


 SITE NAME: LAMBERT'S LANE PH.2
 BUILDER: GREENPARK HOMES

 TOWN OF CALEDON
 BUILDING PERMIT DIVISION

GEA: 2810

DATE: Sep-19

LO# 83952

WINTER NATURAL AIR CHANGE RATE 0.221

SUMMER NATURAL AIR CHANGE RATE 0.072

HEAT LOSS AT °F. 74

HEAT GAIN AT °F. 11

CSA-F280-12

ENERGYSTAR

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	WIC-2	ENS-2
FACTORS	37	9	8	8	8	8	8	8	8	8	8
GRS.WALL AREA	LOSS	GAIN	336	178	65	209	300	272	57	121	113
GLAZING	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS
NORTH	18.6	15.1	0	0	0	0	0	0	0	0	0
EAST	18.6	40.7	0	0	0	0	0	0	0	0	0
SOUTH	18.6	24.1	24	445	578	0	0	0	0	0	0
WEST	18.6	40.7	24	445	977	16	297	561	0	0	0
SKYLT.	31.2	99.9	0	0	0	0	0	0	0	0	0
DOORS	24.7	3.7	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.5	288	1013	150	162	569	84	65	227	34
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	336	421	187	120	150	67	96	120	54
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.4	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	2325	0	0	0	0	0	0	0	0	0	0
SUB TOTAL HT GAIN	1892	0	0	0	0	0	0	0	0	0	0
LEVEL FACTOR / MULTIPLIER	0.20	0.17	0.20	0.17	0.20	0.17	0.20	0.17	0.20	0.17	0.20
AIR CHANGE HEAT LOSS	395	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	72	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	2	480	0	0	0	1	240	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	0	0	669	0	0	0	669	0	0	0	0
TOTAL HT LOSS BTU/H	2719	0	0	0	0	0	0	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H	3917	0	0	0	0	0	0	0	0	0	0

ROOM USE	EXP. WALL	CLG. HT.	LVDN	KIT	FAM	W/R	FOY	LAUN	BAS
FACTORS	56	10	10	10	10	10	10	10	10
GRS.WALL AREA	LOSS	GAIN	565	444	333	60	81	350	968
GLAZING	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS
NORTH	18.6	15.1	0	0	0	0	0	0	0
EAST	18.6	40.7	48	890	1954	0	0	0	0
SOUTH	18.6	24.1	56	1039	1348	0	0	0	0
WEST	18.6	40.7	0	0	0	0	0	0	0
SKYLT.	31.2	99.9	0	0	0	0	0	0	0
DOORS	24.7	3.7	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.5	461	1620	240	384	1349	200	267
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.4	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	3549	0	0	0	0	0	0	0	0
SUB TOTAL HT GAIN	3542	0	0	0	0	0	0	0	0
LEVEL FACTOR / MULTIPLIER	0.30	0.27	0.30	0.27	0.30	0.27	0.30	0.27	0.30
AIR CHANGE HEAT LOSS	969	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	135	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	0	0	569	0	0	569	0	0	0
TOTAL HT LOSS BTU/H	4508	0	0	0	0	0	0	0	0
TOTAL HT GAIN x 1.3 BTU/H	5519	0	0	0	0	0	0	0	0

THIS STRUCTURE MUST BE
 CONSTRUCTED TO MEET OR
 EXCEED THE PROVISIONS OF
 THE ONTARIO BUILDING CODE

TOTAL HEAT GAIN BTU/H:

35303

TONS: 2.94

LOSS DUE TO VENTILATION LOAD BTU/H: 1693

STRUCTURAL HEAT LOSS: 43819

TOTAL COMBINED HEAT LOSS BTU/H: 45411

SITE NAME: LAMBERT'S LANE PH.2
BUILDER: GREENPARK HOMES

LOT 49
TYPE: KINMOUNT 11B

DATE: Sep-19

GFA: 2810 LO# 83962

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 43,819 TOTAL HEAT GAIN 35,067
AIR FLOW RATE CFM 25.81 AIR FLOW RATE CFM 32.25

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

#GOODMAN
GMEC960603BNA 60
FAN SPEED LOW
MEDLOW
MEDIUM
MEDIUM HIGH
HIGH 1131

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

DESIGN CFM = 1131
CFM @ .6" E.S.P.

