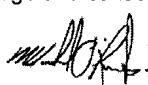


Type in the text you want to insert

**Schedule 1: Designer Information**

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

<b>A. Project Information</b>			
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>B. Individual who reviews and takes responsibility for design activities</b>			
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 ( )	
<b>C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1. of Division C]</b>			
<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 5-BED 50-11 Project: CASTLES OF KING CITY	
<b>D. Declaration of Designer</b>			
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.			
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	ENS-3	BED-5	ENS-2	R1	R2
EXP. WALL	41	41	9	18	33	39	6	10	18	7	0	0
RM AREA	373	285	153	267	239	320	174	108	401	144	0	0
CLG. HT.	11	11	10	10	10	10	10	10	11	10	9	9
COLD FLOOR	0	0	0	0	0	320	84	0	161	0	0	0
COLD CEILING	373	285	153	267	195	264	174	108	401	144	0	0
NO ATTIC EXPOSED CLG	0	0	0	0	44	56	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	429	451	90	180	330	390	60	100	198	70	0	0
GLAZING	0	0	0	0	0	51	0	8	0	0	0	0
NORTH	19.50	13.96	0	0	33	33	0	156	112	0	0	0
EASTWEST	25	488	825	566	957	995	8	0	22	0	0	0
SOUTH	75	1463	711	0	0	0	0	0	429	0	0	0
SKYL.T.	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	329	962	185	442	796	991	152	269	515	205	0	0
NET EXPOSED WALL BAS ABOVE GR	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL BAS BELOW GRADE	373	554	263	396	188	264	174	108	595	282	144	101
NO ATTIC EXPOSED CLG	1.48	0.70	0	0	44	56	0	0	0	0	0	0
EXPOSED FLOOR	2.42	1.15	0	0	0	320	756	145	161	380	73	0
EXPOSED WALL BAS ABOVE GRADE	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	3466	2571	490	1403	2322	3269	765	585	1919	418	0	0
SUB TOTAL HT GAIN	1091	809	154	442	731	1029	241	184	604	132	0	0
HT LOSS AIR LEAKAGE FACTOR	0.315	0	0	0	0	0	0	0	0	0	0	0
HT GAIN AIR LEAKAGE FACTOR	0.109	0	0	0	0	0	0	0	0	0	0	0
HT GAIN PEOPLE/APPLIANCES	240	2	1	1	1	1	1	1	2524	1	0	0
TOTAL HT LOSS BTU/H	4557	3380	645	1845	3054	4299	1006	770	2524	550	0	0
TOTAL HT GAIN x 1.3 BTU/H												

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

ROOM USE	DEN	DIN	KT/FM	PREP	LAUN	WIR	FOY	LIB	R3	R4	WOB	BAS
EXP. WALL	35	21	110	6	23	16	12	0	0	0	0	0
RM AREA	0	0	0	0	12	10	20	0	0	0	0	0
CLG. HT.	10	10	10	10	10	10	20	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	14	12	0	0	0	0	132	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	350	210	1100	60	276	160	240	0	0	0	0	0
GLAZING	43	0	0	0	10	0	0	0	0	0	0	0
NORTH	19.50	13.96	0	0	195	0	0	0	0	0	0	0
EASTWEST	30	585	990	9	176	297	53	1034	1749	0	0	15
SOUTH	0	0	184	3588	3849	0	0	0	0	0	0	293
SKYL.T.	0	0	0	0	0	0	0	0	0	0	0	98
DOORS	0	0	0	0	0	0	0	0	0	0	0	105
NET EXPOSED WALL	277	162	877	51	246	160	167	488	94	0	0	20
NET EXPOSED WALL BAS ABOVE GR	0	0	0	0	0	0	0	0	0	0	0	518
EXPOSED CLG	3.60	0.45	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.48	0.70	0	0	0	0	0	0	0	0	0	296
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 ABOVE GRADE	22.00	0	0	0	0	0	0	0	0	0	0	0
EXPOSED WALL BAS BELOW GRADE	1.08	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	2267	1439	6913	325	1433	468	2360	2094	0	0	0	0
SUB TOTAL HT GAIN	714	453	2177	102	451	147	743	0	0	0	0	0
HT LOSS AIR LEAKAGE FACTOR	0.315	0	0	0	0	0	0	0	0	0	0	0
HT GAIN AIR LEAKAGE FACTOR	0.109	0	0	0	0	0	0	0	0	0	0	0
HT GAIN PEOPLE/APPLIANCES	240	1	6	1	6	1	3102	0	0	0	0	0
TOTAL HT LOSS BTU/H	2981	1892	9090	427	1884	615	3019	0	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H												

