

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

SITE NAME: LAMBERT'S LANE PH.2										DATE: Jul-19		WINTER NATURAL AIR CHANGE RATE 0.262		HEAT LOSS AT °F. 74		CSA-F280-12									
BUILDER: GREENPARK HOMES										LO# 82662		SUMMER NATURAL AIR CHANGE RATE 0.085		HEAT GAIN AT °F. 11		ENERGYSTAR									
TYPE: KINMOUNT 4B WOB										GFA: 2906		ENS-4		BED-2		BED-3		BED-4		ENS-3		ENS-2			
ROOM USE		MBR		ENS		ENS-4		BED-2		BED-3		BED-4		ENS-3		ENS-2									
EXP. WALL		42		23		9		31		38		12		10		10									
CLG. HT.		8		8		8		8		8		8		8		8									
FACTORS																									
GRS.WALL AREA		339		186		73		251		307		97		81		81									
GLAZING		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN									
NORTH		18.6	15.1	8	148	121	0	0	0	0	0	0	0	0	0	0	15	278	227						
EAST		18.6	40.7	0	0	0	0	0	0	0	44	816	1792	48	890	1954	0	0	0						
SOUTH		18.6	24.1	0	0	0	7	130	168	7	130	168	0	0	0	18	297	385	7	130	168				
WEST		18.6	40.7	36	668	1466	14	260	570	0	0	0	0	0	0	0	0	0	0	0	0				
SKYLT.		31.2	99.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
DOORS		24.7	3.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
NET EXPOSED WALL		3.5	0.5	295	1038	154	165	580	86	66	231	34	207	726	108	259	911	135	81	285	42	74	260	38	
NET EXPOSED BENT WALL ABOVE GR		3.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
EXPOSED CLG		1.3	0.6	441	553	246	130	163	72	108	135	60	240	301	134	187	234	104	204	256	114	162	203	90	
NO ATTIC EXPOSED CLG		2.7	1.2	0	0	0	0	0	0	0	14	38	17	36	80	36	0	0	0	0	0	0	0	0	
EXPOSED FLOOR		2.5	0.4	0	0	0	0	0	0	0	254	632	94	0	0	0	0	0	0	0	0	0	0	0	
BASEMENT/CRAWL HEAT LOSS																									
SLAB ON GRADE HEAT LOSS																									
SUBTOTAL HT LOSS				2408		1132		496		2513		2116		837		583									
SUB TOTAL HT GAIN				1987		897		263		2144		2230		541		297									
LEVEL FACTOR / MULTIPLIER		0.20		0.25		0.20		0.25		0.20		0.25		0.20		0.25		0.20		0.25		0.20		0.25	
AIR CHANGE HEAT LOSS		592		278		122		617		520		206		146		192									
AIR CHANGE HEAT GAIN		95		43		13		102		106		26		14		16									
DUCT LOSS		0		0		0		313		0		0		0		97									
DUCT GAIN		0		0		0		331		0		0		0		36									
HEAT GAIN PEOPLE		240		2		480		0		1		240		1		240		0		0		0		0	
HEAT GAIN APPLIANCES/LIGHTS				828		0		0		828		828		828		0									
TOTAL HT LOSS BTU/H		3800		1411		618		3444		2636		1043		738		1072									
TOTAL HT GAIN x 1.3 BTU/H		4407		1222		358		4739		4425		2125		485		513									

RECEIVED
JUL 26 2019
TOWN OF CA...

