

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 LOT 18 Project: GRANELLI HOME CORP	
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.				
January 11, 2019				
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: GRANELLI HOME CORP BUILDING: GREENYORK HOMES										LOT 18 TYPE: LIANA 2		DATE: Jan-19 LO# 81142		WINTER NATURAL AIR CHANGE RATE 0.335 SUMMER NATURAL AIR CHANGE RATE 0.119		HEAT LOSS AT °F 74 HEAT GAIN AT °F 14		CSA-F280-12 SB-12 PACKAGE A1	
ROOM USE	EXP. WALL CLG. HT.	FACTORS	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-2		7		63		7		9	
GRS.WALL AREA	20.8	16.3	0	0	0	0	0	0	0	0		0		0		0		0	
GLAZING	20.8	41.9	0	0	0	0	0	0	0	0		0		0		0		0	
NORTH	20.8	41.9	0	0	0	0	0	0	0	0		0		0		0		0	
EAST	20.8	25.2	0	0	0	0	0	0	0	0		0		0		0		0	
SOUTH	20.8	41.9	0	0	0	0	0	0	0	0		0		0		0		0	
WEST	20.8	41.9	0	0	0	0	0	0	0	0		0		0		0		0	
SKYL.T.	36.4	102.1	0	0	0	0	0	0	0	0		0		0		0		0	
DOORS	24.7	4.7	0	0	0	0	0	0	0	0		0		0		0		0	
NET EXPOSED WALL	4.4	0.8	258	1124	212	186	810	153	90	392		74		249		1085		205	
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.7	0	0	0	0	0	0	0	0		0		0		0		0	
EXPOSED CLG	1.3	0.5	252	316	153	133	167	81	124	155		75		231		289		140	
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0		0		0		0		0	
EXPOSED FLOOR	2.5	0.5	0	0	0	0	0	0	0	0		0		0		0		0	
BASEMENT/CRAWL HEAT LOSS			0	0	0	0	0	0	0	0		0		0		0		0	
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0	0		0		0		0		0	
SUBTOTAL HT LOSS			2063	1822						1413		980		2467		1706		1931	
SUB TOTAL HT GAIN										547		149		0.20		0.28		0.20	
LEVEL FACTOR / MULTIPLIER			0.20	0.28						0.20		0.28		0.20		0.28		0.20	
AIR CHANGE HEAT LOSS			588	389						151		137		137		137		137	
AIR CHANGE HEAT GAIN										13		167		167		167		167	
DUCT LOSS			0	0						0		0		0		0		0	
DUCT GAIN										0		0		0		0		0	
HEAT GAIN PEOPLE	240		2	480						0		0		0		0		0	
HEAT GAIN APPLIANCES/LIGHTS			723							1		240		0		0		0	
TOTAL HT LOSS BTU/H			2831	1803						598		2712		1149		635		0	
TOTAL HT GAIN x 1.3 BTU/H			3856	1385						211		4378		2038		429		185	
TOTAL HEAT GAIN BTU/H:										30327		1529		42949		44478		1680	
TOTAL HEAT GAIN BTU/H:										30327		1529		42949		44478		1680	
EXP. WALL CLG. HT.										62		11		6		11		15	
GRS.WALL AREA										882		312		66		297		135	
GLAZING										0		0		0		0		0	
NORTH										0		0		0		0		0	
EAST										0		0		0		0		0	
SOUTH										0		0		0		0		0	
WEST										0		0		0		0		0	
SKYL.T.										82		1704		0		0		0	
DOORS										0		0		0		0		0	
NET EXPOSED WALL										237		1033		195		600		2614	
NET EXPOSED BSMT WALL ABOVE GR										0		0		0		0		0	
EXPOSED CLG										0		0		0		0		0	
NO ATTIC EXPOSED CLG										0		0		0		0		0	
EXPOSED FLOOR										0		0		0		0		0	
BASEMENT/CRAWL HEAT LOSS										0		0		0		0		0	
SLAB ON GRADE HEAT LOSS										0		0		0		0		0	
SUBTOTAL HT LOSS										1822		1154		2221		685		1108	
SUB TOTAL HT GAIN										0.30		0.41		0.30		0.41		0.30	
LEVEL FACTOR / MULTIPLIER										0.30		0.41		0.30		0.41		0.30	
AIR CHANGE HEAT LOSS										742		718		117		904		59	
AIR CHANGE HEAT GAIN										0		0		0		0		0	
DUCT LOSS										0		0		0		0		0	
DUCT GAIN										0		0		0		0		0	
HEAT GAIN PEOPLE	240									0		0		0		0		0	
HEAT GAIN APPLIANCES/LIGHTS										0		0		0		0		0	
TOTAL HT LOSS BTU/H										2564		723		405		3125		1108	
TOTAL HT GAIN x 1.3 BTU/H										2570		1411		77		967		244	
TOTAL HEAT GAIN BTU/H:										30327		1529		42949		44478		1680	
TOTAL HEAT GAIN BTU/H:										30327		1529		42949		44478		1680	

