


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 BED CORNER Project: PINE VALLEY & TESTON	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> (print name)		declare that (choose one as appropriate):	
<input type="checkbox"/> I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____			
<input checked="" type="checkbox"/> I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: <u>19669</u> Basis for exemption from registration and qualification: <u>O.B.C SENTENCE 3.2.4.1 (4)</u>			
<input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____			
I certify that:			
1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm.			
September 26, 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.

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

TYPE: 5004 THE BEAUMONT
furnace pressure 0.6

DATE: Sep-18

GFA: 4294

LO# 80141

HEATING CFM	1955	COOLING CFM	1955		
TOTAL HEAT LOSS	83,751	TOTAL HEAT GAIN	59,424		
AIR FLOW RATE CFM	23.34	AIR FLOW RATE CFM	32.9		
RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	18	12
R/A	0	0	0	5	4
	1	2	3	4	5

EL296UJH110XE60C	110	AFUE = 96 %	INPUT (BTU/H) = 110,000	OUTPUT (BTU/H) = 106,000
FAN SPEED	0	DESIGN CFM = 1955	CFM @ .8" E.S.P.	
LOW	1380	1955	TEMPERATURE RISE	50 °F
MEDIUM	1505			
HIGH	1685			

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	MBR	ENS-3	LIBR	DIN	KIT	KIT	GREAT	LAUN	KIT	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.37	2.42	1.98	2.18	1.12	1.76	0.33	1.21	0.61	1.37	1.75	1.36	1.88	3.00	3.00	3.17	0.55	3.00	3.81	2.03	3.39	3.39	3.39	3.39
CFM PER RUN HEAT	32	56	46	51	26	41	8	28	14	32	41	32	44	70	70	74	13	70	89	47	79	79	79	79
RM GAIN MBH	2.36	1.90	2.50	2.83	1.74	2.08	0.11	0.28	0.39	2.36	0.97	1.99	2.46	2.74	2.74	2.68	1.78	2.74	1.03	1.82	0.33	0.33	0.33	0.33
CFM PER RUN COOLING	78	62	82	93	57	68	4	9	13	78	32	66	81	90	90	88	59	90	34	60	11	11	11	11
ADJUSTED PRESSURE	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	46	62	29	34	38	50	28	31	43	54	41	41	27	40	32	49	26	36	24	16	50	50	39	30
EQUIVALENT LENGTH	190	140	180	180	120	150	160	150	190	180	180	180	80	140	150	130	150	140	150	130	130	140	100	102
TOTAL EFFECTIVE LENGTH	236	202	209	214	158	200	188	181	233	234	201	107	180	182	179	176	176	176	174	146	180	190	139	132
ADJUSTED PRESSURE	0.07	0.09	0.08	0.08	0.11	0.09	0.09	0.1	0.07	0.07	0.09	0.08	0.15	0.09	0.09	0.09	0.09	0.09	0.12	0.1	0.09	0.12	0.12	0.13
ROUND DUCT SIZE	6	5	5	6	4	5	4	4	4	6	4	5	5	6	6	5	5	6	6	4	5	5	5	5
HEATING VELOCITY (ft/min)	163	411	338	260	298	301	92	321	161	163	470	235	323	357	357	543	95	357	454	539	580	580	580	580
COOLING VELOCITY (ft/min)	398	455	602	474	654	499	46	103	149	398	367	485	595	459	459	646	433	459	173	688	81	81	81	81
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	4X10	4X10	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
ROOM NAME	BAS	BAS	BAS	BAS	WIC	ENS	BED-3	BED-3	BED-4	BED-4	LIBR	KIT	GREAT	GREAT
RM LOSS MBH	3.39	3.39	3.39	3.39	1.36	1.12	1.12	1.12	1.76	1.76	1.36	3.00	3.17	3.17
CFM PER RUN HEAT	79	79	79	79	32	21	26	26	41	41	32	70	74	74
RM GAIN MBH	0.33	0.33	0.33	0.33	0.94	0.70	1.74	1.74	2.08	2.08	1.99	2.74	2.68	2.68
CFM PER RUN COOLING	11	11	11	11	31	23	57	57	68	68	66	90	88	88
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	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	140	130	140	150	130	140	150	150	150
TOTAL EFFECTIVE LENGTH	157	103	137	181	174	173	172	186	197	170	178	189	214	214
ADJUSTED PRESSURE	0.11	0.17	0.13	0.13	0.1	0.1	0.1	0.09	0.09	0.1	0.1	0.09	0.08	0.08
ROUND DUCT SIZE	5	5	5	5	4	4	4	5	5	5	5	6	5	6
HEATING VELOCITY (ft/min)	580	580	580	580	367	241	191	191	301	301	235	357	543	377
COOLING VELOCITY (ft/min)	81	81	81	81	356	264	419	419	499	499	485	459	646	449
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10
TRUNK	B	D	F	E	D	D	F	F	E	E	E	B	A	A

