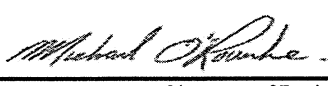


Schedule 1: Designer Information

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@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]				
☐ 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: LIANA 2 Project: GRANELLI HOME CORP		
D. Declaration of Designer				
I <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate): (print name)				
☐ 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.				
June 20, 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.

[illegible]

ROOM USE	FACTORS	LVDN	KBIF	LAUN	W/R	FOY	WUB	BAS
EXP. WALL CLG. HT.		25 11	62 11	12	6 11	27 11	16 9	133 9
GRS.WALL AREA GLAZING	LOSS GAIN	276	682	312	66	287	135	788
NORTH		0	0	0	0	0	0	0
EAST		0	0	0	0	7	0	0
SOUTH		38	789	959	0	145	0	161
WEST		0	0	0	0	0	0	0
SKYL.T.		0	0	0	0	0	0	0
DOORS		0	0	0	0	0	0	0
NET EXPOSED WALL	4.4 0.8	237	1033	195	66	986	493	93
NET EXPOSED BSMT WALL ABOVE GR	3.6 0.7	0	0	0	288	200	501	0
EXPOSED CLG	1.3 0.6	0	0	0	0	0	0	264
NO ATTIC EXPOSED CLG	2.7 1.3	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5 0.5	0	0	0	0	0	0	0
BASEMENT/RAWL HEAT LOSS		0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	0	4460
SUBTOTAL HT LOSS		1822	4318	1765	288	2221	114	6479
LEVEL FACTOR/MULTIPLIER		0.30	0.41	0.30	0.41	0.30	0.41	0.80
AIR CHANGE HEAT LOSS		742	1757	718	117	904	188	7054
AIR CHANGE HEAT GAIN		100	341	29	5	59	0	80
DUCT LOSS		0	0	0	0	0	0	0
DUCT GAIN		0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS		723	723	723	0	0	0	0
TOTAL HT LOSS BTU/H		2564	6075	2484	405	3125	1108	13643
TOTAL HT GAIN x 1.3 BTU/H		2570	6480	1411	77	967	244	1681

TOTAL HEAT GAIN BTU/H:

TONS: 2.52

LOSS DUE TO VENTILATION LOAD BTU/H: 1529

STRUCTURAL HEAT LOSS: 42960

TOTAL COMBINED HEAT LOSS BTU/H: 44489

SITE NAME: GRANELLI HOME CORP
BUILDING: GREENYORK HOMES

DATE: Jun-18

GFA: 2284 LO# 79000

TYPE: LIANA 2
furnace pressure
furnace filter
a/c coil pressure
available pressure
for s/a & r/a

HEATING CFM	970	COOLING CFM	970
TOTAL HEAT LOSS	42,960	TOTAL HEAT GAIN	29,939
AIR FLOW RATE CFM	22.58	AIR FLOW RATE CFM	32.4

AFUE = 96 %
INPUT (BTU/H) = 60,000
OUTPUT (BTU/H) = 58,000

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	10	7	4
R/A	0	0	5	2	1

DESIGN CFM = 970
CFM @ 8" E.S.P.
TEMPERATURE RISE 55 °F

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

All S/A runs 5'x2 unless noted otherwise on layout.

