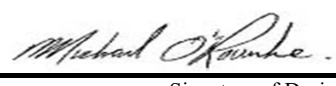


Schedule 1: Designer Information

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 BRAMPTON	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@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]			
☐ House ☐ Small Buildings ☐ Large Buildings ☐ Complex Buildings ☒ HVAC – House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection ☐ Building Structural ☐ Plumbing – House ☐ Plumbing – All Buildings ☐ 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: AUBURN 4 UNFIN BSMT Project: OSTIENSE	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> (print name) declare that (choose one as appropriate):			
☐ 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: _____			
☒ 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>			
☐ 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.			
August 1, 2017			
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.

Application for a Permit Construct or Demolish – Effective January 1, 2015

SITE NAME: OSTIENSE				UNFIN BSMT				DATE: Aug-17				WINTER NATURAL AIR CHANGE RATE 0.293				HEAT LOSS ΔT °F. 74				CSA-F280-12			
BUILDER: GREENYORK HOMES				TYPE: AUBURN 4				LO# 75360				SUMMER NATURAL AIR CHANGE RATE 0.104				HEAT GAIN ΔT °F. 14				SB-12 PACKAGE A1			
ROOM USE																							
EXP. WALL																							
CLG. HT.																							
FACTORS																							
GRS.WALL AREA	LOSS	GAIN																					
GLAZING																							
NORTH	20.7	16.3	0	0	0	8	166	130															
EAST	20.7	41.9	0	0	0	0	0	0															
SOUTH	20.7	25.2	0	0	0	0	0	0															
WEST	20.7	41.9	32	663	1340	16	332	670															
SKYLT.	20.7	86.9	0	0	0	0	0	0															
DOORS	24.6	4.7	0	0	0	0	0	0															
NET EXPOSED WALL	4.3	0.8	318	1382	261	237	1030	195															
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0															
EXPOSED CLG	1.2	0.6	300	375	182	204	255	124															
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0															
EXPOSED FLOOR	2.5	0.5	0	0	0	0	0	0															
BASEMENT/CRAWL HEAT LOSS																							
SLAB ON GRADE HEAT LOSS																							
SUBTOTAL HT LOSS			2420			1782																	
SUB TOTAL HT GAIN				1784			1120																
LEVEL FACTOR / MULTIPLIER	0.20	0.31				0.20	0.31					0.20	0.31										
AIR CHANGE HEAT LOSS			745			548																	
AIR CHANGE HEAT GAIN				146		92																	
DUCT LOSS			0			0																	
DUCT GAIN				0		0																	
HEAT GAIN PEOPLE	240	2		480	0	0																	
HEAT GAIN APPLIANCES/LIGHTS				415		0																	
TOTAL HT LOSS BTU/H			3164			2330																	
TOTAL HT GAIN x 1.3 BTU/H				3674		1575																	

ROOM USE																							
EXP. WALL																							
CLG. HT.																							
FACTORS																							
GRS.WALL AREA	LOSS	GAIN																					
GLAZING																							
NORTH	20.7	16.3	0	0	0																		
EAST	20.7	41.9	0	0	0																		
SOUTH	20.7	25.2	40	829	1009																		
WEST	20.7	41.9	0	0	0	96	1989	4021															
SKYLT.	20.7	86.9	0	0	0	0	0	0															
DOORS	24.6	4.7	0	0	0	0	0	0															
NET EXPOSED WALL	4.3	0.8	330	1434	271	604	2625	497															
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0															
EXPOSED CLG	1.2	0.6	0	0	0	0	0	0															
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0															
EXPOSED FLOOR	2.5	0.5	0	0	0	0	0	0															
BASEMENT/CRAWL HEAT LOSS																							
SLAB ON GRADE HEAT LOSS																							
SUBTOTAL HT LOSS			2263			4614																	
SUB TOTAL HT GAIN				1281			4518																
LEVEL FACTOR / MULTIPLIER	0.30	0.39				0.30	0.39					0.30	0.39										
AIR CHANGE HEAT LOSS			885			1804																	
AIR CHANGE HEAT GAIN				105		371																	
DUCT LOSS			0			0																	
DUCT GAIN				0		0																	
HEAT GAIN PEOPLE	240	0		0		0																	
HEAT GAIN APPLIANCES/LIGHTS				415		415																	
TOTAL HT LOSS BTU/H			3147			6417																	
TOTAL HT GAIN x 1.3 BTU/H				2341		6895																	

