


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.
Municipality VAUGHAN (WOODBIDGE)			Postal code
Plan number/ other description			Lot/con.
B. Individual who reviews and takes responsibility for design activities			
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 375 FINLEY AVE		Unit no. 202	Lot/con. N/A
Municipality AJAX	Postal code L1S 2E2	Province ONTARIO	E-mail info@hvacdsgns.ca
Telephone number (905) 619-2300	Fax number (905) 619-2375	Cell number ()	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]			
<input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection <input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> On-site Sewage Systems			
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: 5004 THE BEAUMONT OPT. ELEVATOR WOB 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 12, 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 OPT. ELEVATOR WOB DATE: Sep-18 WINTER NATURAL AIR CHANGE RATE 0.407 HEAT LOSS AT °F. 76 CSA-F280-12
BUILDING: GOLD PARK HOMES TYPE: 8004 THE BEAUMONT LO# 79980 SUMMER NATURAL AIR CHANGE RATE 0.137 HEAT GAIN AT °F. 13 SB-12 PACKAGE A1

ROOM USE	EXP. WALL	CLG. HT.	INS.	DRESS	BED-2	BED-3	BED-4	ENS-2	HALL	ENS-3	HEAT LOSS AT °F.
GRS.WALL AREA	180		342	108	98	182	430	0	117	182	
GLAZING	0		0	0	0	0	0	0	0	0	
NORTH	21.3	18.0	0	0	0	0	0	0	0	0	
EAST	21.3	41.6	0	0	0	0	0	0	0	0	
SOUTH	21.3	24.9	0	0	0	0	0	0	0	0	
WEST	21.3	41.6	0	0	0	0	0	0	0	0	
SKYL.T.	37.2	101.5	0	0	0	0	0	0	0	0	
DOORS	25.2	4.3	0	0	0	0	0	0	0	0	
NET EXPOSED WALL	4.6	0.8	148	660	111	305	1351	229	104	464	
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0	0	0	0	
EXPOSED CLG	1.3	0.6	488	601	275	312	400	183	228	293	
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	
EXPOSED FLOOR	2.8	0.4	0	0	0	0	0	0	0	0	
BASEMENT/CRAWL HEAT LOSS	0		0	0	0	0	0	0	0	0	
SLAB ON GRADE HEAT LOSS	0		0	0	0	0	0	0	0	0	
SUBTOTAL HT LOSS	2155		2549	842	1387	2622	3886	184	622	1237	
SUB TOTAL HT GAIN	0.20	0.45	0.20	0.45	0.20	0.45	0.20	0.45	0.20	0.45	
LEVEL FACTOR / MULTIPLIER	971		1149	379	616	1182	1751	83	280	557	
AIR CHANGE HEAT LOSS	0		0	0	0	0	0	0	0	0	
AIR CHANGE HEAT GAIN	0		0	0	0	0	0	0	0	0	
DUCT LOSS	0		0	0	0	0	0	0	0	0	
DUCT GAIN	0		0	0	0	0	0	0	0	0	
HEAT GAIN PEOPLE	2		480	0	0	0	0	0	0	0	
HEAT GAIN APPLIANCES/LIGHTS	768		0	0	0	0	0	0	0	0	
TOTAL HT LOSS BTU/H	3126		3698	1221	2181	4184	6200	294	903	1974	
TOTAL HT GAIN x 1.3 BTU/H	4596		2522	1423	2233	5845	5579	96	187	1126	