RECEIVED
JUL 26 2019
TOWN OF CALEDON
BUILDING SECTION
FILE NO. BAS

ROOM USE		LV/DN		KT/FM		LAUN		W/R		FOY		OFF		WOB		BXS	
EXP. WALL		30		72		28		8		22		25		22		132	
CLG. HT.		10		10		11		10		10		10		9		9	
FACTORS																	
GRS. WALL AREA		302		726		310		81		222		252		198		792	
LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
GLAZING																	
NORTH		18.6	15.1	0	0	0	0	0	0	0	0	0	0	0	70	1299	1060
EAST		18.6	40.7	0	0	0	0	0	0	0	0	40	742	1629	5	93	76
SOUTH		18.6	24.1	40	742	983	0	0	0	0	0	0	0	0	0	0	0
WEST		18.6	40.7	0	0	0	100	1855	4072	0	0	0	0	0	0	10	186
SKYLT.		31.2	98.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS		24.7	3.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL		3.5	0.5	262	923	137	626	2201	326	0	0	0	0	0	10	247	37
NET EXPOSED BSMT WALL ABOVE GR		3.5	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG		1.3	0.6	0	0	0	63	79	35	18	23	10	0	0	118	415	62
NO ATTIC EXPOSED CLG		2.7	1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR		2.5	0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS																	
SLAB ON GRADE HEAT LOSS																	
SUBTOTAL HT LOSS		1665		4135		1537		389		1731		1488		604		2466	
SUB TOTAL HT GAIN		1099		4433		234		207		257		1739		2564		4629	
LEVEL FACTOR / MULTIPLIER		0.30	0.37			0.30	0.37			0.30	0.37			1158		596	
AIR CHANGE HEAT LOSS		610		1515		563		142		634		545		0.50		0.93	
AIR CHANGE HEAT GAIN		52		212		11		10		12		83				84	
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		0	
HEAT GAIN APPLIANCES/LIGHTS		828		828		828		828		828		828		0		828	
TOTAL HT LOSS BTU/H		2275		5650		2099		531		2365		2033		2584		11310	
TOTAL HT GAIN x 1.3 BTU/H		2574		7115		1396		282		350		3445		1505		1960	

TOTAL HEAT GAIN BTU/H:

37056

TONS: 3.09

LOSS DUE TO VENTILATION LOAD BTU/H: 1593

STRUCTURAL HEAT LOSS: 42790

TOTAL COMBINED HEAT LOSS BTU/H: 44382

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

TYPE: KINMOUNT 4B WOB

DATE: Jun-19

GFA: 2906 LO# 82662

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 44,251 TOTAL HEAT GAIN 37,004
AIR FLOW RATE CFM 25.56 AIR FLOW RATE CFM 30.56

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

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

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

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	11	8	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

