


Schedule 1: Designer Information

Type in the text you want to insert

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 MODEL CERTIFICATION		Unit no. N/A	Lot/con. N/A
Municipality KING CITY	Postal code N/A	Plan number/ other description N/A	
B. Individual who reviews and takes responsibility for design activities			
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 65 CHURCH STREET SOUTH		Unit no.	Lot/con.
Municipality AJAX	Postal code L1S 6A7	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"/> vHVAC – House <input type="checkbox"/> Building Structural <input type="checkbox"/> Small Buildings <input type="checkbox"/> Building Services <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Large Buildings <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> Complex Buildings <input type="checkbox"/> Fire Protection <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 Can/CSA-F280-M90		Model: OPT 2ND 5 BED - 50-8 Project: CASTLES OF KING CITY	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate): (print name)			
<input type="checkbox"/> 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: <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.			
<u>JANUARY 30, 2014</u> 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.

ROOM USE	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-3	BED-5	ENS-2	R1	R2
EXP. WALL	57	25	9	28	13	52	7	6	34	5	0	0
RM AREA	480	315	243	207	272	311	105	162	218	112	0	0
CLG. HT.	13	10	10	9	0	10	9	9	10	9	9	9
COLD FLOOR	0	0	0	0	0	12	0	60	218	112	0	0
COLD CEILING	480	315	243	207	272	311	105	162	218	112	0	0
NO ATTIC EXPOSED CLG	0	0	0	0	0	0	0	0	0	0	0	0
GROSS WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0	0	0	0	0
GROSS WALL BAS BELOW GRADE	0	0	0	0	0	0	0	0	0	0	0	0
FACTORS												
GRS WALL AREA	741	250	81	252	117	520	63	54	340	45	0	0
GLAZING												
NORTH	19.50	13.96										
EAST/WEST	19.50	33.00										
SOUTH	19.50	20.92										
SKYLT.	19.50	136.72										
DOORS	25.91	4.98										
NET EXPOSED WALL	631	1945	355	227	664	128	81	237	46	225	658	127
NET EXPOSED WALL BAS ABOVE GR	480	712	338	299	444	211	243	361	171	207	307	146
EXPOSED CLG	1.48	0.70										
NO ATTIC EXPOSED CLG	2.42	1.15										
EXPOSED FLOOR	2.36	0.45										
EXPOSED WALL BAS BELOW GRADE	22.00											
BELOW GRADE HT LOSS FLOOR	1.08											
SUBTOTAL HT LOSS	4831	1868	598	1482	1163	3119	440	640	2579	894	0	0
SUB TOTAL HT GAIN	3188	3285	217	472	320	987	139	202	816	283	0	0
HT LOSS AIR LEAKAGE FACTOR	0.317											
HT GAIN AIR LEAKAGE FACTOR	0.102											
HT GAIN PEOPLE/APPLANCES	240											
TOTAL HT LOSS BTU/H	6361	2460	787	1964	1331	4107	579	842	3395	1177	0	0
TOTAL HT GAIN x 1.3 BTU/H	5191	5017	622	1978	988	3578	584	733	3039	1463	0	0