TOTAL HEAT GAIN BTU/H: 34997

TONS: 2.92

LOSS DUE TO VENTILATION LOAD BTU/H: 2777

STRUCTURAL HEAT LOSS: 52405

TOTAL COMBINED HEAT LOSS BTU/H: 55182

SITE NAME: OSTIENSE
BUILDER: GREENYORK HOMES

UNFIN BSMT
TYPE: AUBURN 4

DATE: Aug-17

GFA: 2966 LO# 75360

HEATING CFM 1030 COOLING CFM 1030
TOTAL HEAT LOSS 55,182 TOTAL HEAT GAIN 34,997
AIR FLOW RATE CFM 18.67 AIR FLOW RATE CFM 29.43

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure
for s/a & r/a 0.35

#CARRIER

AFUE = 96 %

59SP5A-60-12

INPUT (BTU/H) = 60,000

FAN SPEED 60

OUTPUT (BTU/H) = 58,000

LOW 0

MEDLOW 785

MEDIUM 845

MEDIUM HIGH 970

HIGH 1030

DESIGN CFM = 1030

CFM @ .6" E.S.P.

TEMPERATURE RISE 52 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	8	8	4
R/A	0	0	4	2	1

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-2	BED-3	BED-4	BATH		OFF		ENS-2	LIV	LIBR	KT/FM	KT/FM	KT/FM	LAUN	FOY	FOY		BAS	BAS	BAS	BAS
RM LOSS MBH	3.16	2.33		1.29	4.02	1.35	1.08		2.70		0.66	3.15	3.02	2.14	2.14	2.14	2.53	2.57	2.57		4.58	4.58	4.58	4.58
CFM PER RUN HEAT	59	44		24	75	25	20		50		12	59	56	40	40	40	47	48	48		86	86	86	86
RM GAIN MBH	3.67	1.57		1.50	3.68	1.73	1.04		2.82		0.43	2.34	2.95	2.30	2.30	2.30	1.16	1.90	1.90		0.35	0.35	0.35	0.35
CFM PER RUN COOLING	108	46		44	108	51	30		83		13	69	87	68	68	68	34	56	56		10	10	10	10
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	0.17	0.17
ACTUAL DUCT LGH	33	69		52	51	41	53		51		33	9	35	34	42	44	46	41	34		36	41	18	47
EQUIVALENT LENGTH	80	140		130	100	180	140		130		130	180	120	120	90	130	110	130	140		140	150	130	170
TOTAL EFFECTIVE LENGTH	113	209		182	151	221	193		181		163	189	155	154	132	174	156	171	174		176	191	148	217
ADJUSTED PRESSURE	0.15	0.08		0.09	0.11	0.08	0.09		0.1		0.11	0.09	0.11	0.11	0.13	0.1	0.11	0.1	0.1		0.1	0.09	0.12	0.08
ROUND DUCT SIZE	5	4		4	6	5	4		5		4	5	5	5	5	5	4	5	5		5	5	5	6
HEATING VELOCITY (ft/min)	433	505		275	382	184	229		367		138	433	411	294	294	294	539	352	352		631	631	631	438
COOLING VELOCITY (ft/min)	793	528		505	551	374	344		609		149	507	639	499	499	499	390	411	411		73	73	73	51
OUTLET GRILL SIZE	3X10	3X10		3X10	4X10	3X10	3X10		3X10		3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10		3X10	3X10	3X10	4X10
TRUNK	D	C		C	B	B	B		A		B	D	A	D	D	C	C	A	A		D	C	B	A

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																								
RM LOSS MBH																								
CFM PER RUN HEAT																								
RM GAIN MBH																								
CFM PER RUN COOLING																								
ADJUSTED PRESSURE																								
ACTUAL DUCT LGH																								
EQUIVALENT LENGTH																								
TOTAL EFFECTIVE LENGTH																								
ADJUSTED PRESSURE																								
ROUND DUCT SIZE																								
HEATING VELOCITY (ft/min)																								
COOLING VELOCITY (ft/min)																								
OUTLET GRILL SIZE																								
TRUNK																								

