

RECEIVED

SEP 26 2019

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

 TOWN OF CALEDON
 BUILDING SECTION
 FILE NO.

 DATE: Aug-19
 LO# 83006

 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
 ENERGYSAR

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-4
			33	37	13	15	35	31	14	6
			9	8	8	8	8	8	8	8
GRS.WALL AREA	LOSS	GAIN	300	299	105	121	283	251	113	48
GLAZING	LOSS	GAIN	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS
NORTH	18.6	14.1	0	0	0	0	0	0	0	7
EAST	18.6	37.6	0	0	0	0	45	37	0	0
SOUTH	18.6	22.3	0	0	0	0	0	0	0	0
WEST	18.6	37.6	32	584	1202	25	464	939	0	0
SKYLT.	31.2	99.9	0	0	0	0	0	0	0	0
DOORS	24.7	3.7	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.5	268	942	140	258	908	135	105	370
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	270	338	151	255	320	142	195	244
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.4	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS			1874	1888	614	988	2059	2464	769	658
SUB TOTAL HT GAIN			1492	1572	163	554	1986	1768	314	215
LEVEL FACTOR / MULTIPLIER	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
AIR CHANGE HEAT LOSS			382	406	125	202	420	503	157	134
AIR CHANGE HEAT GAIN			77	81	8	29	103	92	16	11
DUCT LOSS			0	0	0	0	0	297	0	79
DUCT GAIN			0	0	0	0	0	265	0	23
HEAT GAIN PEOPLE	240	2	480	0	0	1	240	1	240	0
HEAT GAIN APPLIANCES/LIGHTS			563	0	0	563	563	563	0	0
TOTAL HT LOSS BTU/H			2256	2393	739	1189	2479	3264	926	871
TOTAL HT GAIN x 1.3 BTU/H			3396	2150	224	1802	3760	3808	430	323

ROOM USE	EXP. WALL	CLG. HT.	LIV	KIT	FAM	LAUN	W/R	FOY	OFF	WUB	BAS
			33	43	38	29	7	19	19	18	164
			10	10	10	12	10	10	10	9	9
GRS.WALL AREA	LOSS	GAIN	330	430	380	348	70	190	190	162	984
GLAZING	LOSS	GAIN	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS	LOSS
NORTH	18.6	14.1	0	0	0	7	130	99	0	0	6
EAST	18.6	37.6	0	0	0	0	0	0	6	111	225
SOUTH	18.6	22.3	30	557	669	0	0	0	0	0	0
WEST	18.6	37.6	0	0	0	0	0	0	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	300	1055	156	375	1319	195	333	1171	174
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	0	0	0	0	0	0	0	0	0
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
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS			1611	2461	2043	1752	351	1604	1089	154	8134
SUB TOTAL HT GAIN			825	1583	1939	339	189	447	1136	258	592
LEVEL FACTOR / MULTIPLIER	0.30	0.32	0.30	0.32	0.30	0.32	0.30	0.32	0.30	0.32	0.50
AIR CHANGE HEAT LOSS			516	788	654	561	112	513	349	5821	5821
AIR CHANGE HEAT GAIN			43	82	100	18	10	23	59	0	44
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	0	0
HEAT GAIN APPLIANCES/LIGHTS			563	563	563	563	563	563	563	0	563
TOTAL HT LOSS BTU/H			2127	3249	2697	2312	464	2117	1438	1191	13955
TOTAL HT GAIN x 1.3 BTU/H			1860	2896	3383	1196	258	611	2285	336	1559

TOTAL HEAT GAIN BTU/H: 30512

TONS: 2.54

LOSS DUE TO VENTILATION LOAD BTU/H: 1593

STRUCTURAL HEAT LOSS: 43667

TOTAL COMBINED HEAT LOSS BTU/H: 45260

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

LOT 39
TYPE: KINMOUNT 6A

DATE: Aug-19

GFA: 3062 LO# 83006

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 43,687 TOTAL HEAT GAIN 30,276
AIR FLOW RATE CFM 25.9 AIR FLOW RATE CFM 37.36