HIGH 1131 TEMPERATURE RISE 47 °F

RUN #	1	2	3	4	5	6	7	8	9	10	11	12	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	ENS-4	BED-2	BED-3	BED-4	ENS-3	BED-2	BED-3	MBR	ENS-2	LV/DN	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	OFF	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.59	1.50	0.85	1.79	1.40	1.09	0.78	1.79	1.40	1.59	1.12	2.29	1.89	1.89	1.89	2.11	0.57	2.49	2.17	3.56	3.56	3.56	3.56
CFM PER RUN HEAT	41	38	17	46	36	28	20	46	36	41	29	58	48	48	48	54	15	64	55	91	91	91	91
RM GAIN MBH.	2.22	1.24	0.36	2.38	2.23	2.13	0.41	2.38	2.23	2.22	0.52	2.57	2.37	2.37	2.37	1.39	0.29	0.36	3.47	0.87	0.87	0.87	0.87
CFM PER RUN COOLING	68	38	11	73	68	85	13	73	68	68	16	79	73	73	73	43	9	11	106	26	26	26	26
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	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	36	20	17	63	54	41	33	60	59	58	56	19	19	29	37	41	25	49	41	14	40	19	40
EQUIVALENT LENGTH	140	190	180	130	190	170	190	100	170	110	120	120	170	120	90	80	130	100	110	150	140	130	110
TOTAL EFFECTIVE LENGTH	176	210	197	193	244	211	223	160	229	168	176	139	189	149	127	121	155	149	151	164	180	149	150
ADJUSTED PRESSURE	0.1	0.08	0.09	0.09	0.07	0.08	0.08	0.11	0.08	0.1	0.1	0.12	0.09	0.12	0.14	0.14	0.11	0.12	0.11	0.1	0.09	0.11	0.11
ROUND DUCT SIZE	5	4	4	5	6	5	4	6	6	5	4	5	5	5	5	5	4	5	6	6	6	6	6
HEATING VELOCITY (ft/min)	301	436	195	338	184	206	229	235	184	301	333	426	352	352	352	396	172	470	280	464	464	464	464
COOLING VELOCITY (ft/min)	499	436	126	536	347	477	149	372	347	499	184	580	536	536	536	316	103	81	540	133	133	133	133
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10
TRUNK	C	B	B	B	A	A	A	B	A	C	B	B	C	C	C	C	A	A	A	C	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	MBR	1.59	41	2.22	68	0.17	36	140	176	0.1	5	301	499	3X10	C
2	ENS	1.50	38	1.24	38	0.17	20	190	210	0.08	4	436	436	3X10	B
3	ENS-4	0.85	17	0.36	11	0.17	17	180	197	0.09	4	195	126	3X10	B
4	BED-2	1.79	46	2.38	73	0.17	63	130	193	0.09	5	338	536	3X10	B
5	BED-3	1.40	36	2.23	68	0.17	54	190	244	0.07	6	184	347	4X10	A
6	BED-4	1.09	28	2.13	85	0.17	41	170	211	0.08	5	206	477	3X10	A
7	ENS-3	0.78	20	0.41	13	0.17	33	190	223	0.08	4	229	149	3X10	A
8	BED-2	1.79	46	2.38	73	0.17	60	100	160	0.11	6	235	372	4X10	B
9	BED-3	1.40	36	2.23	68	0.17	59	170	229	0.08	6	184	347	4X10	A
10	MBR	1.59	41	2.22	68	0.17	58	110	168	0.1	5	301	499	3X10	C
11	ENS-2	1.12	29	0.52	16	0.17	56	120	176	0.1	4	333	184	3X10	B
12	LV/DN	2.29	58	2.57	79	0.17	19	120	139	0.12	5	426	580	3X10	B
14	KT/FM	1.89	48	2.37	73	0.17	19	170	189	0.09	5	352	536	3X10	C
15	KT/FM	1.89	48	2.37	73	0.17	29	120	149	0.12	5	352	536	3X10	C
16	KT/FM	1.89	48	2.37	73	0.17	37	90	127	0.14	5	352	536	3X10	C
17	LAUN	2.11	54	1.39	43	0.17	41	80	155	0.14	5	396	316	3X10	C
18	W/R	0.57	15	0.29	9	0.17	25	130	149	0.11	4	172	103	3X10	A
19	FOY	2.49	64	0.36	11	0.17	49	100	151	0.12	5	470	540	3X10	A
20	OFF	2.17	55	3.47	106	0.16	41	110	164	0.11	6	280	133	4X10	A
21	BAS	3.56	91	0.87	26	0.16	14	150	180	0.1	6	464	133	4X10	C
22	BAS	3.56	91	0.87	26	0.16	40	140	180	0.09	6	464	133	4X10	C
23	BAS	3.56	91	0.87	26	0.16	19	130	149	0.11	6	464	133	4X10	B
24	BAS	3.56	91	0.87	26	0.16	40	110	150	0.11	6	464	133	4X10	A

