

SITE NAME: SECONDO
BUILDER: GREENPARK HOMES
TYPE: PINEBROOK 2
GFA: 3046
DATE: Nov-17
LO# 76865
WINTER NATURAL AIR CHANGE RATE 0.227
SUMMER NATURAL AIR CHANGE RATE 0.070
HEAT LOSS ΔT °F. 81
HEAT GAIN ΔT °F. 14
CSA-F280-12
ENERGYSTAR

ROOM USE	EXP. WALL	CLG. HT.	FACTORS	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-2	TOTAL
GRS.WALL AREA	38	9	225	225	54	182	333	144	16	81	17	153
GLAZING	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	20.4	15.9	0	0	0	0	0	0	0	0	0	0
EAST	20.4	41.5	0	0	0	0	0	0	0	0	0	0
SOUTH	20.4	24.8	0	0	0	0	0	0	0	0	0	0
WEST	20.4	41.5	32	651	1327	14	285	581	0	0	0	0
SKYL.T.	34.2	101.2	0	0	0	0	0	0	0	0	0	0
DOORS	27.0	4.7	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	5.4	0.9	310	1669	287	0	0	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.7	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.6	0.7	336	539	238	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	4.0	1.8	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	3.3	0.6	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	2860	1836	1836	1836	1149	152	1659	2142	1323	744	1318	637
SUB TOTAL HT GAIN	0.20	0.17	0.20	0.17	0.20	0.17	0.20	0.17	0.20	0.17	0.20	0.17
LEVEL FACTOR / MULTIPLIER	480	315	315	480	90	12	403	492	227	128	226	50
AIR CHANGE HEAT LOSS	145	0	0	0	0	0	269	0	0	0	154	69
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	240	1	240	0	0	0
DUCT LOSS	0	0	0	0	0	0	664	664	664	0	0	0
DUCT GAIN	2	480	0	0	0	0	3025	3364	1550	872	1698	982
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	664	664	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	3350	2151	1611	213	611	3850	4178	2088	2088	514	982	982
TOTAL HT GAIN x 1.3 BTU/H	4084	1896	1896	6281	6790	711	2146	1388	1388	482	2028	2028

ROOM USE	EXP. WALL	CLG. HT.	FACTORS	LVDN	OFF	KTIFM	WIC-2	LAUN	MUD	FOY	TOTAL
GRS.WALL AREA	210	210	210	210	210	210	210	210	210	210	210
GLAZING	0	0	0	0	0	0	0	0	0	0	0
NORTH	20.4	15.9	0	0	0	0	0	0	0	0	0
EAST	20.4	41.5	0	0	0	0	0	0	0	0	0
SOUTH	20.4	24.8	22	448	546	0	0	0	0	0	0
WEST	20.4	41.5	0	0	0	0	0	0	0	0	0
SKYL.T.	34.2	101.2	0	0	0	0	0	0	0	0	0
DOORS	27.0	4.7	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	5.4	0.9	188	1012	174	0	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.7	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.6	0.7	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	4.0	1.8	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	3.3	0.6	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	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
SUBTOTAL HT LOSS	1460	1807	1807	737	3865	5192	742	2050	2066	1997	9568
SUB TOTAL HT GAIN	0.30	0.31	0.30	0.31	0.30	0.31	0.30	0.31	0.30	0.31	0.50
LEVEL FACTOR / MULTIPLIER	449	556	556	449	1598	228	40	352	636	615	6804
AIR CHANGE HEAT LOSS	56	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	664	664	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	1909	2363	1872	6281	6790	970	2146	1388	1388	482	16372
TOTAL HT GAIN x 1.3 BTU/H	2408	1896	1896	6281	6790	711	2146	1388	1388	482	2028

SITE NAME: SECONDOPARK
BUILDER: GREENPARK HOMES

TYPE: PINEBROOK 2 DATE: Nov-17 GFA: 3046 LO# 78865

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 52,983 TOTAL HEAT GAIN 34,325
AIR FLOW RATE CFM 21.35 AIR FLOW RATE CFM 32.95