Michael O'Rourke

GFA: 2284 LO# 81142

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

#CARRIER
59SP5A-60-12 60
FAN SPEED

S/A	0	0	11
R/A	0	0	5

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

plenum pressure s/a	0.18	r/a pressure	0.17
max s/a diff press. loss	0.02	r/a grille press. Loss	0.02
min adjusted pressure s/a	0.16	adjusted pressure r/a	0.15

DESIGN CFM = $\frac{971}{\text{CFM @ .6" E.S.}}$

RUN #		ROOM NAME																			TEMPERATURE RISE		H		I	
1	2	3	4	5	6	7	8	9	10	11	13	14	15	16	17	18	19	21	22	23	24	25				
MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	BED-2	BED-3	MBR	ENS-2	LVDIN	K/B/F	K/B/F	K/B/F	LAUN	W/R	FOY	BAS	BAS	BAS	BAS	BAS				
RM LOSS MBH:	1.32	1.80	0.70	1.73	1.36	1.15	0.64	1.73	1.32	0.56	2.56	2.03	2.03	2.03	2.48	0.40	3.12	3.66	3.66	3.66	3.66	3.66				
CFM PER RUN HEAT	30	41	16	39	31	26	14	39	30	13	58	46	46	46	56	9	71	83	83	83	83	83				
RM GAIN MBH:	1.93	1.38	0.21	2.01	2.19	2.04	0.43	2.01	1.93	0.18	2.57	2.16	2.16	2.16	1.41	0.08	0.97	0.48	0.48	0.48	0.48	0.48				
CFM PER RUN COOLING	62	45	7	65	71	66	14	65	71	62	83	70	70	70	46	2	31	16	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	0.16				
ACTUAL DUCT LGH:	29	23	36	50	41	20	50	45	46	47	28	35	29	39	34	33	32	37	45	25	35	35				
EQUIVALENT LENGTH	190	160	150	120	130	150	140	140	160	160	130	140	140	140	150	150	110	150	150	140	120	120				
TOTAL EFFECTIVE LENGTH	219	183	226	200	161	150	200	185	206	207	158	175	169	189	174	183	142	187	195	165	155	155				
ADJUSTED PRESSURE	0.08	0.09	0.08	0.09	0.11	0.11	0.09	0.09	0.08	0.08	0.1	0.1	0.1	0.09	0.1	0.09	0.12	0.09	0.08	0.1	0.1	0.1				
ROUND DUCT SIZE	5	4	5	5	6	4	4	5	5	4	6	5	5	5	5	4	5	6	6	6	6	6				
HEATING VELOCITY (ft/min)	220	470	184	286	228	133	161	286	220	149	296	338	338	338	411	103	521	423	423	423	423	423				
COOLING VELOCITY (ft/min)	455	516	80	477	521	337	477	521	455	69	423	514	514	514	338	103	228	82	82	82	82	82				
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10				
TRUNK	B	E	B	D	E	D	D	D	A	D	D	A	A	A	B	C	C	A	B	D	D	C				

RUN #	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 (#/min)
	COOLING VELOCITY (#/min)
	OUTLET GRILL SIZE
	TRUNK