ROOM USE	EXP. WALL	CLG. HT.	DIN	KIT	GREAT	LAUN	ENS-4	FOY	MUD	WOB	BAS
GRS.WALL AREA	297		187	1087	896	0	54	407	468	610	
GLAZING	0		0	0	0	0	0	0	0	0	
NORTH	21.3	16.0	0	0	0	0	0	0	0	0	
EAST	21.3	41.6	0	0	0	0	0	0	0	0	
SOUTH	21.3	24.9	0	0	0	0	0	0	0	0	
WEST	21.3	41.6	0	0	0	0	0	0	0	0	
SKYL.T.	37.2	101.5	0	0	0	0	0	0	0	0	
DOORS	25.2	4.3	0	0	0	0	0	0	0	0	
NET EXPOSED WALL	4.6	0.8	244	1089	183	0	46	205	35	362	
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0	0	0	0	
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0	0	
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	
EXPOSED FLOOR	2.8	0.4	0	0	0	0	0	0	0	0	
BASEMENT/CRAWL HEAT LOSS	0		0	0	0	0	0	0	0	0	
SLAB ON GRADE HEAT LOSS	0		0	0	0	0	0	0	0	0	
SUBTOTAL HT LOSS	2217		1238	7699	6772	184	453	2821	2920	719	
SUB TOTAL HT GAIN	0.30	0.46	0.30	0.46	0.30	0.46	0.20	0.46	0.30	0.46	
LEVEL FACTOR / MULTIPLIER	1019		569	3541	3114	83	204	1297	1343	4403	
AIR CHANGE HEAT LOSS	0		0	0	0	0	0	0	0	0	
AIR CHANGE HEAT GAIN	0		0	0	0	0	0	0	0	0	
DUCT LOSS	0		0	0	0	0	0	0	0	0	
DUCT GAIN	0		0	0	0	0	0	0	0	0	
HEAT GAIN PEOPLE	240		0	0	0	0	0	0	0	0	
HEAT GAIN APPLIANCES/LIGHTS	768		758	768	768	768	0	0	758	0	
TOTAL HT LOSS BTU/H	3236		1808	11239	9886	266	656	4118	4283	5447	
TOTAL HT GAIN x 1.3 BTU/H	4048		1995	7224	7224	1104	377	2527	1675	5723	

TOTAL HEAT GAIN BTU/H: 61059 TONS: 6.09 LOSS DUE TO VENTILATION LOAD BTU/H: 3161 STRUCTURAL HEAT LOSS: 88443 TOTAL COMBINED HEAT LOSS BTU/H: 91624

Michael O'Rourke

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

TYPE: 5004 THE BEAUMONT
OPT. ELEVATOR WOB

DATE: Sep-18

GFA: 4330 LO# 79980

HEATING CFM 1955 COOLING CFM 1955
TOTAL HEAT LOSS 88,443 TOTAL HEAT GAIN 60,523
AIR FLOW RATE CFM 22.1 AIR FLOW RATE CFM 32.3