#GOODMAN
GMEC960603BNA 60
FAN SPEED
LOW
MEDLOW
MEDIUM
HIGH

AFUE = 96 %
INPUT (BTU/H) = 60,000
OUTPUT (BTU/H) = 57,600

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	8	4
R/A	0	0	4	3	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	WIC	BED-2	BED-3	BED-4	BATH	BED-2	BED-3	MBR	ENS-2	LVDN	OFF	KT/FM	KT/FM	WIC-2	LAUN	MUD	FOY	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH	1.68	2.15	0.61	1.51	1.68	1.55	0.87	1.51	1.68	1.68	1.70	1.91	2.36	2.26	2.26	0.97	2.64	2.70	56	4.09	4.09	4.09	4.09	4.09
CFM PER RUN HEAT	36	46	13	32	36	33	19	32	36	36	36	41	50	48	48	21	56	58	56	87	87	87	87	87
RM GAIN MBH	2.04	1.61	0.21	1.93	2.09	2.09	0.51	1.93	2.09	2.04	0.98	1.87	1.90	2.09	2.09	0.71	2.15	1.39	0.48	0.51	0.51	0.51	0.51	0.51
CFM PER RUN COOLING	67	53	7	63	69	69	17	63	69	67	32	62	62	69	69	23	71	46	16	17	17	17	17	17
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	0.16	0.16	0.16	0.16	0.16
EQUIVALENT LENGTH	170	160	160	170	160	160	150	160	150	130	200	190	140	150	200	160	140	170	140	180	180	180	180	180
TOTAL EFFECTIVE LENGTH	232	193	211	211	203	183	184	207	202	206	251	194	158	187	245	186	156	232	186	210	250	190	216	216
ADJUSTED PRESSURE	0.07	0.09	0.08	0.08	0.08	0.09	0.09	0.08	0.08	0.08	0.07	0.09	0.11	0.07	0.07	0.09	0.11	0.07	0.09	0.07	0.08	0.06	0.09	0.08
ROUND DUCT SIZE	5	5	4	5	5	5	4	5	5	5	4	5	5	5	5	4	5	5	5	6	6	6	5	6
HEATING VELOCITY (ft/min)	264	338	149	235	264	242	218	235	264	264	413	301	367	352	352	241	411	426	411	352	444	444	639	444
COOLING VELOCITY (ft/min)	492	389	80	463	507	507	195	463	507	492	367	455	455	507	507	264	521	338	117	507	87	125	87	87
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	4X10
TRUNK	C	D	D	A	A	D	B	A	A	C	A	B	B	D	C	A	B	C	A	C	D	C	B	A

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 (ft/min)	COOLING VELOCITY (ft/min)	OUTLET GRILL SIZE	TRUNK
1	TRUNK A	336	0.07	9.6	10	0.15	8	605	0	0.00	0	0	0	0	0
2	TRUNK B	589	0.07	11.9	16	0.15	8	663	0	0.00	0	0	0	0	0
3	TRUNK C	313	0.06	9.8	12	0.15	8	470	0	0.00	0	0	0	0	0
4	TRUNK D	540	0.06	12	16	0.15	8	608	0	0.00	0	0	0	0	0
5	TRUNK E	0	0.00	0	0	0.15	8	0	0	0.00	0	0	0	0	0
6	TRUNK F	0	0.00	0	0	0.15	8	0	0	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 A	336	0.07	9.6	10	0.15	8	TRUNK G	0	0.00	0	0	0
TRUNK B	589	0.07	11.9	16	0.15	8	TRUNK H	0	0.00	0	0	0
TRUNK C	313	0.06	9.8	12	0.15	8	TRUNK I	0	0.00	0	0	0
TRUNK D	540	0.06	12	16	0.15	8	TRUNK J	0	0.00	0	0	0
TRUNK E	0	0.00	0	0	0.15	8	TRUNK K	0	0.00	0	0	0
TRUNK F	0	0.00	0	0	0.15	8	TRUNK L	0	0.00	0	0	0
RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12
AIR VOLUME	125	135	95	85	135	250	135	0	0	0	0	0
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
ACTUAL DUCT LGH	55	47	55	56	41	20	23	1	1	1	1	1
EQUIVALENT LENGTH	225	185	165	175	230	215	220	0	0	0	0	0
TOTAL EFFECTIVE LENGTH	280	232	220	231	271	235	243	1	1	1	1	1
ADJUSTED PRESSURE	0.05	0.06	0.07	0.06	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.06
ROUND DUCT SIZE	7.2	7.1	6	6	7.5	9	7.1	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	8	0	0	0	0	0
INLET GRILL SIZE	14	14	14	14	14	30	14	0	0	0	0	0