RUN #	1	2	3	4	5	6	7	8	9	10	13	14	15	16	17	18	19	21	22	23	24
ROOM NAME	MBR	ENS	W/C	BED-2	BED-3	BED-4	BATH	BED-2	BED-3	MBR	L/DN	KB/F	KB/F	KB/F	LAUN	W/R	FOY	BAS	BAS	BAS	BAS
RM LOSS MBH	1.32	1.80	0.70	1.73	1.64	1.15	0.64	1.73	1.64	1.32	2.86	2.03	2.03	2.03	2.48	0.40	3.12	3.66	3.66	3.66	3.66
CFM PER RUN HEAT	30	41	16	39	37	26	14	39	37	30	58	46	46	46	56	9	71	83	83	83	83
RM GAIN MBH	1.93	1.38	0.21	2.01	2.28	2.04	0.43	2.01	2.28	1.93	2.57	2.16	2.16	2.16	1.41	0.08	0.97	0.48	0.48	0.48	0.48
CFM PER RUN COOLING	62	45	7	65	74	66	14	65	74	62	83	70	70	70	48	2	31	16	16	16	16
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	29	23	36	50	41	20	50	45	52	46	28	35	29	39	34	33	32	37	32	25	35
EQUIVALENT LENGTH	190	160	190	150	120	130	150	140	140	160	130	140	140	150	140	150	110	150	110	140	120
TOTAL EFFECTIVE LENGTH	219	183	226	200	161	150	200	185	192	206	158	175	169	189	174	183	142	187	142	165	155
ADJUSTED PRESSURE	0.08	0.09	0.08	0.09	0.11	0.11	0.09	0.09	0.09	0.08	0.1	0.1	0.1	0.1	0.09	0.1	0.09	0.09	0.11	0.11	0.1
ROUND DUCT SIZE	5	4	4	5	6	6	4	5	5	5	6	5	5	5	5	4	5	6	6	6	6
HEATING VELOCITY (ft/min)	220	470	184	286	272	133	161	286	272	220	296	338	338	338	411	103	521	423	423	423	423
COOLING VELOCITY (ft/min)	455	516	80	477	543	337	161	477	543	455	423	514	514	514	338	23	228	82	82	82	82
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	B	E	B	D	D	E	D	D	C	A	D	A	A	A	B	C	C	A	B	D	C

RUN #	ROOM NAME	RM LOSS MBH	CFM PER RUN HEAT	RM GAIN MBH	CFM PER RUN COOLING	ADJUSTED PRESSURE	EQUIVALENT LENGTH	TOTAL EFFECTIVE LENGTH	ADJUSTED PRESSURE	ROUND DUCT SIZE	HEATING VELOCITY (ft/min)	COOLING VELOCITY (ft/min)	OUTLET GRILL SIZE	TRUNK
1	TRUNK A	251	0.08	8.4	12	8	565	8	0.00	0	0	0	0	0
2	TRUNK B	436	0.08	10.3	8	8	654	8	0.00	0	0	0	0	0
3	TRUNK C	200	0.09	7.5	8	8	450	8	0.00	0	0	0	0	0
4	TRUNK D	470	0.09	10.3	12	8	705	8	0.00	0	0	0	0	0
5	TRUNK E	973	0.08	13.9	22	8	796	8	0.00	0	0	0	0	0
6	TRUNK F	0	0.00	0	0	8	0	8	0.00	0	0	0	0	0

SUPPLY AIR TRUNK SIZE	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	251	0.08	8.4	12	8	0	0.00	0	0	0	0	0.06	0	0	8
TRUNK B	436	0.08	10.3	8	8	0	0.00	0	0	0	0	0.06	0	0	8
TRUNK C	200	0.09	7.5	8	8	0	0.00	0	0	0	0	0.06	0	0	8
TRUNK D	470	0.09	10.3	12	8	0	0.00	0	0	0	0	0.06	0	0	8
TRUNK E	973	0.08	13.9	22	8	0	0.00	0	0	0	0	0.06	0	0	8
TRUNK F	0	0.00	0	0	8	0	0.00	0	0	0	0	0.06	0	0	8
RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AIR VOLUME	85	85	85	85	85	360	85	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
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
ACTUAL DUCT LGH	43	53	55	42	39	18	34	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	175	215	175	165	220	135	200	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	218	268	230	207	259	153	234	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.07	0.06	0.06	0.07	0.06	0.10	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
ROUND DUCT SIZE	5.8	6	6	5.8	6	9	6	0	0	0	0	0	0	0	0
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	14	30	14	0	0	0	0	0	0	0	0

