

SITE NAME: LAMBERT'S LANE PH.2

BUILDER: GREENPARK HOMES

WOB

TYPE: WOODCROFT 3 OPT 2ND

GFA: 2907

TOWN OF CALEDON
BUILDING SECTION
FILE 10083307

WINTER NATURAL AIR CHANGE RATE 0.268

SUMMER NATURAL AIR CHANGE RATE 0.087

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	LAUN	BED-5	ENS-3	
			33	29	7	14	30	11	6	0	12	20	
			9	9	9	9	9	9	9	9	9	9	
GRS.WALL AREA	LOSS	GAIN	297	261	53	126	270	99	54	0	108	180	
GLAZING	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	
NORTH	18.6	15.1	0	0	0	0	0	0	7	130	106	0	0
EAST	18.6	40.7	0	0	0	0	44	816	1782	0	0	0	0
SOUTH	18.6	24.1	0	0	0	0	0	0	0	0	0	10	186
WEST	18.6	40.7	32	594	1303	14	260	570	0	0	0	0	0
SKYLT.	31.2	99.9	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
NET EXPOSED WALL	3.5	0.5	265	932	138	227	798	118	63	222	33	111	390
NET EXPOSED BUILT WALL ABOVE GR	3.5	0.5	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	266	333	148	198	248	110	133	167	74	238	298
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.4	0	0	0	0	0	0	102	264	38	221	550
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			1659		1677		388		1221		2438		1177
SUB TOTAL HT GAIN			1589		1102		107		456		2114		1881
LEVEL FACTOR / MULTIPLIER	0.20	0.24											
AIR CHANGE HEAT LOSS	451												
AIR CHANGE HEAT GAIN		75			52		5		22		88		11
DUCT LOSS	0				0		152		303		0		26
DUCT GAIN		0			0		125		288		0		0
HEAT GAIN PEOPLE	240	2	480	0	0	0	1	240	1	240	0	1	240
HEAT GAIN APPLIANCES/LIGHTS			530	0	0	0	530	0	530	0	530	0	530
TOTAL HT LOSS BTU/H			2310		2084		482		1669		3333		1463
TOTAL HT GAIN x 1.3 BTU/H			3477		1500		146		1783		4267		3635

ROOM USE	EXP. WALL	CLG. HT.	LIV/DIN	KIT	FAM	FOY	MUD	WOB	BAS
			33	43	36	34	26	44	128
			10	10	10	10	11	9	9
GRS.WALL AREA	LOSS	GAIN	330	430	360	340	286	396	768
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	40	742	1629	0	0	0	0
SOUTH	18.6	24.1	23	427	553	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	267	939	139	365	1284	190	320
NET EXPOSED BUILT 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
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0
SUBTOTAL HT LOSS			2108		2489		1867		1796
SUB TOTAL HT GAIN			2321		2837		177		212
LEVEL FACTOR / MULTIPLIER	0.30	0.46							
AIR CHANGE HEAT LOSS	960								
AIR CHANGE HEAT GAIN		110							
DUCT LOSS	0								
DUCT GAIN		0							
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			530	0	0	0	0	0	0
TOTAL HT LOSS BTU/H			3067		3623		2718		530
TOTAL HT GAIN x 1.3 BTU/H			3849		4551		3133		6898

TOTAL HEAT GAIN BTU/H:

38896

TONS: 3.07

LOSS DUE TO VENTILATION LOAD BTU/H: 1911

CONSTRUCTED TO EXCEED THE PROVISIONS OF THE ONTARIO BUILDING CODE

TOTAL COMBINED HEAT LOSS BTU/H: 44770

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

EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE
Michael O'Rourke

INDIVIDUAL BCIN: 19659

MICHAEL O'ROURKE

APPLICANT COPY

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

WOB
TYPE: WOODCROFT 3 OPT 2ND

DATE: Jul-19

GFA: 2907 LO# 83307

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 42,859 TOTAL HEAT GAIN 36,611
AIR FLOW RATE CFM 26.39 AIR FLOW RATE CFM 30.89

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

#GOODMAN
GMEC96063BNA 60
FAN SPEED LOW

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

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	13	7	5
R/A	0	0	5	2	1

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

MEDLOW
MEDIUM
MEDIUM HIGH
HIGH 1131

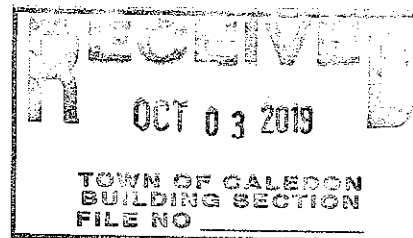
DESIGN CFM = 1131
CFM @ .5" E.S.P.