TYPE: PINEBROOK 2
SITE NAME: SECONDO

LO # 76865

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	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A	TOTAL	190.8 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	190.8	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	35.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
155.0 cfm	3.0 sones
☒ HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	ΔT °F
155.0 CFM	81 F
X	X
FACTOR	% LOSS
1.08	X
	0.25

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 65H		
155 cfm high	64 cfm low	
75 % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

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

BUILDER: GREENPARK 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:	November-17

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** PINEBROOK 2**BUILDER:** GREENPARK HOMES**SFQT:** 3046**LO#** 76865**SITE:** SECONDO**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-9	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

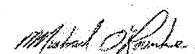
ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	2.50	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	41194.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 58.0 ft	WIDTH: 34.0 ft	EXPOSED PERIMETER:	184.0 ft

2012 OBC - COMPLIANCE PACKAGE**Component****Compliance Package
ENERGYSTAR****Nominal Min. Eff.**

Ceiling with Attic Space Minimum RSI (R)-Value	50	50.72
Ceiling Without Attic Space Minimum RSI (R)-Value	31	20.54
Exposed Floor Minimum RSI (R)-Value	31	24.58
Walls Above Grade Minimum RSI (R)-Value	20 + 5	15.12
Basement Walls Minimum RSI (R)-Value	20	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	ZONE 2	-
Skylights Maximum U-Value	ZONE 2	-
Space Heating Equipment Minimum AFUE	0.95	-
HRV Minimum Efficiency	65%	-
Domestic Hot Water Heater Minimum EF	0.75	-

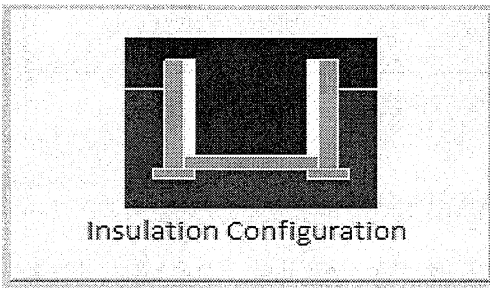
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Bradford	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	17.7	 Insulation Configuration
Floor Width (m):	10.4	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	1.2	
Door Area (m ²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1944