TYPE: LIANA 2
SITE NAME: GRANELLI HOME CORP

LO # 79000

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>4</u> @ 10.6 cfm	<u>42.4</u> cfm
Other Rooms	<u>4</u> @ 10.6 cfm	<u>42.4</u> cfm
Table 9.32.3.A.	TOTAL	<u>159.0</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>159</u>	cfm
Less Principal Ventil. Capacity	<u>79.5</u>	cfm
Required Supplemental Capacity	<u>79.5</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	LIFEBREATH RNC5-HEX
Location:	BSMT
<u>79.5</u> cfm	<u>3.0</u> sones
☒ HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	ΔT °F
79.5 CFM	X 74 F
X	X
FACTOR	% LOSS
1.08	X 0.24

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
LAUN	QTXEN050C	50	☒
W/R	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	LIFEBREATH RNC5-HEX	
<u>108</u>	cfm high	<u>59</u> cfm low
<u>76</u>	% Sensible Efficiency	☒ HVI Approved
@ 32 deg F (0 deg C)		

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:	June-18

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** LIANA 2**BUILDER:** GREENYORK HOMES**SFQT:** 2284**LO#** 79000**SITE:** GRANELLI HOME CORP**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 (ft³):	31793.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.75	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 44.0 ft	WIDTH: 30.0 ft	EXPOSED PERIMETER:	133.0 ft

2012 OBC - COMPLIANCE PACKAGE		Compliance Package A1	
Component		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	-

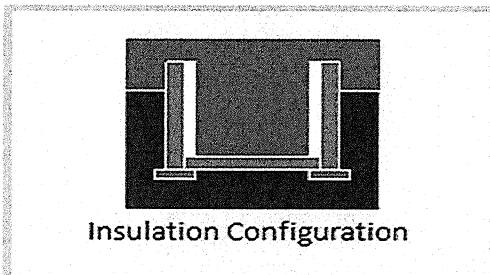
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

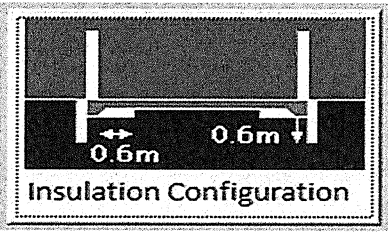
Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	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):	13.4	 Insulation Configuration
Floor Width (m):	9.1	
Exposed Perimeter (m):	40.5	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	0.6	
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):		1307

TYPE: LIANA 2
LO# 79000

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		
Length (m):	0.6	 Insulation Configuration
Width (m):	4.0	
Exposed Perimeter (m):	4.6	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		33