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SUPPLY AIR TRUNK SIZE															RETURN 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	345	0.07	9.7	12	x	8	518			TRUNK G	0	0.00	0	0	x	8	0		TRUNK O	0	0.05	0	0	x	8	0					
TRUNK B	670	0.07	12.5	18	x	8	670			TRUNK H	0	0.00	0	0	x	8	0		TRUNK P	0	0.05	0	0	x	8	0					
TRUNK C	462	0.09	10.2	12	x	8	693			TRUNK I	0	0.00	0	0	x	8	0		TRUNK Q	0	0.05	0	0	x	8	0					
TRUNK D	0	0.00	0	0	x	8	0			TRUNK J	0	0.00	0	0	x	8	0		TRUNK R	0	0.05	0	0	x	8	0					
TRUNK E	0	0.00	0	0	x	8	0			TRUNK K	0	0.00	0	0	x	8	0		TRUNK S	0	0.05	0	0	x	8	0					
TRUNK F	0	0.00	0	0	x	8	0			TRUNK L	0	0.00	0	0	x	8	0		TRUNK T	0	0.05	0	0	x	8	0					
															TRUNK U	0	0.05	0	0	x	8	0		TRUNK V	0	0.05	0	0	x	8	0
															TRUNK W	0	0.05	0	0	x	8	0		TRUNK X	1131	0.05	16.5	32	x	8	636
															TRUNK Y	430	0.05	11.5	16	x	8	484		TRUNK Z	0	0.05	0	0	x	8	0
															DROP	1131	0.05	16.5	24	x	10	679									

RETURN AIR #	1	2	3	4	5	6										BR
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
AIR VOLUME	165	135	75	85	365	135	0	0	0	0	0	0	0	0	0	171
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
ACTUAL DUCT LGH.	42	58	67	64	22	42	1	1	1	1	1	1	1	1	1	18
EQUIVALENT LENGTH	180	225	205	185	175	230	0	0	0	0	0	0	0	0	0	185
TOTAL EFFECTIVE LH	222	263	272	249	197	272	1	1	1	1	1	1	1	1	1	203
ADJUSTED PRESSURE	0.07	0.05	0.05	0.06	0.08	0.05	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.07
ROUND DUCT SIZE	7.4	7.5	8	8	9.6	7.5	0	0	0	0	0	0	0	0	0	7.5
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: KINMOUNT 4B WOB
SITE NAME: LAMBERT'S LANE PH.2

LO # 82662

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	6	@ 10.6 cfm	63.6	cfm
Other Rooms	6	@ 10.6 cfm	63.6	cfm
Table 9.32.3.A.		TOTAL	201.4	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	201.4	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	121.9	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	74 F	1.08	0.25

SUPPLEMENTAL FANS PANASONIC

Location	Model	cfm	HVI	Sones
ENS	FV-05-11VK1	50	☒	0.3
ENS-3	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: *Michael O'Rourke*
HRAI # 001820
Date: July-19

THIS STRUCTURE MUST BE
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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: 19669 *Michael O'Rourke* MICHAEL O'ROURKE

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** KINMOUNT 4B WOB**BUILDER:** GREENPARK HOMES**SFQT:** 2906**LO#** 82662**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 (ft ³):	39674.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.75	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 54.0 ft	WIDTH: 34.0 ft	EXPOSED PERIMETER:	132.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	44.0 ft

2012 OBC - COMPLIANCE PACKAGE

Component	Compliance Package	
	ENERGYSTAR	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	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	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.9	-

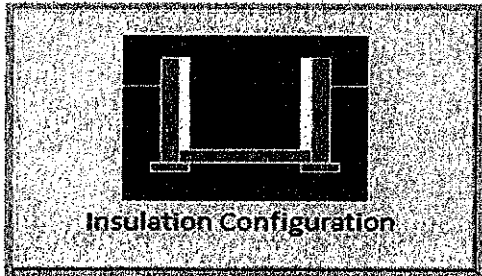
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

EXCEED THE REQUIREMENTS OF
THE ONTARIO BUILDING CODE*Michael O'Rourke*

Residential Foundation Thermal Load Calculator

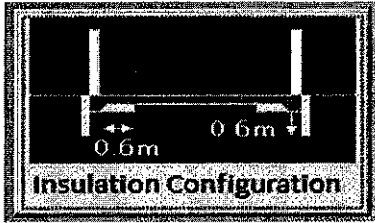
Supplemental tool for CAN/CSA-F280

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):	4.6	 Insulation Configuration
Floor Width (m):	10.4	
Exposed Perimeter (m):	40.2	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.54	
Window Area (m ²):	1.4	
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):	723	

