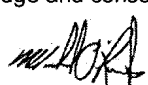


Schedule 1: Designer Information

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@hvacdesigns.ca
Telephone number (905) 619-2300	Fax number (905) 619-2375	Cell number ()	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1. of Division C]			
<input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings <input 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 Can/CSA-F280-M90		Model: OPT 2ND #1 HIS/HER ENS 50-6 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 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.			
JANUARY 30, 2014			
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	MBRT	HALL	ENS-2	R1	R2
EXP. WALL	36	25	7	33	34	13	9	68	16	9	0	0
RM AREA	320	190	132	168	218	156	108	330	192	126	0	0
CLG. HT.	13	11	10	10	10	10	10	11	10	10	9	9
COLD FLOOR	0	64	0	0	0	0	0	330	0	0	0	0
COLD CEILING	20	190	132	168	218	156	108	330	192	126	0	0
NO ATTIC EXPOSED CLG	300	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	468	250	70	363	340	130	90	748	160	90	0	0
GLAZING	20	390	279	26	507	363	0	26	507	363	0	0
NORTH	19.50	13.96	0	0	0	0	0	0	0	0	0	0
EAST/WEST	19.50	33.00	0	26	507	858	0	40	780	1320	0	0
SOUTH	19.50	20.92	0	0	0	0	6	117	126	0	0	0
SKYL.T.	19.50	136.72	0	0	0	0	0	0	0	0	0	0
DOORS	25.91	4.98	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	368	1078	207	311	314	177	84	682	1995	384	115	336
WALL BAS ABOVE GR	360	0.45	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.48	0.70	0	168	249	118	108	330	490	232	126	187
NO ATTIC EXPOSED CLG	2.42	1.15	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.36	0.45	0	0	0	0	0	330	780	150	0	0
EXPOSED WALL BAS BELOW GRADE	22.00	0	0	0	0	0	0	0	0	0	0	0
BELOW GRADE HT LOSS FLOOR	1.08	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	3782	1827	401	2173	1749	877	523	4551	1499	450	0	0
SUB TOTAL HT GAIN	3243	1311	132	1514	1188	235	140	1220	402	121	0	0
HT LOSS AIR LEAKAGE FACTOR	0.268	490	107	582	469	114	24	235	162	13	0	0
HT GAIN AIR LEAKAGE FACTOR	0.096	312	240	146	240	240	1	240	240	240	0	0
HT GAIN PEOPLE/APPLANCES	240	4795	508	2755	2218	1112	663	5771	1901	571	0	0
TOTAL HT LOSS BTU/H	5245	2317	501	2470	2005	1037	667	4113	2713	511	0	0
TOTAL HT GAIN x 1.3 BTU/H												

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	MUD	DIN	KIT	FAM	LAUN	WIR	FOY	LIBR	R3	R4	WOB	BAS
EXP. WALL	30	38	38	57	17	16	8	29	0	0	0	216
RM AREA	0	0	0	0	80	0	0	0	0	0	0	0
CLG. HT.	12	10	10	10	10	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	80	0	0	0	0	0	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	360	380	380	570	170	160	80	290	0	0	0	0
GLAZING	24	468	335	12	8	8	0	23	0	0	0	0
NORTH	19.50	13.96	0	0	156	112	0	449	0	0	0	0
EAST/WEST	19.50	33.00	16	47	312	528	14	449	0	0	0	0
SOUTH	19.50	20.92	18	12	312	528	0	449	0	0	0	0
SKYL.T.	19.50	136.72	351	234	251	0	0	449	0	0	0	0
DOORS	25.91	4.98	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	316	924	326	499	146	152	46	714	0	0	0	0
WALL BAS ABOVE GR	360	0.45	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.48	0.70	0	0	80	56	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.42	1.15	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.36	0.45	0	0	0	0	0	0	0	0	0	0
EXPOSED WALL BAS BELOW GRADE	22.00	0	0	0	0	0	0	0	0	0	0	0
BELOW GRADE HT LOSS FLOOR	1.08	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	1910	1973	2135	2844	1014	601	926	1611	0	0	0	0
SUB TOTAL HT GAIN	612	529	572	762	272	161	248	432	0	0	0	0
HT LOSS AIR LEAKAGE FACTOR	0.268	59	162	216	75	19	56	117	0	0	0	0
HT GAIN AIR LEAKAGE FACTOR	0.096	240	240	480	1440	762	1174	2042	0	0	0	0
HT GAIN PEOPLE/APPLANCES	240	4795	2707	3606	1285	762	1174	2042	0	0	0	0
TOTAL HT LOSS BTU/H	2423	2502	2707	3606	1285	762	1174	2042	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H												