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

Michael O'Rourke

ROOM USE	LIV	DIN	KT/DM	FAM	LAUN	WIR	FOY	DEN	R3	R4	WOB	BAS
EXP. WALL	0	15	86	0	31	11	37	40	0	0	0	198
RM AREA	0	0	0	0	0	0	0	0	0	0	0	0
CLG. HT.	10	10	10	10	12	10	10	10	9	9	9	9
COLD FLOOR	0	0	0	0	0	0	0	0	0	0	0	0
COLD CEILING	0	0	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	0	0	12	0	0	0	0	0	0	0	0	0
GROSS WALL BAS ABOVE GRADE	0	0	0	0	0	0	0	0	0	0	0	594
GROSS WALL BAS BELOW GRADE	0	0	0	0	0	0	0	0	0	0	0	1188
FACTORS												
GRS WALL AREA	0	150	860	0	372	110	370	400	0	0	0	0
GLAZING												
NORTH	19.50	13.96										
EAST/WEST	19.50	33.00										
SOUTH	19.50	20.92										
SKYLT.	19.50	136.72										
DOORS	25.91	4.98										
NET EXPOSED WALL	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL BAS ABOVE GR	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	3.60	0.45										
NO ATTIC EXPOSED CLG	2.42	1.15										
EXPOSED FLOOR	2.36	0.45										
EXPOSED WALL BAS BELOW GRADE	22.00											
BELOW GRADE HT LOSS FLOOR	1.08											
SUBTOTAL HT LOSS	0	936	5940	0	1680	504	1823	1916	0	0	0	10326
SUB TOTAL HT GAIN	0	296	1880	0	532	160	577	606	0	0	0	3269
HT LOSS AIR LEAKAGE FACTOR	0.317											
HT GAIN AIR LEAKAGE FACTOR	0.102											
HT GAIN PEOPLE/APPLANCES	240											
TOTAL HT LOSS BTU/H	0	1232	7820	0	2212	664	2400	2522	0	0	0	13595
TOTAL HT GAIN x 1.3 BTU/H	0	1009	10388	0	2532	612	1233	2725	0	0	0	1475

TOTAL HEAT GAIN BTU/H

4.03 TONS

LOSS DUE TO VENTILATION LOAD BTU/H

20538

TOTAL STRUCTURE HEAT LOSS BTU/H

53447

TOTAL COMBINED HEAT LOSS BTU/H

73985

OPT 2ND 5 BED

DATE: Jan-14 GFA: 4334 LO#: 53842 CALCULATIONS per HRAI PAGE 2 of 3

SITE NAME: CASTLES OF KING CITY

BUILDER: ZANCOR HOMES

FURNACE CFM 1460 FURNACE CFM 1460
TOTAL HEAT LOSS 53447 TOTAL HEAT GAIN 43167
AIR FLOW RATE CFM 27.32 AIR FLOW RATE CFM 33.82

*LENNOX
ML195UH090XP48C 90 OUTPUT 85000 BTUH
FAN SPEED CFM @ 5" E.S.P.
LOW 1285
MEDLOW 1460
MEDIUM 1675
HIGH 1830

RUN COUNT	3rd	2nd	1st	Bas
S/A	0	15	10	6
R/A	0	5	3	1

All S/A diffusers 4"x10" unless noted otherwise on layout.

All R/A diffusers 5"x10" 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	ENS-2	ENS	BED-4	BED-5	BATH	BED-3	WIC	MBR	ENS-3	DEN	DIN	KT/FM	KT/FM	LAUN	W/R	FOY	DEN	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	2.12	1.23	1.18	1.23	2.05	1.70	0.58	1.33	0.79	2.12	0.84	1.26	1.23	1.96	1.96	1.96	0.66	2.40	1.26	2.27	2.27	2.27	2.27	2.27
CFM PER RUN HEAT	58	34	32	34	56	46	16	36	21	58	23	34	34	53	53	53	60	66	34	62	62	62	62	62
RM GAIN MBH	1.73	2.51	1.46	2.51	1.79	1.52	0.58	0.99	0.62	1.73	0.73	1.36	1.01	2.60	2.60	2.53	0.61	1.23	1.36	0.25	0.25	0.25	0.25	0.25
CFM PER RUN COOLING	59	85	49	85	61	51	20	33	21	59	25	46	34	88	88	88	21	42	46	8	8	8	8	8
ADJUSTED PRESSURE	0.125	0.13	0.125	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.125	0.13	0.13	0.13	0.13	0.13	0.13
ACTUAL DUCT LGH	83	48	49	46	54	52	32	45	46	35	59	39	20	35	41	66	52	30	39	61	35	32	42	42
EQUIVALENT LENGTH	190	210	120	150	180	140	180	210	170	200	190	130	160	130	200	170	120	120	170	130	180	150	120	140
TOTAL EFFECTIVE LH	273	258	169	196	234	192	212	255	216	235	249	169	180	165	241	236	172	150	209	169	241	185	152	182
ADJUSTED PRESSURE	0.05	0.05	0.07	0.06	0.05	0.07	0.06	0.05	0.05	0.05	0.05	0.05	0.07	0.07	0.08	0.05	0.07	0.08	0.06	0.07	0.05	0.07	0.08	0.07
ROUND DUCT SIZE	5	6	5	6	6	5	5	5	5	5	5	5	5	5	6	6	6	5	5	6	5	5	5	5
OUTLET GRILL SIZE	3X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10
TRUNK	A	A	E	A	D	E	C	D	C	A	E	D	E	B	A	A	C	E	D	A	B	C	D	D