TEMPERATURE RISE 47 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	11	9	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.

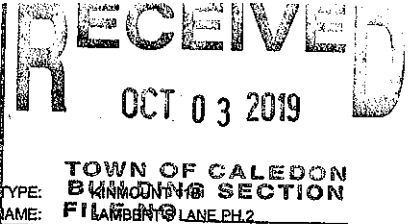
plenum pressure s/a 0.18
max s/a dif press. loss 0.02
min adjusted pressure s/a 0.16
r/a pressure 0.17
r/a grille press. Loss 0.02
adjusted pressure r/a 0.15

RUN #	1	2	3	4	5	6	7	9	10	11	12	13	14	15	16	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	BED-3	MBR	ENS-2	LV/DN	LV/DN	KIT	FAM	FAM	LAUN	FOY	W/R	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.36	1.19	0.41	2.26	1.31	2.34	0.73	1.31	1.36	1.46	2.25	2.25	1.56	1.37	1.37	2.64	1.42	0.27	3.51	3.51	3.51	3.51
CFM PER RUN HEAT	35	31	10	58	34	80	19	34	35	38	58	58	40	35	35	68	37	7	91	91	91	91
RM GAIN MBH.	1.96	1.08	0.12	2.88	2.09	2.69	0.71	2.09	1.96	0.36	2.76	2.76	2.15	1.80	1.80	1.15	0.86	0.04	0.53	0.53	0.53	0.53
CFM PER RUN COOLING	63	35	4	93	68	87	23	68	63	12	89	89	69	58	58	37	28	1	17	17	17	17
ADJUSTED PRESSURE	0.17	0.17	0.17	0.16	0.17	0.16	0.17	0.17	0.17	0.17	0.16	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.	27	54	36	46	47	17	37	59	32	50	22	40	38	8	33	39	14	20	22	37	32	18
EQUIVALENT LENGTH	190	160	160	190	170	170	190	170	160	190	160	140	160	160	130	150	170	190	150	150	140	160
TOTAL EFFECTIVE LENGTH	217	214	196	236	217	187	227	229	192	240	182	180	198	168	163	189	184	210	172	187	172	178
ADJUSTED PRESSURE	0.08	0.08	0.09	0.07	0.08	0.09	0.08	0.08	0.09	0.07	0.09	0.09	0.09	0.1	0.11	0.09	0.09	0.08	0.09	0.09	0.09	0.09
ROUND DUCT SIZE	5	4	4	6	6	6	4	6	5	5	6	6	5	5	5	5	4	4	6	6	6	6
HEATING VELOCITY (ft/min)	257	356	115	296	173	306	218	173	257	279	296	296	294	257	257	499	424	80	464	464	464	464
COOLING VELOCITY (ft/min)	463	402	46	474	347	444	264	347	463	88	454	454	507	426	426	272	321	11	87	87	87	87
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	4X10	4X10	3X10	4X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	B	D	D	A	A	B	B	A	C	B	B	A	D	C	C	D	B	B	C	D	A	B

RUN #	25	26
ROOM NAME	WIC-2	KIT
RM LOSS MBH.	1.34	1.56
CFM PER RUN HEAT	34	40
RM GAIN MBH.	1.51	2.15
CFM PER RUN COOLING	49	69
ADJUSTED PRESSURE	0.17	0.17
ACTUAL DUCT LGH.	42	30
EQUIVALENT LENGTH	160	170
TOTAL EFFECTIVE LENGTH	202	200
ADJUSTED PRESSURE	0.09	0.09
ROUND DUCT SIZE	5	5
HEATING VELOCITY (ft/min)	250	294
COOLING VELOCITY (ft/min)	360	507
OUTLET GRILL SIZE	3X10	3X10
TRUNK	A	D