SUPPLY AIR TRUNK SIZE										RETURN AIR TRUNK SIZE												
TRUNK			VELOCITY			TRUNK			VELOCITY			TRUNK			VELOCITY							
CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	X	8	565 (ft/min)	TRUNK G	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	X	8	565 (ft/min)	TRUNK O	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	X	8	565 (ft/min)
TRUNK A	251	0.08	8.3	8	8	565	TRUNK G	0	0.00	0	0	0	8	565	TRUNK O	0	0.06	0	0	0	8	565
TRUNK B	436	0.08	10.3	12	8	654	TRUNK H	0	0.00	0	0	0	8	654	TRUNK P	0	0.06	0	0	0	8	654
TRUNK C	194	0.09	7.4	8	8	437	TRUNK I	0	0.00	0	0	0	8	437	TRUNK Q	0	0.06	0	0	0	8	437
TRUNK D	471	0.08	10.6	14	8	606	TRUNK J	0	0.00	0	0	0	8	606	TRUNK R	0	0.06	0	0	0	8	606
TRUNK E	974	0.08	13.9	22	8	797	TRUNK K	0	0.00	0	0	0	8	797	TRUNK S	0	0.06	0	0	0	8	797
TRUNK F	974	0.08	13.9	22	8	797	TRUNK K	0	0.00	0	0	0	8	797	TRUNK S	0	0.06	0	0	0	8	797

[illegible]

TYPE: LIANA 2
SITE NAME: GRANELL HOME CORP

LO # 81142
LOT 18

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	3 @ 10.6 cfm	31.8 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	4 @ 10.6 cfm	42.4 cfm
Table 9.32.3.A.	TOTAL	169.6 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	79.5	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	169.6	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	90.1	cfm

PRINCIPAL EXHAUST FAN CAPACITY			
Model: LIFE BREATH RNC5-HEX	Location: BSMT		
79.5 cfm	3.0 sones		
☒	HVI Approved		
PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
79.5 CFM	X 74 F	X 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: LIFE BREATH RNC5-HEX		
108 cfm high	59 cfm low	
76 % 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:	January-19

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: LIANA 2	LOT 18	BUILDER: GREENYORK HOMES
SFQT: 2284	LO# 81142	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

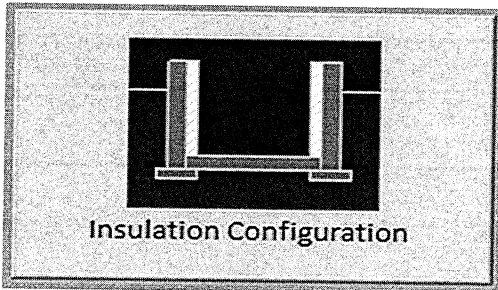
2012 OBC - COMPLIANCE PACKAGE		
Component	Compliance Package A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement 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

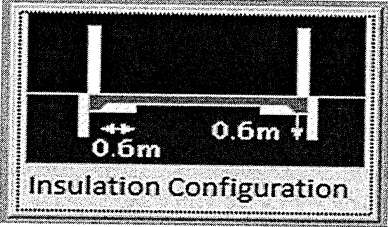
Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	13.4	 Insulation Configuration
Floor Width (m):	9.1	
Exposed Perimeter (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# 81142