TOTAL HEAT GAIN BTU/H 45112 3.76 TONS 17859 TOTAL STRUCTURE HEAT LOSS BTU/H 51925 TOTAL COMBINED HEAT LOSS BTU/H 69784

SITE NAME: CASTLES OF KING
BUILDER: ZANCOR HOMES

DATE: Jan-14 GFA: 3742 LO# 53718 CALCULATIONS per HRAI PAGE 2 of 3

FURNACE CFM 1460 FURNACE CFM 1460
TOTAL HEAT LOSS 51925 TOTAL HEAT GAIN 40647
AIR FLOW RATE CFM 28.12 AIR FLOW RATE CFM 35.92

*LENNOX HI-BOY HI-EFFICIENCY
ML195U090XP48C 90 OUTPUT 85000 BTUH
FAN SPEED CFM @ 5" E.S.P.

RUN COUNT	3rd	2nd	1st	Bas
S/A	0	14	13	5
R/A	0	4	3	1

plenum pressure s/a 0.14
s/a dir press. loss 0.01
adjusted pressure s/a 0.13
r/a pressure 0.14
r/a grille press. loss 0.02
adjusted pressure r/a 0.12

All S/A diffusers 4"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	WIC	BED-2	BED-3	BED-4	BATH	HALL	HALL	MBR	ENS-2	DIN	DIN	KIT	KIT	KIT	LAUN	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.60	1.16	0.51	1.38	2.22	1.11	0.66	1.38	1.90	1.60	0.57	1.25	1.25	1.35	1.35	1.35	1.80	1.29	0.76	1.17	2.42	2.56	2.56	2.56
CFM PER RUN HEAT	45	33	14	39	62	31	19	39	53	45	16	35	35	38	38	38	51	36	21	33	68	72	72	72
RM GAIN MBH	1.75	1.09	0.50	1.23	2.01	1.04	0.67	1.23	2.71	1.75	0.51	1.36	1.36	1.63	1.63	1.63	1.92	0.98	0.59	1.15	1.18	0.29	0.29	0.29
CFM PER RUN COOLING	63	39	18	44	72	37	24	44	97	63	18	49	49	58	58	58	69	107	41	43	10	10	10	10
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	0.13	0.13	0.13	0.13	0.13	0.13
ACTUAL DUCT LGH	74	69	48	56	40	43	35	67	50	74	40	26	35	40	40	40	85	31	35	34	30	38	30	40
EQUIVALENT LENGTH	190	170	190	140	190	160	190	170	160	170	150	160	160	190	150	150	160	150	150	190	170	150	140	210
TOTAL EFFECTIVE LH	264	239	238	196	230	203	225	237	210	244	190	186	175	230	190	190	245	191	185	184	220	242	188	170
ADJUSTED PRESSURE	0.05	0.05	0.05	0.06	0.05	0.06	0.06	0.05	0.05	0.05	0.07	0.07	0.07	0.05	0.05	0.05	0.07	0.07	0.07	0.06	0.05	0.07	0.07	0.05
ROUND DUCT SIZE	6	5	5	5	6	5	5	5	6	6	5	5	5	5	5	5	6	5	5	6	6	5	5	6
OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	4X10	4X10	3X10	3X10	4X10
TRUNK	A	B	B	D	C	D	D	C	D	A	C	D	D	C	B	B	A	D	C	B	A	B	D	C

25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
RUN #	BAS	MBR	MBRT	ENS	FAM	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR
ROOM NAME	BAS	MBR	MBRT	ENS	FAM	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR	LIBR
RM LOSS MBH	2.56	1.60	2.89	1.16	1.80	1.02	1.02	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	72	45	81	33	51	29	29	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RM GAIN MBH	0.29	1.75	2.06	1.09	1.92	1.02	1.02	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	10	63	74	39	69	37	37	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	0.125	0.13	0.13	0.13	0.13	0.13
ACTUAL DUCT LGH	12	75	68	59	52	68	50	44	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	200	190	170	150	140	190	190	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	212	265	258	229	202	208	240	234	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.05	0.05	0.05	0.06	0.06	0.05	0.05	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
ROUND DUCT SIZE	6	6	6	6	5	6	5	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
OUTLET GRILL SIZE	4X10	4X10	4X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	D	A	A	B	B	A	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C