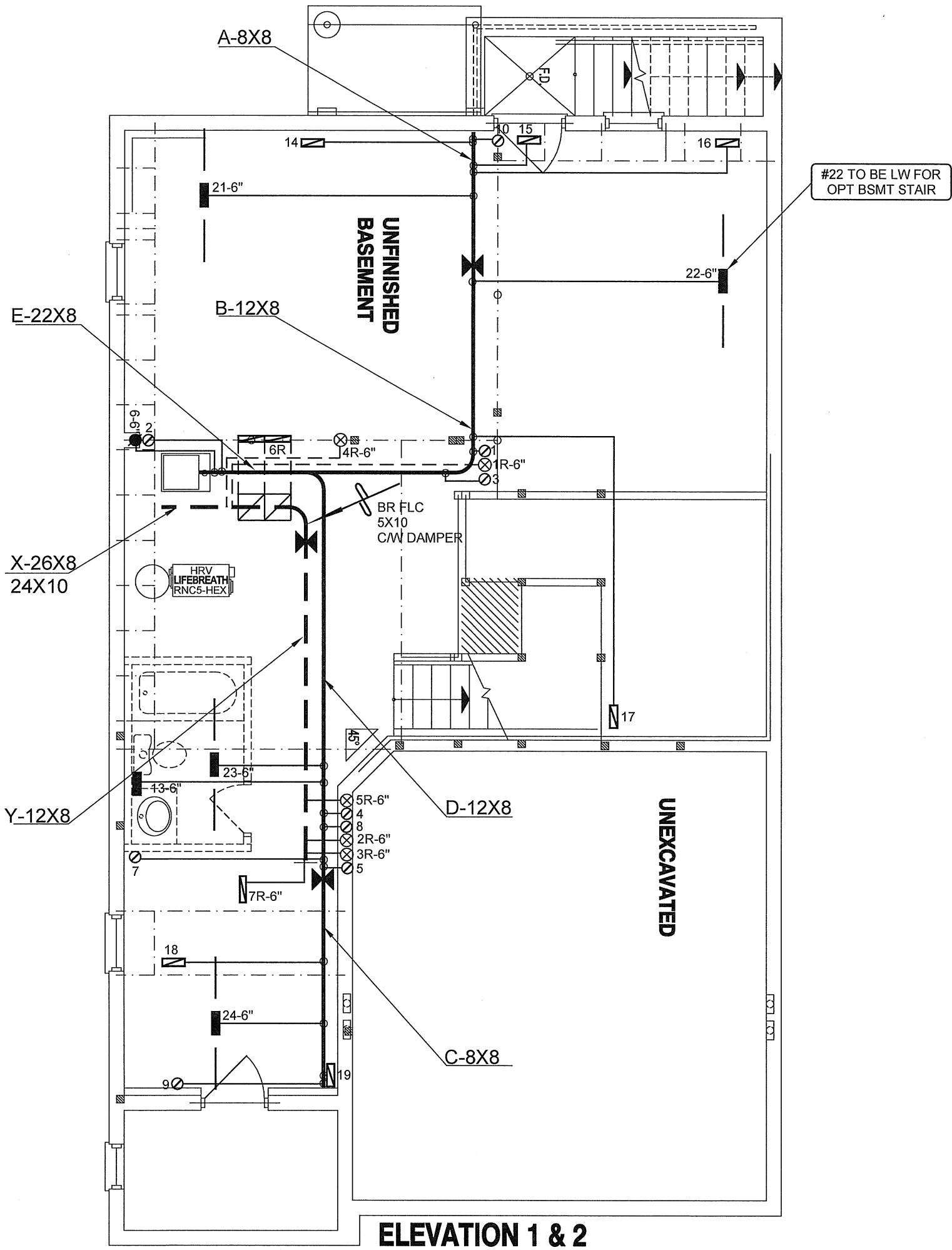
TYPE: LIANA 2
LO# 79000

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):	7.01			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	900.3			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1200.1 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	37.5	37.5		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.335			
Cooling Air Leakage Rate (ACH/H):	0.119			

TYPE: LIANA 2
LO# 79000



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.