LOT 18

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# 81142

LOT 18

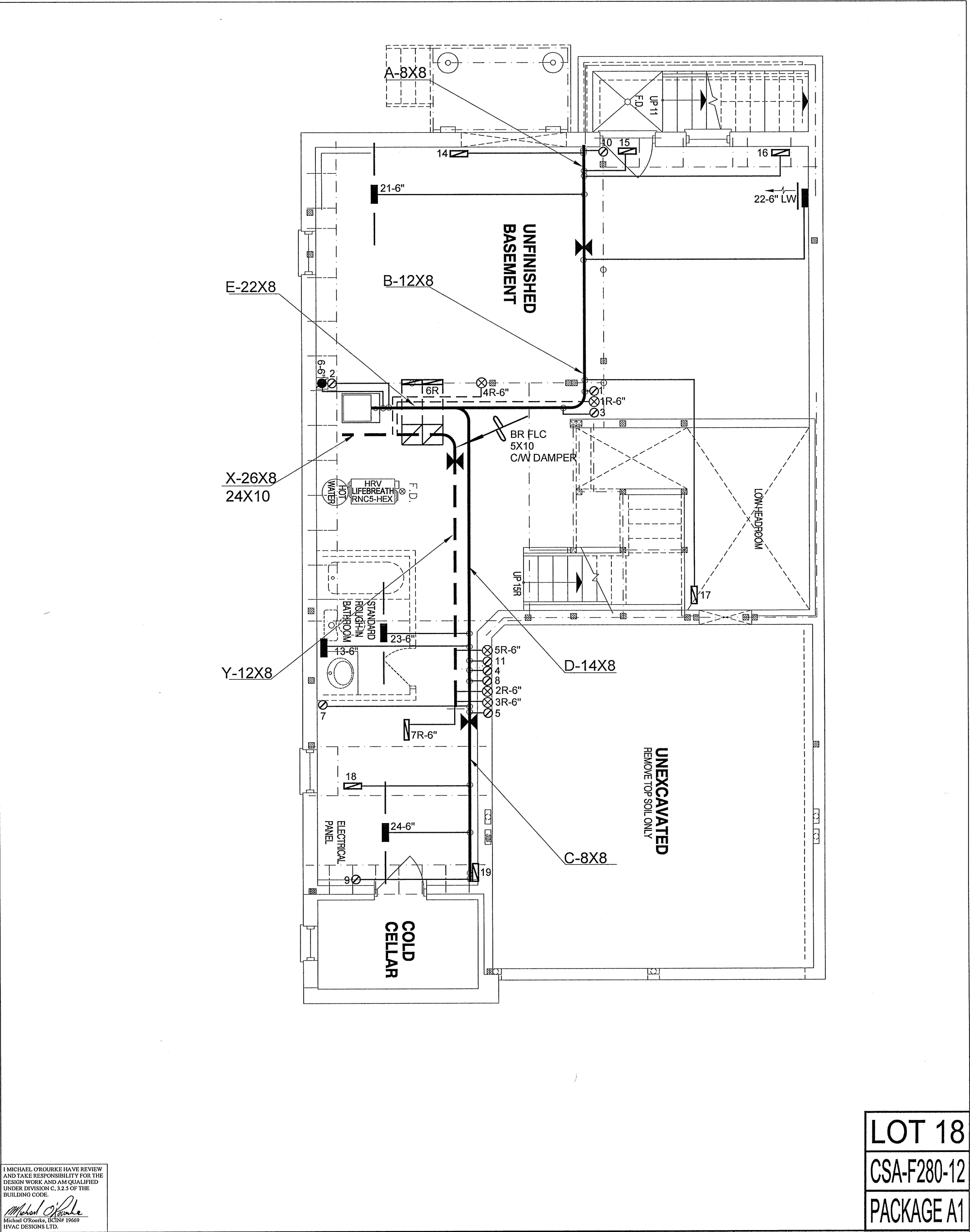
Air Infiltration Residential Load Calculator

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
Diameter (mm):	0	0	0
		#4	0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.335		
Cooling Air Leakage Rate (ACH/H):	0.119		

TYPE: LIANA 2
LO# 81142

LOT 18



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.