SUPPLY AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT
TRUNK A	390	0.05	11.1	14
TRUNK B	767	0.05	14.3	23
TRUNK C	315	0.05	10.2	12
TRUNK D	693	0.05	13.8	22
TRUNK E	1460	0.05	18.2	30

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	0	0.04	0	0
TRUNK X	1460	0.04	19.2	33
TRUNK Y	550	0.04	13.3	20
TRUNK Z	375	0.04	11.6	15
DROP	1460	0.04	19.2	24

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	BR
AIR VOLUME	0	175	135	120	300	185	120	0	0	0	0	0	0	0	175
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
ACTUAL DUCT LGH	74	29	45	56	56	19	48	1	1	1	1	1	1	1	14
EQUIVALENT LENGTH	190	135	185	215	185	140	220	1	1	1	1	1	1	1	150
TOTAL EFFECTIVE LH	264	164	230	271	241	159	268	1	1	1	1	1	1	1	164
ADJUSTED PRESSURE	0.05	0.07	0.05	0.04	0.05	0.08	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.07
ROUND DUCT SIZE	9.4	7.5	7.5	7.5	10.1	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	30	14	14	14	30	14	14	14	14	14	14	14	14	14	14

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 32.5 OF THE BUILDING CODE.

MICHAEL O'ROURKE
BCIN: 19669

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

TYPE: 50-6 OPT # 1

LO # 53718

PAGE 3 of 3

SITE NAME: CASTLES OF KING

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	5	@ 10.6 cfm	53	cfm
Other Rooms	7	@ 10.6 cfm	74.2	cfm
Table 9.32.3.A.	TOTAL		212	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	212	cfm
Less Principal Ventil. Capacity	120	cfm
Required Supplemental Capacity	92	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model:	VANEE 90H-V ECM	Location:	BSMT
120	cfm	<input checked="" type="checkbox"/>	HVI Approved
	0.6		sones

SUPPLEMENTAL FANS

NUTONE

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

HEAT RECOVERY VENTILATOR

9.32.3.11.

Model:	VANEE 90H-V ECM
159	cfm high 65 cfm low
75	% Sensible Efficiency
@ 32 deg F (0 deg C)	<input checked="" type="checkbox"/> HVI Approved