## OPT 5-BED

DATE: Jan-14 GFA: 4549 LO# 53773 CALCULATIONS per HRAI PAGE 2 of 3

SITE NAME: CASTLES OF KING  
BUILDER: ZANCOR HOMES

FURNACE CFM 1460 FURNACE CFM 1460  
TOTAL HEAT LOSS 56259 TOTAL HEAT GAIN 42729  
AIR FLOW RATE CFM 25.95 AIR FLOW RATE CFM 34.17

\*LENNOX  
ML195UH090XP48C 90  
FAN SPEED LOW 1285  
DESIGN CFM = 1460  
TEMPERATURE RISE 54 DEG.F.

ROOM COUNT	3rd	2nd	1st	Bas
S/A	0	14	11	6
R/A	0	5	4	1

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

All R/A diffusers 5"x9" unless noted otherwise on layout.

ROOM NAME	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
MBR	2.28	1.69	0.64	1.85	1.53	2.15	1.01	1.53	2.52	2.28	0.55	1.49	1.89	2.27	2.27	2.27	1.88	0.62	3.10	0.77	2.15	1.69	2.27	1.49
CFM PER RUN HEAT	59	44	17	48	56	26	40	56	65	59	14	39	49	59	59	59	49	16	81	20	56	44	59	39
RM GAIN MBH.	2.36	1.36	0.54	2.08	1.33	1.09	0.97	1.33	2.01	2.36	0.51	1.43	2.75	2.50	2.50	2.50	2.42	0.44	3.02	0.66	1.09	1.36	2.50	1.43
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.	49	26	21	76	85	93	87	84	68	56	48	71	47	43	36	31	68	59	64	81	87	30	45	72
EQUIVALENT LENGTH	140	140	150	190	190	150	160	150	200	130	140	140	110	120	120	100	130	160	100	160	140	160	100	160
TOTAL EFFECTIVE LH	189	166	171	266	275	243	247	234	268	186	188	211	157	163	156	131	198	219	164	241	227	190	145	202
ADJUSTED PRESSURE	0.07	0.08	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.07	0.07	0.06	0.08	0.08	0.08	0.1	0.06	0.06	0.08	0.05	0.06	0.07	0.09	0.06
ROUND DUCT SIZE	6	5	5	6	5	5	5	5	6	6	5	5	6	6	6	5	6	5	6	5	5	5	5	5
OUTLET GRILL SIZE	4X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	4X10	4X10	4X10	3X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10
TRUNK	E	G	E	B	A	B	B	B	A	E	D	A	C	F	F	E	A	B	B	A	B	G	D	A

ROOM NAME	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
MBR	2.27	2.27	2.27	2.27	2.27	2.27	2.27	0.43	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	59	59	59	59	59	59	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RM GAIN MBH.	0.24	0.24	0.24	0.24	0.24	0.24	0.78	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
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.	35	41	42	54	70	44	8	27	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	110	90	120	150	120	100	120	120	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	145	131	162	204	190	144	128	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.09	0.1	0.08	0.06	0.07	0.09	0.1	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	12.5	12.5
ROUND DUCT SIZE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	F	D	C	B	A	C	G	G	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10

## SUPPLY AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT
TRUNK A	286	0.05	9.9	8
TRUNK B	693	0.05	13.8	22
TRUNK C	860	0.05	14.9	25
TRUNK D	132	0.05	7.4	6
TRUNK E	1186	0.05	16.8	32

## 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	250	0.04	9.9	11
TRUNK W	625	0.04	14	22
TRUNK X	1460	0.04	19.2	33
TRUNK Y	1285	0.04	18.3	30
TRUNK Z	860	0.04	15.8	28
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 OROURKE  
BCIN: 19669

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AS QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER"  
UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE. INDIVIDUAL BCIN: 19669

IEVW: E RESP

TYPE: 50-11

LO # 53773

MICHAEL O'ROURKE

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	6	@ 10.6 cfm	63.6	cfm
Other Rooms	5	@ 10.6 cfm	53	cfm
Table 9.32.3.A.	TOTAL		201.4	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	201.4	cfm
Less Principal Ventil. Capacity	120	cfm
Required Supplemental Capacity	81.4	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
ENS-2	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
BATH	QTXEN050C	50	<input checked="" type="checkbox"/>	0.3
W/R	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	<input checked="" type="checkbox"/>	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:

*Michael O'Rourke*

HRAI #

001820

Date:

January-14

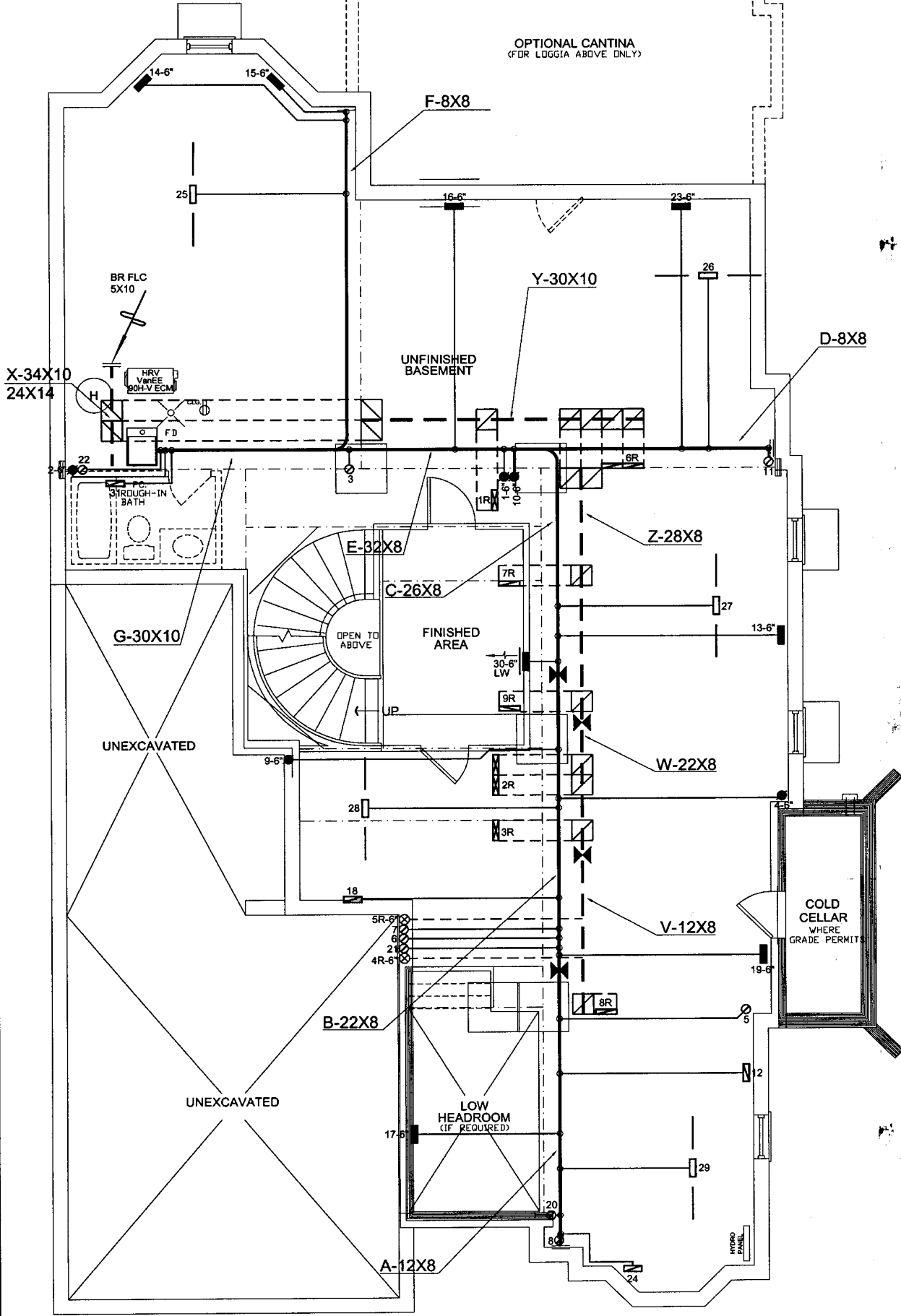
**MODEL: 50-11****LO# 53773****BUILDER: ZANCOR HOMES****SFQT: 4549****ENERGYSTAR 12.1****Component****Compliance Package****ZONE 1**

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

**ZONE C**

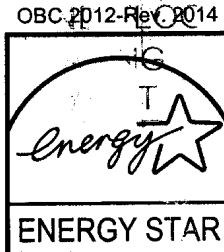
Windows and Sliding Glass Doors Maximum U-Value	2.8
Skylights Maximum U-Value	95%
Space Heating Equipment Minimum AFUE	75%
HRV Minimum Efficiency	0.9
Domestic Hot Water Heater Minimum EF	

*Michael O'Rourke***INDIVIDUAL BCIN: 19669****MICHAEL O'ROURKE**



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.