RUN #	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
ROOM NAME	BAS	BAS	MBR	BED-5	BED-4	BED-2	KT/FM																	
RM LOSS MBH	2.27	2.27	2.12	1.70	2.05	1.96	1.96	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFM PER RUN HEAT	62	62	58	46	56	54	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RM GAIN MBH	0.25	0.25	1.73	1.52	1.79	1.98	2.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CFM PER RUN COOLING	8	8	59	51	61	67	88	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ADJUSTED PRESSURE	0.125	0.13	0.125	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.125	0.13	0.13	0.13	0.13	0.13
ACTUAL DUCT LGH	31	26	46	58	51	47	58	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	160	150	150	150	140	200	140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	191	176	196	208	191	247	198	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.07	0.07	0.06	0.06	0.07	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
ROUND DUCT SIZE	5	5	5	5	5	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	D	E	C	E	D	C	B																	

SUPPLY AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT
TRUNK A	352	0.05	10.7	13
TRUNK B	520	0.05	12.3	17
TRUNK C	791	0.05	14.4	24
TRUNK D	406	0.05	11.3	14
TRUNK E	667	0.05	13.6	21

RETURN AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT
TRUNK O	0	0.04	0	0
TRUNK P	0	0.04	0	0
TRUNK Q	0	0.04	0	0
TRUNK R	0	0.04	0	0
TRUNK S	0	0.04	0	0
TRUNK T	0	0.04	0	0
TRUNK U	0	0.04	0	0
TRUNK V	0	0.04	0	0
TRUNK W	655	0.04	14.2	23
TRUNK X	835	0.04	15.6	28
TRUNK Y	245	0.04	9.9	11
TRUNK Z	625	0.04	14	22
DROP	1460	0.04	19.2	24

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.

MICHAEL O'ROURKE
BCIN: 19669

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	135	155	105	95	245	275	135	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLENUM PRESSURE	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
ACTUAL DUCT LGH	58	54	57	46	77	56	27	46	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	205	185	195	185	205	170	185	200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	263	239	252	231	282	226	212	246	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.05	0.05	0.05	0.05	0.04	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
ROUND DUCT SIZE	7.5	7.5	7.8	6.8	6.9	9.3	9.3	7.5	0	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	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	30	14	14	30	30	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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

TYPE: 50-8

LO # 53842

MICHAEL O'ROURKE

PAGE 3 of 3

SITE NAME: CASTLES OF KING CITY

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES 9.32.3.1(1)

a) ☒ Direct vent (sealed combustion) only

b) ☐ Positive venting induced draft (except fireplaces)

c) ☐ Natural draft, B-vent or induced draft gas fireplace

d) ☐ Solid Fuel (including fireplaces)

e) ☐ No Combustion Appliances

HEATING SYSTEM

☒ Forced Air ☐ Non Forced Air

☐ Electric Space Heat

HOUSE TYPE 9.32.1(2)

☒ I Type a) or b) appliance only, no solid fuel

☐ II Type I except with solid fuel (including fireplaces)

☐ III Any Type c) appliance

☐ IV Type I, or II with electric space heat

☐ Other: Type I, II or IV no forced air

SYSTEM DESIGN OPTIONS O.N.H.W.P.