TEMPERATURE RISE 47 °F

All S/A diffusers 4"x10" unless noted otherwise on layout.
All S/A runs 5"x2" 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-5	LAUN	MBR	ENS-3	LIV/DIN	LIV/DIN	KIT	KIT	FAM	BED-3	BED-4	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.15	2.08	0.48	1.67	1.67	0.73	0.93	1.11	0.18	1.15	1.12	1.53	1.53	1.81	1.81	2.72	1.67	0.73	1.74	2.08	2.99	2.99	2.99	2.99
CFM PER RUN HEAT	30	55	13	44	44	19	24	29	5	30	29	40	40	48	48	72	44	19	48	55	79	79	79	79
RM GAIN MBH	1.74	1.50	0.15	1.78	2.13	1.77	0.34	1.73	0.78	1.74	0.74	1.92	1.92	2.28	2.28	3.13	2.13	1.77	0.24	0.29	1.25	1.25	1.25	1.25
CFM PER RUN COOLING	54	46	4	55	66	55	10	53	24	54	23	59	59	70	70	97	66	55	7	9	39	39	39	39
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	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	63	67	24	71	47	41	55	16	66	52	41	7	21	31	39	54	56	38	33	42	34	63	12	10
EQUIVALENT LENGTH	160	150	170	140	190	155	125	205	150	145	155	120	120	130	150	110	160	130	170	120	140	140	130	110
TOTAL EFFECTIVE LENGTH	223	217	194	211	237	196	180	221	216	197	196	127	141	161	189	164	216	168	203	162	174	203	142	120
ADJUSTED PRESSURE	0.08	0.08	0.09	0.08	0.07	0.09	0.1	0.08	0.08	0.09	0.09	0.14	0.12	0.11	0.09	0.1	0.08	0.1	0.08	0.11	0.1	0.08	0.12	0.14
ROUND DUCT SIZE	5	5	4	8	5	5	4	5	4	5	4	5	5	5	5	6	5	5	5	5	5	6	5	5
HEATING VELOCITY (ft/min)	220	404	149	224	323	140	275	213	57	220	333	294	294	352	352	367	323	140	338	404	580	403	580	580
COOLING VELOCITY (ft/min)	396	338	46	280	485	404	115	389	275	396	264	433	433	514	514	495	485	404	51	66	286	199	286	286
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10
TRUNK	B	A	B	D	C	C	D	B	A	B	C	D	C	B	B	A	C	C	C	A	B	A	D	D

RUN #	25
ROOM NAME	BAS
RM LOSS MBH	2.99
CFM PER RUN HEAT	79
RM GAIN MBH	1.25
CFM PER RUN COOLING	39
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH	39
EQUIVALENT LENGTH	160
TOTAL EFFECTIVE LENGTH	199
ADJUSTED PRESSURE	0.09
ROUND DUCT SIZE	5
HEATING VELOCITY (ft/min)	580
COOLING VELOCITY (ft/min)	286
OUTLET GRILL SIZE	3X10
TRUNK	B