SUPPLY AIR TRUNK SIZE

	TRUNK	STATIC	ROUND	RECT		VELOCITY		TRUNK	STATIC	ROUND	RECT		VELOCITY		
	CFM	PRESS.	DUCT	DUCT		(ft/min)		CFM	PRESS.	DUCT	DUCT		(ft/min)		
TRUNK A	288	0.08	8.8	9	x	8	576	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	506	0.08	10.9	13	x	8	701	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	241	0.08	8.2	8	x	8	542	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	525	0.08	11	14	x	8	675	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	0	0.00	0	0	x	8	0	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	x	8	0

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)
TRUNK O	0	0.06	0	0	x	8	0
TRUNK P	0	0.06	0	0	x	8	0
TRUNK Q	0	0.06	0	0	x	8	0
TRUNK R	0	0.06	0	0	x	8	0
TRUNK S	0	0.06	0	0	x	8	0
TRUNK T	0	0.06	0	0	x	8	0
TRUNK U	0	0.06	0	0	x	8	0
TRUNK V	0	0.06	0	0	x	8	0
TRUNK W	0	0.06	0	0	x	8	0
TRUNK X	1030	0.06	15.2	28	x	8	662
TRUNK Y	590	0.06	12.4	17	x	8	625
TRUNK Z	280	0.06	9.4	10	x	8	504
DROP	1030	0.06	15.2	24	x	10	618

RETURN AIR #

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	BR
AIR VOLUME	145	0	85	85	310	135	135	0	0	0	0	0	0	0	0	135
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
ACTUAL DUCT LGH	51	1	64	64	41	37	43	1	1	1	1	1	1	1	1	16
EQUIVALENT LENGTH	195	0	200	195	185	200	135	0	0	0	0	0	0	0	0	150
TOTAL EFFECTIVE LH	246	1	264	259	226	237	178	1	1	1	1	1	1	1	1	166
ADJUSTED PRESSURE	0.06	14.80	0.06	0.06	0.07	0.06	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.09
ROUND DUCT SIZE	7.3	0	6	6	9.4	7.1	6.6	0	0	0	0	0	0	0	0	6.4
INLET GRILL SIZE	8	0	8	8	8	8	8	0	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	0	14	14	30	14	14	0	0	0	0	0	0	0	0	14

TYPE: AUBURN 4
SITE NAME: OSTIENSE

LO # 75360
UNFIN BSMT

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	<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>5</u> @ 10.6 cfm	<u>53</u> cfm
Other Rooms	<u>5</u> @ 10.6 cfm	<u>53.0</u> cfm
Table 9.32.3.A.	TOTAL	<u>180.2</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>180.2</u>	cfm
Less Principal Ventil. Capacity	<u>139</u>	cfm
Required Supplemental Capacity	<u>41.2</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 60H-V+
Location:	BSMT
<u>139.0</u> cfm	<u>3.0</u> sones
☒ HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION				
CFM	ΔT °F	FACTOR	% LOSS	
139.0 CFM	X 74 F	X 1.08	X	0.25

SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	☒	0.3
BATH	QTXEN050C	50	☒	0.3
ENS-2	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 60H-V+	
<u>139</u> cfm high	<u>50</u> cfm low	
<u>75</u> % Sensible Efficiency @ 32 deg F (0 deg C)	☒ HVI Approved	

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER:	
GREENYORK 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:	August-17

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: AUBURN 4	UNFIN BSMT	BUILDER: GREENYORK HOMES
SFQT: 2966	LO# 75360	SITE: OSTIENSE

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

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 (ft ³):	41800.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.40	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.5 ft
LENGTH: 48.0 ft	WIDTH: 38.0 ft	EXPOSED PERIMETER:	0.0 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	29.8
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	-

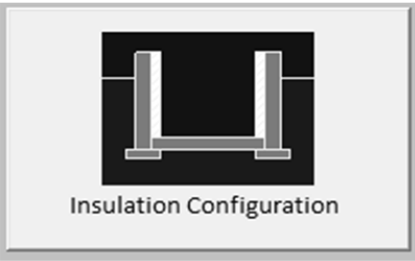
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	14.6	 Insulation Configuration
Floor Width (m):	11.6	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	2.0	
Window Area (m ²):	1.5	
Door Area (m ²):	3.7	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1627

