4	5	5	5	5
HEATING VELOCITY (ft/min)	178	367	220	382	228	338	92	333	172	178	505	272	301	507	507	551	149	507	474	551	573	573	573	573
COOLING VELOCITY (ft/min)	408	367	551	587	507	565	46	115	149	408	459	521	514	646	646	624	516	646	459	161	88	88	88	88
OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	C	D	F	F	E	F	D	E	B	F	E	F	C	C	A	D	B	E	D	A	A	C	C

RUN #	25	26	27	28	29	30	31	32	33	34	35	36	37	38	
	BAS	BAS	BAS	BAS	WIC	ENS	BED-3	BED-3	BED-4	BED-4	LIBR	KIT	GREAT	GREAT	
	RM LOSS MBH	3.28	3.28	3.28	0.72	1.32	1.29	1.32	1.92	1.92	1.53	2.89	3.11	3.11	
	CFM PER RUN HEAT	78	78	78	17	32	31	31	46	46	37	69	75	75	
	RM GAIN MBH	0.35	0.35	0.35	0.45	0.95	2.07	2.07	2.31	2.31	2.13	2.64	2.57	2.57	
	CFM PER RUN COOLING	12	12	12	15	32	69	69	77	77	71	88	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	33	42	46	47	40	35	28	39	64
	EQUIVALENT LENGTH	120	80	120	150	140	130	140	150	130	140	150	150	150	150
	TOTAL EFFECTIVE LENGTH	157	103	137	181	174	173	172	186	197	170	175	178	189	214
ADJUSTED PRESSURE	0.11	0.17	0.13	0.1	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	4	5	5	5	5	5	5	5	6	
HEATING VELOCITY (ft/min)	573	573	573	573	195	367	228	228	338	338	272	507	551	382	
COOLING VELOCITY (ft/min)	88	88	88	88	172	367	507	507	565	565	521	646	624	433	
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	
TRUNK	B	D	F	E	D	D	F	F	E	E	F	B	A	A	

SUPPLY AIR TRUNK SIZE														RETURN AIR TRUNK SIZE													
		TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM		STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)	TRUNK CFM		STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)									
TRUNK A		381	0.08	9.8	12	8		TRUNK G	0	0.00	0	8		TRUNK O	0	0.06	0	0	8								
TRUNK B		667	0.07	12.5	18	8		TRUNK H	0	0.00	0	8		TRUNK P	0	0.06	0	0	8								
TRUNK C		326	0.09	8.9	10	8		TRUNK I	0	0.00	0	8		TRUNK Q	0	0.06	0	0	8								
TRUNK D		1240	0.07	15.7	28	8		TRUNK J	0	0.00	0	8		TRUNK R	0	0.06	0	0	8								
TRUNK E		398	0.07	10.3	12	8		TRUNK K	0	0.00	0	8		TRUNK S	0	0.06	0	0	8								
TRUNK F		714	0.07	12.8	20	8		TRUNK L	0	0.00	0	8		TRUNK T	0	0.06	0	0	8								
														TRUNK U	0	0.06	0	0	8								
														TRUNK V	0	0.06	0	0	8								
														TRUNK W	0	0.06	0	0	8								
RETURN AIR #		1	2	3	4	6	7	8	9				BR	TRUNK X	1465	0.06	17.4	32	8								
AIR VOLUME		0	0	0	0	85	300	300	185	0	0	0	0	TRUNK Y	685	0.06	13.1	20	8								
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	TRUNK Z	490	0.06	11.5	16	8								
ACTUAL DUCT LGH.		38	37	37	45	59	27	25	34	1	1	1	1	DROP	1955	0.06	19.4	24	18								
EQUIVALENT LENGTH		195	185	185	205	175	190	185	150	0	0	0	0														
TOTAL EFFECTIVE LH		233	222	202	250	234	217	210	184	1	1	1	1														
ADJUSTED PRESSURE		0.06	0.07	0.07	0.06	0.06	0.07	0.07	0.08	14.80	14.80	14.80	14.80														
ROUND DUCT SIZE		6.8	6.6	6.6	6.8	9	6	9.2	7.5	0	0	0	0														
INLET GRILL SIZE		8	8	8	8	8	8	8	8	0	0	0	0														
INLET GRILL SIZE		X	X	X	X	X	X	X	X	X	X	X	X														