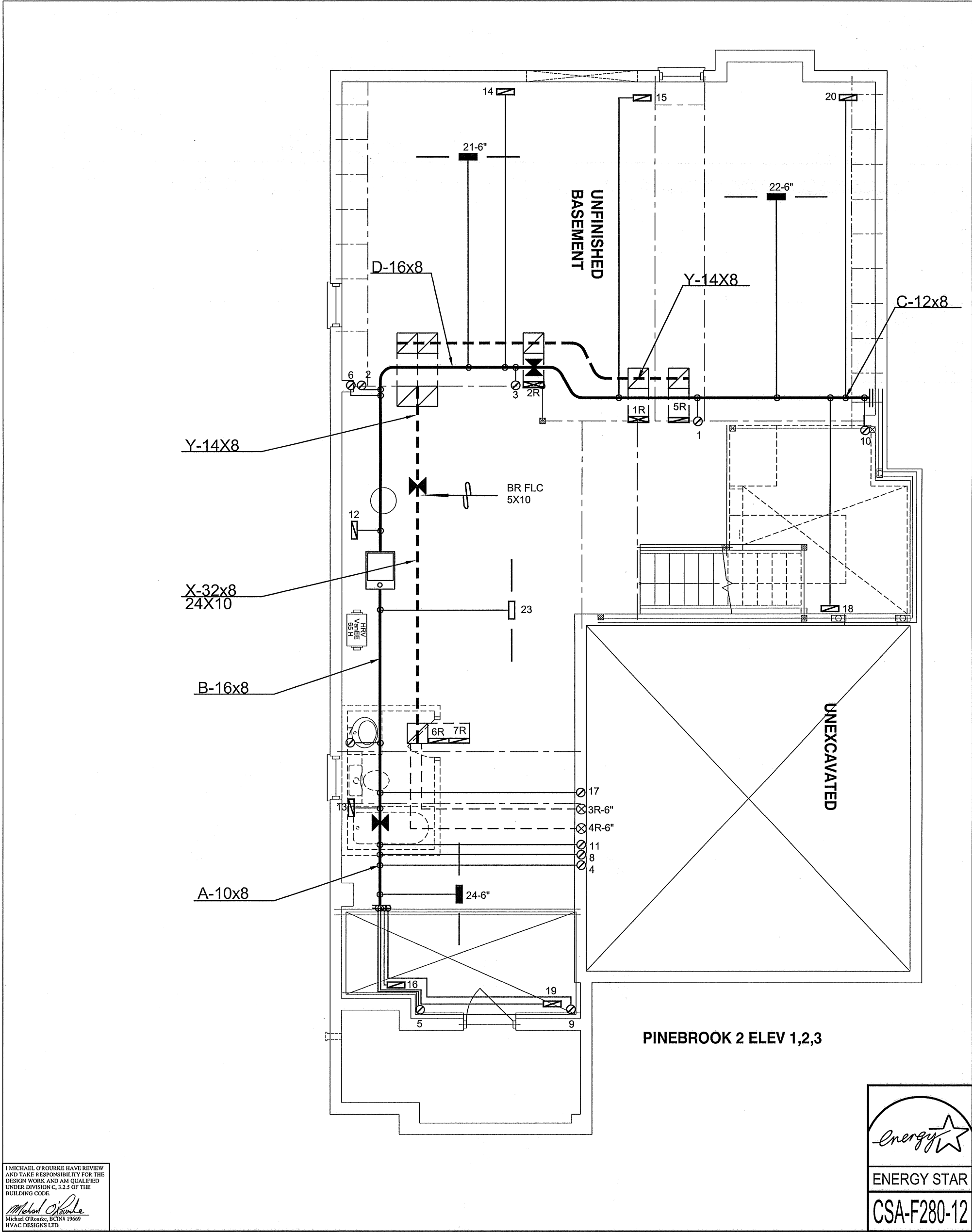
TYPE: PINEBROOK 2
LO# 76865

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Bradford			
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):	6.71			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1166.5			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Detached (2.5 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1088.9 cm ²		
	2.50	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	73.2	73.2		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.227			
Cooling Air Leakage Rate (ACH/H):	0.070			

TYPE: PINEBROOK 2
LO# 76865



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.