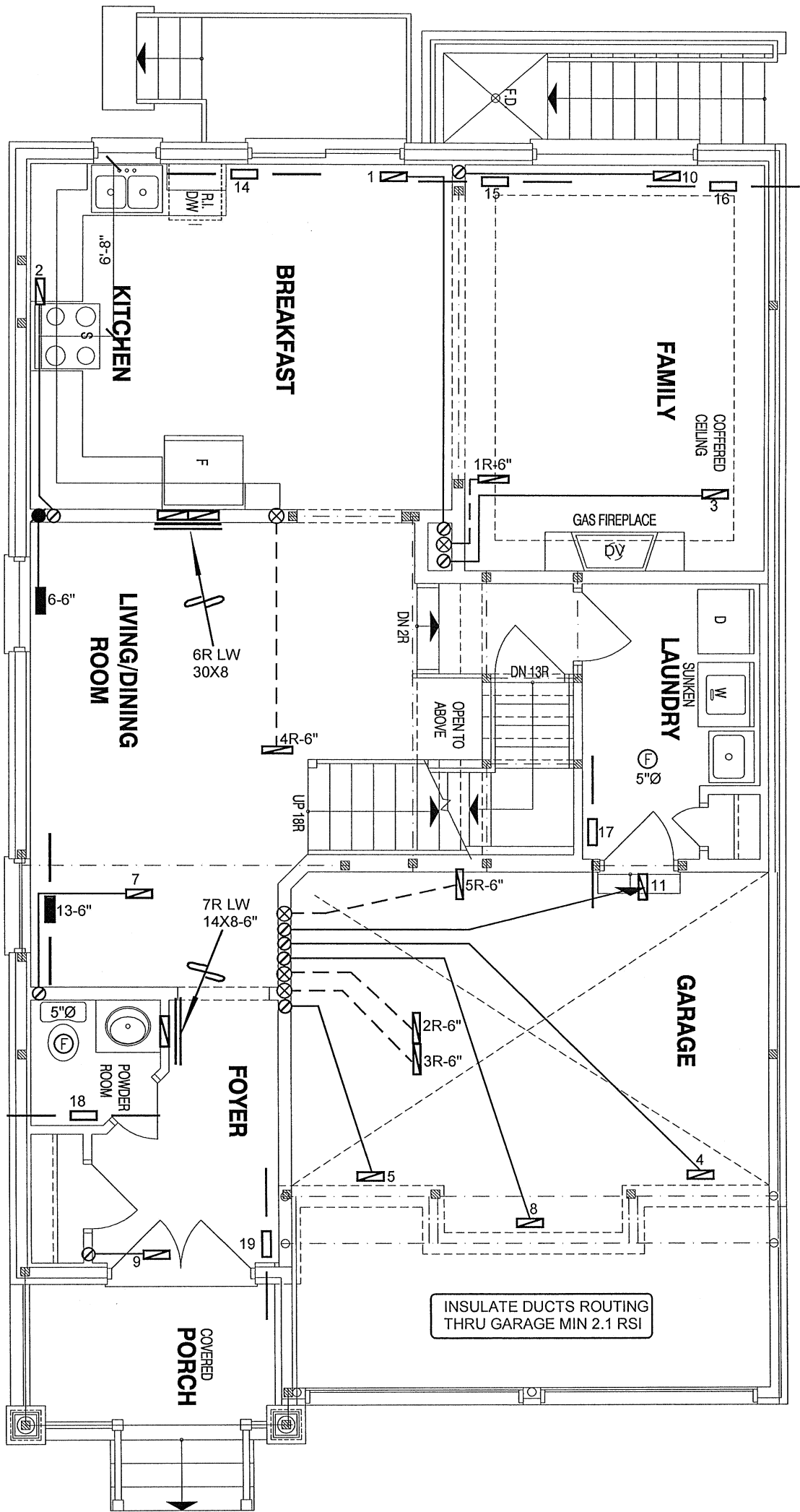
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

LOT 18
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		HVACDESIGNS LTD. 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.	HEAT LOSS 44478 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GREENYORK HOMES			MAKE	CARRIER	3RD FLOOR			BASEMENT	
Project Name			MODEL	59SP5A-60-12	2ND FLOOR			HEATING	
GRANELLI HOMES CORP BRAMPTON, ONTARIO			INPUT	60 MBTU/H	1ST FLOOR			LAYOUT	
LOT 18			OUTPUT	58 MBTU/H	BASEMENT			Date	
LIANA 2			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			JAN/2019	
2284 sqft			FAN SPEED	970 cfm @ 0.6" w.c.				Scale	
						3/16" = 1'-0"			
						BCIN# 19669			
					LO#		81142		