☐ 1 Exhaust only/Forced Air System

☐ 2 HRV with Ducting/Forced Air System

☒ 3 HRV Simplified/connected to forced air system

☐ 4 HRV with Ducting/non forced air system

☐ Part 6 Design

TOTAL VENTILATION CAPACITY 9.32.3.3(1)

Basement & Master Bedroom	2	@ 21.2 cfm	42.4	cfm
Other Bedrooms	4	@ 10.6 cfm	42.4	cfm
Kitchen & Bathrooms	8	@ 10.6 cfm	84.8	cfm
Other Rooms	7	@ 10.6 cfm	74.2	cfm
Table 9.32.3.A.	TOTAL		243.8	cfm

PRINCIPAL VENTILATION CAPACITY REQUIRED 9.32.3.4.(1)

Master Bedroom	31.8 cfm
Two Bedrooms	47.7 cfm
Three Bedrooms	63.6 cfm
Four Bedrooms	79.5 cfm
Table 9.32.3.B.	TOTAL 95.4 cfm
More than 5 - Part 6	

SUPPLEMENTAL VENTILATION CAPACITY 9.32.3.5.

Total Ventilation Capacity	243.8	cfm
Less Principal Ventil. Capacity	125	cfm
Required Supplemental Capacity	118.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANE 90H-V ECM Location: BSMT

125 cfm ☒ HVI Approved

0.6 sones

SUPPLEMENTAL FANS

Location	Model	NUTONE cfm	HVI	Sones
ENS	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
W/R	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
ENS-2	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
LAUN	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANE 90H-V ECM

159 cfm high 65 cfm low

75 % Sensible Efficiency ☒ HVI Approved

@ 32 deg F (0 deg C)

LOCATION OF INSTALLATION

Lot: Concession

Township: Plan:

Address:

Roll # Building Permit #

BUILDER

Name:

Address:

City:

Telephone #: Fax #:

INSTALLING CONTRACTOR

Name:

Address:

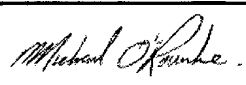
City:

Telephone #: Fax #:

DESIGNER CERTIFICATION

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

Name: HVAC Designs Ltd.

Signature: 

HRAI # 001820

Date: January-14

MODEL: 50-8
SFQT: 4334

LO# 53842

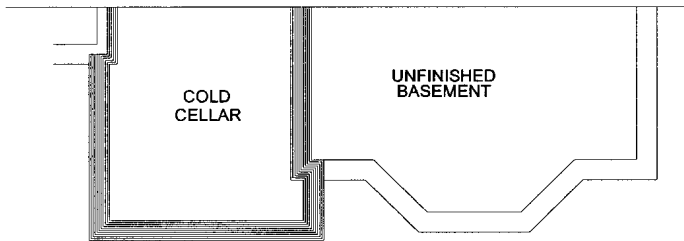
BUILDER: ZANCOR HOMES

ENERGYSTAR 12.1

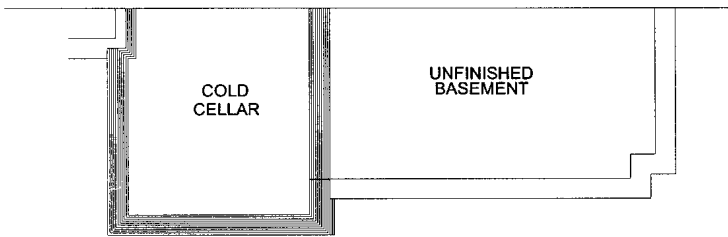
Component	Compliance Package
	ZONE 1
Ceiling with Attic Space Minimum RSI (R)-Value	50
Ceiling Without Attic Space Minimum RSI (R)-Value	31
Exposed Floor Minimum RSI (R)-Value	31
Walls Above Grade Minimum RSI (R)-Value	24
Basement Walls Minimum RSI (R)-Value	20
Below Grade Slab Entire surface > 600 mm below grade Minimum RSI (R)-Value	-
Edge of Below Grade Slab ≤ 600 mm Below Grade Minimum RSI (R)-Value	10
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10
Windows and Sliding Glass Doors Maximum U-Value	ZONE C
Skylights Maximum U-Value	2.8
Space Heating Equipment Minimum AFUE	95%
HRV Minimum Efficiency	75%
Domestic Hot Water Heater Minimum EF	0.9