SUPPLY AIR TRUNK SIZE	TRUNK	STATIC	ROUND	RECT	VELOCITY	TRUNK	STATIC	ROUND	RECT	VELOCITY	TRUNK	STATIC	ROUND	RECT	VELOCITY
	CFM	PRESS.	DUCT	DUCT	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)
TRUNK A	309	0.07	9.3	12	x	8	464	TRUNK G	0	0.00	0	0	0	x	8
TRUNK B	654	0.07	12.4	18	x	8	654	TRUNK H	0	0.00	0	0	0	x	8
TRUNK C	196	0.09	7.4	8	x	8	441	TRUNK I	0	0.00	0	0	0	x	8
TRUNK D	280	0.08	8.7	10	x	8	504	TRUNK J	0	0.00	0	0	0	x	8
TRUNK E	476	0.08	10.6	14	x	8	612	TRUNK K	0	0.00	0	0	0	x	8
TRUNK F	0	0.00	0	0	x	8	0	TRUNK L	0	0.00	0	0	0	x	8

RETURN AIR #	1	2	3	4	5	6											BR	TRUNK W	0	0.06	0	0	x	8	0
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		TRUNK X	966	0.06	14.9	26	x	8	669
AIR VOLUME	165	165	85	75	340	135	0	0	0	0	0	0	0	0	0	166		TRUNK Y	165	0.06	7.7	8	x	8	371
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		TRUNK Z	460	0.06	11.3	14	x	8	591
ACTUAL DUCT LGH.	54	20	37	60	16	32	1	1	1	1	1	1	1	1	1	14		DROP	1131	0.06	15.8	24	x	10	679
EQUIVALENT LENGTH	150	145	205	195	135	160	0	0	0	0	0	0	0	0	0	175									
TOTAL EFFECTIVE LH	204	165	242	255	151	192	1	1	1	1	1	1	1	1	1	189									
ADJUSTED PRESSURE	0.07	0.09	0.06	0.06	0.10	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.08									
ROUND DUCT SIZE	7.4	6.9	6	5.7	8.9	6.8	0	0	0	0	0	0	0	0	0	7.2									
INLET GRILL SIZE	8	8	8	8	8	8	0	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	14	14	14	30	14	0	0	0	0	0	0	0	0	0	14									


 TYPE: **BUILDING SECTION**
 SITE NAME: **FILABENT LANE PH.2**

 LO # 83962
 LOT 49

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 Ventili. Capacity	79.5	cfm
Required Supplemental Capacity	90.1	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	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 0.25

SUPPLEMENTAL FANS		PANASONIC
Location	Model	cfm HVI Sones
ENS	FV-05-11VK1	50 ✓ 0.3
BATH	FV-05-11VK1	50 ✓ 0.3
ENS-2	FV-05-11VK1	50 ✓ 0.3
W/R	FV-05-11VK1	50 ✓ 0.3

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:	September-19

 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.
 INDIVIDUAL BCIN: 19689 *Michael O'Rourke* MICHAEL O'ROURKE

CSA F280-12 Residential Heat Loss and Heat Gain Calculations
Formula Sheet (For Air Leakage / Ventilation Calculation)

LO#: 83962

Model: KINMOUNT 11B

Builder: GREENPARK HOMES

Date: 19/09/2019

Volume Calculation
Air Change & Delta T Data
House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	1219	9	10361.5
First	1219	10	12291.177
Second	1591	8	12860.053
Third	0	9	0
Fourth	0	9	0
Total:			35,512.7 ft³
Total:			1005.6 m³

WINTER NATURAL AIR CHANGE RATE	0.221
SUMMER NATURAL AIR CHANGE RATE	0.072

Design Temperature Difference

	Tin °C	Tout °C	ΔT °C	ΔT °F
Winter DTDh	22	-19	41	74
Summer DTDc	24	30	6	11

5.2.3.1 Heat Loss due to Air Leakage
6.2.6 Sensible Gain due to Air Leakage

$$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$$

$$0.221 \times 279.34 \times 41^\circ\text{C} \times 1.2 = 3059 \text{ W}$$

$$= 10438 \text{ Btu/h}$$

$$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$$

$$0.072 \times 279.34 \times 6^\circ\text{C} \times 1.2 = 147 \text{ W}$$

$$= 503 \text{ Btu/h}$$

5.2.3.2 Heat Loss due to Mechanical Ventilation
6.2.7 Sensible heat Gain due to Ventilation

$$HL_{vaib} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

$$80 \text{ CFM} \times 74^\circ\text{F} \times 1.08 \times 0.25 = 1593 \text{ Btu/h}$$

$$HL_{vaib} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

$$80 \text{ CFM} \times 11^\circ\text{F} \times 1.08 \times 0.25 = 236 \text{ Btu/h}$$