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	13	8
R/A	0	0	5	4	1

EL296UHH10XE60C 110
FAN SPEED LOW 0
MEDIUM 1380
HIGH 1505
MEDIUM HIGH 1685
HIGH 1955
TEMPERATURE RISE 50 °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	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	DRESS	BED-2	BED-3	BED-4	ENS-2	HALL	ENS-4	MBR	ENS-3	LIBR	DIN	KIT	KIT	GREAT	LAUN	KIT	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.56	1.73	1.22	2.18	1.39	2.07	0.29	0.90	0.66	1.56	1.97	1.62	1.81	2.81	2.81	3.30	0.27	2.81	4.12	2.13	3.65	3.65	3.65	3.65
CFM PER RUN HEAT	35	38	27	48	31	46	6	20	15	35	44	36	40	62	62	73	6	62	91	47	81	81	81	81
RM GAIN MBH	2.30	1.24	1.42	2.23	1.98	2.19	0.10	0.19	0.38	2.30	1.13	2.02	1.99	2.45	2.45	2.41	1.10	2.45	2.53	0.84	0.89	0.89	0.89	0.89
CFM PER RUN COOLING	74	40	46	72	64	71	3	6	12	74	36	65	64	79	79	78	36	79	82	27	29	29	29	29
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	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	46	62	29	34	38	50	28	31	43	54	41	41	27	40	32	49	26	36	24	16	58	50	51	30
EQUIVALENT LENGTH	190	140	180	180	120	150	160	180	190	180	160	180	80	140	150	130	150	140	150	130	180	160	180	102
TOTAL EFFECTIVE LENGTH	236	202	209	214	158	200	188	211	233	234	201	221	107	180	182	179	176	176	174	146	238	210	211	132
ADJUSTED PRESSURE	0.07	0.09	0.08	0.08	0.11	0.09	0.09	0.08	0.07	0.07	0.09	0.08	0.16	0.1	0.09	0.1	0.1	0.1	0.09	0.12	0.07	0.08	0.08	0.12
ROUND DUCT SIZE	5	4	4	5	5	5	4	4	4	5	4	5	5	5	5	5	4	5	6	4	6	5	5	5
HEATING VELOCITY (ft/min)	257	436	310	352	228	338	69	229	172	257	505	264	294	455	455	536	69	455	464	539	413	595	595	595
COOLING VELOCITY (ft/min)	543	459	528	529	470	521	34	69	138	543	413	477	470	580	580	573	413	580	418	310	148	213	213	213
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	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	39
ROOM NAME	BAS	BAS	BAS	BAS	ENS	ENS	BED-3	BED-3	BED-4	BED-4	LIBR	KIT	GREAT	GREAT	MUD
RM LOSS MBH	3.65	3.65	3.65	3.65	1.73	0.23	1.39	1.39	2.07	2.07	1.62	2.81	3.30	3.30	2.13
CFM PER RUN HEAT	81	81	81	81	38	5	31	31	46	46	36	62	73	73	47
RM GAIN MBH	0.89	0.89	0.89	0.89	1.24	0.04	1.98	1.98	2.19	2.19	2.02	2.45	2.41	2.41	0.84
CFM PER RUN COOLING	29	29	29	29	40	1	64	64	71	71	65	79	78	78	27
ADJUSTED PRESSURE	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
ACTUAL DUCT LGH	37	23	17	31	34	33	42	48	47	40	35	28	39	64	35
EQUIVALENT LENGTH	120	80	120	150	140	140	130	140	150	130	140	150	150	150	90
TOTAL EFFECTIVE LENGTH	157	103	137	181	174	173	172	186	197	170	175	178	189	214	125
ADJUSTED PRESSURE	0.1	0.16	0.12	0.09	0.1	0.1	0.1	0.09	0.09	0.1	0.1	0.1	0.09	0.08	0.14
ROUND DUCT SIZE	5	5	5	5	4	4	5	5	5	5	5	5	5	5	4
HEATING VELOCITY (ft/min)	595	595	595	595	436	57	228	228	338	338	284	455	536	536	539
COOLING VELOCITY (ft/min)	213	213	213	213	459	11	470	470	521	521	573	580	573	573	310
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	D	F	E	D	D	F	F	E	E	E	B	A	A	D

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	0.07	10.1	12	572	TRUNK G	0	0.00	0	0	0	TRUNK O	0	0.06	0	0	8
TRUNK B	656	0.07	12.4	18	656	TRUNK H	0	0.00	0	0	0	TRUNK P	0	0.06	0	0	8
TRUNK C	324	0.08	9.2	10	583	TRUNK I	0	0.00	0	0	0	TRUNK Q	0	0.06	0	0	8
TRUNK D	1251	0.07	15.8	28	804	TRUNK J	0	0.00	0	0	0	TRUNK R	0	0.06	0	0	8
TRUNK E	397	0.07	10.3	12	586	TRUNK K	0	0.00	0	0	0	TRUNK S	0	0.06	0	0	8
TRUNK F	709	0.07	12.7	18	709	TRUNK L	0	0.00	0	0	0	TRUNK T	0	0.06	0	0	8

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
AIR VOLUME	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH	38	37	37	45	43	59	27	25	34	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	195	185	165	205	145	175	190	185	150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	233	222	202	250	188	234	217	210	184	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.07	0.07	0.06	0.08	0.06	0.07	0.07	0.08	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	6.8	6.6	6.6	6.8	9	6	9.2	9.2	7.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
INLET GRILL SIZE	14	14	14	14	14	14	30	30	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

LO # 79980
OPT. ELEVATOR WOB

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

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

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

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

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

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

PRINCIPAL VENTILATION CAPACITY REQUIRED		9.32.3.4.(1)
1 Bedroom	31.8	cfm
2 Bedroom	47.7	cfm
3 Bedroom	63.6	cfm
4 Bedroom	79.5	cfm
5 Bedroom	95.4	cfm
TOTAL	79.5	cfm