TYPE: KINMOUNT 4B WOB
LO# 82662THIS STRUCTURE MUST BE
CONSTRUCTED TO MEET OR
EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE

Residential Slab on Grade 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):	1.5	
Width (m):	10.4	
Exposed Perimeter (m):	13.4	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		177

TYPE: KINMOUNT 4B WOB

LO# 82662

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

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):	8.53		
Building Configuration			
Type:	Detached		
Number of Stories:	Two		
Foundation:	Full		
House Volume (m ³):	1123.4		
Air Leakage/Ventilation			
Air Tightness Type:	Energy Star Detached (2.5 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1048.7 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):	0.268		
Cooling Air Leakage Rate (ACH/H):	0.087		

TYPE: KINMOUNT 4B WOB
LO# 82662

X-32X8
24X10

Y-16X8

B-18X8

A-12X8

UNFINISHED
BASEMENT

SA LW FOR
WOB PLAN

BR FLC
5X10
C/W DAMPER

C-12X8

2 3

OPTIONAL
WASHROOM

5R

TR

1

10

17

11

4-6"

4R-6"

8-6"

3R-6"

2R

18

6R

24-6"

20-6"

19

12

7 6

23-6"

21-6" LW

14

15

16

22-6" LW

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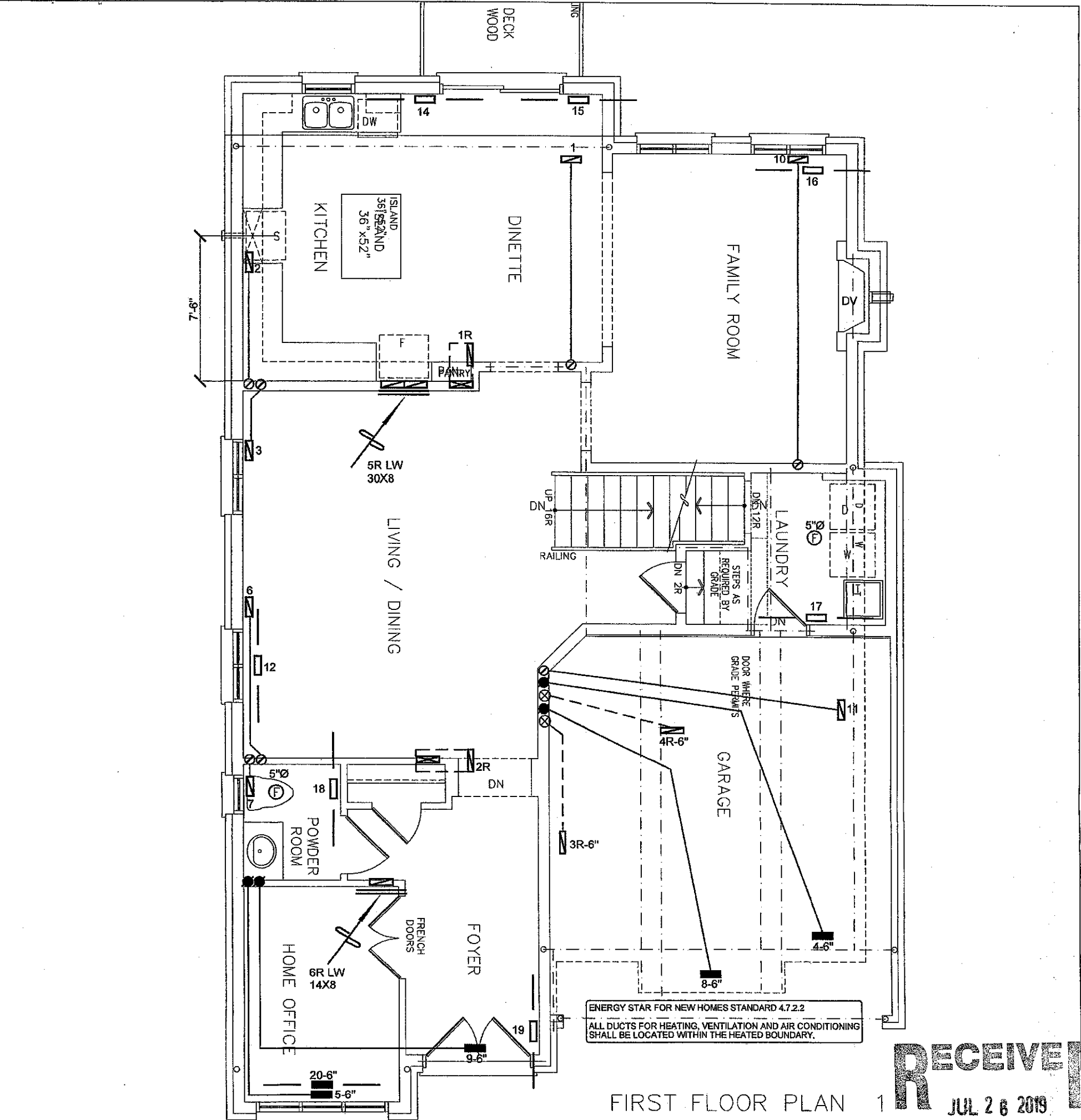
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FIRST FLOOR PLAN 1