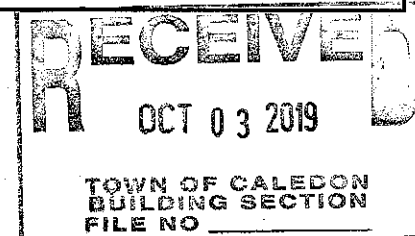
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)

$$HL_{airr} = \text{Level Factor} \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agcleve} + HL_{bgcleve})\}$$

Level	Level Factor (LF)	HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HLlevel)	Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)
1	0.5	10,438	8,835	0.591
2	0.3		11,586	0.270
3	0.2		12,288	0.170
4	0		0	0.000
5	0		0	0.000

*HLairbv = Air leakage heat loss + ventilation heat loss

*For a balanced or supply only ventilation system HLairve = 0



HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: KINMOUNT 11B	LOT 49	BUILDER: GREENPARK HOMES
SFQT: 2810	LO# 83962	SITE: LAMBERT'S LANE PH.2

DESIGN ASSUMPTIONS

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

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):	35512.7	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	5.5 ft
LENGTH: 54.0 ft	WIDTH: 34.0 ft	EXPOSED PERIMETER:	176.0 ft

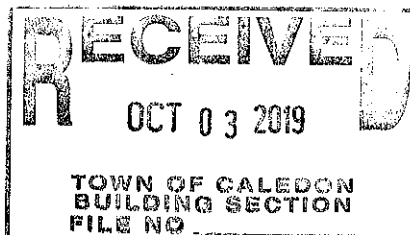
2012 OBC - COMPLIANCE PACKAGE**Component**

Ceiling with Attic Space Minimum RSI (R)-Value
Ceiling Without Attic Space Minimum RSI (R)-Value
Exposed Floor Minimum RSI (R)-Value
Walls Above Grade Minimum RSI (R)-Value
Basement Walls Minimum RSI (R)-Value
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
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value
Windows and Sliding Glass Doors Maximum U-Value
Skylights Maximum U-Value
Space Heating Equipment Minimum AFUE
HRV Minimum Efficiency
Domestic Hot Water Heater Minimum EF

**Compliance Package
ENERGYSTAR****Nominal Min. Eff.**

60	59.20
31	27.70
31	29.80
R22+R5	21.10
20	21.12
-	-
10	10
10	11.13
ZONE 2	-
ZONE 2	-
0.96	-
75%	-
0.9	-

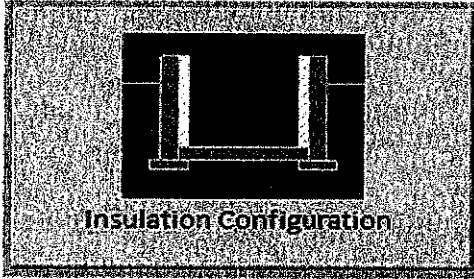
INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE



Michael O'Rourke

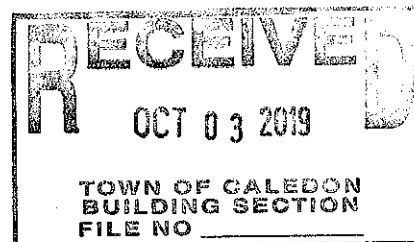
Residential Foundation Thermal Load Calculator

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):	16.5	 Insulation Configuration
Floor Width (m):	10.4	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.6	
Depth Below Grade (m):	1.68	
Window Area (m ²):	1.9	
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):		1792

TYPE: KINMOUNT 11B
LO# 83962

LOT 49



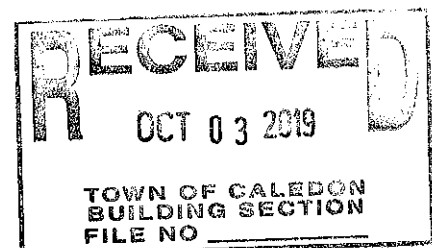
Air Infiltration Residential Load Calculator