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

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	266	0.08	8.5	8	X	8	599	TRUNK G	0	0.00	0	0	X	8	0	TRUNK O	0	0.05	0	0	X	8	0		0
TRUNK B	622	0.08	11.7	16	X	8	700	TRUNK H	0	0.00	0	0	X	8	0	TRUNK P	0	0.05	0	0	X	8	0		0
TRUNK C	241	0.07	8.5	10	X	8	434	TRUNK I	0	0.00	0	0	X	8	0	TRUNK Q	0	0.05	0	0	X	8	0		0
TRUNK D	507	0.07	11.2	16	X	8	570	TRUNK J	0	0.00	0	0	X	8	0	TRUNK R	0	0.05	0	0	X	8	0		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		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		0
																TRUNK U	0	0.05	0	0	X	8	0		0
																TRUNK V	0	0.05	0	0	X	8	0		0
																TRUNK W	0	0.05	0	0	X	8	0		0
																TRUNK X	1131	0.05	16.5	32	X	8	636		
																TRUNK Y	210	0.05	8.8	10	X	8	378		
																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	7																			BR
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
AIR VOLUME	75	175	85	95	85	135	300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	181	
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	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	
ACTUAL DUCT LGH.	55	43	62	39	56	40	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	
EQUIVALENT LENGTH	215	180	185	170	180	190	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135	
TOTAL EFFECTIVE LH	270	223	247	209	236	230	194	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	149	
ADJUSTED PRESSURE	0.05	0.07	0.06	0.07	0.06	0.06	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.10	
ROUND DUCT SIZE	6	7.5	6	6	6	7.1	8.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
INLET GRILL SIZE	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	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	X	X	X	X	X	X	X	X	X	
INLET GRILL SIZE	14	14	14	14	14	14	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
AIR VOLUME	75	175	85	95	85	135	300	0	0	0	0	0	0	0	0	0	0	0	0	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	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	43	62	39	58	40	19	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	215	180	185	170	180	190	175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	270	223	247	209	236	230	194	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.05	0.07	0.06	0.07	0.06	0.06	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	6	7.5	6	6	6	7.1	8.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	14	14	14	14	14	14	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE: WOODCROFT 3 OPT 2ND
SITE NAME: LAMBERT'S LANE PH.2

LO # 83307
WOB

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	4 @ 10.6 cfm	42.4 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	5 @ 10.6 cfm	53.0 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	95.4	cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.6.
Total Ventilation Capacity	190.8	cfm
Less Principal Ventll. Capacity	95.4	cfm
Required Supplemental Capacity	95.4	cfm

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

PRINCIPAL EXHAUST HEAT LOSS CALCULATION				
CFM	ΔT °F	FACTOR	% LOSS	
95.4 CFM	74 F	X 1.08	X	0.25

SUPPLEMENTAL FANS		PANASONIC		
Location	Model	cfm	HVI	Sonos
ENS	FV-05-11VK1	50	☒	0.3
BATH	FV-05-11VK1	50	☒	0.3
ENS-3	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 @ 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

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

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

RECEIVED
OCT 03 2019
TOWN OF CALEDON
BUILDING DEPARTMENT

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

LO#: 83307

Model: WOODCROFT 3 OPT 2ND

Builder: GREENPARK HOMES

Date: 7/30/2019

Volume Calculation
House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	1257	9	11313
First	1257	10	12570
Second	1658	9	14922
Third	0	9	0
Fourth	0	9	0
Total:			38,805.0 ft³
Total:			1098.8 m³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.268
SUMMER NATURAL AIR CHANGE RATE	0.087

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

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

$$0.268 \times 305.23 \times 41^\circ\text{C} \times 1.2 = 4043 \text{ W}$$

$$= 13795 \text{ Btu/h}$$

6.2.6 Sensible Gain due to Air Leakage

$$HG_{satb} = LR_{atrc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$$

$$0.087 \times 305.23 \times 6^\circ\text{C} \times 1.2 = 195 \text{ W}$$

$$= 664 \text{ Btu/h}$$

5.2.3.2 Heat Loss due to Mechanical Ventilation

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

$$95 \text{ CFM} \times 74^\circ\text{F} \times 1.08 \times 0.25 = 1911 \text{ Btu/h}$$

6.2.7 Sensible heat Gain due to Ventilation

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

$$95 \text{ CFM} \times 11^\circ\text{F} \times 1.08 \times 0.25 = 283 \text{ Btu/h}$$

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

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

Level	Level Factor (LF)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{cleve})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HL _{cleve})
1	0.5	13,795	8,067	0.855
2	0.3		9,088	0.455
3	0.2		11,370	0.243
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

THIS STRUCTURE HAS BEEN
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EXCEED THE PROVISIONS OF
THE ONTARIO BUILDING CODE.