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

LO # 77478
OPT. 5 BEDROOM

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	4 @ 10.6 cfm	42.4 cfm
Kitchen & Bathrooms	6 @ 10.6 cfm	63.6 cfm
Other Rooms	5 @ 10.6 cfm	53.0 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		95.4 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-4/5	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 #	Bulking 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#: 77478		Model: 5004 THE BEAUMONT		Builder: GOLD PARK HOMES		Date: 9/10/2018																																																																														
Volume Calculation				Air Change & Delta T Data																																																																																
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$HL_{air-b} = LR_{air-b} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$																																																																																				
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								=	28902 Btu/h																																																																											
5.2.3.2 Heat Loss due to Mechanical Ventilation																																																																																				
$HL_{vair-b} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																																																				
155 CFM	x	76 °F	x	1.08	x	0.25	=	3181 Btu/h																																																																												
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																																																				
$HL_{qirr} = Level Factor \times HL_{airbv} \times \{(HL_{qgr} + HL_{bgcr}) \div (HL_{qlevel} + HL_{bglevel})\}$																																																																																				
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*Hlairebv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system Hlairev = 0																																																																																				

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 5004 THE BEAUMONT	OPT. 5 BEDROOM	BUILDER: GOLD PARK HOMES
SFQT: 4184	LO# 77478	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:	6
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.27	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

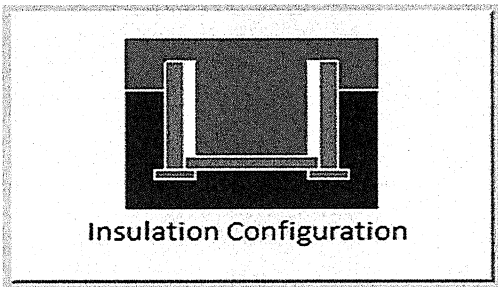
2012 OBC - COMPLIANCE PACKAGE		
Component	Compliance Package A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement 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):	3.7	
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):		2349

TYPE: 5004 THE BEAUMONT
LO# 77478

OPT. 5 BEDROOM

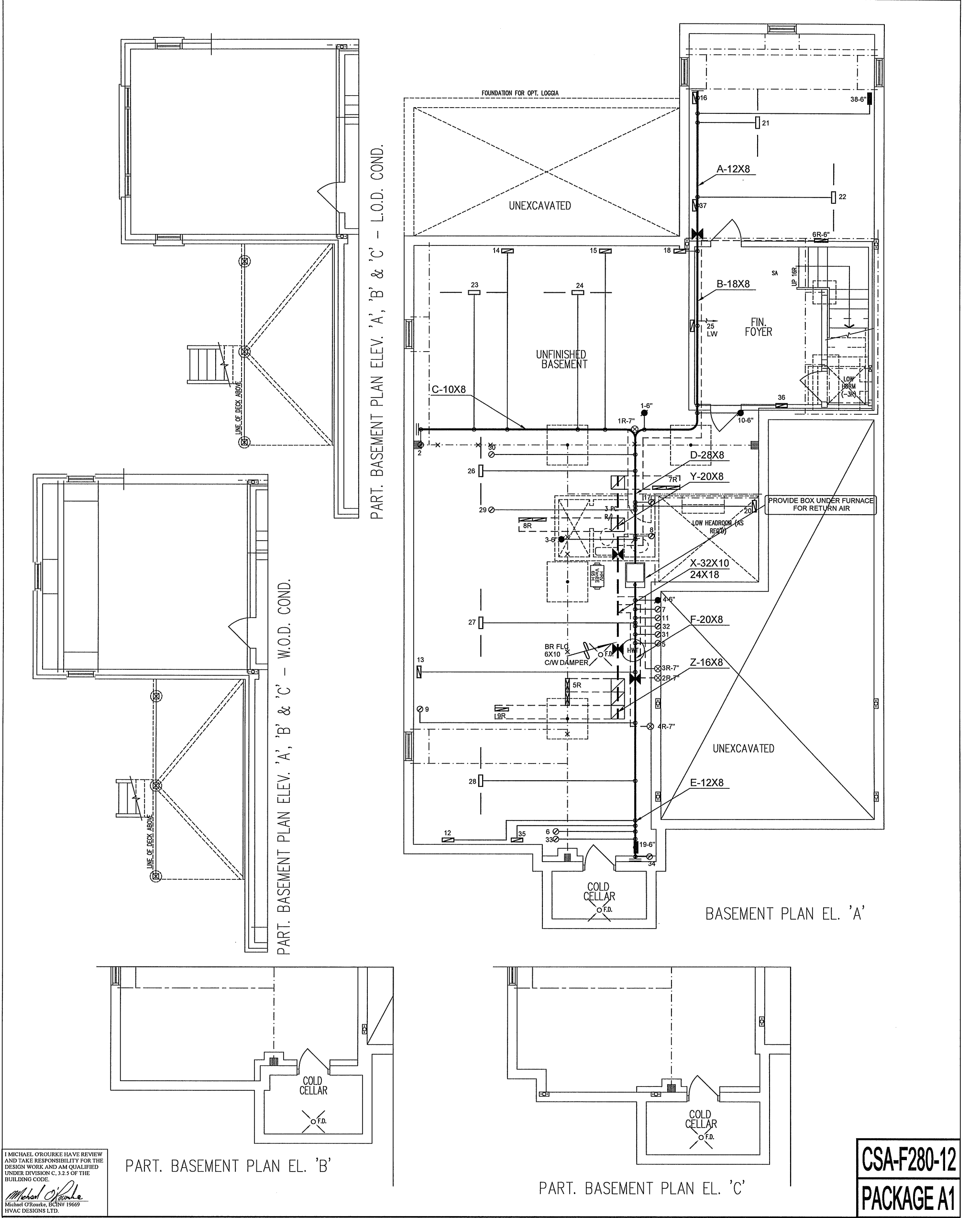
Air Infiltration Residential Load Calculator