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	380	0.08	9.8	12	8	TRUNK G	0	0.00	0	0	8	TRUNK O	0	0.06	0	0	8
TRUNK B	663	0.07	12.4	18	8	TRUNK H	0	0.00	0	0	8	TRUNK P	0	0.06	0	0	8
TRUNK C	354	0.09	9.2	10	8	TRUNK I	0	0.00	0	0	8	TRUNK Q	0	0.06	0	0	8
TRUNK D	1283	0.07	15.9	30	8	TRUNK J	0	0.00	0	0	8	TRUNK R	0	0.06	0	0	8
TRUNK E	369	0.07	10	12	8	TRUNK K	0	0.00	0	0	8	TRUNK S	0	0.06	0	0	8
TRUNK F	670	0.07	12.5	20	8	TRUNK L	0	0.00	0	0	8	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	120	120	120	120	305	85	300	300	185	0	0	0	0	0	0	0	0	1465	1465	17.4	32	32	32	32
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	0.06	0.06	0.06	0.06	0.06	0.06	0.06
ACTUAL DUCT LGH	38	37	37	45	43	59	27	25	34	1	1	1	1	1	1	1	1	490	490	11.5	16	16	16	16
EQUIVALENT LENGTH	195	185	165	205	145	175	190	185	150	0	0	0	0	0	0	0	0	1955	1955	19.4	24	24	24	24
TOTAL EFFECTIVE LH	233	222	207	250	188	234	217	210	184	1	1	1	1	1	1	1	1	805	805	13.9	22	22	22	22
ADJUSTED PRESSURE	0.06	0.07	0.07	0.06	0.08	0.06	0.06	0.07	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.06	0.06	0.06	0.06	0.06	0.06	0.06
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	19.4	19.4	19.4	24	24	24	24
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	18	18	18	18	18	18	18
TRUNK	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	18	18	18	18	18	18	18

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

LO # 80141
OPT 5 BED CORNER

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	<u>2</u> @ 21.2 cfm	<u>42.4</u> cfm
Other Bedrooms	<u>3</u> @ 10.6 cfm	<u>31.8</u> cfm
Kitchen & Bathrooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Other Rooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Table 9.32.3.A.	TOTAL	<u>201.4</u> 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		<u>79.5</u> cfm

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

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
<u>155.0</u> cfm	<u>3.0</u> sones
<input checked="" type="checkbox"/> HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	$\Delta T \cdot F$
155.0 CFM	X 76 F
X	X 1.08
X	X 0.25

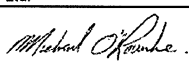
SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-2	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-3	QTXEN050C	50	<input checked="" type="checkbox"/>
ENS-4	QTXEN050C	50	<input checked="" type="checkbox"/>