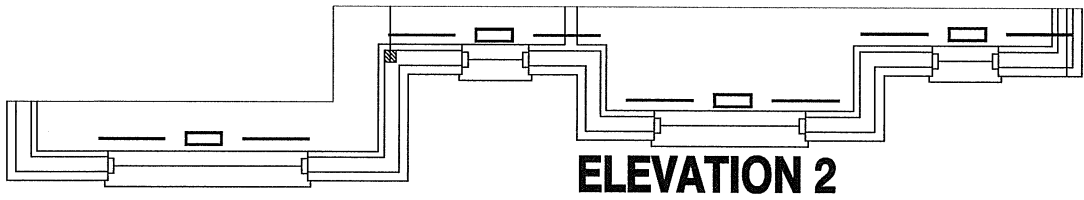
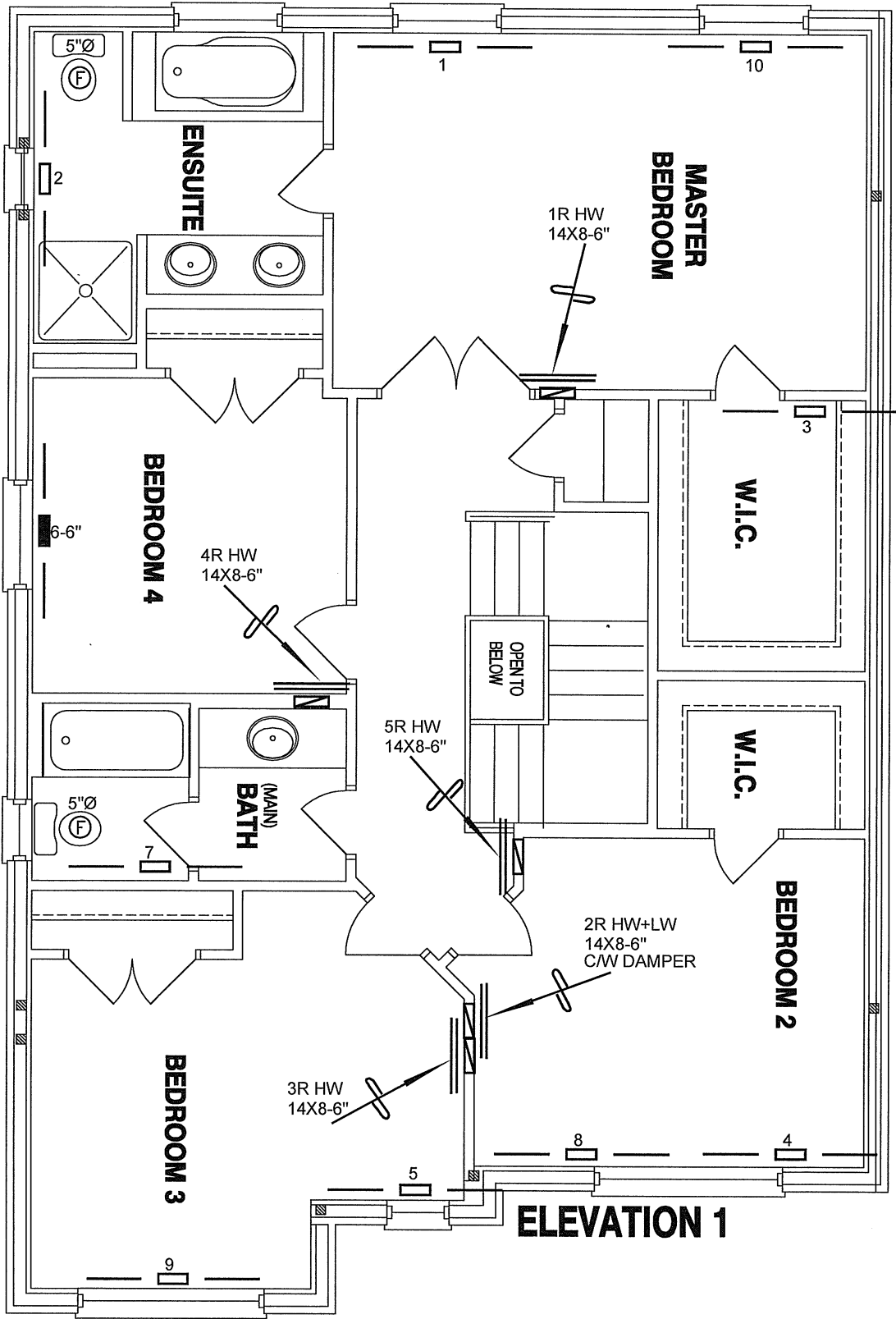
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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		

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		 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	HEAT LOSS 44489 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GREENYORK HOMES			MAKE CARRIER	3RD FLOOR				BASEMENT HEATING LAYOUT	
Project Name GRANELLI HOMES CORP BRAMPTON, ONTARIO			MODEL 59SP5A-60-12	2ND FLOOR	10	5	2	Date JUNE/2018	
			INPUT 60 MBTU/H	1ST FLOOR	7	2	3	Scale 3/16" = 1'-0"	
			OUTPUT 58 MBTU/H	BASEMENT	4	1	0	BCIN# 19669	
		COOLING 2.5 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						
LIANA 2		FAN SPEED 970 cfm @ 0.6" w.c.	LO# 79000						
2284 sqft									



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.

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		 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 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	
GREENYORK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JUNE/2018
GRANELLI HOMES CORP BRAMPTON, ONTARIO			Scale	3/16" = 1'-0"
LIANA 2			BCIN# 19669	
2284 sqft			LO#	79000