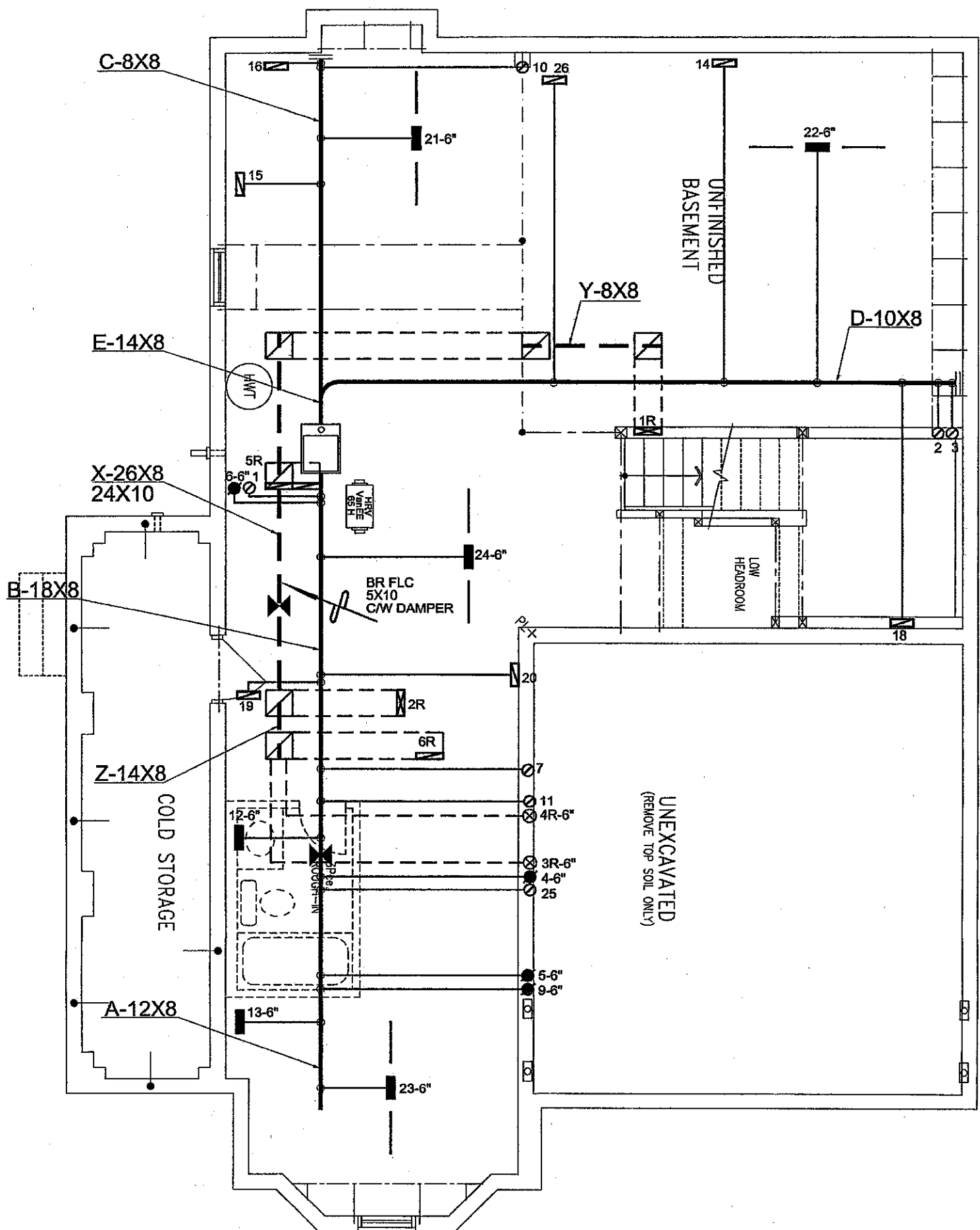
Supplemental tool for CAN/CSA-F280

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):	6.45			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1005.6			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Detached (2.5 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	938.7 cm ²		
	2.50	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):	0.221			
Cooling Air Leakage Rate (ACH/H):	0.072			

TYPE: KINMOUNT 11B
LO# 83962

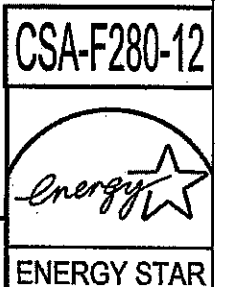
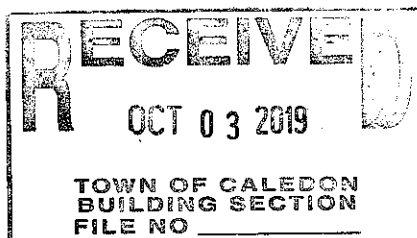
LOT 49





BASEMENT PLAN - ELEV. 2

THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE



LOT 49

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.