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: WOODCROFT 3 OPT 2ND	WOB	BUILDER: GREENPARK HOMES
SFQT: 2907	LO# 83307	SITE: LAMBERT'S LANE PH.2

DESIGN ASSUMPTIONS

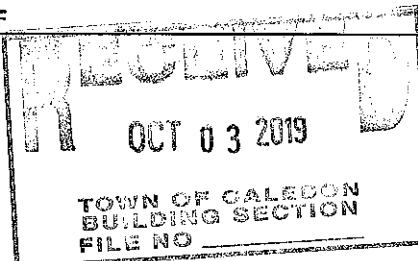
HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75

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):	38805.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
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: 47.0 ft	WIDTH: 39.0 ft	EXPOSED PERIMETER:	128.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	44.0 ft

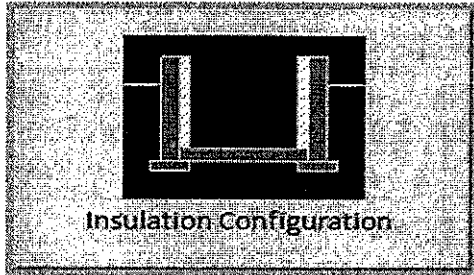
2012 OBC - COMPLIANCE PACKAGE

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

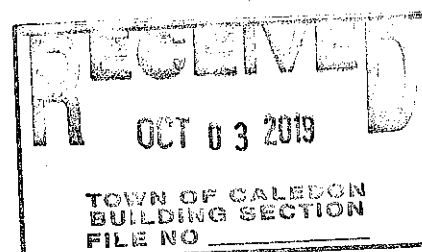
Residential Foundation Thermal Load Calculator

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	
Floor Width (m):	11.9	
Exposed Perimeter (m):	39.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.56	
Window Area (m ²):	0.8	
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):		804

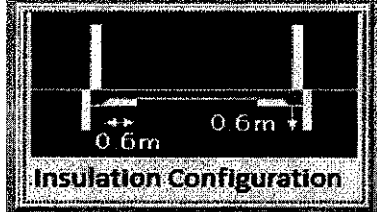
THIS STRUCTURE MUST BE
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THE ONTARIO BUILDING CODETYPE: WOODCROFT 3 OPT 2ND
LO# 83307

WOB



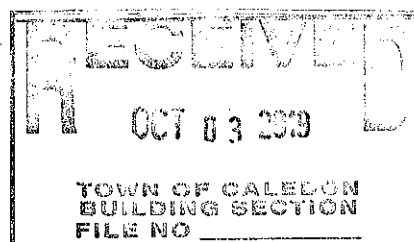
Residential Slab on Grade Thermal Load Calculator

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):	11.9	
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):		188

TYPE: WOODCROFT 3 OPT 2ND
LO# 83307

WOB

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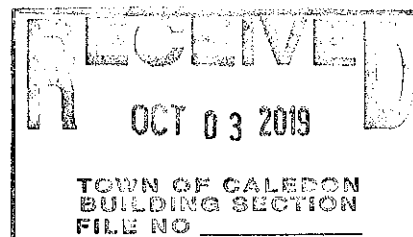
Air Infiltration Residential Load Calculator

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):	1098.8			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Detached (2.5 ACH)			
Custom BDT Data:	ELA @ 10 Pa. 2.50	1025.8 cm ² ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply 45.0	Total Exhaust 45.0		
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: WOODCROFT 3 OPT 2ND
LO# 83307

WOB

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BASEMENT PLAN -
WALKOUT CONDITION

RECEIVED
OCT 03 2019
TOWN OF CALEDON
BUILDING DEPARTMENT
FILE NO.

APPROVED
For construction as per the
Ontario Building Code
Town of Caledon Building Department
Initial *[Signature]*
Date *Oct 11, 2019*
File # *CMOD-WOODCROFT 3*
(OPT 2ND WOB)

UNEXCAVATED

THIS STRUCTURE MUST BE
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BASEMENT PLAN - ELEV. '1'

BASEMENT PLAN - ELEV. '2'

BASEMENT PLAN - ELEV. '3'

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, 3.2.5 OF THE
BUILDING CODE.
[Signature]
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

MINIMUM CEILING HEIGHT SHALL BE 2100 MM
OVER AT LEAST 75% OF BASEMENT
AREA EXCEPT THAT UNDER BEAMS AND
DUCTS THE CLEARANCE IS PERMITTED TO
BE REDUCED 1950 MM