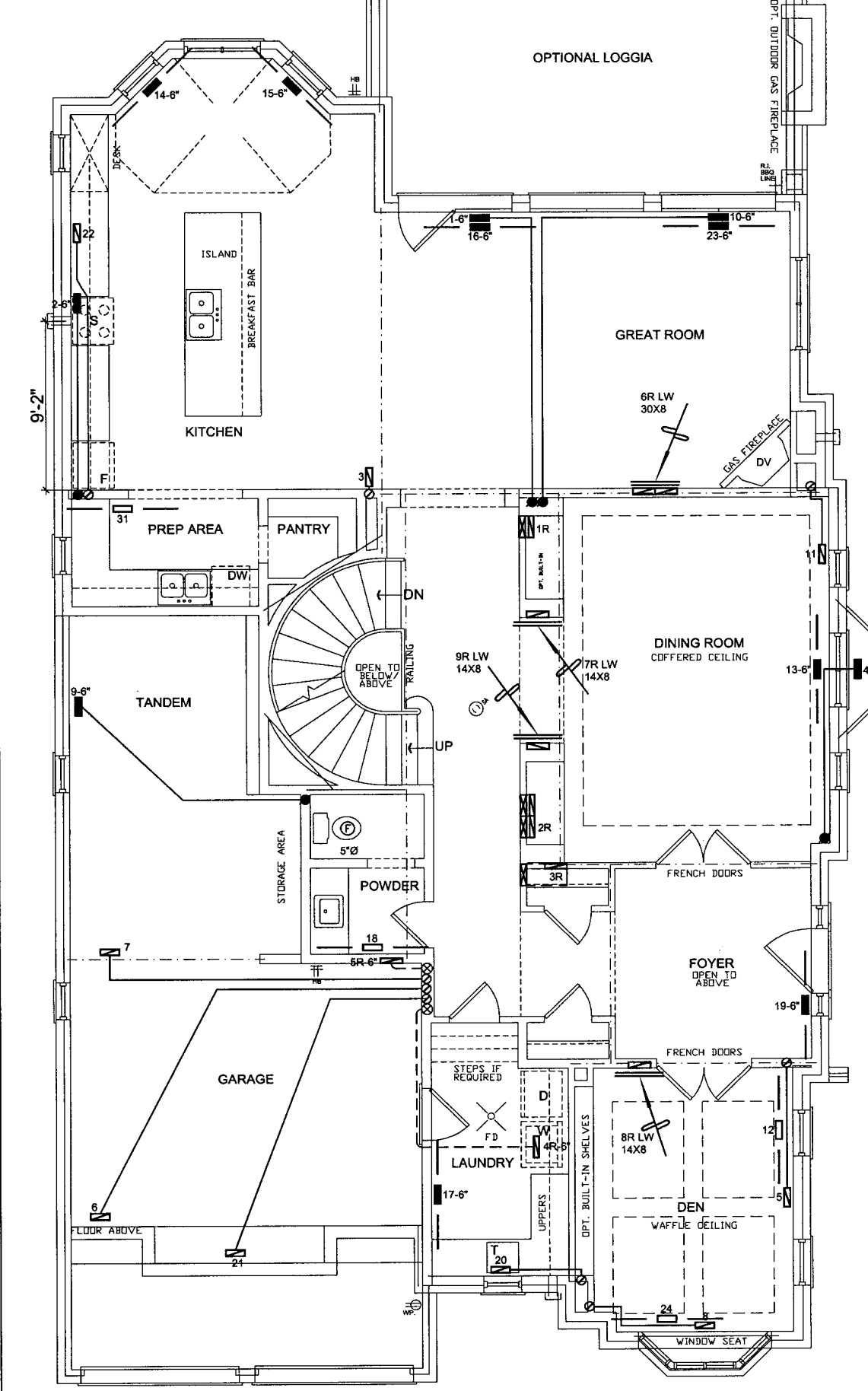
*Michael O'Rourke*  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.