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: 50-6 OPT # 1
SFQT: 3742

LO# 53718

BUILDER: ZANCOR HOMES

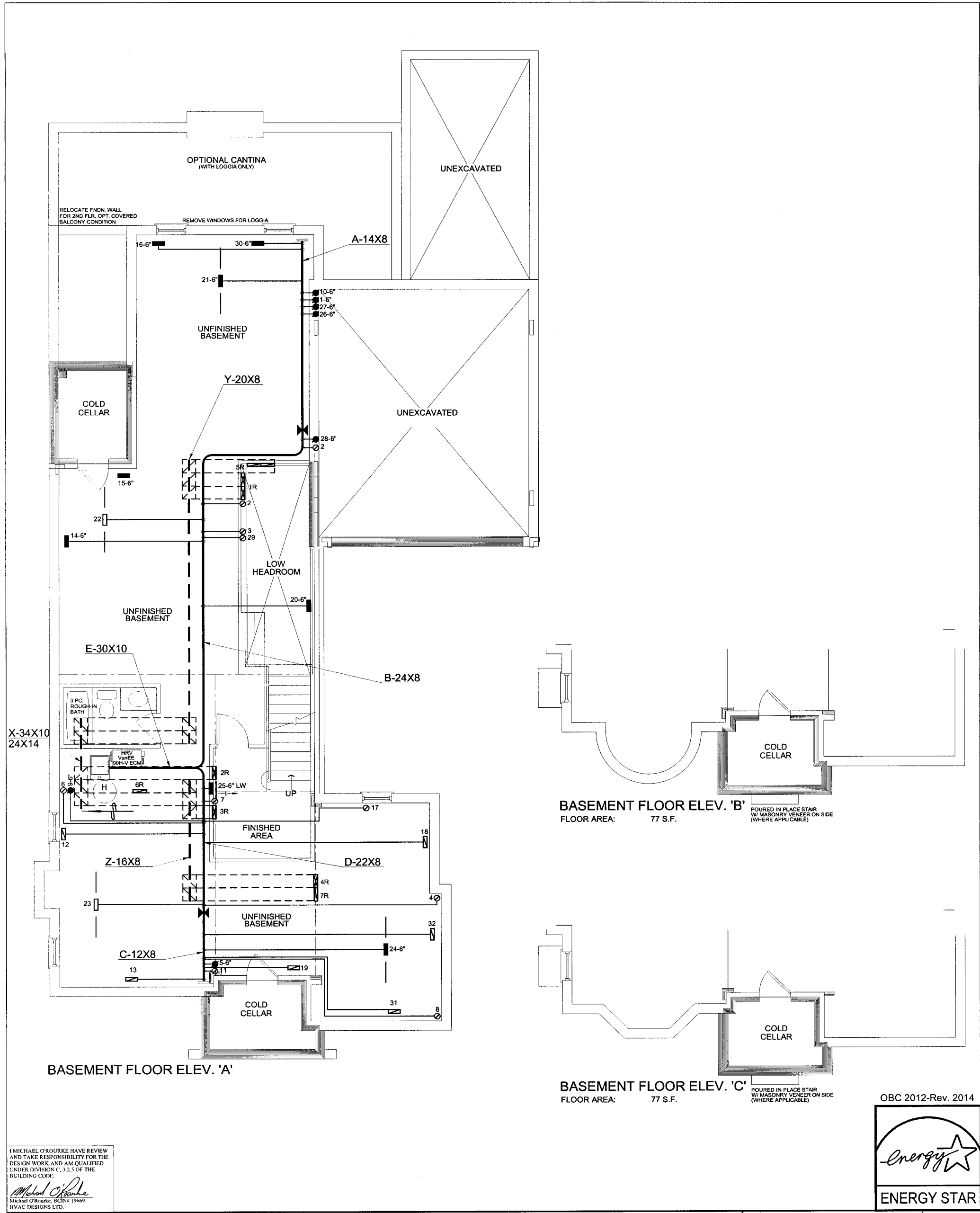
ENERGYSTAR 12.1

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



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.