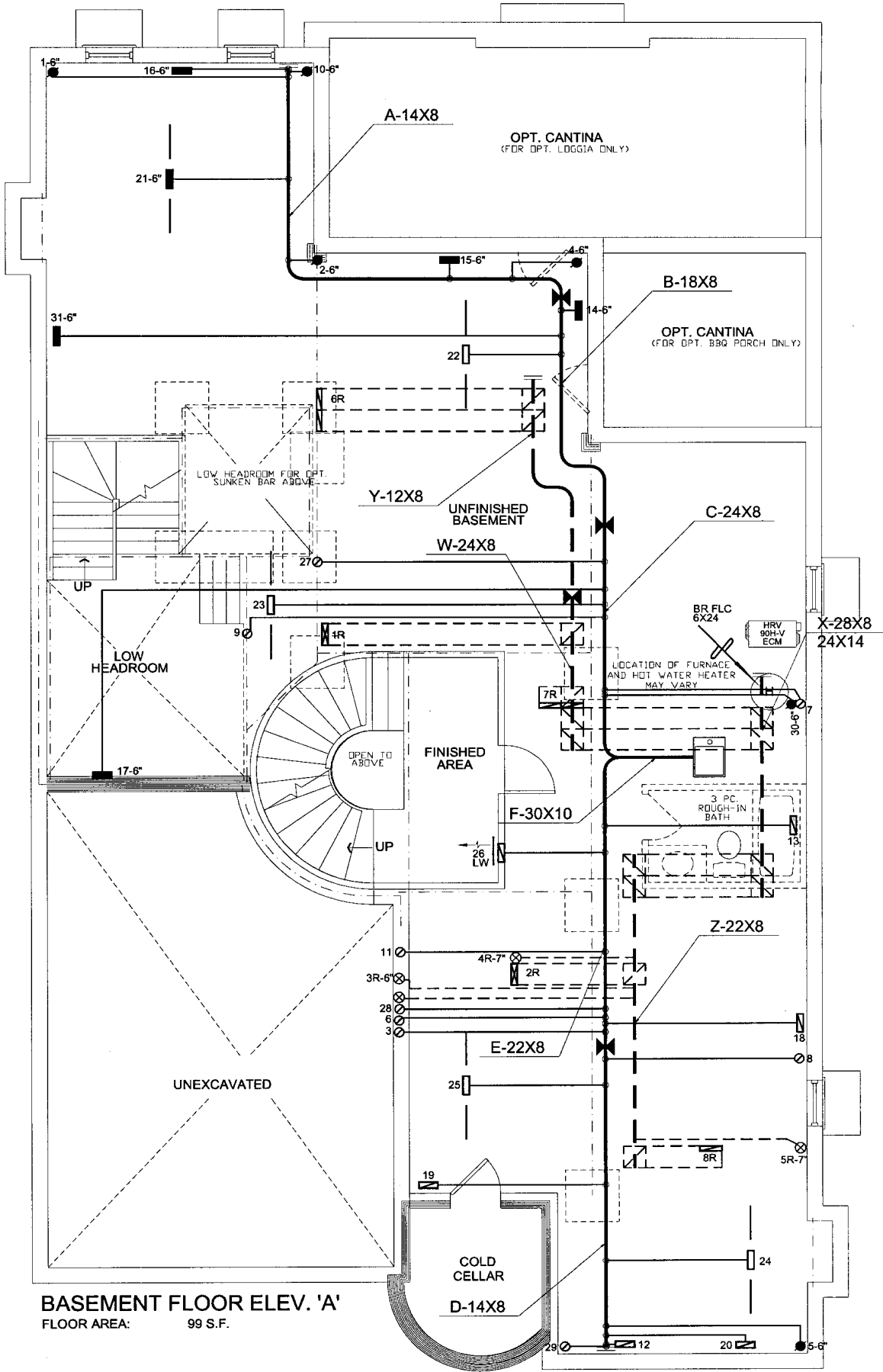
INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE



PARTIAL BASEMENT FLOOR ELEV. 'B'
FLOOR AREA: 99 S.F.



PARTIAL BASEMENT FLOOR ELEV. 'C'
FLOOR AREA: 99 S.F.



BASEMENT FLOOR ELEV. 'A'
FLOOR AREA: 99 S.F.