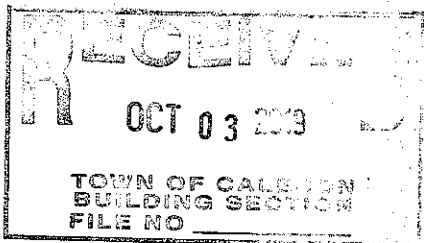
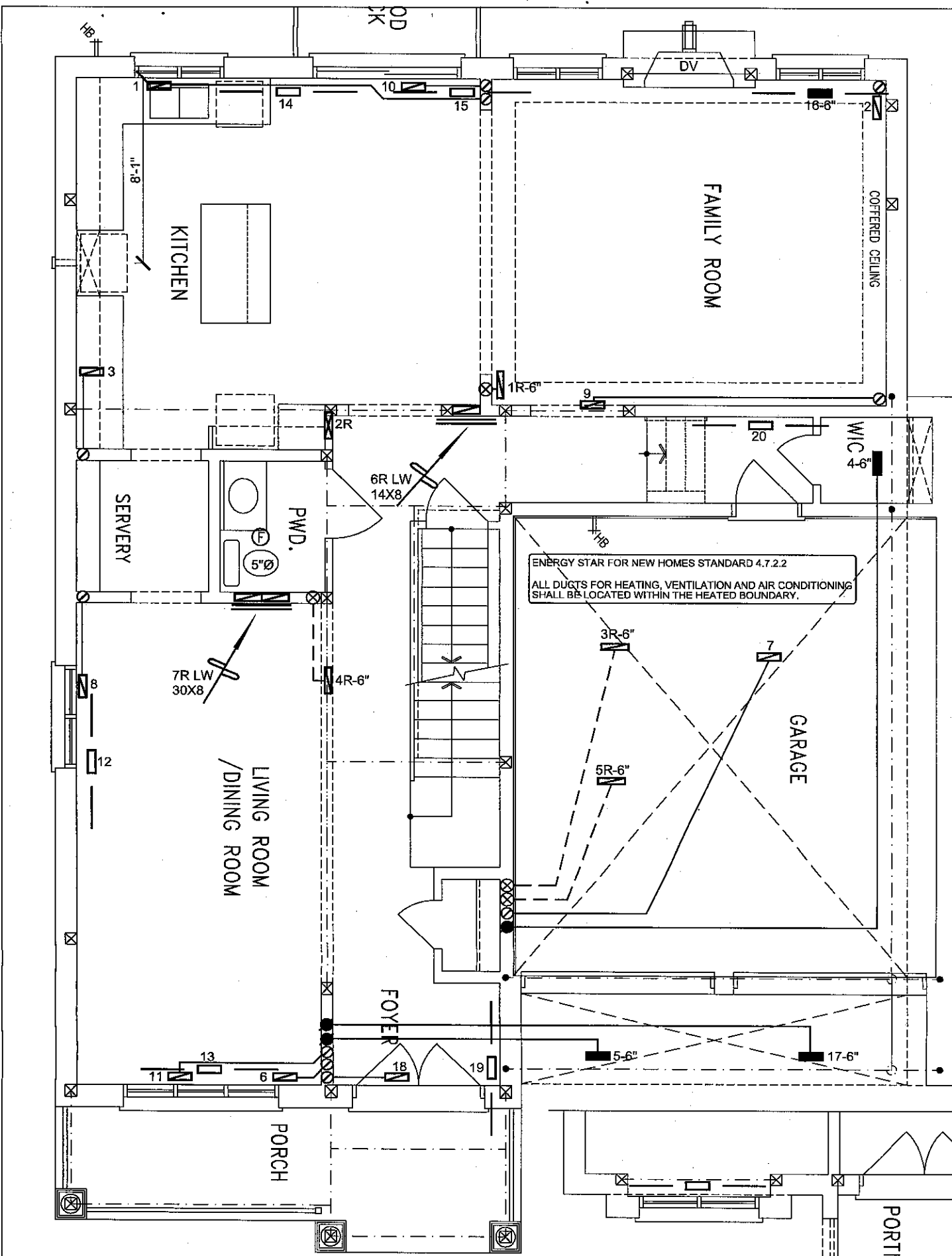
HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	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