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 1131

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

DESIGN CFM = 1131
CFM @ .8" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	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.

plenium 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

TEMPERATURE RISE 47 °F

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-4	BED-3	MBR	ENS-4	LIV	FAM	KIT	KIT	FAM	LAUN	W/R	FOY	OFF	BAS	BAS	BAS	BAS
RM LOSS MBH	1.13	1.59	0.74	1.19	1.24	1.63	0.93	1.63	1.24	1.13	0.87	2.13	1.35	1.62	1.62	1.35	2.31	0.46	2.12	1.44	3.79	3.79	3.79	3.79
CFM PER RUN HEAT	29	41	19	31	32	42	24	42	32	29	23	55	35	42	42	35	60	12	55	37	98	98	98	98
RM GAIN MBH	1.70	1.43	0.22	1.80	1.88	1.90	0.43	1.90	1.88	1.70	0.32	1.86	1.69	1.45	1.45	1.69	1.20	0.26	0.61	2.29	0.47	0.47	0.47	0.47
CFM PER RUN COOLING	63	53	8	67	70	71	16	71	70	63	12	69	63	54	54	63	45	10	23	85	18	18	18	18
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
ACTUAL DUCT LGH.	57	49	37	21	45	47	37	37	47	44	33	14	38	35	31	46	46	8	37	28	51	30	11	28
EQUIVALENT LENGTH	190	130	180	140	130	200	140	170	90	150	170	140	160	140	120	130	140	120	170	140	150	170	130	190
TOTAL EFFECTIVE LENGTH	247	179	217	161	175	247	177	207	137	194	203	154	198	175	151	176	186	128	207	168	201	200	141	218
ADJUSTED PRESSURE	0.07	0.1	0.08	0.11	0.1	0.07	0.1	0.08	0.13	0.09	0.08	0.11	0.09	0.1	0.11	0.1	0.09	0.13	0.08	0.1	0.08	0.08	0.11	0.07
ROUND DUCT SIZE	6	5	4	5	5	6	4	6	5	5	4	5	5	5	5	5	5	4	5	6	6	6	6	6
HEATING VELOCITY (ft/min)	148	301	218	228	235	214	275	214	235	213	264	404	257	308	308	257	441	138	404	189	500	500	500	500
COOLING VELOCITY (ft/min)	321	389	92	492	514	362	184	362	514	463	138	507	463	396	396	463	330	115	169	433	92	92	92	92
OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10
TRUNK	B	B	E	C	D	E	E	E	D	B	E	E	A	B	B	A	A	C	D	D	A	B	C	D

RUN #	25
ROOM NAME	ENS
RM LOSS MBH	0.79
CFM PER RUN HEAT	20
RM GAIN MBH	0.71
CFM PER RUN COOLING	27
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH.	19
EQUIVALENT LENGTH	130
TOTAL EFFECTIVE LENGTH	149
ADJUSTED PRESSURE	0.12
ROUND DUCT SIZE	4
HEATING VELOCITY (ft/min)	229
COOLING VELOCITY (ft/min)	310
OUTLET GRILL SIZE	3X10
TRUNK	C

SUPPLY AIR TRUNK SIZE										RETURN 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	228	0.08	8.1	8	x	8	513	0	0.00	0	0	x	8	0	0	0.06	0	0	x	8	0
TRUNK B	281	0.07	9	10	x	8	506	0	0.00	0	0	x	8	0	0	0.06	0	0	x	8	0
TRUNK C	670	0.07	12.5	18	x	8	670	0	0.00	0	0	x	8	0	0	0.06	0	0	x	8	0
TRUNK D	254	0.07	8.7	10	x	8	457	0	0.00	0	0	x	8	0	0	0.06	0	0	x	8	0
TRUNK E	459	0.07	10.8	14	x	8	590	0	0.00	0	0	x	8	0	0	0.06	0	0	x	8	0
TRUNK F	0	0.00	0	0	x	8	0	0	0.00	0	0	x	8	0	0	0.06	0	0	x	8	0
								</													