OBC 2012-Rev. 2014

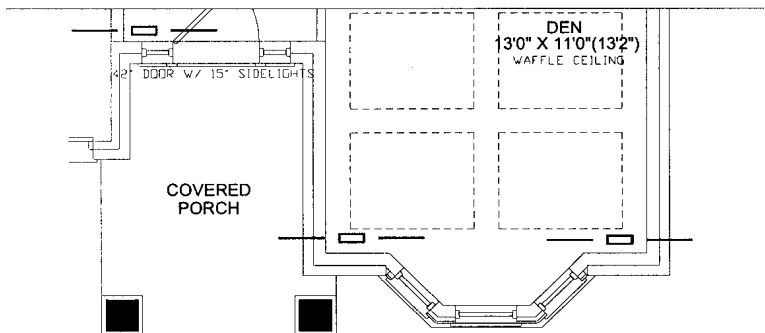


I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

HVAC LEGEND								REVISIONS		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	No.	Description	Date
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	2.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	1.		
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	No.		

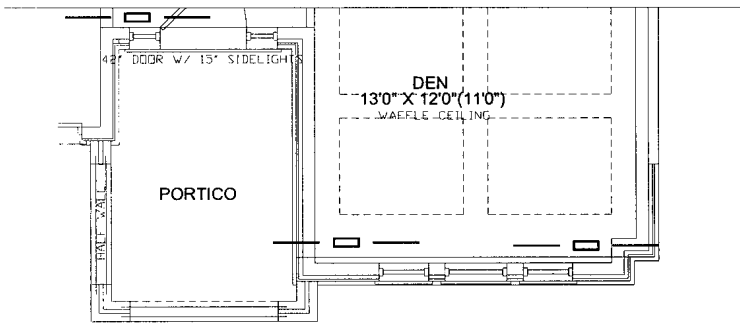
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Client		<div><div>HVACDESIGNS LTD.</div><div>65 Church Street South - Ajax, Ontario L1S 6A7 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</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></div>	HEAT LOSS 73985 BTU/H		# OF RUNS S/A R/A FANS		Sheet Title <div>BASEMENT HEATING LAYOUT</div> <div>Date JAN/2014</div> <div>Scale 1/8" = 1'-0"</div> <div>BCIN# 19669</div> <div>LO# 53842</div>
ZANCOR HOMES			UNIT DATA		3RD FLOOR		
Project Name			MAKE		2ND FLOOR		
CASTLES OF KING CITY KING CITY, ONTARIO			MODEL		1ST FLOOR		
OPT 2ND 5 BED 50-8 4334 sqft			ML195UH090XP48C-90		10 3 3		
			INPUT		BASEMENT		
			88 MBTU/H		6 1 0		
		OUTPUT		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			
		85 MBTU/H					
		COOLING		TONS			
		4.0					
		FAN SPEED		cfm @ 0.5" w.c.			
		1460					