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 65H		
<u>155</u> cfm high	<u>64</u> cfm low	
<u>75</u> % 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:	
HRAI #	001820
Date:	September-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																											
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																											
LO#: 80141		Model: 5004 THE BEAUMONT		Builder: GOLD PARK HOMES		Date: 9/26/2018																																																					
Volume Calculation					Air Change & Delta T Data																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>House Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> </thead> <tbody> <tr> <td>Bsmt</td> <td>2078</td> <td>10</td> <td>20780</td> </tr> <tr> <td>First</td> <td>2078</td> <td>11</td> <td>22858</td> </tr> <tr> <td>Second</td> <td>2301</td> <td>9</td> <td>20709</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>64,347.0 ft³</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>1822.1 m³</td> </tr> </tbody> </table>					House Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	2078	10	20780	First	2078	11	22858	Second	2301	9	20709	Third	0	9	0	Fourth	0	9	0	Total:			64,347.0 ft³	Total:			1822.1 m³	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> </tr> </thead> <tbody> <tr> <td>Winter DTDh</td> <td>22</td> <td>-20</td> </tr> <tr> <td>Summer DTDc</td> <td>23</td> <td>31</td> </tr> <tr> <td></td> <td></td> <td>8</td> </tr> <tr> <td></td> <td></td> <td>14</td> </tr> </tbody> </table>					Design Temperature Difference			Tin °C	Tout °C	ΔT °C	Winter DTDh	22	-20	Summer DTDc	23	31			8			14
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5.2.3.1 Heat Loss due to Air Leakage					6.2.6 Sensible Gain due to Air Leakage																																																						
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$					$HG_{satb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																																						
0.340 x 506.14 x 42 °C x 1.2 = 8720 W					= 0.118 x 506.14 x 8 °C x 1.2 = 547 W																																																						
= 29754 Btu/h					= 1868 Btu/h																																																						
5.2.3.2 Heat Loss due to Mechanical Ventilation					6.2.7 Sensible heat Gain due to Ventilation																																																						
$HL_{vaib} = PVC \times DTD_h \times 1.08 \times (1 - E)$					$HL_{vaib} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																						
155 CFM x 76 °F x 1.08 x 0.25 = 3181 Btu/h					155 CFM x 14 °F x 1.08 x 0.25 = 578 Btu/h																																																						
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																											
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$																																																											
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Level Factor (LF)</th> <th>HLairbv 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 / HLlevel)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.5</td> <td rowspan="5" style="text-align: center; vertical-align: middle;">29,754</td> <td>12,277</td> <td>1.212</td> </tr> <tr> <td>2</td> <td>0.3</td> <td>23,016</td> <td>0.388</td> </tr> <tr> <td>3</td> <td>0.2</td> <td>17,372</td> <td>0.343</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>										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	29,754	12,277	1.212	2	0.3	23,016	0.388	3	0.2	17,372	0.343	4	0	0	0.000	5	0	0	0.000																								
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*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: 5004 THE BEAUMONT	OPT 5 BED CORNER	BUILDER: GOLD PARK HOMES
SFQT: 4294	LO# 80141	SITE: PINE VALLEY & TESTON

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	74

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	64347.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.90	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 74.0 ft	WIDTH: 46.0 ft	EXPOSED PERIMETER:	240.0 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	-

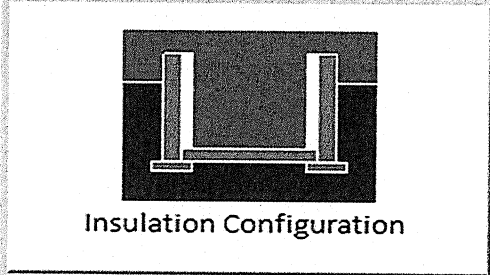
INDIVIDUAL BCIN: 19669

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):	14.0	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	3.8	
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):		2465