RETURN AIR #	1	2	3	4	5	6											BR							
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	TRUNK W	0	0.06	0	0	x	8	0
AIR VOLUME	155	170	95	85	290	165	0	0	0	0	0	0	0	0	0	0	TRUNK X	786	0.06	13.8	22	x	8	643
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 Y	345	0.06	10.1	12	x	8	518
ACTUAL DUCT LGH.	58	43	56	56	20	32	1	1	1	1	1	1	1	1	1	1	TRUNK Z	0	0.06	0	0	x	8	0
EQUIVALENT LENGTH	180	175	165	190	135	170	0	0	0	0	0	0	0	0	0	0	DROP	1131	0.06	15.8	24	x	10	679
TOTAL EFFECTIVE LH	238	218	221	246	155	202	1	1	1	1	1	1	1	1	1	1								
ADJUSTED PRESSURE	0.06	0.07	0.07	0.06	0.10	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80								
ROUND DUCT SIZE	7.5	7.5	6	6	8.3	7.4	0	0	0	0	0	0	0	0	0	0								
INLET GRILL SIZE	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0								
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X								
INLET GRILL SIZE	14	14	14	14	24	14	0	0	0	0	0	0	0	0	0	0								

TYPE: KINMOUNT 5A
SITE NAME: LAMBERT'S LANE PH.2

LO # 83006
LOT 39

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: VANE 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-4	FV-05-11VK1	50	☒	0.3
W/R	FV-05-11VK1	50	☒	0.3

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

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:	July-19

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: KINMOUNT 6A	LOT 39	BUILDER: GREENPARK HOMES
SFQT: 3062	LO# 83006	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):	41268.0	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:	6.0 ft
LENGTH: 57.0 ft	WIDTH: 34.0 ft	EXPOSED PERIMETER:	164.0 ft

2012 OBC - COMPLIANCE PACKAGE		Compliance Package	
Component		ENERGYSTAR	
		Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	THE ONTARIO BUILDING CODE EXCEEDS THE PROVISIONS OF THIS STANDARD TO MEET THE REQUIREMENTS OF THE 2012 OBC	60	59.20
Ceiling Without Attic Space Minimum RSI (R)-Value		31	27.70
Exposed Floor Minimum RSI (R)-Value		31	29.80
Walls Above Grade Minimum RSI (R)-Value		R22+R5	21.10
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	RECEIVED SEP 26 2019 TOWN OF CALEDON	0.96	-
HRV Minimum Efficiency		75%	-
Domestic Hot Water Heater Minimum EF		0.9	-

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE*Michael O'Rourke*

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

LO#: 83006

Model: KINMOUNT 6A

Builder: GREENPARK HOMES

Date: 8/1/2019

Volume Calculation
House Volume

Level	Floor Area (ft ²)	Floor Height (ft)	Volume (ft ³)
Bsmt	1371	9	12339
First	1371	10	13710
Second	1691	8	13668.353
Third	0	9	0
Fourth	0	9	0
Total:			39,717.4 ft ³
Total:			1124.7 m ³

Air Change & Delta T Data

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

Design Temperature Difference				
	T _{in} °C	T _{out} °C	ΔT °C	ΔT °F
Winter DTD _h	22	-19	41	74
Summer DTD _c	24	30	6	11

5.2.3.1 Heat Loss due to Air Leakage

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

$$0.221 \times 312.41 \times 41^\circ\text{C} \times 1.2 = 3412 \text{ W}$$

$$= 11642 \text{ Btu/h}$$

6.2.6 Sensible Gain due to Air Leakage

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

$$0.072 \times 312.41 \times 6^\circ\text{C} \times 1.2 = 164 \text{ W}$$

$$= 560 \text{ Btu/h}$$

5.2.3.2 Heat Loss due to Mechanical Ventilation

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

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

6.2.7 Sensible heat Gain due to Ventilation

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

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

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

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

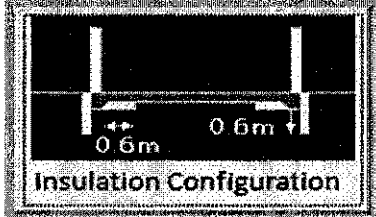
Level	Level Factor (LF)	HL _{airv} Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{level})	Air Leakage Heat Loss Multiplier (LF x HL _{airbv} / HL _{level})
1	0.5	11,642	9,325	0.624
2	0.3		10,911	0.320
3	0.2		11,413	0.204
4	0		0	0.000
5	0		0	0.000