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

PRINCIPAL EXHAUST FAN CAPACITY			
Model: VANEE 65H	Location: BSMT		
155.0 cfm	3.0 sones		
<input checked="" type="checkbox"/>	HVI Approved		
PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
155.0 CFM	X 76 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-2	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-3	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-4	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:	September-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																																			
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																																			
LO#: 79980	Model: 5004 THE BEAUMONT	Builder: GOLD PARK HOMES	Date: 9/12/2018																																																																
Volume Calculation		Air Change & Delta T Data																																																																	
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5.2.3.1 Heat Loss due to Air Leakage																																																																			
$HL_{airb} = LR_{airb} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$																																																																			
0.407	x	515.77	x	42 °C	x	1.2	=	10633 W																																																											
								=	36278 Btu/h																																																										
5.2.3.2 Heat Loss due to Mechanical Ventilation																																																																			
$HL_{mech} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																																			
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)																																																																			
$HL_{airrv} = Level Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclvl} + HL_{bgclvl})\}$																																																																			
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<p>*HLairbv = Air leakage heat loss + ventilation heat loss</p> <p>*For a balanced or supply only ventilation system HLairve = 0</p>																																																																			

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 5004 THE BEAUMONT	OPT. ELEVATOR WOB	BUILDER: GOLD PARK HOMES
SFQT: 4330	LO# 79980	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)	75

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):	65571.0	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: 74.0 ft	WIDTH: 41.0 ft	EXPOSED PERIMETER:	179.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	51.0 ft

2012 OBC - COMPLIANCE PACKAGE

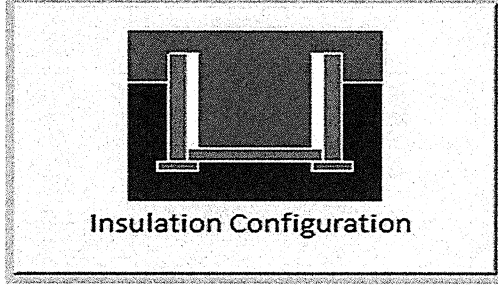
Component	Compliance Package A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 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

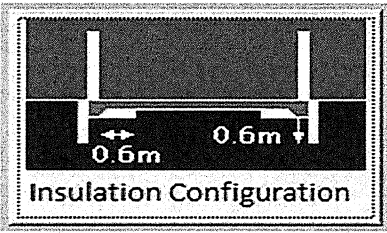
Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	4.6	 Insulation Configuration
Floor Width (m):	12.5	
Exposed Perimeter (m):	54.6	
Wall Height (m):	3.0	
Depth Below Grade (m):	1.83	
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):		853

TYPE: 5004 THE BEAUMONT
LO# 79980

OPT. ELEVATOR WOB

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		
Length (m):	1.5	
Width (m):	12.5	
Exposed Perimeter (m):	15.5	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		211