TYPE: 5004 THE BEAUMONT
LO# 80141

OPT 5 BED CORNER

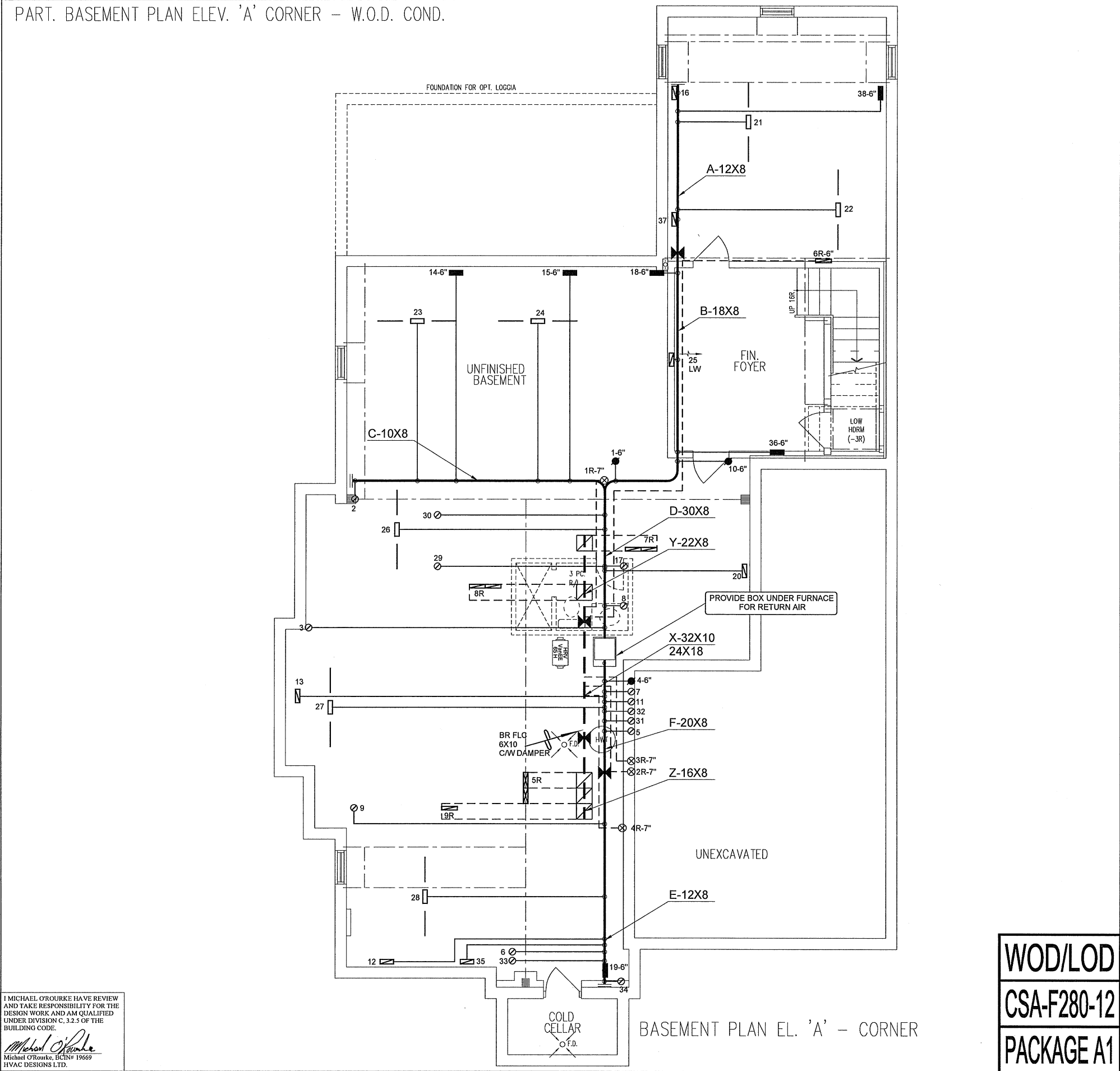