*HL_{airbv} = Air leakage heat loss + ventilation heat loss

*For a balanced or supply only ventilation system HL_{airv} = 0

Residential Slab Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

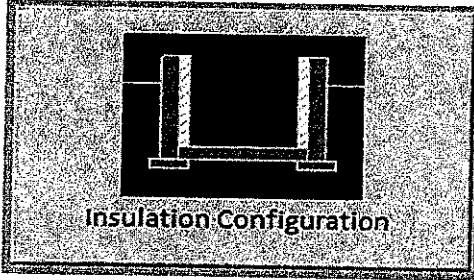
Weather Station Description		
Province:	Ontario	
Region:	Brampton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Length (m):	0.9	 Insulation Configuration
Width (m):	4.6	
Exposed Perimeter (m):	5.5	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		45

TYPE: KINMOUNT 6A
LO# 83006

LOT 39

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):	17.4	 Insulation Configuration
Floor Width (m):	10.4	
Exposed Perimeter (m):	50.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	1.6	
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):	1656	

TYPE: KINMOUNT 6A
LO# 83006

LOT 39

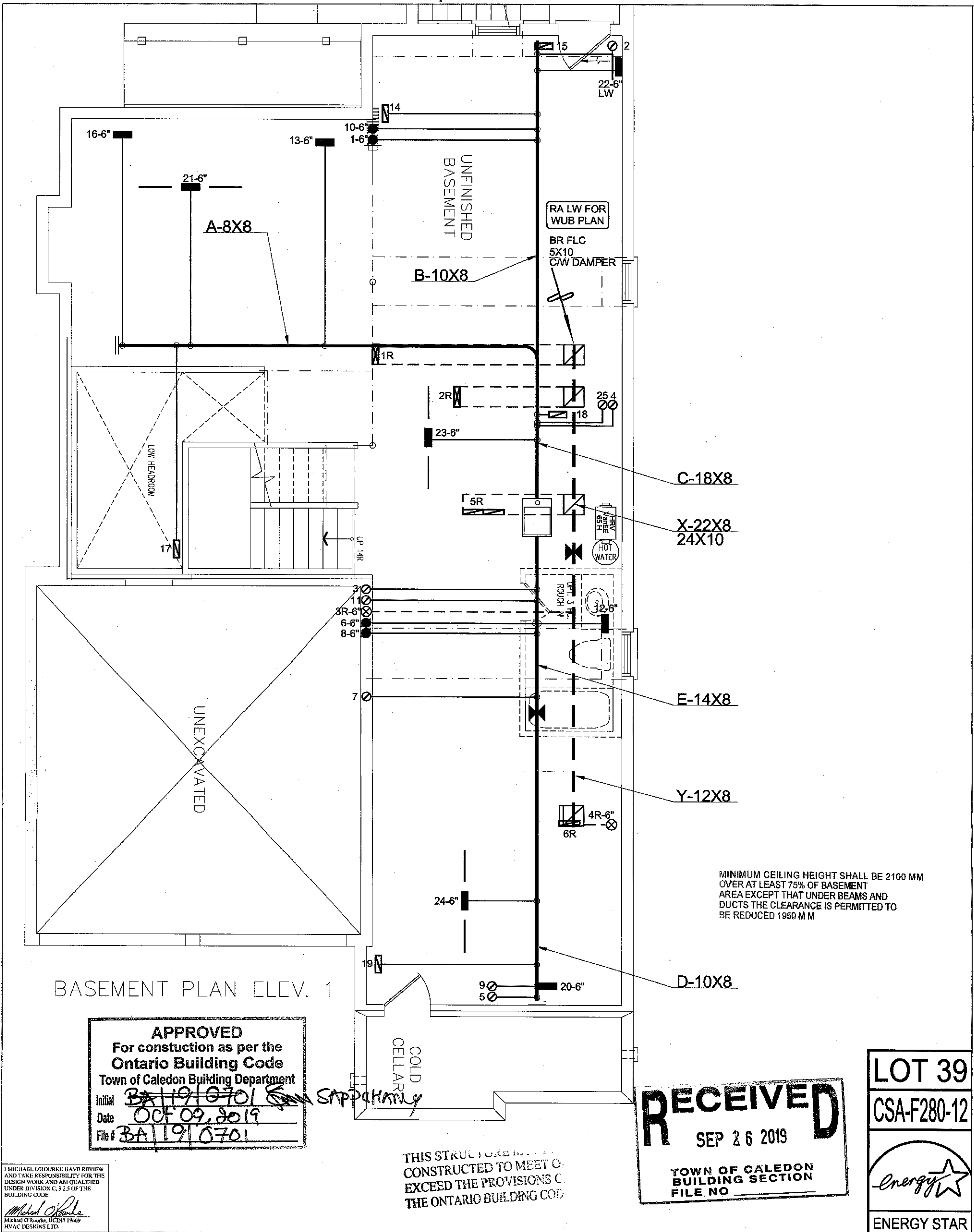
Air Infiltration Residential Load Calculator