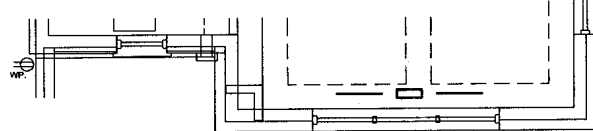
HVAC LEGEND						3.	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER
						No.	Revisions

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

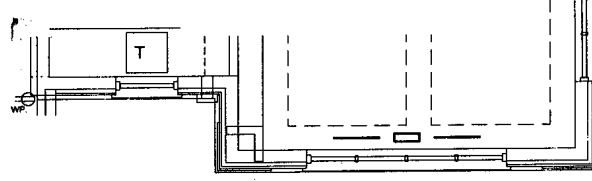
Client <b>ZANCOR HOMES</b>		<div><p>65 Church Street South - Ajax, Ontario L1S 6A7 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services</p><p>Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.</p></div>	HEAT LOSS 73225 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title <b>BASEMENT HEATING LAYOUT</b>	
Project Name <b>THE CASTLES OF KING CITY KING CITY, ONTARIO</b>			MAKE <b>LENNOX</b>	3RD FLOOR					
			MODEL <b>ML195UH090XP48C-90</b>	2ND FLOOR	14	5	5		
			INPUT <b>88</b> MBTU/H	1ST FLOOR	11	4	2		
			OUTPUT <b>85</b> MBTU/H	BASEMENT	6	1	0		
OPT 5-BED 50-11		COOLING <b>4.0</b> 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			Date <b>JAN/2014</b>	Scale <b>3/16" = 1'-0"</b>	
		FAN SPEED <b>1465</b> cfm @ 0.5" w.c.					BCIN# 19669		
		4549 sqft						LO# <b>53773</b>	



GROUND FLOOR ELEV. 'A'



GROUND FLOOR ELEV. 'B'



GROUND FLOOR ELEV. 'C'

1 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.	5773	
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
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS	

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

Client

ZANCOR HOMES

Project Name

THE CASTLES OF KING CITY  
KING CITY, ONTARIO

OPT 5-BED  
50-11

4549 sqft

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  
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.