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# 77478


OPT. 5 BEDROOM

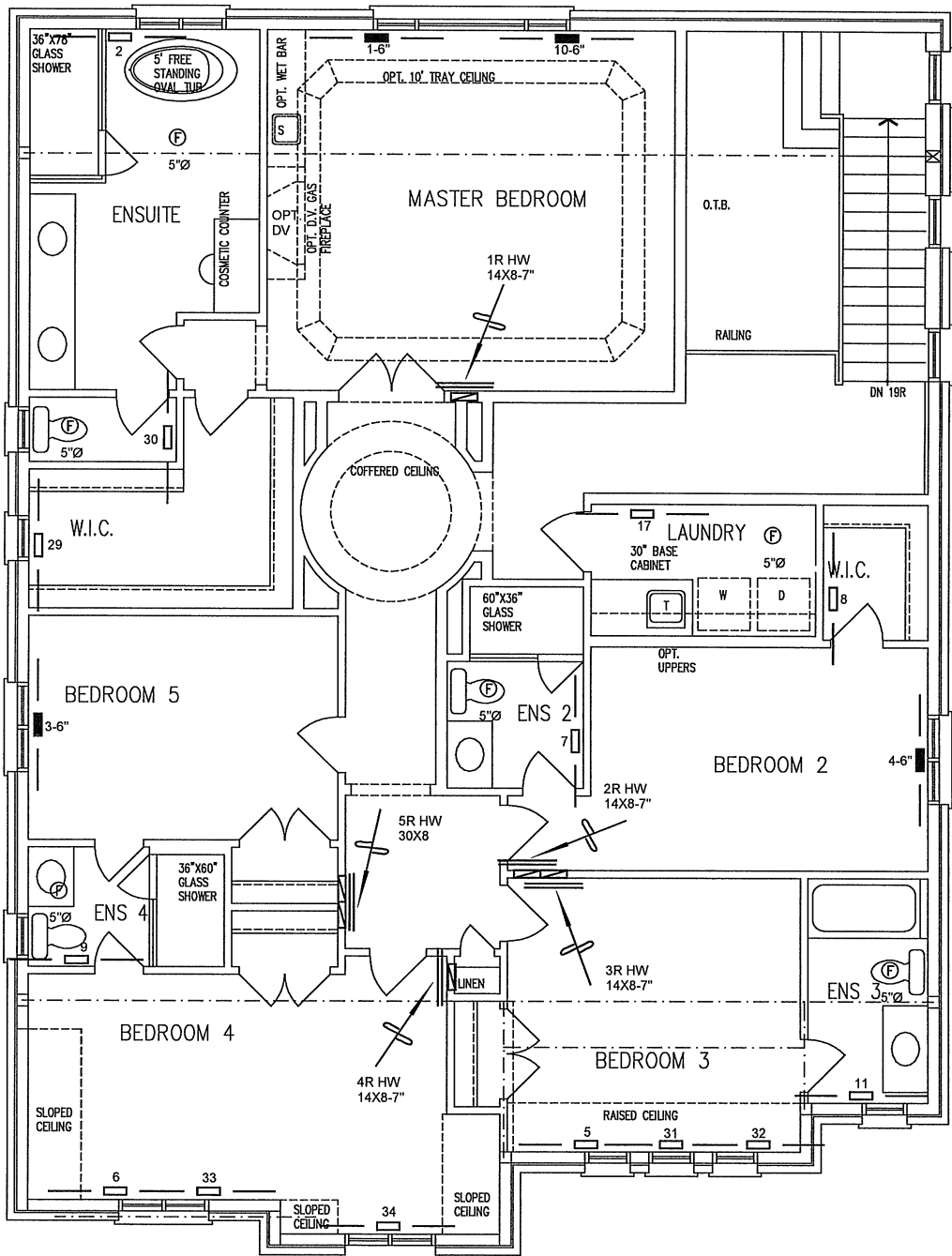


I MICHAEL O'Rourke HAVE REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C. 3.2.5 OF THE BUILDING CODE.

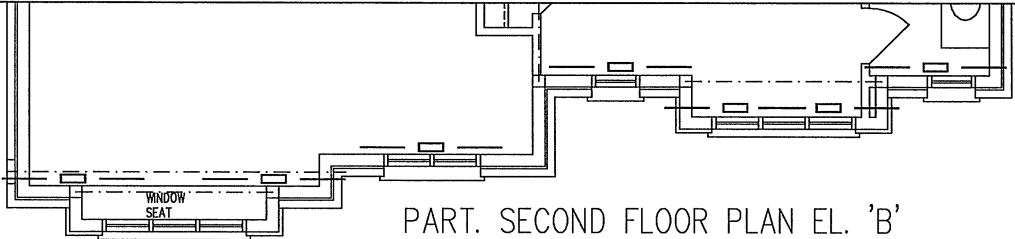
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

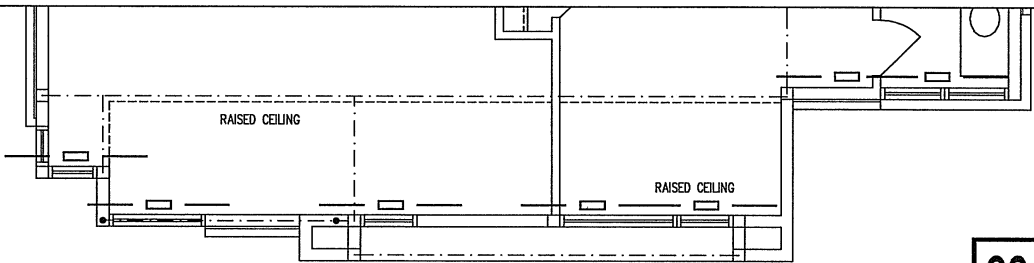
HVAC LEGEND								3.									
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.									
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	DECK CONDITIONS ADDED	SEPT/2018							
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK 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									
ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.																	
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 84837 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	EL296110XE60C	2ND FLOOR	18	5	6						
PINE VALLEY & TESTON VAUGHAN, ONTARIO						INPUT	110 MBTU/H	1ST FLOOR	12	4	2		Date	JAN/2018			
OPT. 5 BEDROOM						OUTPUT	106 MBTU/H	BASEMENT				8	1	0	Scale	1/8" = 1'-0"	
THE BEAUMONT						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								BCIN# 19669	
5004						FAN SPEED	1955 cfm @ 0.6" w.c.									LO#	77478
4184 sqft																	



OPT. 5 BED. SECOND FLOOR PLAN EL. 'A'



PART. SECOND FLOOR PLAN EL. 'B'



PART. SECOND FLOOR PLAN EL. 'C'

CSA-F280-12
PACKAGE A1

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	1/8" = 1'-0"
OPT. 5 BEDROOM THE BEAUMONT			BCIN# 19669	
5004	4184 sqft		LO#	77478