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):	6.71		
Building Configuration			
Type:	Detached		
Number of Stories:	Two		
Foundation:	Full		
House Volume (m ³):	1168.6		
Air Leakage/Ventilation			
Air Tightness Type:	Energy Star Detached (2.5 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1090.9 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
Diameter (mm):	0	0	0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.227		
Cooling Air Leakage Rate (ACH/H):	0.074		

TYPE: KINMOUNT 6A
LO# 83006

LOT 39



APPROVED
For construction as per the
Ontario Building Code
Town of Caledon Building Department
Initial BA/19/0701
Date Oct 09, 2019
File # BA/19/0701

SAPPHIRE

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SEP 26 2019
TOWN OF CALEDON
BUILDING SECTION
FILE NO

LOT 39
CSA-F280-12
Energy Star
ENERGY STAR

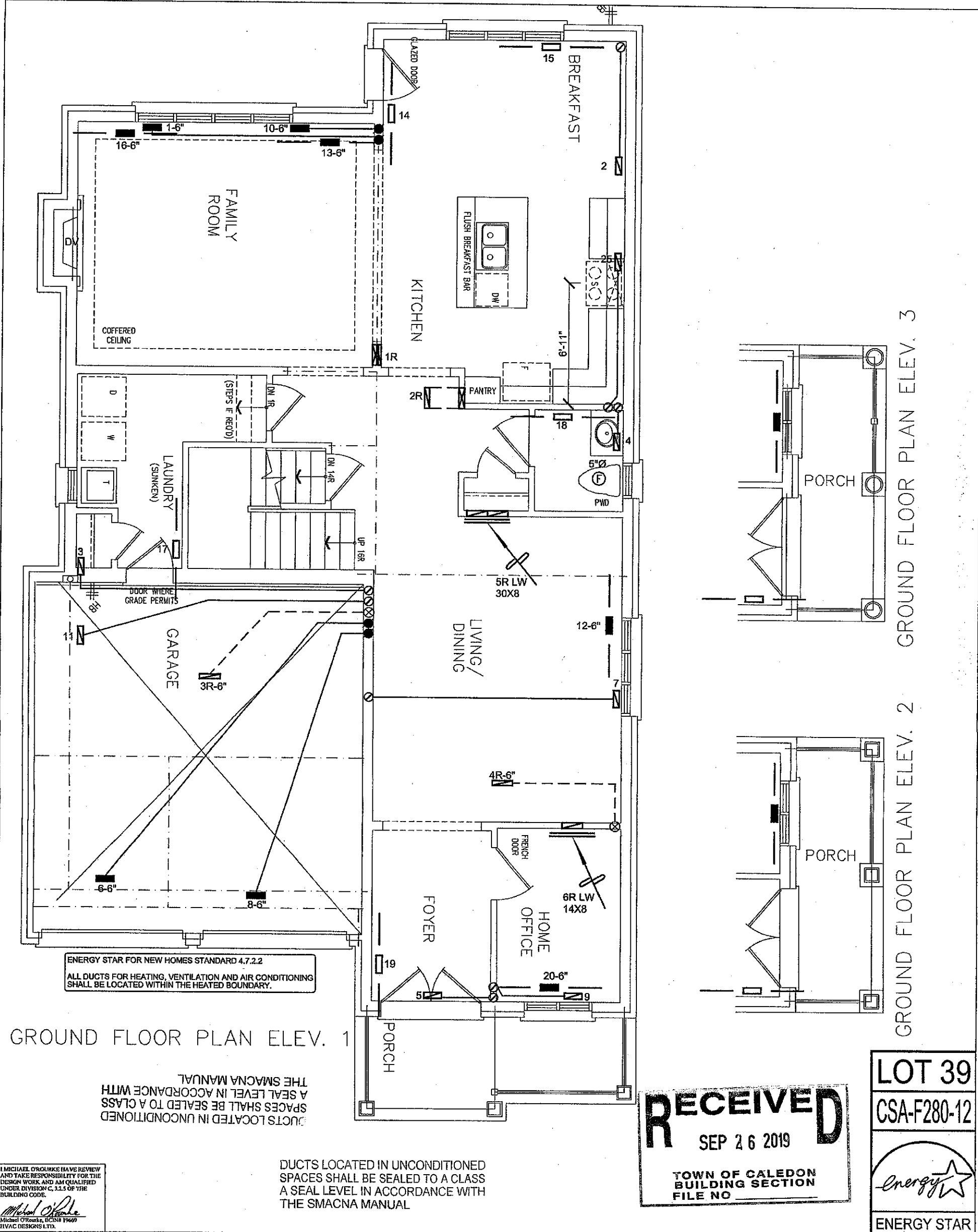
I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.3.2.3 OF THE BUILDING CODE.
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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