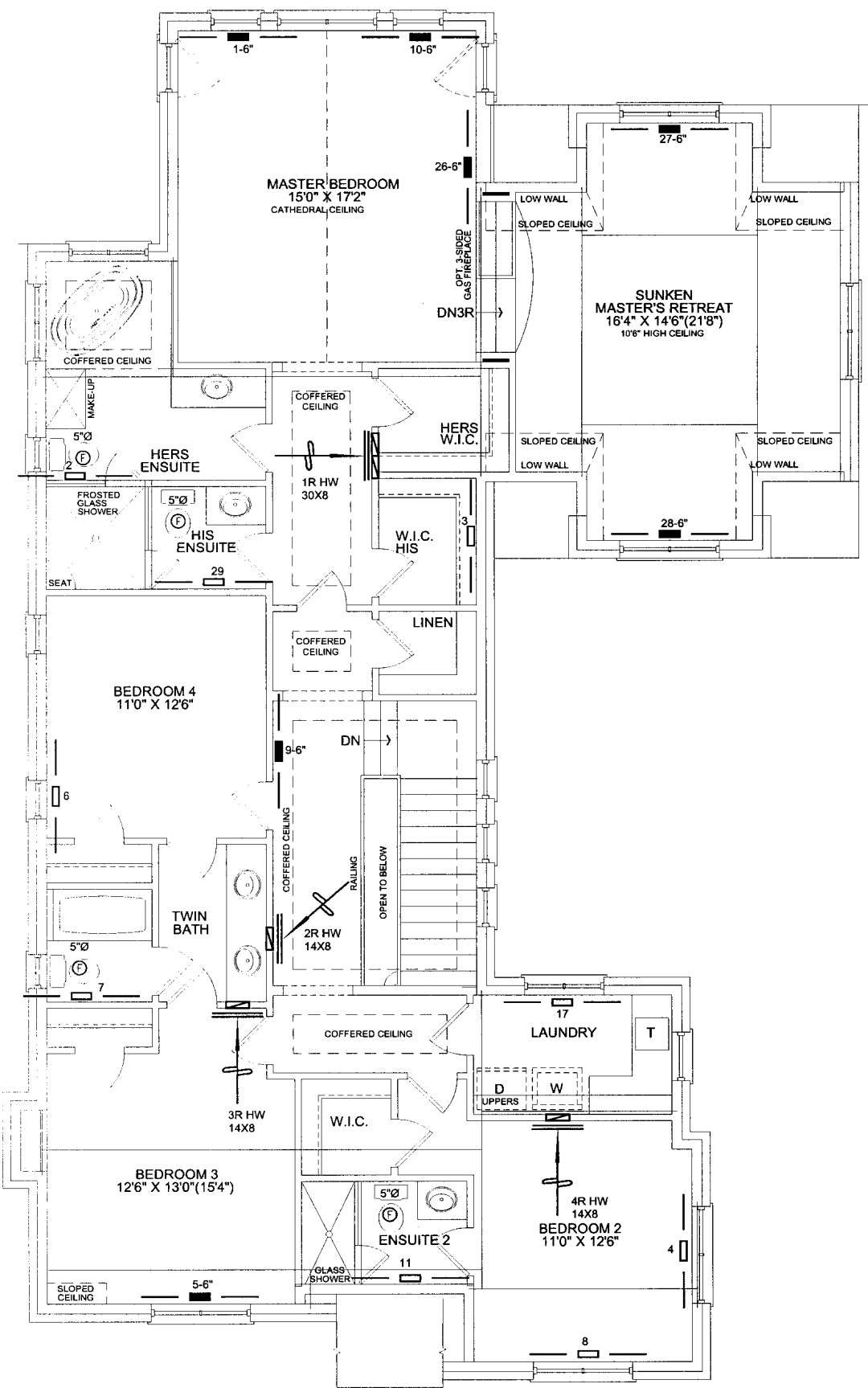
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.



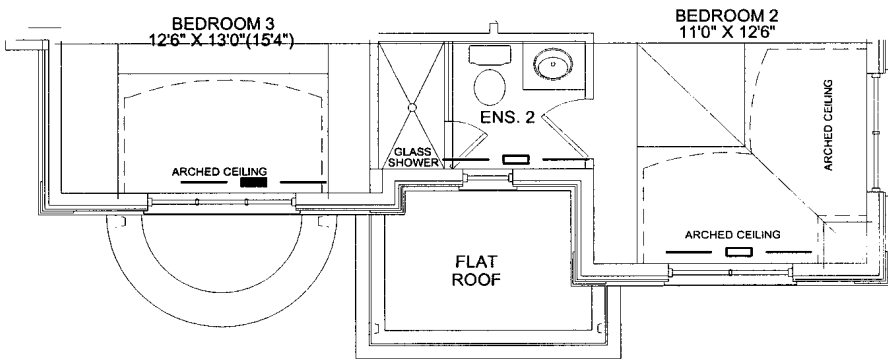
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		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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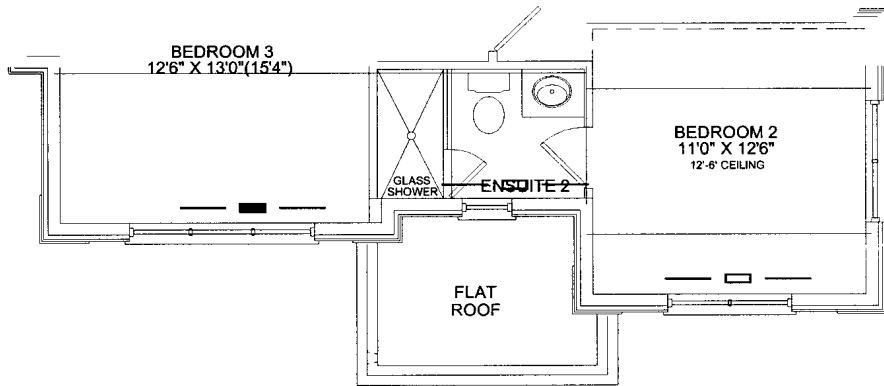
Client ZANCOR HOMES		<div>HVACDESIGNS LTD.</div> <div>65 Church Street South - Ajax, Ontario L1S 6A7 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div>	HEAT LOSS 69784 BTU/H		# OF RUNS S/A R/A FANS			Sheet Title BASEMENT HEATING LAYOUT	
Project Name THE CASTLES OF KING CITY KING CITY, ONTARIO			UNIT DATA		3RD FLOOR			Date	
			MAKE LENNOX		2ND FLOOR 14 4 4			Scale	
			MODEL ML195UH090XP48C-90		1ST FLOOR 13 3 2			BCIN# 19669	
OPT 2ND #1 HIS/HER ENS 50-6 3742 sqft		INPUT 88 MBTU/H		BASEMENT 5 1 0			LO# 53718		
		OUTPUT 85 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					
		COOLING 4.0 TONS							
		FAN SPEED 1460 cfm @ 0.5" w.c.							