RECEIVED
JUL 26 2019

TOWN OF CALEDON
BUILDING SECTION
FILE N

WOB
CSA-F280-12



ENERGY STAR

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

FIRST FLOOR PLAN 2

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, BCIN# 19669
HVAC DESIGNS LTD.

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

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Client

GREENPARK HOMES

Project Name

LAMBERT'S LANE HOME CORP PH 2

CALEDON, ONTARIO

WOB

KINMOUNT 4B

2906 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.

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

Sheet Title

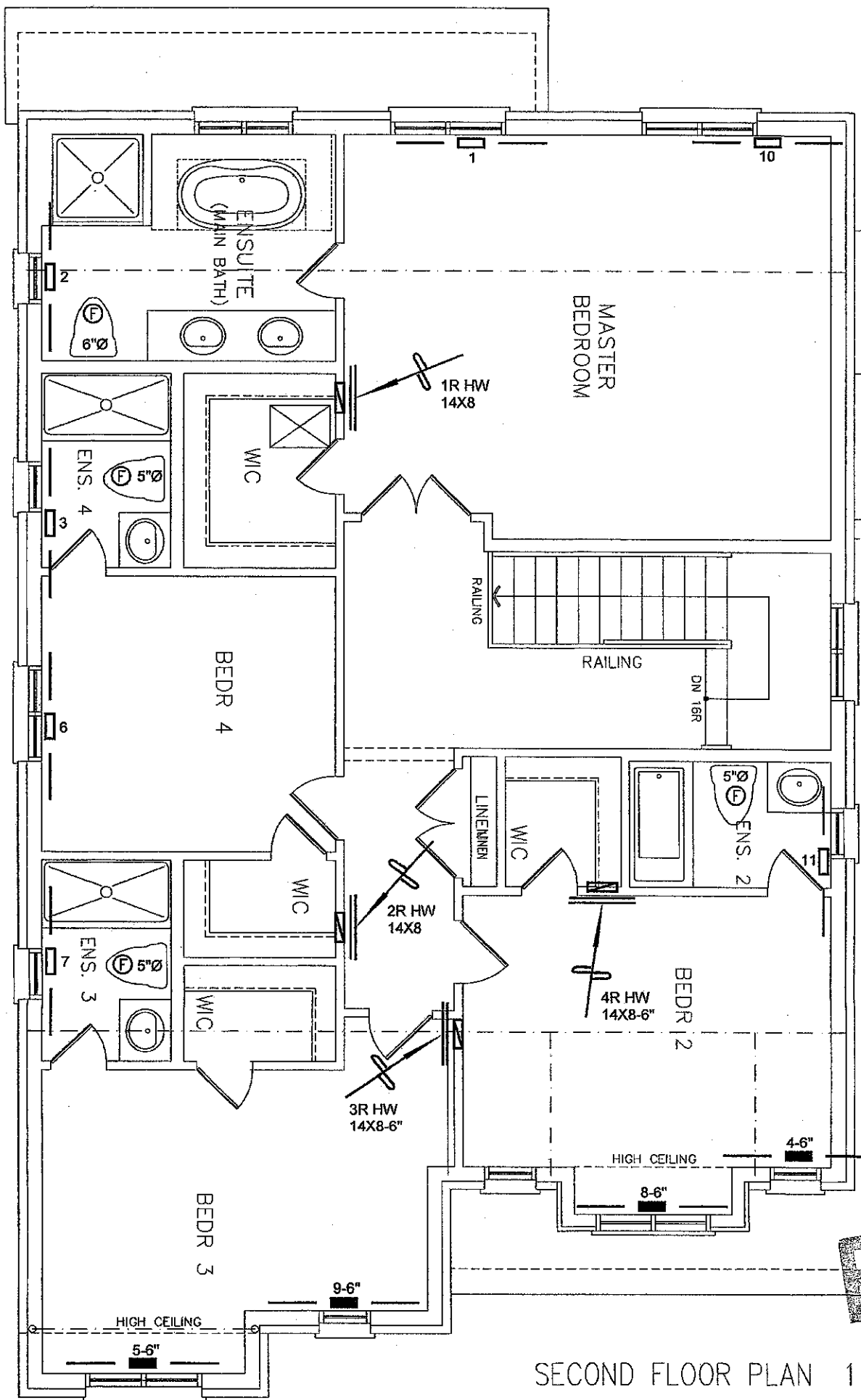
FIRST FLOOR HEATING LAYOUT

Date **JUNE/2019**

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

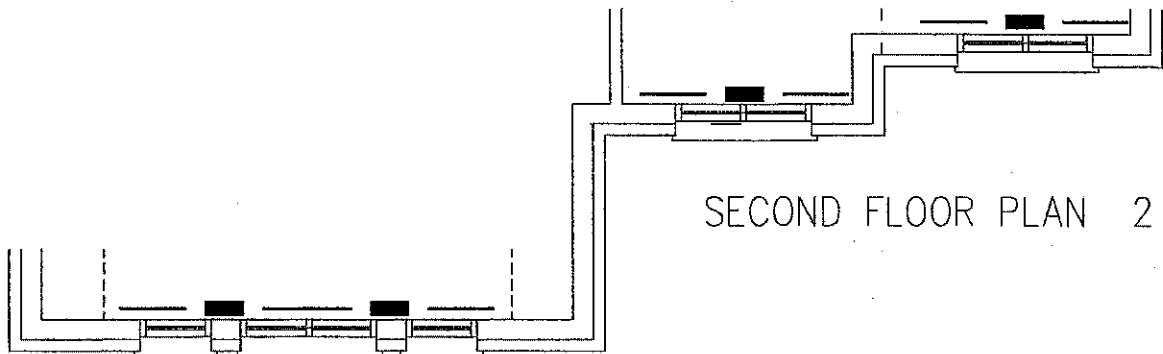
BCIN# **19669**

LO# **82662**



SECOND FLOOR PLAN 1

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JUL 26 2019
TOWN OF CALEDON
BUILDING SECTION
FILE NO.



SECOND FLOOR PLAN 2

WOB
CSA-F280-12
ENERGY STAR

I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 1.2.5 OF THE BUILDING CODE.
Michael O'Rourke
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	Date
	SUPPLY AIR BOOT ABOVE		8" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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Client GREENPARK HOMES		HVAC DESIGNS 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.	THIS STRUCTURE MAY NOT EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE	Sheet Title SECOND FLOOR HEATING LAYOUT	
Project Name LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO	WOB KINMOUNT 4B 2906 sqft			Date JUNE/2019	Scale 3/16" = 1'-0"
				BCIN# 19669	LO# 82662