TYPE: 5004 THE BEAUMONT
LO# 79980

OPT. ELEVATOR WOB

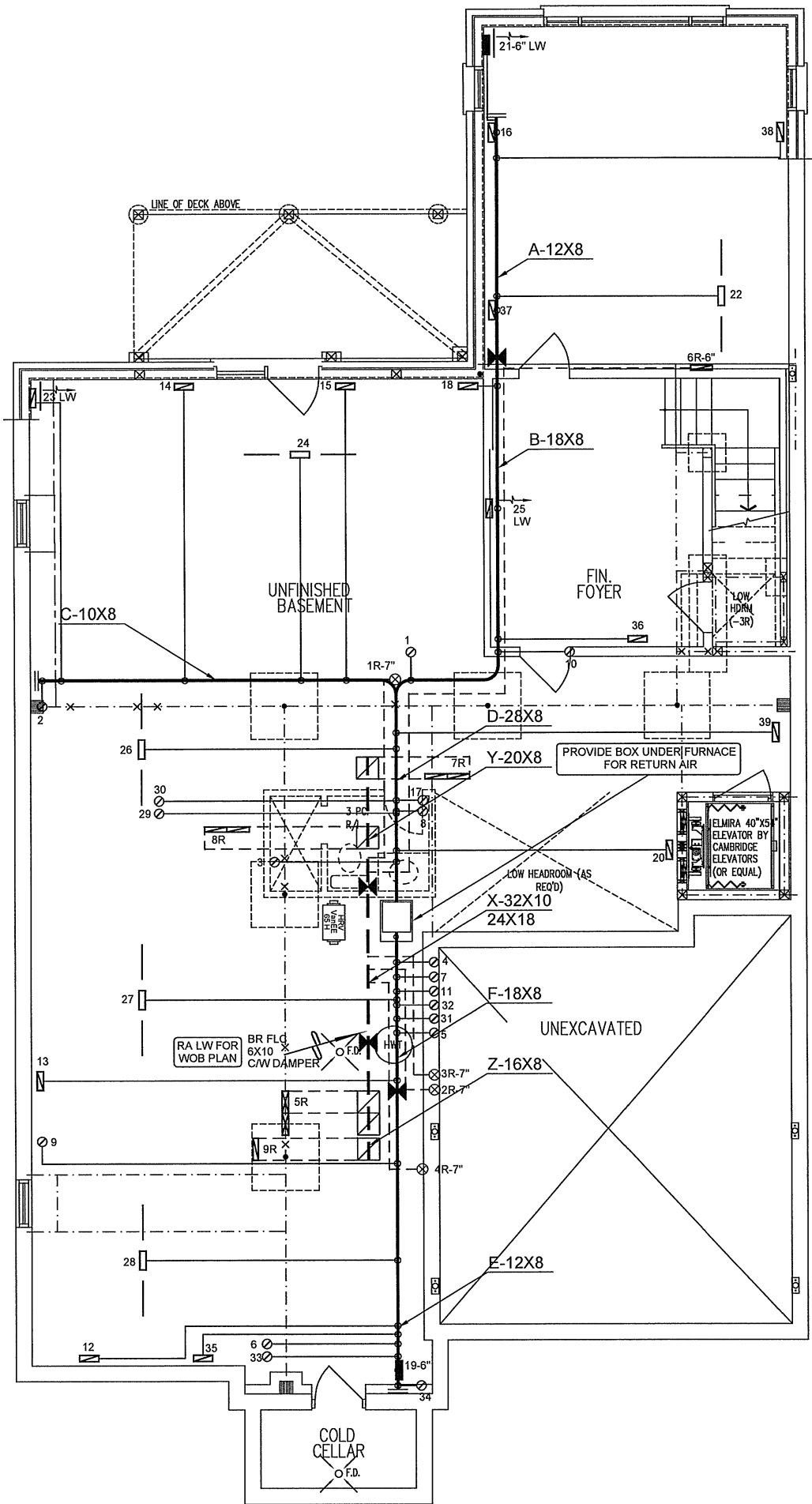
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

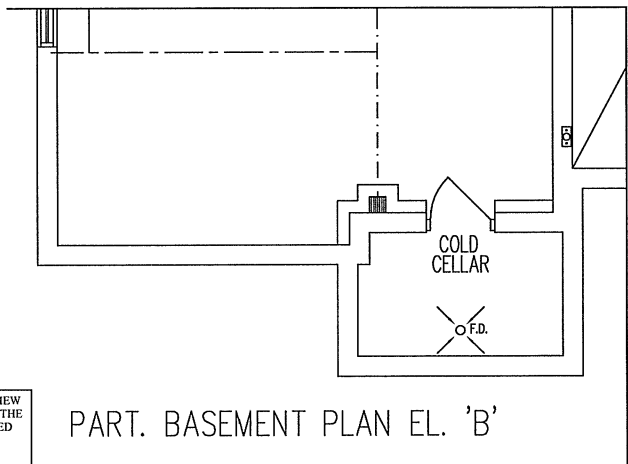
Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	9.14			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1856.8			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2475.1 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):	0.407			
Cooling Air Leakage Rate (ACH/H):	0.137			