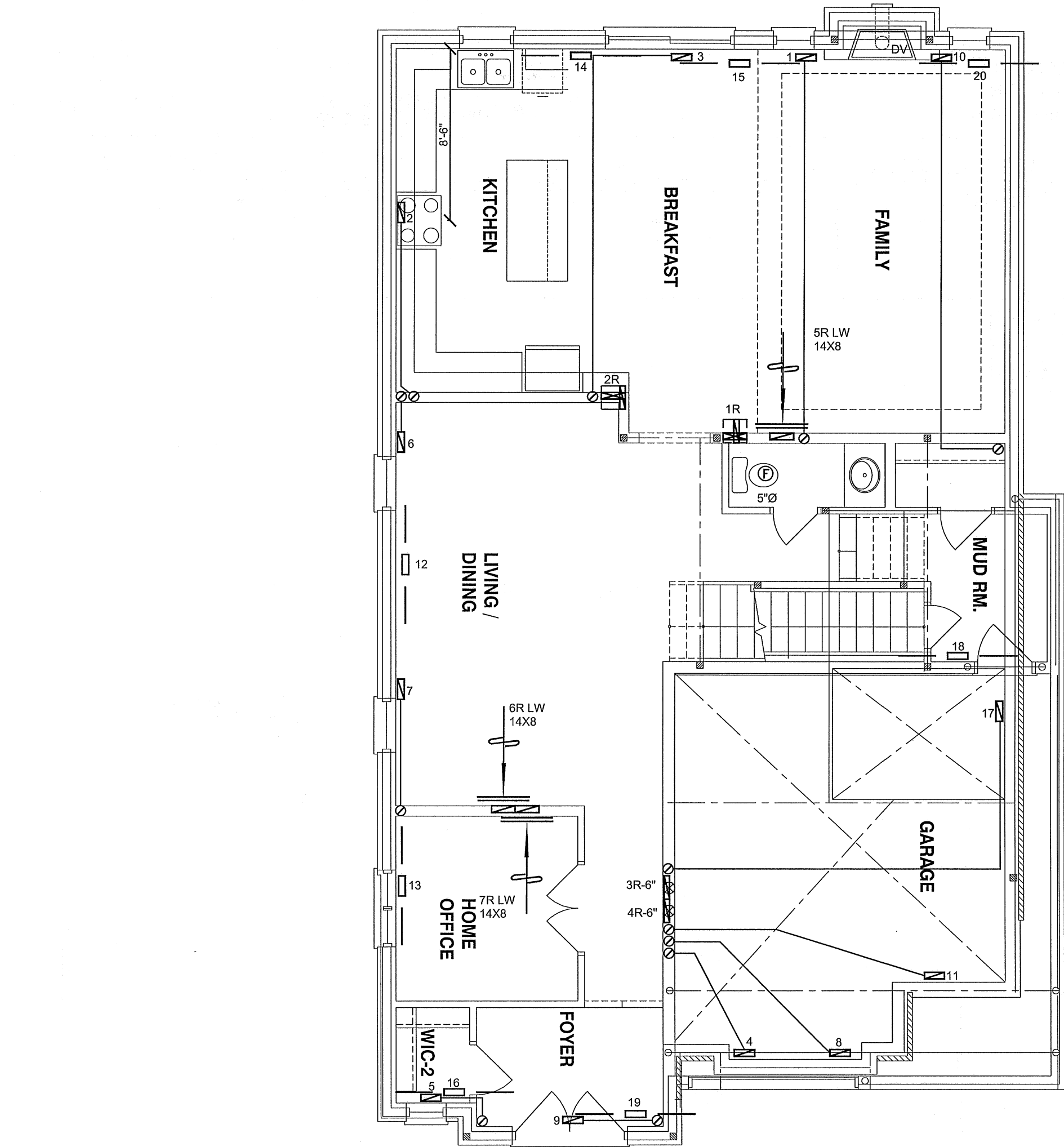
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.



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.	
	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		Date
							REVISIONS		

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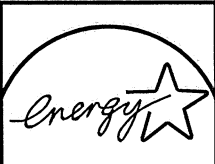
Client GREENPARK HOMES		 375 Finley Ave - Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	HEAT LOSS 56389 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title BASEMENT HEATING LAYOUT			
Project Name SECONDO EAST GWILLIMBURY, ONTARIO			MAKE GOODMAN	3RD FLOOR							
PINEBROOK 2 3046 sqft		MODEL GMEC960603BNA-60	2ND FLOOR		12	4	4	Date NOV/2017			
		INPUT 60 MBTU/H	1ST FLOOR		8	3	2				
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.		OUTPUT 57.6 MBTU/H	BASEMENT					4	1	0	Date NOV/2017
		COOLING 3.0 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					Scale 3/16" = 1'-0"			
		FAN SPEED 1131 cfm @ 0.6" w.c.						BCIN# 19669			
							LO#			76865	



PINEBROOK 2 ELEV 1, 2, 3

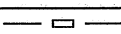
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