NOTE: STOP DUCT 3" IF COLD CELLAR DOOR IS INSTALLED

ALL RETURN AIR PARTITIONS 6"

HVAC DESIGNS LTD. MUST BE CONSULTED WITH REGARDS TO ANY KITCHEN EXHAUST FAN
THAT EXCEEDS 700 CFM. THIS MAY RESULT IN THE DEPRESSURIZATION OF THE DWELLING.

HVAC LEGEND						REVISIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	No.	Date
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE	3.	
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE	2.	
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		RETURN AIR STACK 2nd FLOOR	1.	
					FRA- FLOOR RETURN AIR GRILLE	No.	Description
					REDUCER		

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ONTARIO BUILDING CODE.

Client
GREENPARK HOMES
Project Name
**LAMBERT'S LANE HOME CORP PH 2
CALEDON, ONTARIO**

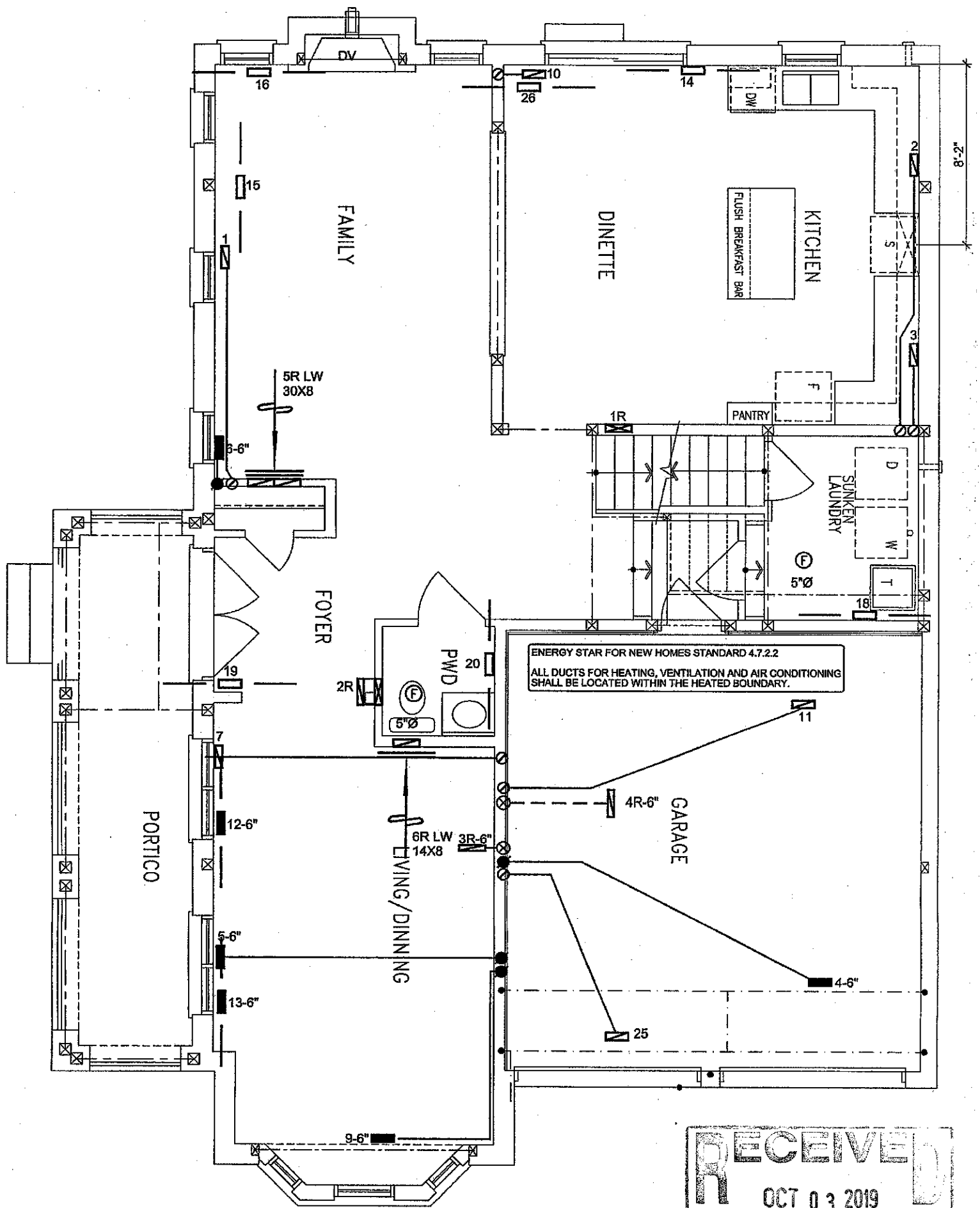
HVACDESIGNS LTD.
375 Finley Ave. Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdesigns.ca
Web: www.hvacdesigns.ca
Specializing in Residential Mechanical Design Services