TYPE: 5004 THE BEAUMONT
LO# 79980

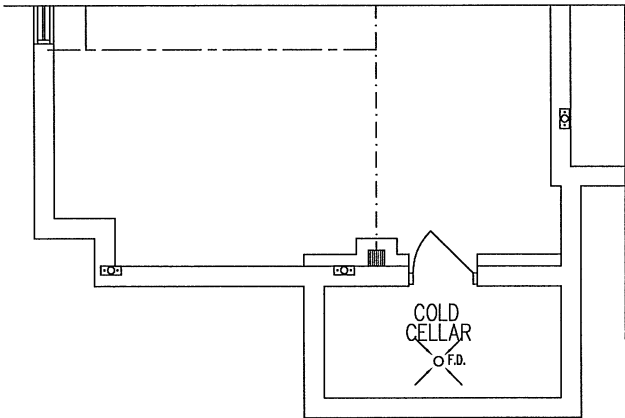
OPT. ELEVATOR WOB



PART. BASEMENT PLAN EL. 'A' (OPT. ELEVATOR)



PART. BASEMENT PLAN EL. 'B'



PART. BASEMENT PLAN EL. 'C'

CSA-F280-12

WOB

PACKAGE A1

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER

3.		
2.		
1.		
No.	Description	Date
REVISIONS		

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Client
GOLD PARK HOMES

Project Name
**PINE VALLEY & TESTON
VAUGHAN, ONTARIO
OPT. ELEVATOR
THE BEAUMONT - WOB
5004 4330 sqft**

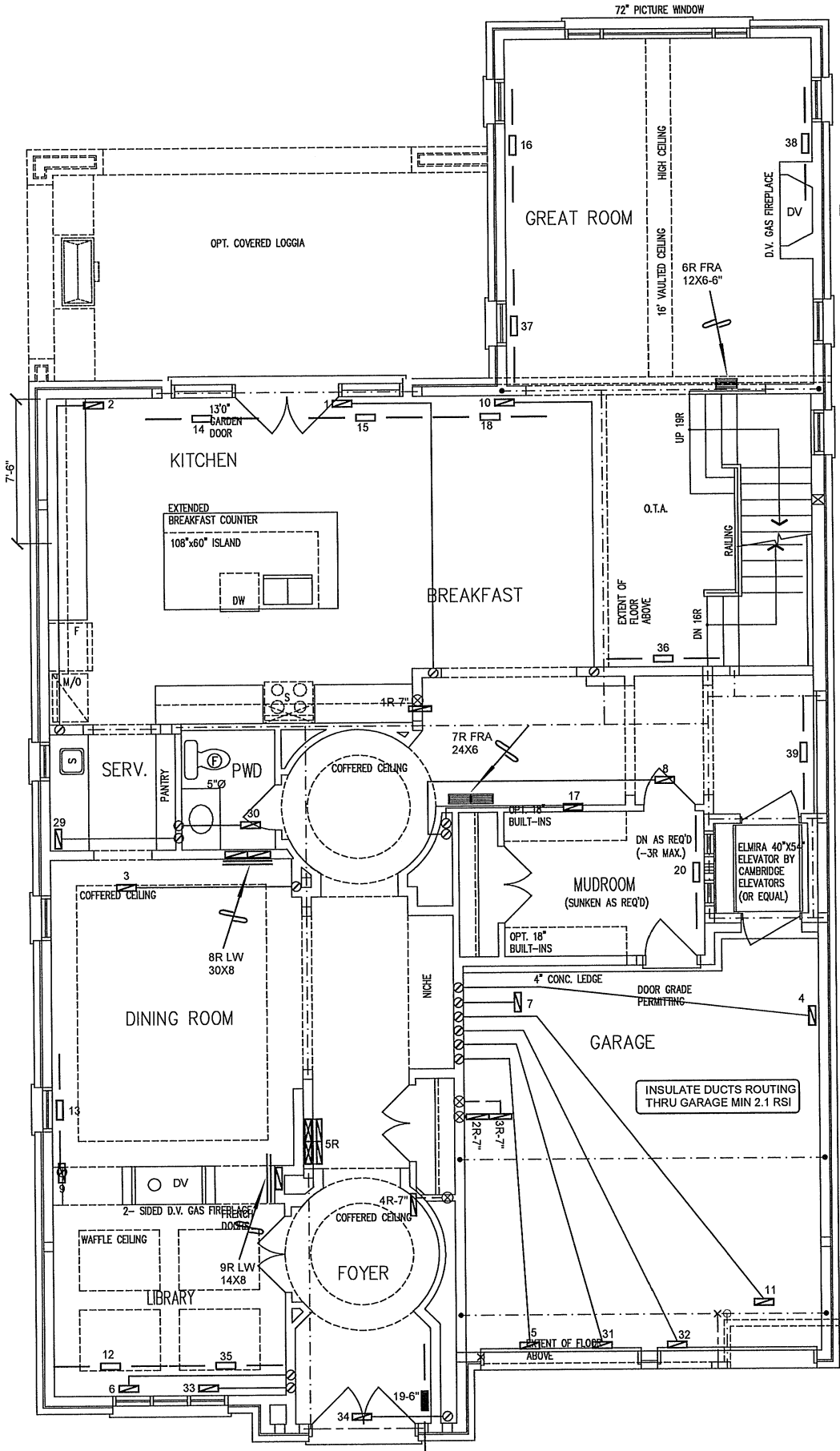
HVACDESIGNS LTD.