TYPE: AUBURN 4
LO# 75360

UNFIN BSMT

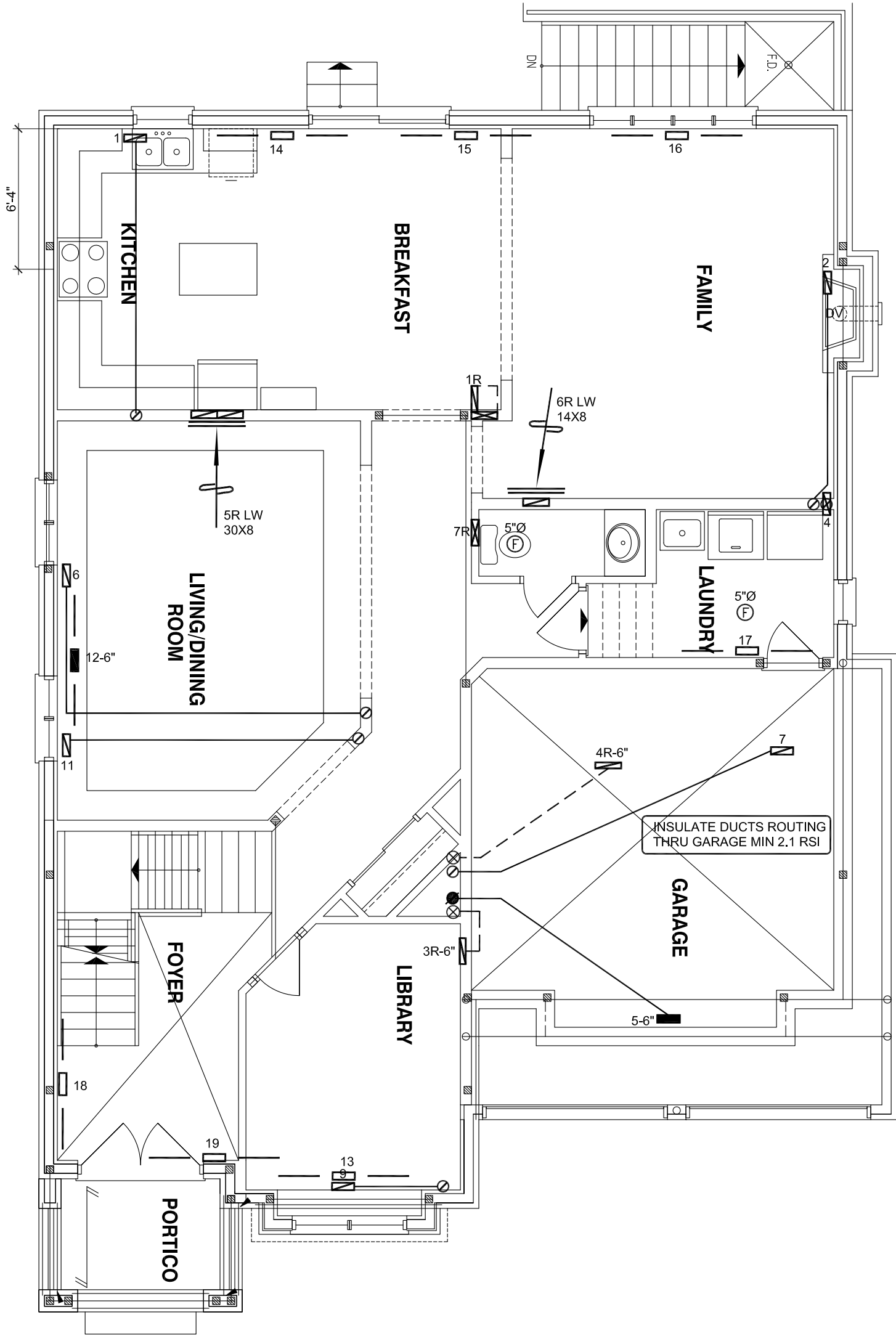
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Brampton			
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):	5.79			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1183.6			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa. 3.57	1577.8 cm ² ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply 65.6	Total Exhaust 65.6		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):		0.293		
Cooling Air Leakage Rate (ACH/H):		0.104		

TYPE: AUBURN 4
LO# 75360

UNFIN BSMT



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.