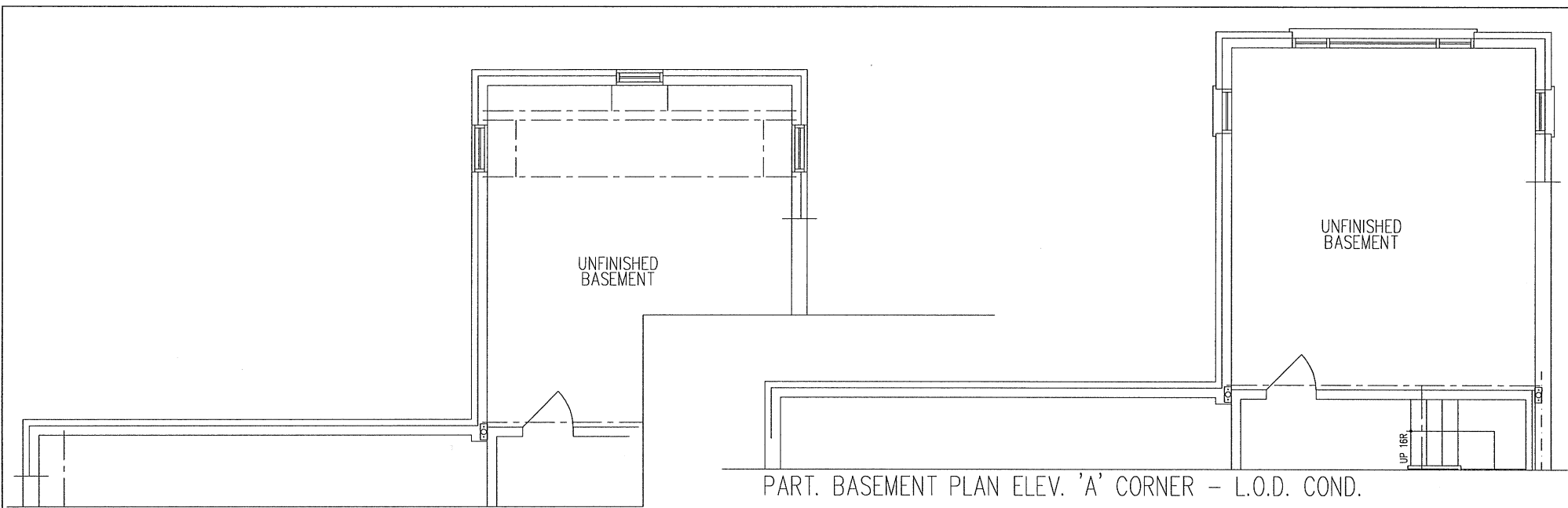
Air Infiltration Residential Load Calculator