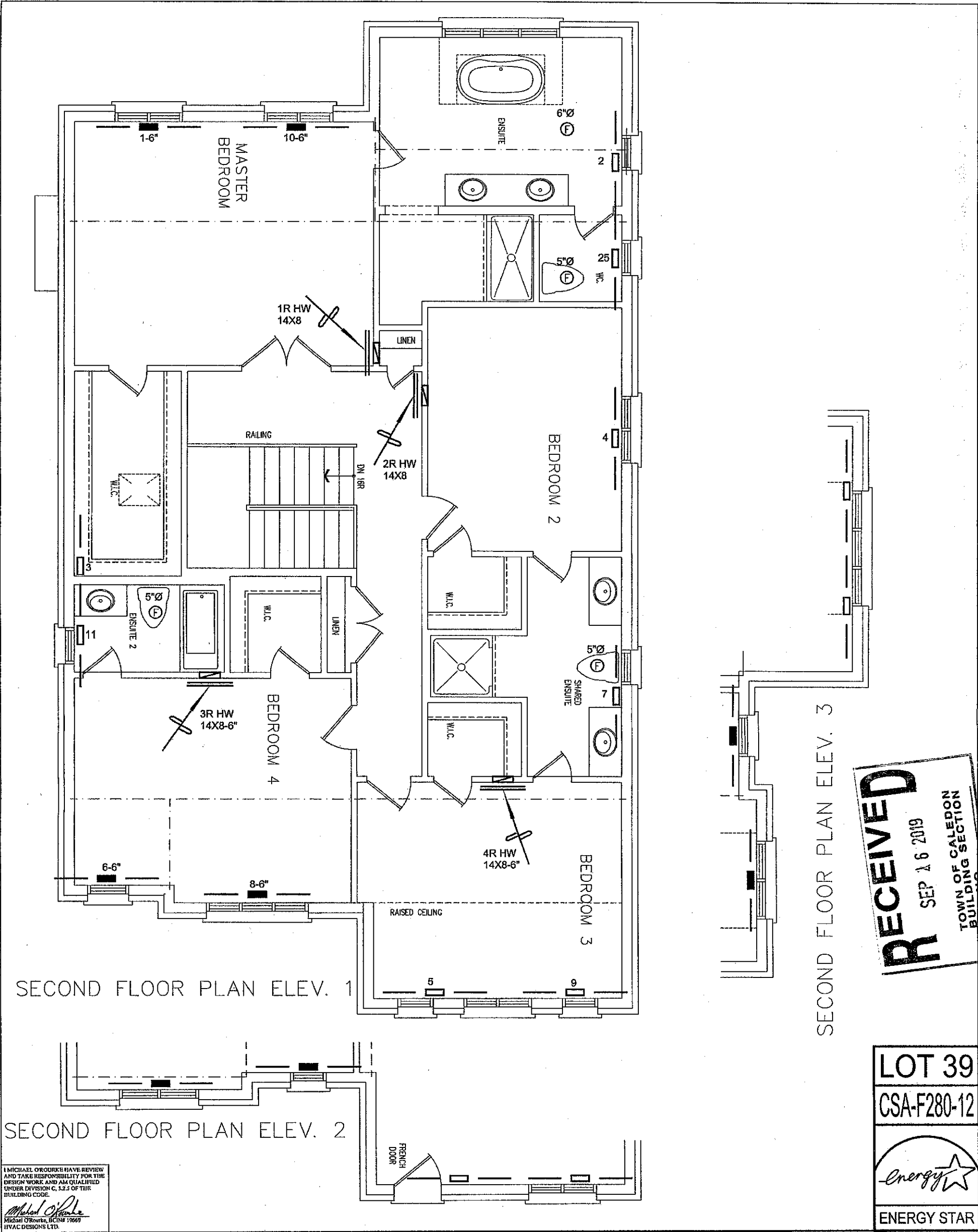
HVAC LEGEND								REVISIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	No.	Date
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	3.	
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN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

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Client GREENPARK HOMES Project Name LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO LOT 39 KINMOUNT 6A 3062 sqft	HVACDESIGNS LTD. 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.	HEAT LOSS 45260 BTU/H UNIT DATA MAKE GOODMAN MODEL GMEC960603BNA INPUT 60 MBTU/H OUTPUT 57.6 MBTU/H COOLING 2.5 TONS FAN SPEED 1131 cfm @ 0.5" w.g.	# OF RUNS S/A R/A FANS 3RD FLOOR 2ND FLOOR 12 4 4 1ST FLOOR 9 2 2 BASEMENT 4 1 0 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	Sheet Title BASEMENT HEATING LAYOUT Date JULY/2019 Scale 3/16" = 1'-0" BCIN# 19669 LO# 83006



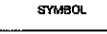
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
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	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		
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Client								Sheet Title		
GREENPARK HOMES								FIRST FLOOR HEATING LAYOUT		
Project Name								Date	JULY/2019	
LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO								Scale	3/16" = 1'-0"	
LOT 39 KINMOUNT 6A 3062 sqft								BCIN# 19669		
								LO#	83006	
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. THIS STRUCTURE MUST BE CONSTRUCTED TO MEET OR EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE										



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TOWN OF CALEDON
BUILDING SECTION
FILE NO.

LOT 39
CSA-F280-12


ENERGY STAR

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.	
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								REVISIONS	
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Project Name LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO		Date JULY/2019							
LOT 39 KINMOUNT 6A 3062 sqft						Scale 3/16" = 1'-0"			
						BCIN# 19669			
						LO# 83006			