Sheet Title

FIRST FLOOR  
HEATING  
LAYOUT

Date

JAN/2014

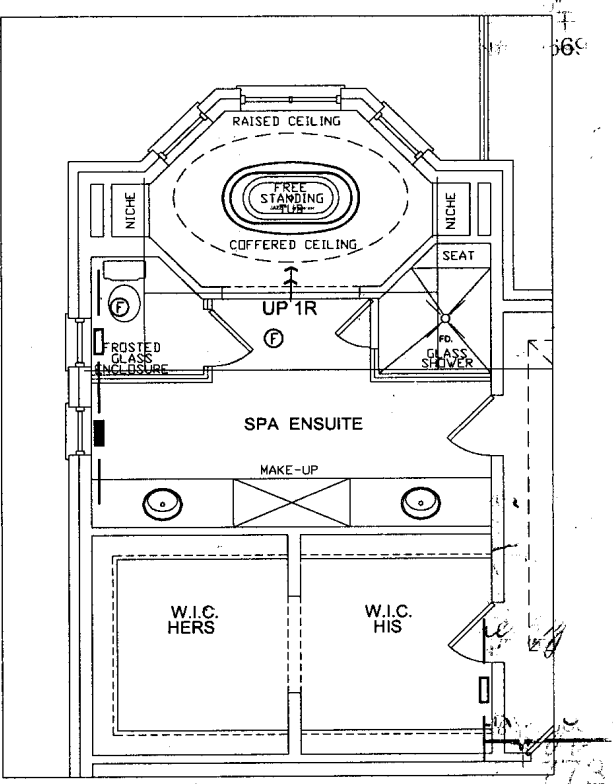
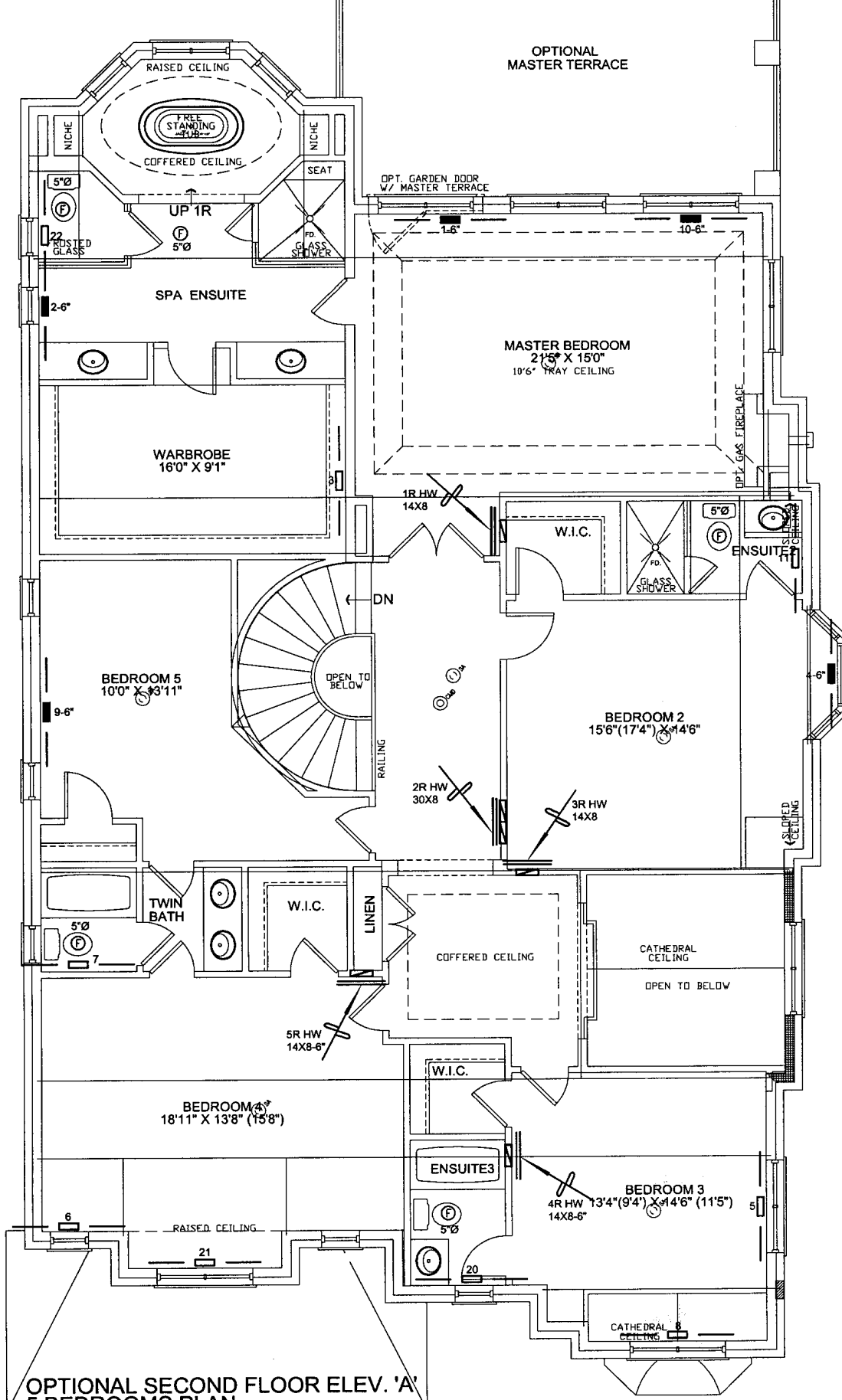
Scale

3/16" = 1'-0"

BCIN# 19669

LO#

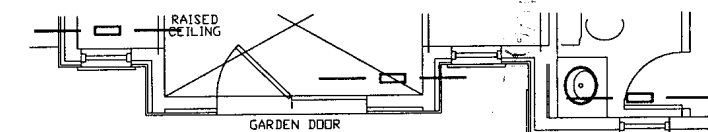
53773



OPTIONAL SECOND FLOOR ELEV. 'A'  
5 BEDROOMS PLAN

FLOOR AREA: 2560 S.F.  
DEDUCT O.T.B.: 115 S.F.  
TOTAL: 2445 S.F.

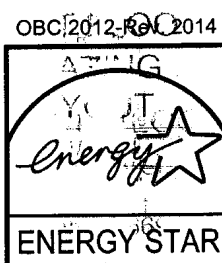
OPTIONAL SECOND FLOOR ELEV. 'B'  
5 BEDROOM PLAN



OPTIONAL SECOND FLOOR ELEV. 'C'  
5 BEDROOMS PLAN

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.

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



Client <b>ZANCOR HOMES</b>		<b>HVAC DESIGNS LTD.</b> 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 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.	Sheet Title <b>SECOND FLOOR HEATING LAYOUT</b>	
Project Name <b>THE CASTLES OF KING CITY KING CITY, ONTARIO</b>			Date <b>JAN/2014</b>	
OPT 5-BED 50-11		Scale 3/16" = 1'-0"		
4549 sqft		BCIN# 19869		
		LO# 53773		