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):	1822.1			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2428.9 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	73.2	73.2		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.340			
Cooling Air Leakage Rate (ACH/H):	0.118			

TYPE: 5004 THE BEAUMONT
LO# 80141

OPT 5 BED CORNER

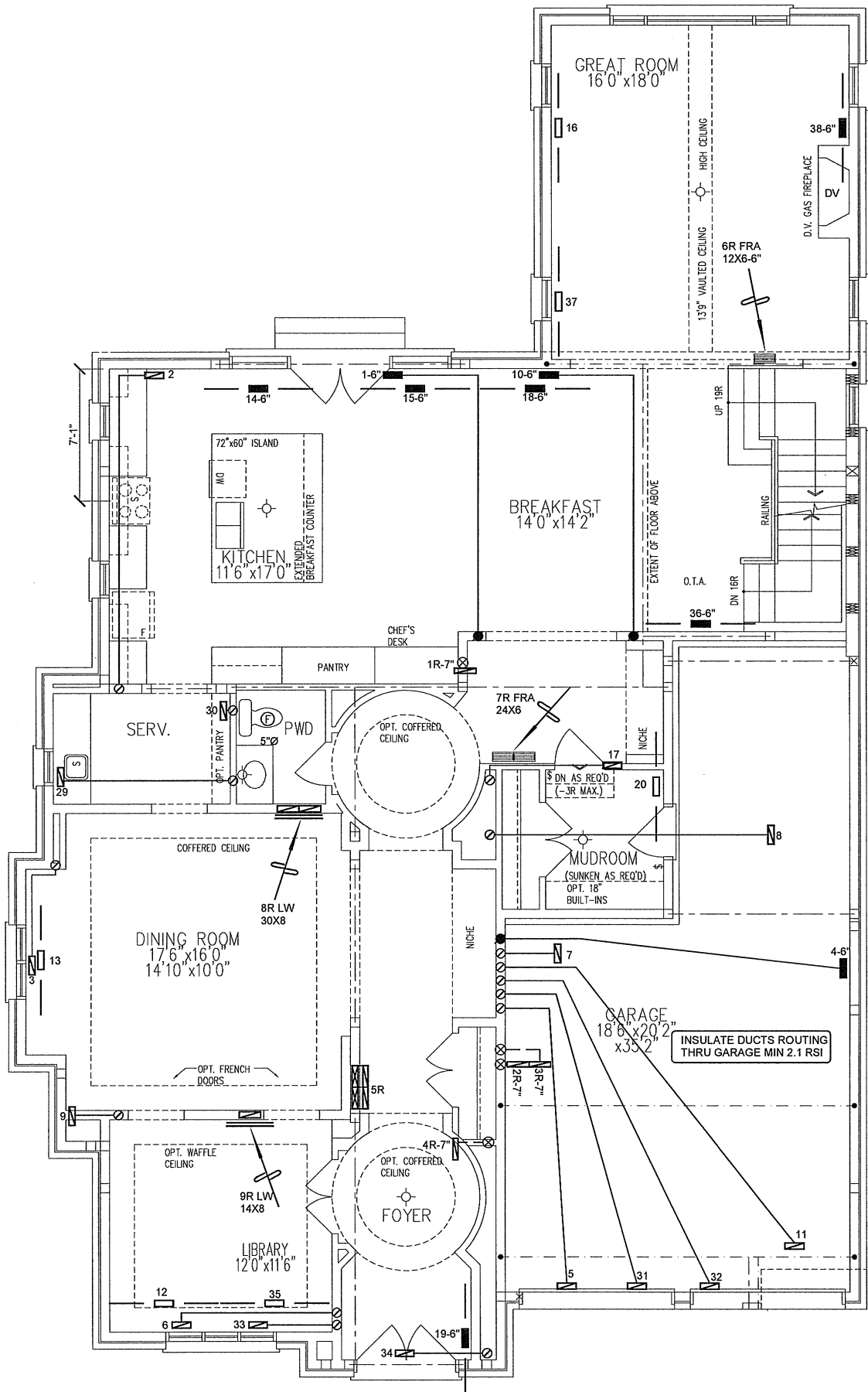


WOD/LOD
CSA-F280-12
PACKAGE A1

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.	
	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>HVACDESIGNS LTD.</div><div>375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div></div>	HEAT LOSS 86932 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	Date	SEPT/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			INPUT	110 MBTU/H	1ST FLOOR	12	4	2		
THE BEAUMONT		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.	OUTPUT	106 MBTU/H	ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A				Date	SEPT/2018
OPT 5 BED			COOLING	5.0 TONS					Scale	1/8" = 1'-0"
5004 - CORNER			FAN SPEED	1955 cfm @ 0.6" w.c.					BCIN# 19669	
4294 sqft									LO#	80141



GROUND FLOOR PLAN EL. 'A' - CORNER

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.