CSA-F280-12
PACKAGE A1

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

ARIA COMFORT SYSTEMS

Project Name

GREENYORK HOMES
OSTIENSE
BRAMPTON, ONTARIO
UNFIN BSMT
AUBURN 4

2966 sqft

375 Finley Ave, Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: mike@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

FIRST FLOOR
HEATING
LAYOUT

Date

AUG/2017

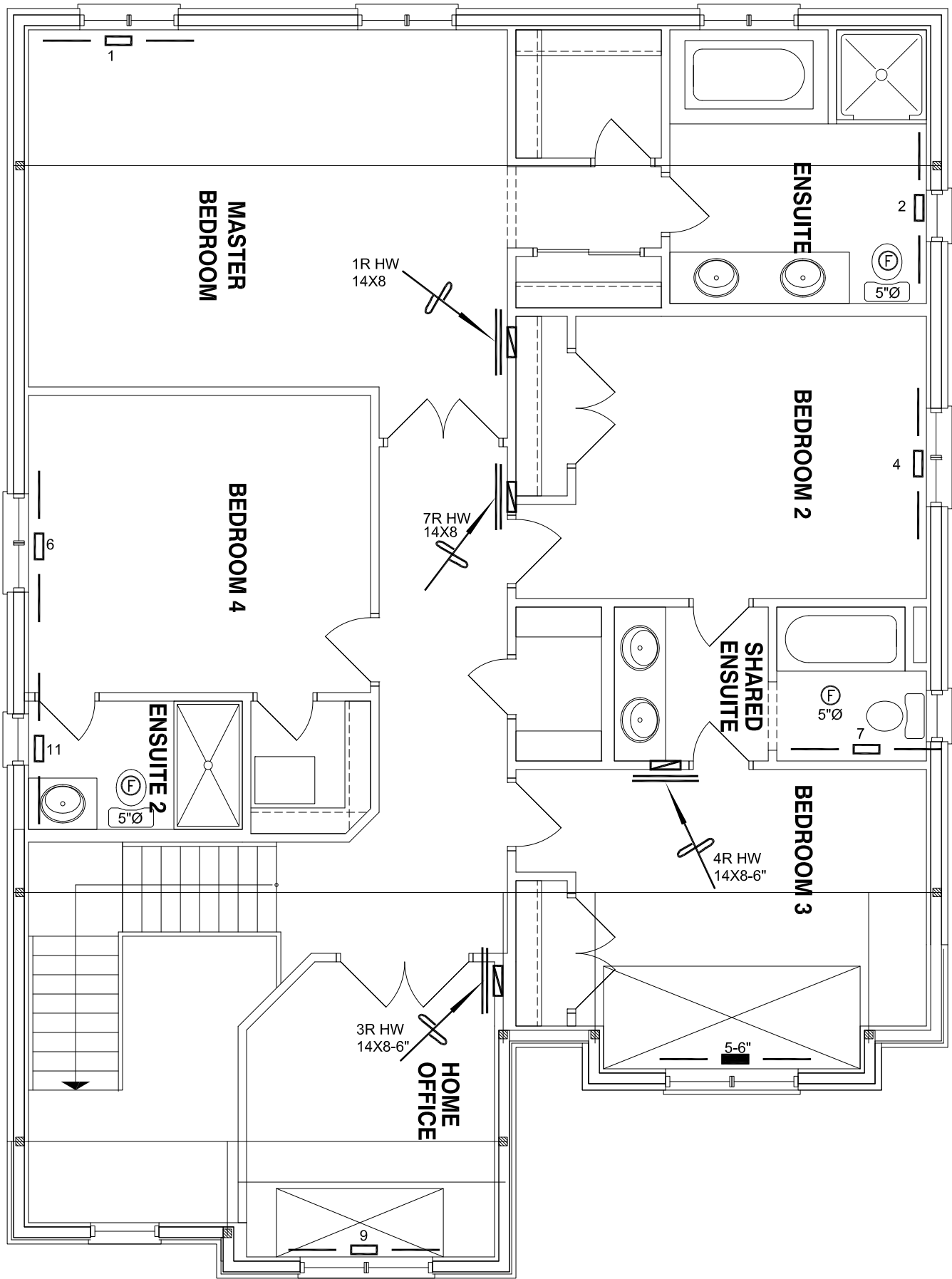
Scale

3/16" = 1'-0"

BCIN# 19669

LO#

73911



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.

CSA-F280-12

PACKAGE A1

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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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

SECOND FLOOR
HEATING
LAYOUT

Date

AUG/2017

Scale

3/16" = 1'-0"

BCIN# 19669

LO#

73911