OPT. #1 SECOND FLOOR ELEV. 'A'
W/ HIS/HERS ENSUITE



OPT. #1 SECOND FLOOR ELEV. 'B'
W/ HIS/HERS ENSUITE



OPT. #1 SECOND FLOOR ELEV. 'C'
W/ HIS/HERS ENSUITE

OBC 2012-Rev. 2014



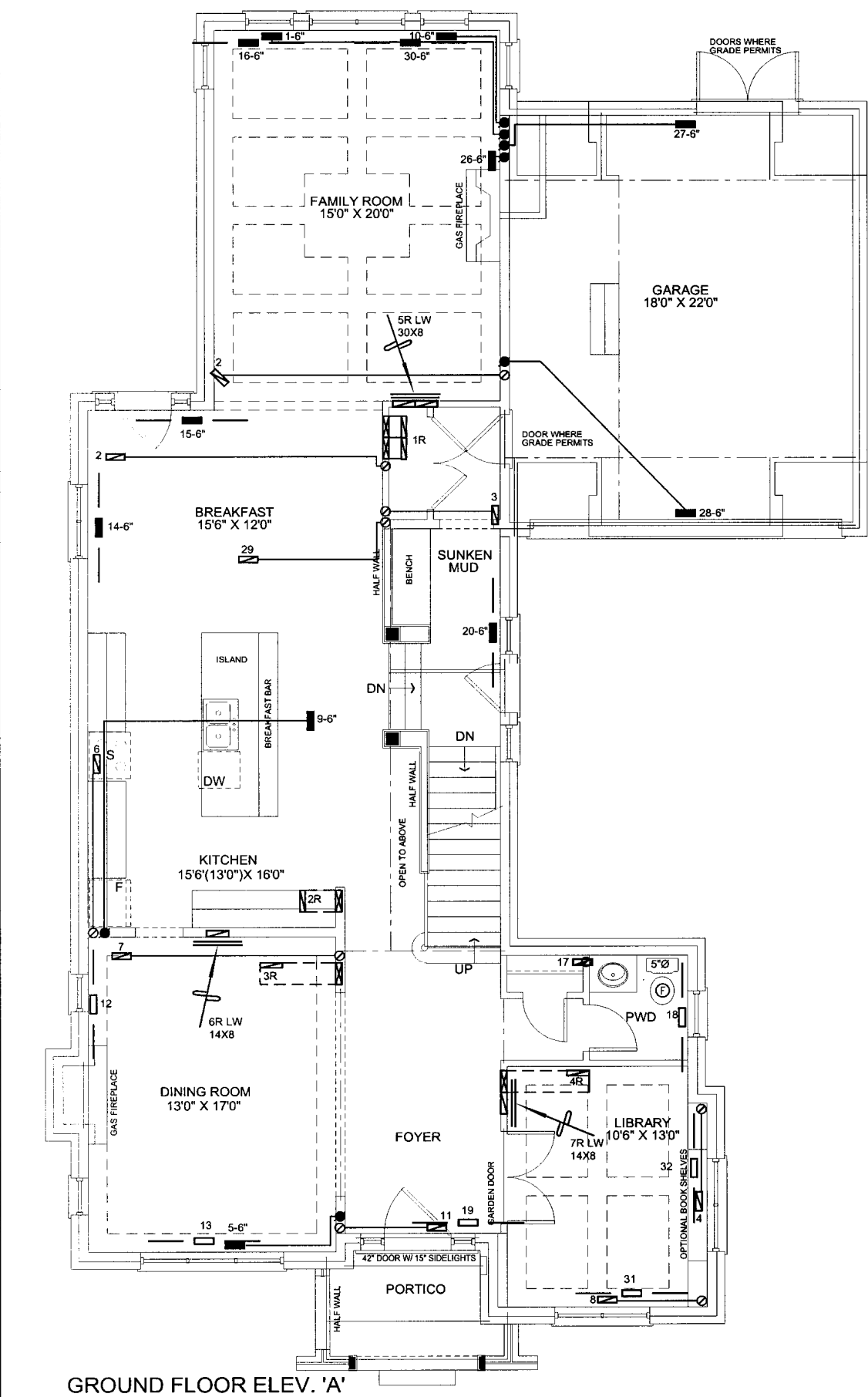
I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C. 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