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 46878 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS		
MAKE	GOODMAN	3RD FLOOR		
MODEL	GMEC980603BNA	2ND FLOOR	11	4 3
INPUT	60 MBTU/H	1ST FLOOR	9	2 3
OUTPUT	57.6 MBTU/H	BASEMENT	4	1 0
COOLING	3.0 TONS	ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5/8" UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A		
FAN SPEED	1131 cfm @ 0.6" w.c.			

Sheet Title	
BASEMENT HEATING LAYOUT	
Date	SEPT/2019
Scale	3/16" = 1'-0"
BCIN#	19669
LO#	83962

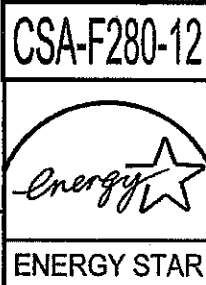
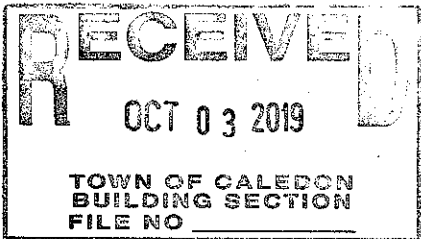
LOT 49
KINMOUNT 11B 2810 sqft



GROUND FLOOR PLAN – ELEV. 2

DUCTS LOCATED IN UNCONDITIONED SPACES SHALL BE SEALED TO A CLASS A SEAL LEVEL IN ACCORDANCE WITH THE SMACNA MANUAL

THIS STRUCTURE MUST BE CONSTRUCTED TO MEET OR EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE



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 49

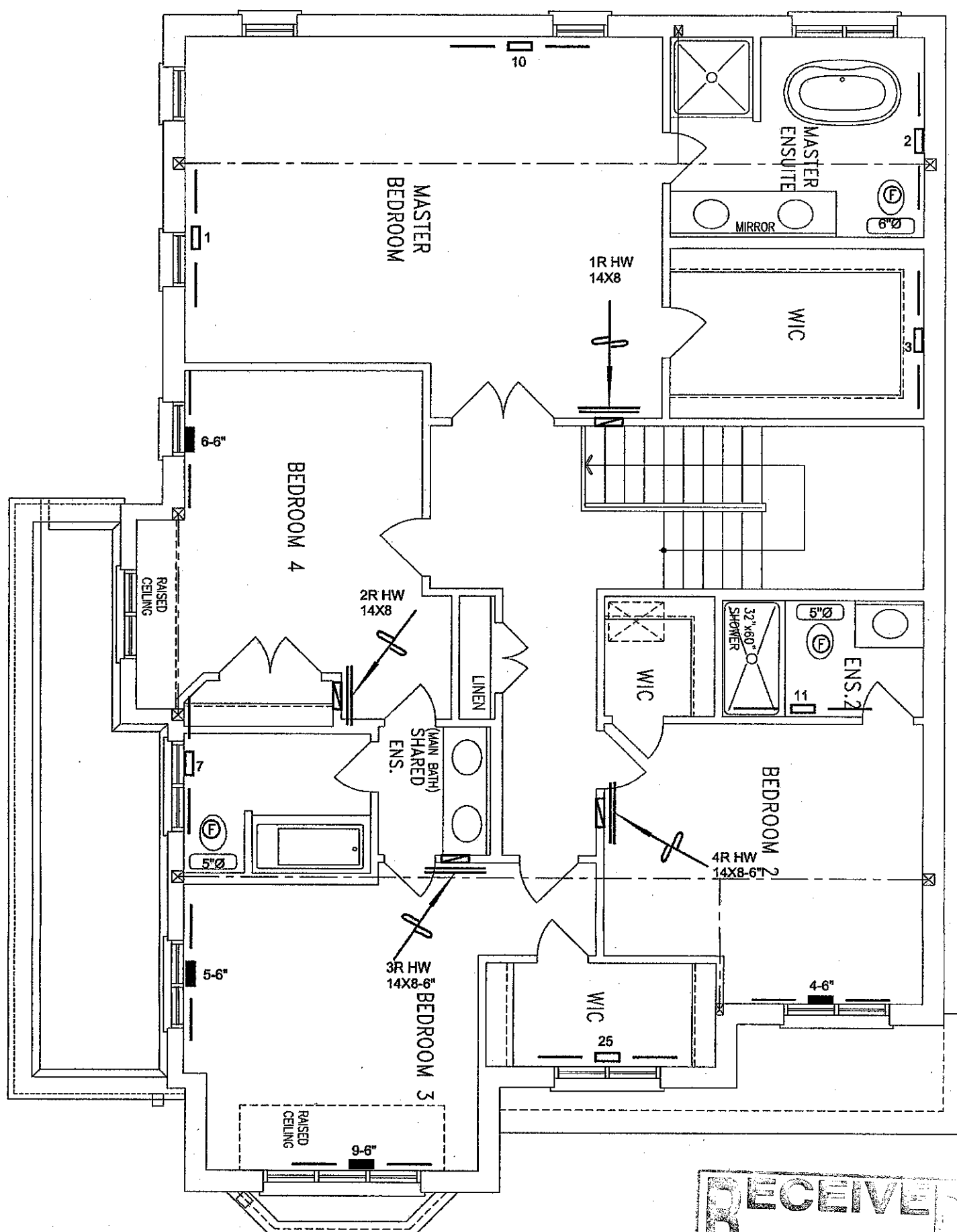
ALL RETURN AIR PARTITIONS 6"

HVAC DESIGNS LTD. MUST BE CONSULTED WITH REGARDS TO ANY KITCHEN EXHAUST FAN THAT EXCEEDS 700 CFM. THIS MAY RESULT IN THE DEPRESSURIZATION OF THE DWELLING.

HVAC LEGEND							