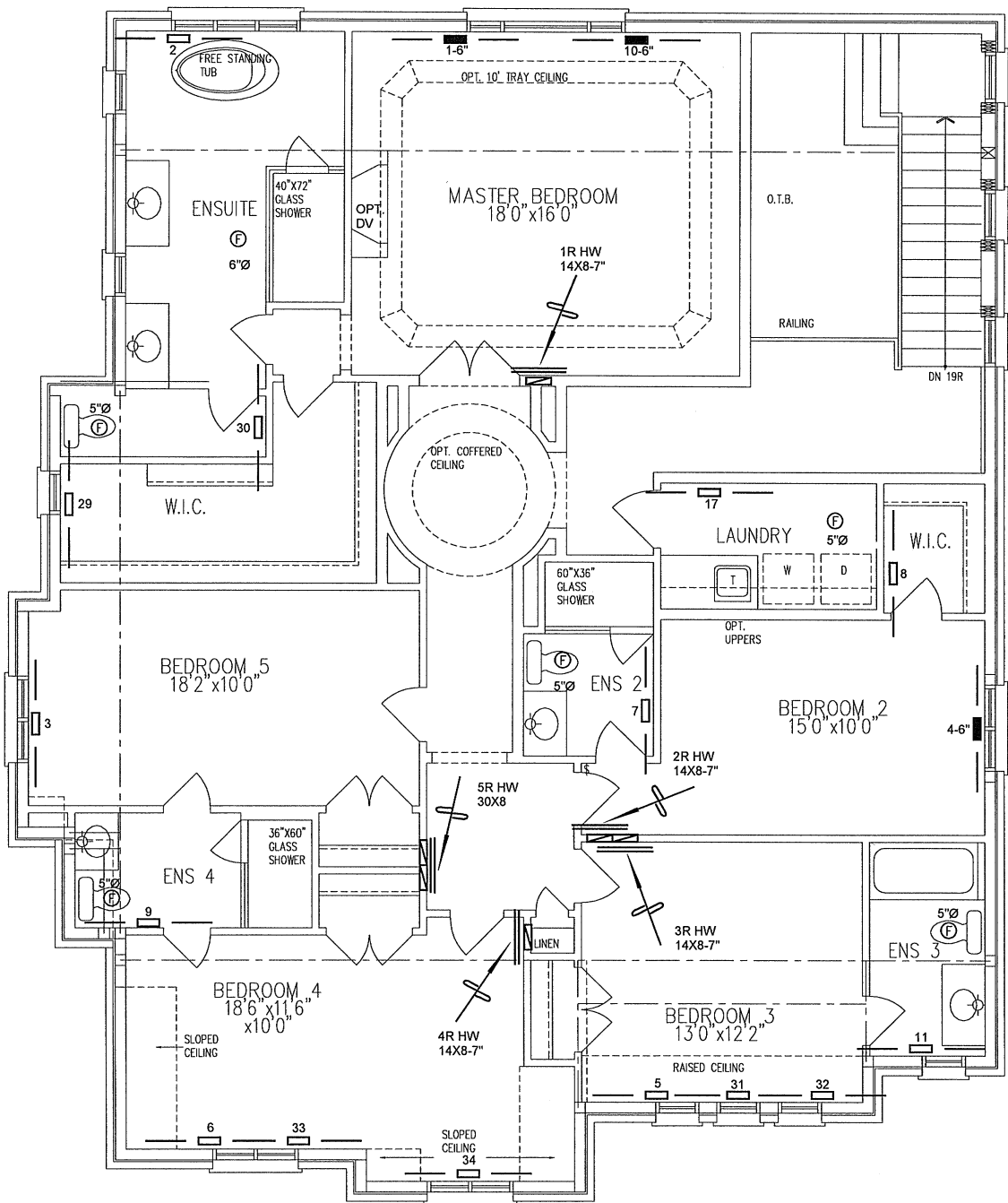
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

WOD/LOD
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.	
	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 THE BEAUMONT OPT 5 BED 5004 - CORNER 4294 sqft			Scale	1/8" = 1'-0"
			BCIN# 19669	
		LO#	80141	



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

WOD/LOD
CSA-F280-12
PACKAGE A1

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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.		
	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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GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT		
Project Name			Date	SEPT/2018	
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	1/8" = 1'-0"	
THE BEAUMONT			BCIN# 19669		
OPT 5 BED				LO#	80141
5004 - CORNER 4294 sqft		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.			