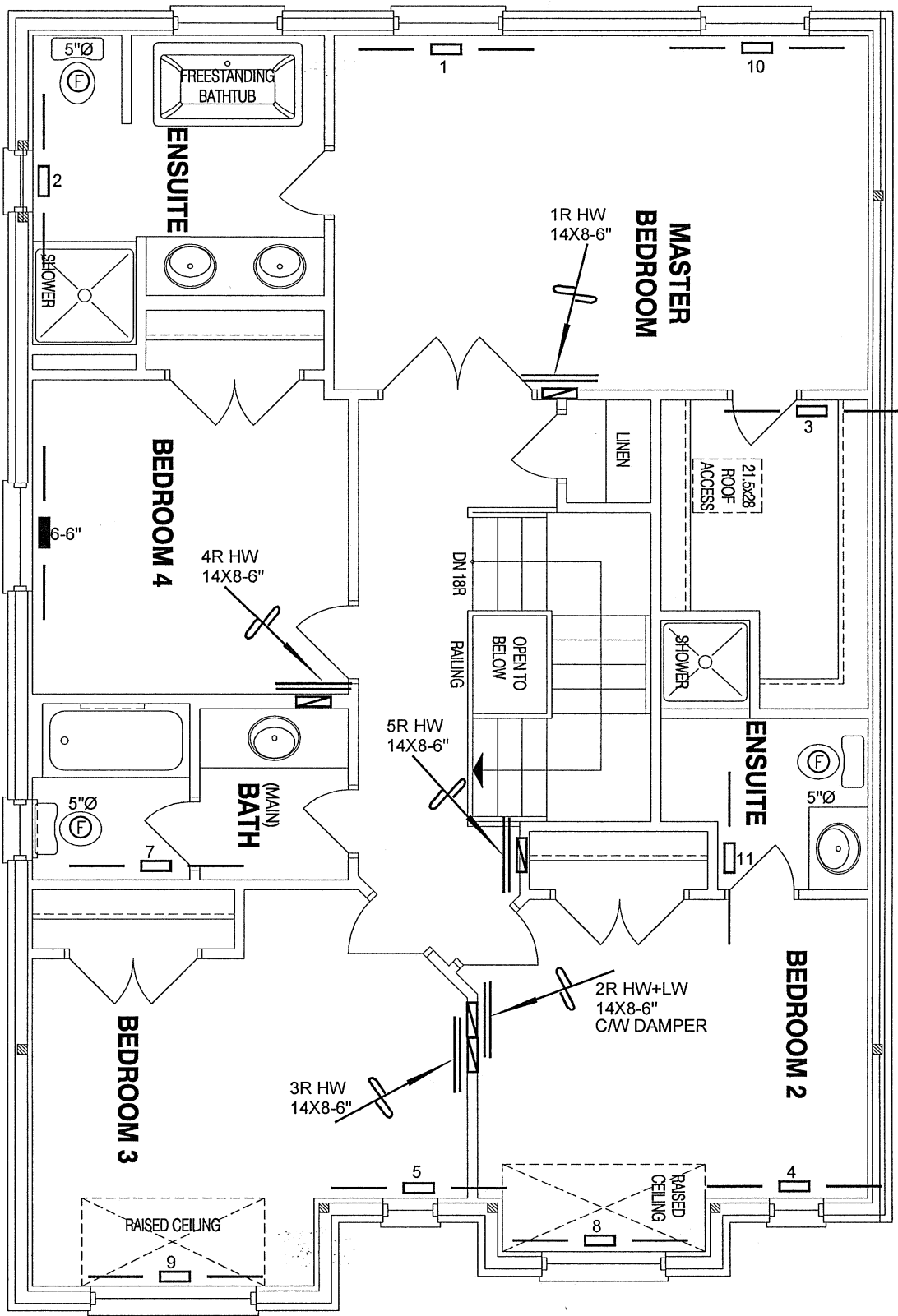
LOT 18
CSA-F280-12
PACKAGE A1

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.		
	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 GREENYORK HOMES		 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 FIRST FLOOR HEATING LAYOUT
Project Name GRANELLI HOMES CORP BRAMPTON, ONTARIO	2284 sqft		
LOT 18 LIANA 2			Date JAN/2019
			Scale 3/16" = 1'-0"
			BCIN# 19669
			LO# 81142



LOT 18
CSA-F280-12
PACKAGE A1

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
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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.		
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GREENYORK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2019
GRANELLI HOMES CORP BRAMPTON, ONTARIO			Scale	3/16" = 1'-0"
LOT 18			BCIN# 19669	
LIANA 2	2284 sqft		LO#	81142