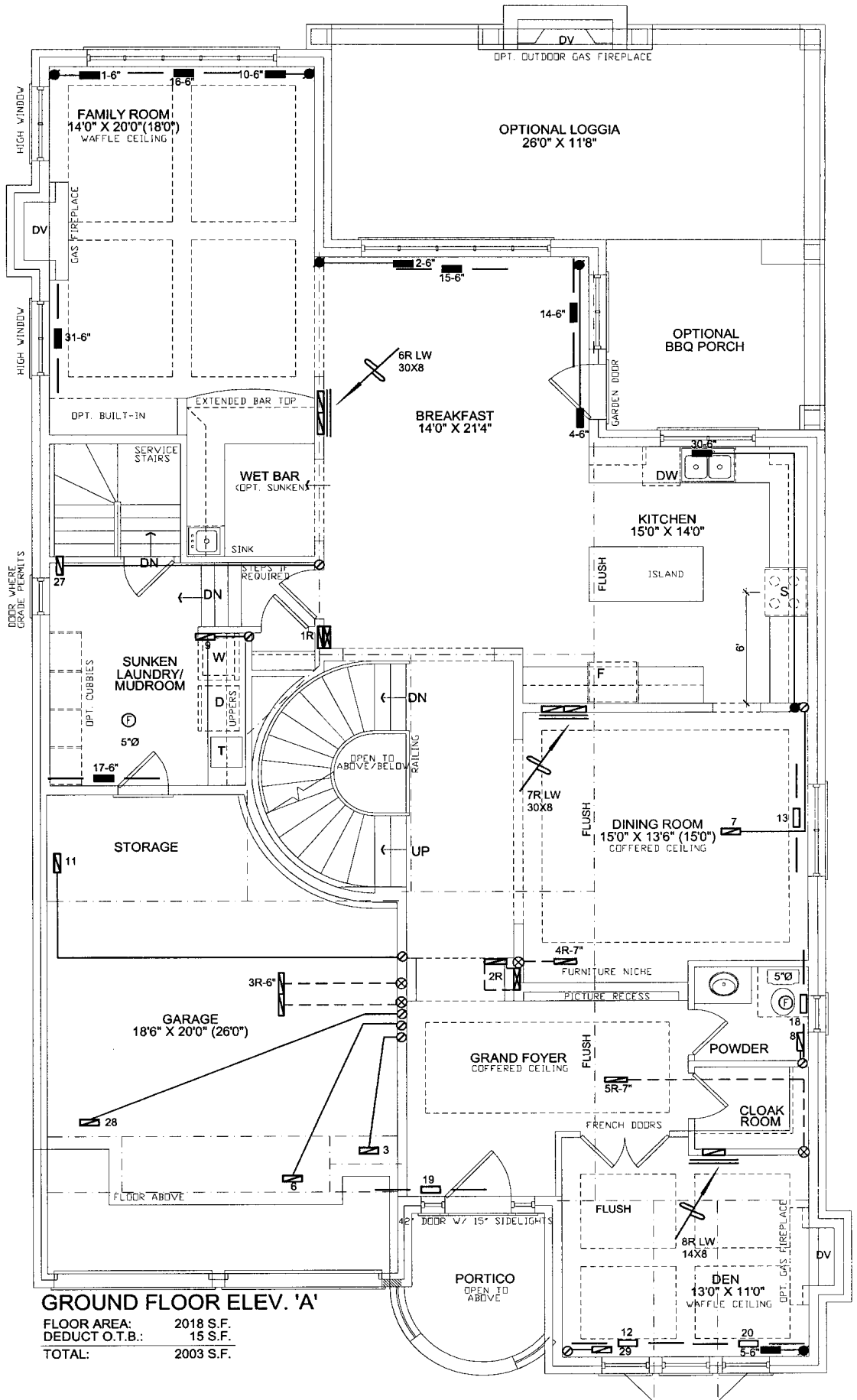
PARTIAL GROUND FLOOR ELEV. 'B'

FLOOR AREA: 2019 S.F.
DEDUCT O.T.B.: 15 S.F.
TOTAL: 2004 S.F.



PARTIAL GROUND FLOOR ELEV. 'C'

FLOOR AREA: 2019 S.F.
DEDUCT O.T.B.: 15 S.F.
TOTAL: 2004 S.F.



GROUND FLOOR ELEV. 'A'

FLOOR AREA: 2018 S.F.
DEDUCT O.T.B.: 15 S.F.
TOTAL: 2003 S.F.

OBC 2012-Rev. 2014

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, BCIN# 19669
HVAC DESIGNS LTD.