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



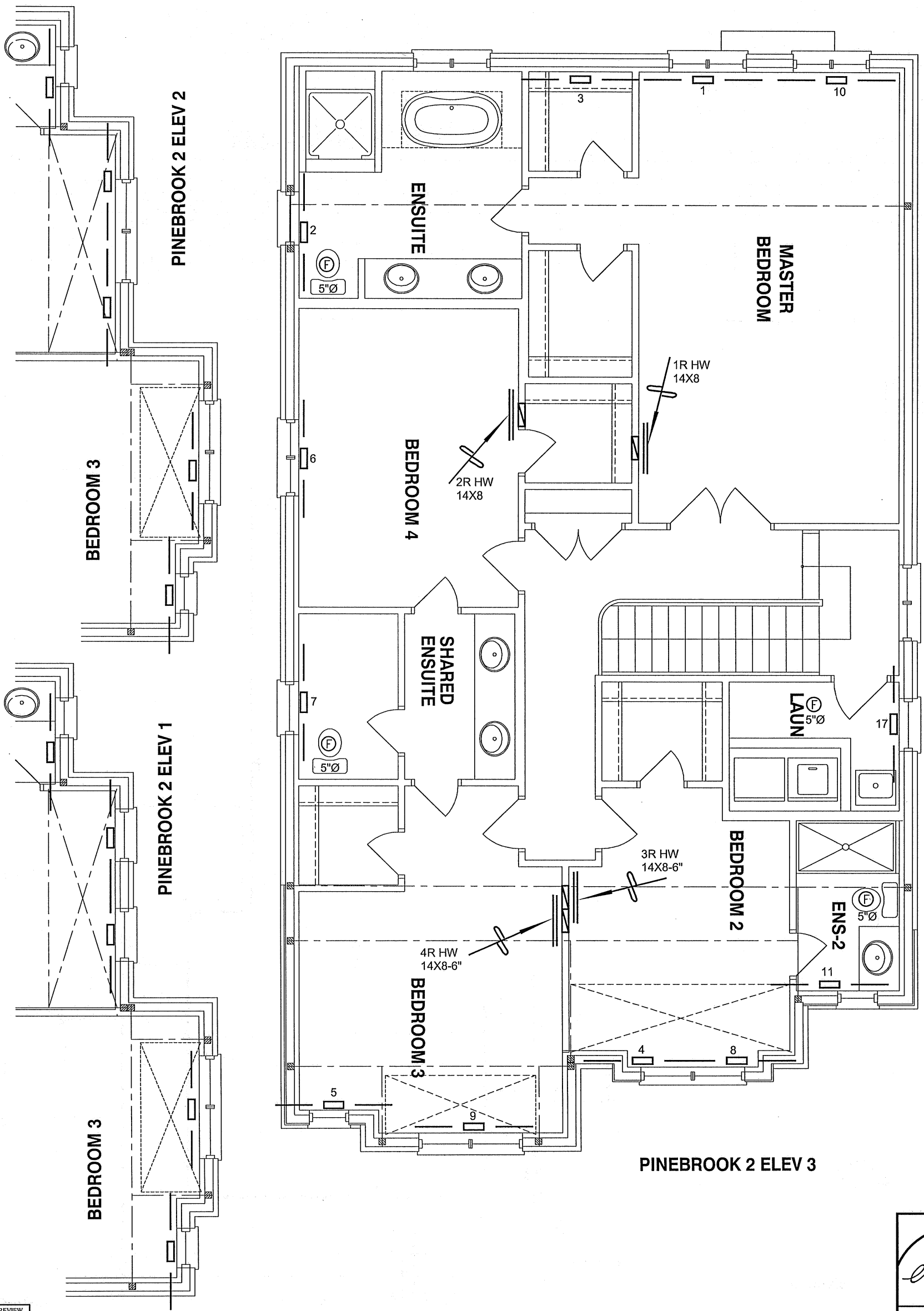
ENERGY STAR

CSA-F280-12

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		

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 GREENPARK 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 SECONDO EAST GWILLIMBURY, ONTARIO			Date NOV/2017	
PINEBROOK 2			Scale 3/16" = 1'-0"	
3046 sqft			BCIN# 19669	
			LO#	76865



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ENERGY STAR

CSA-F280-12

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
GREENPARK HOMES

Project Name
**SECONDO
EAST GWILLIMBURY,
ONTARIO**

PINEBROOK 2 3046 sqft

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L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
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Sheet Title
**SECOND FLOOR
HEATING
LAYOUT**

Date **NOV/2017**

Scale **3/16" = 1'-0"**

BCIN# 19669

LO# **76865**