HVAC LEGEND								3.	
	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.	Description Date

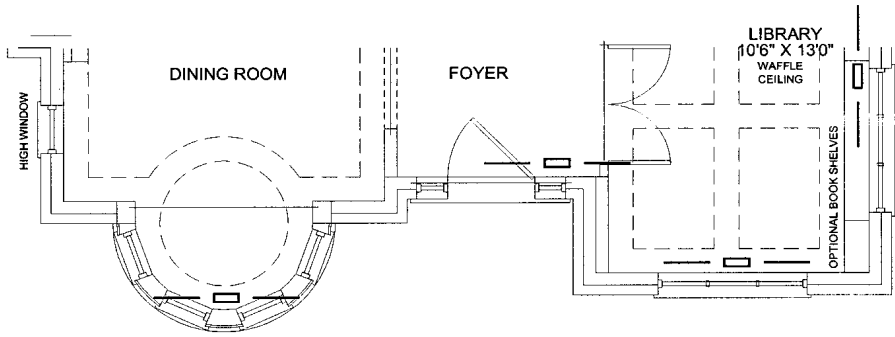
REVISIONS

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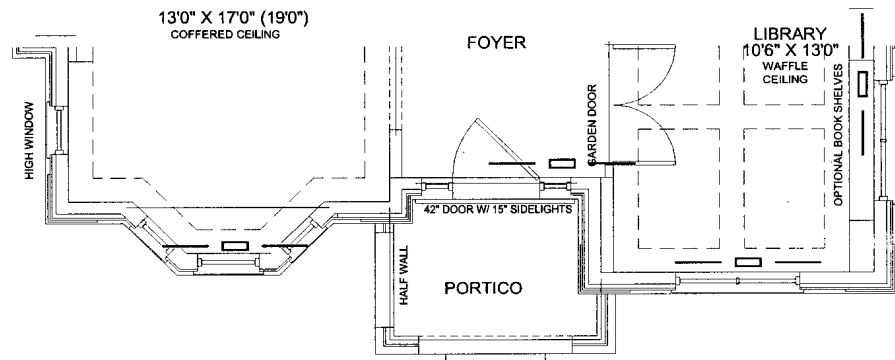
Client		<div></div> <div>65 Church Street South - Ajax, Ontario L1S 6A7 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</div> <div>Installation to comply with the latest Ontario Building Code. 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	
ZANCOR HOMES			HEATING LAYOUT	
Project Name THE CASTLES OF KING CITY KING CITY, ONTARIO			Date	JAN/2014
OPT 2ND #1 HIS/HER ENS 50-6 3742 sqft			Scale	1/8" = 1'-0"
		BCIN# 19669		
		LO#	53718	



GROUND FLOOR ELEV. 'A'

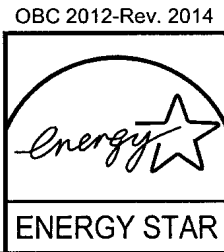


GROUND FLOOR ELEV. 'B'



GROUND FLOOR ELEV. '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.



HVAC LEGEND								3.	
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.	
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Client ZANCOR HOMES		<div><p>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</p></div>	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name THE CASTLES OF KING CITY KING CITY, ONTARIO			Date JAN/2014	Scale 1/8" = 1'-0"
OPT 2ND #1 HIS/HER ENS 50-6 3742 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.	BCIN# 19669	
			LO#	53718