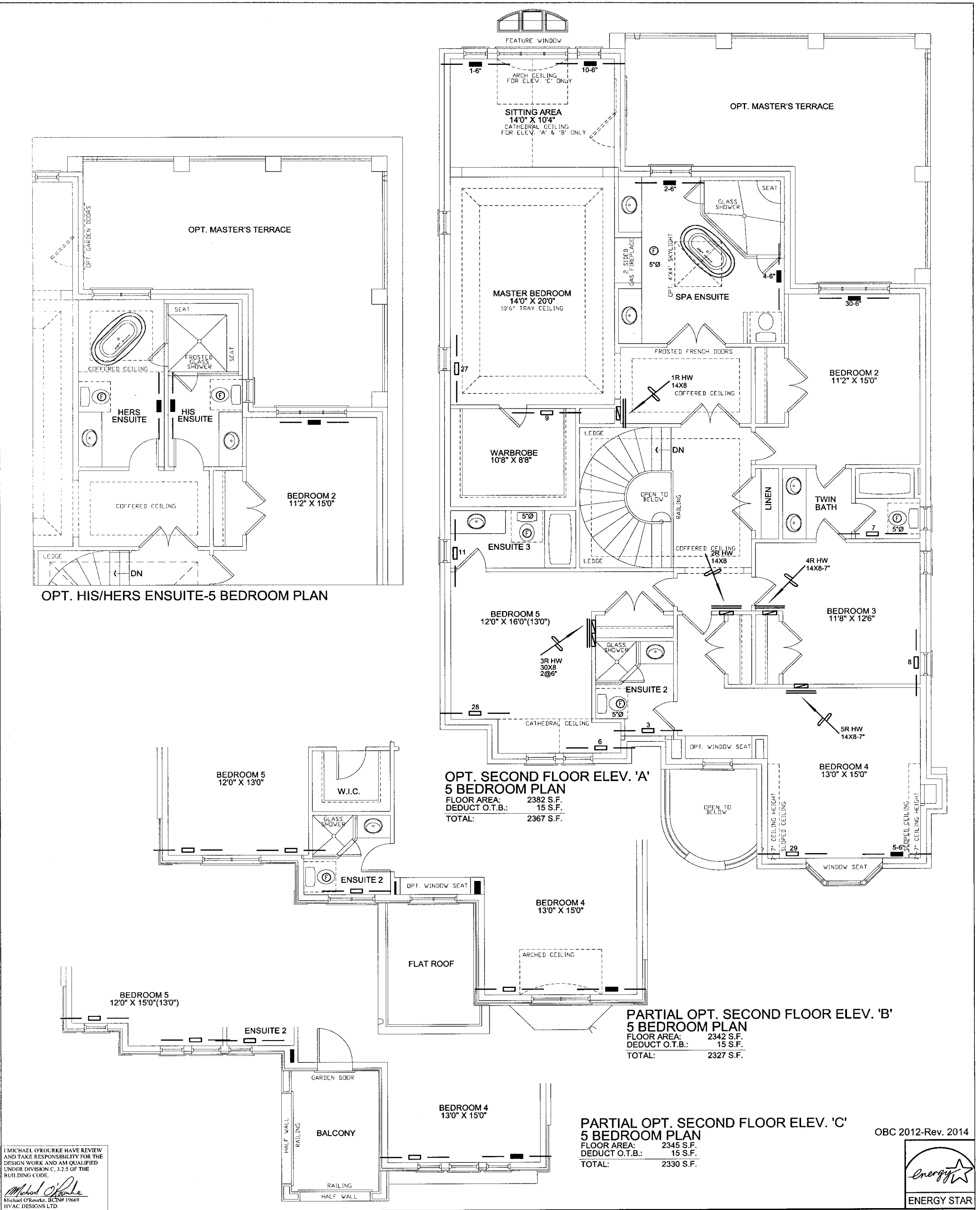


ENERGY STAR

HVAC LEGEND										
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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Client ZANCOR HOMES		<div></div> <div>65 Church Street South - Ajax, Ontario L1S 6A7 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 FIRST FLOOR HEATING LAYOUT	
Project Name CASTLES OF KING CITY KING CITY, ONTARIO			Date JAN/2014	
OPT 2ND 5 BED 50-8			Scale 1/8" = 1'-0"	
4334 sqft			BCIN# 19669	
			LO#	53842



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								
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	2.
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	1.
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	No.
							REVISIONS	
							Description	Date

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Client ZANCOR HOMES		<div><div>HVACDESIGNS LTD.</div><div>65 Church Street South - Ajax, Ontario L1S 6A7 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacadesigns.ca Web: www.hvacadesigns.ca Specializing in Residential Mechanical Design Services</div></div>	Sheet Title SECOND FLOOR HEATING LAYOUT	
Project Name CASTLES OF KING CITY KING CITY, ONTARIO			Date JAN/2014	Scale 1/8" = 1'-0"
OPT 2ND 5 BED 50-8		4334 sqft	BCIN# 19669	
			LO# 53842	