375 Finley Ave. Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdsgns.ca
Web: www.hvacdsgns.ca
Specializing in Residential Mechanical Design Services

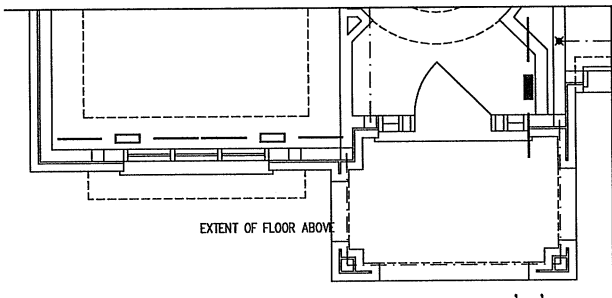
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

HEAT LOSS 91624 BTU/H UNIT DATA	# OF RUNS	S/A	R/A	FANS
MAKE LENNOX	3RD FLOOR			
MODEL EL296110XE60C	2ND FLOOR	18	5	6
INPUT 110 MBTU/H	1ST FLOOR	13	4	2
OUTPUT 106 MBTU/H	BASEMENT	8	1	0
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			
FAN SPEED 1955 cfm @ 0.6" w.c.				

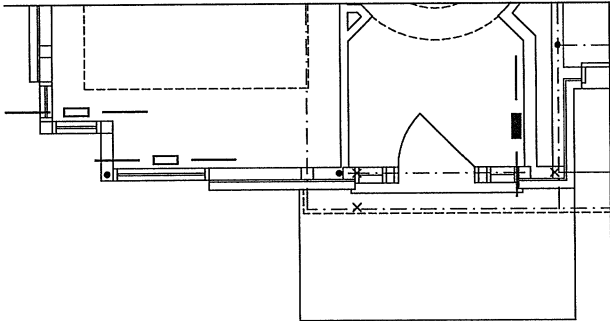
Sheet Title BASEMENT HEATING LAYOUT
Date SEPT/2018
Scale 1/8" = 1'-0"
BCIN# 19669
LO# 79980



PART. GROUND FLOOR PLAN EL. 'A' (OPT. ELEVATOR)



PART. GROUND FLOOR PLAN EL. 'B'



PART. GROUND FLOOR PLAN EL. 'C'

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.