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

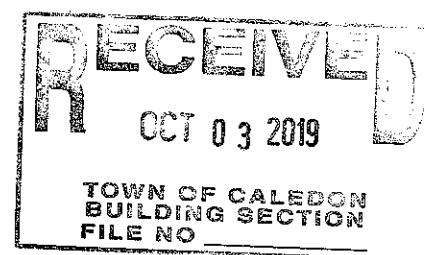
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Client GREENPARK HOMES		 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdsgns.ca Web: www.hvacdsgns.ca Specializing in Residential Mechanical Design Services Installation to comply 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 LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO	LOT 49 KINMOUNT 11B 2810 sqft		Date SEPT/2019	Scale 3/16" = 1'-0"
		BCIN# 19669		LO# 83962



SECOND FLOOR PLAN - ELEV. 2

**HIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE**



CSA-F280-12



LOT 49

ENERGY STAR

ALL RETURN AIR PARTITIONS 6"

HVAC DESIGNS LTD. MUST BE CONSULTED WITH REGARDS TO ANY KITCHEN EXHAUST FAN THAT EXCEEDS 700 CFM. THIS MAY RESULT IN THE DEPRESSURIZATION OF THE DWELLING

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	 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	Sheet Title	
Project Name		SECOND FLOOR	
LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO		HEATING LAYOUT	
LOT 49	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.	Date	SEPT/2019
KINMOUNT 11B 2810 sqft		Scale	3/16" = 1'-0"
		BCIN# 19669	
		LO#	83962