CSA-F280-12

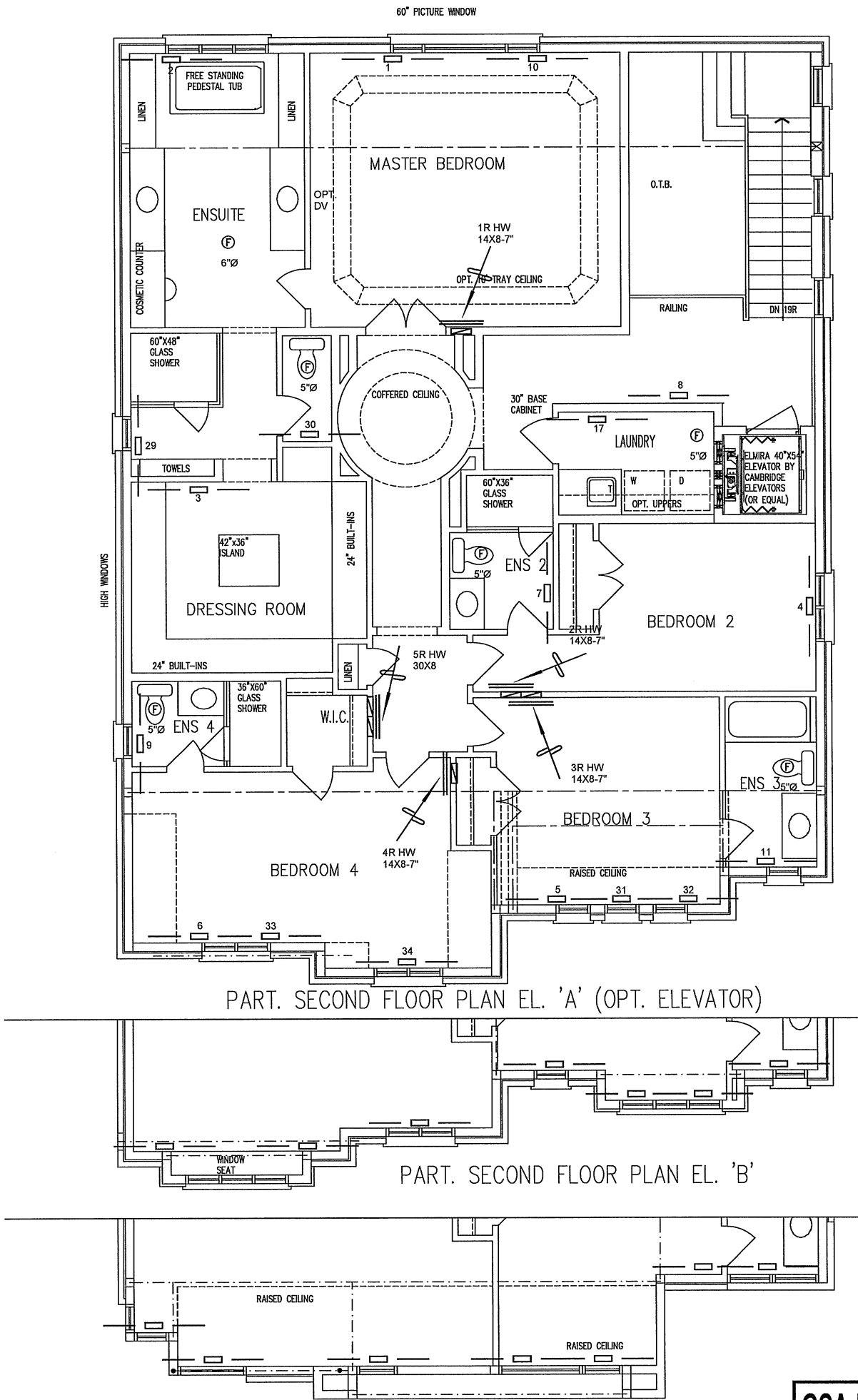
WOB

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.	
	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></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	SEPT/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	1/8" = 1'-0"
OPT. ELEVATOR			BCIN# 19669	
THE BEAUMONT - WOB			LO#	79980
5004				
4330 sqft				



I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C. 3.2.3 OF THE BUILDING CODE.

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

CSA-F280-12

WOB PACKAGE A1

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	SEPT/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	1/8" = 1'-0"
OPT. ELEVATOR			BCIN# 19669	
THE BEAUMONT - WOB			LO#	79980
5004	4330 sqft			