3.		
2.		
1.		
No.	Description	Date
REVISIONS		

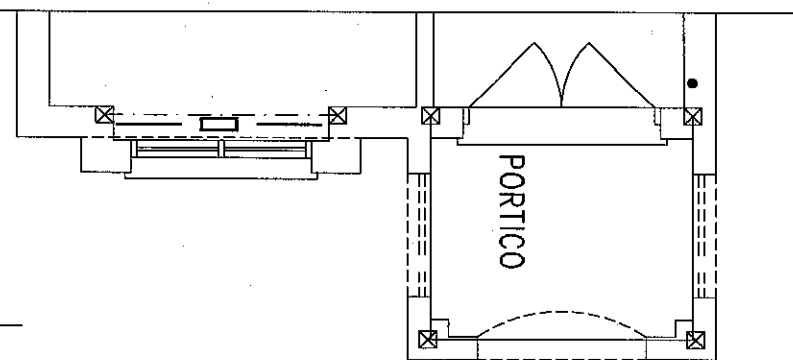
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Client GREENPARK HOMES Project Name LAMBERTS LANE HOME CORP PH2 CALEDON, ONTARIO OPT 2ND WOB WOODCROFT 3 2907 sqft	 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel: 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdsgns.ca Web: www.hvacdsgns.ca 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 44770 BTU/H UNIT DATA MAKE GOODMAN MODEL GMEC960603BNA INPUT 60 MBTU/H OUTPUT 57.6 MBTU/H COOLING 3.0 TONS FAN SPEED 1131 cfm @ 0.6" w.o.	# OF RUNS S/A R/A FANS 3RD FLOOR 2ND FLOOR 13 5 5 1ST FLOOR 7 2 2 BASEMENT 5 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# 83307

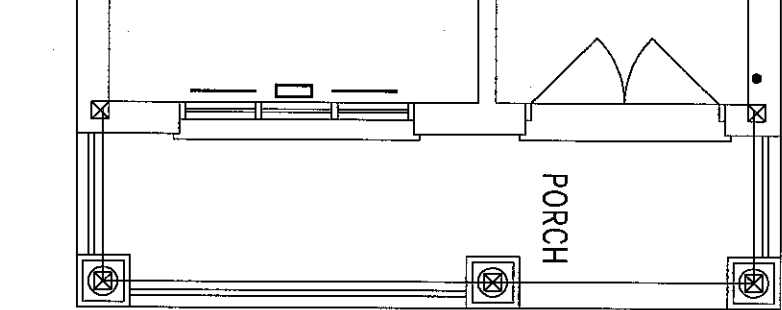


DUCTS LOCATED IN UNCONDITIONED SPACES SHALL BE SEALED TO A CLASS A SEAL LEVEL IN ACCORDANCE WITH THE SMACNA MANUAL

GROUND FLOOR PLAN - ELEV. '1'



GROUND FLOOR PLAN - ELEV. '2'



GROUND FLOOR PLAN - ELEV. '3'

WOB

CSA-F280-12

ENERGY STAR

I MICHAEL O'DOURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Dourke
Michael O'Dourke, 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"x6" 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

LAMBERTS LANE HOME CORP PH2 CALEDON, ONTARIO

OPT 2ND WOB

WOODCROFT 3 2907 sqft

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.

Sheet Title

FIRST FLOOR HEATING LAYOUT

Date

JULY/2019

Scale

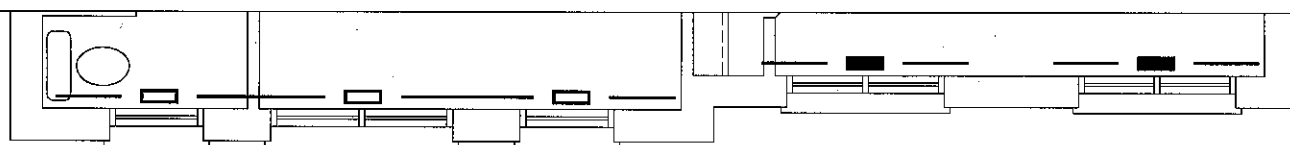
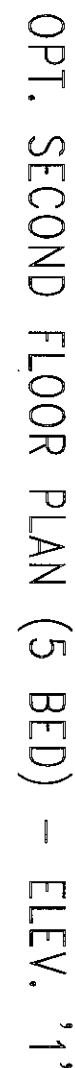
3/16" = 1'-0"

BCIN#

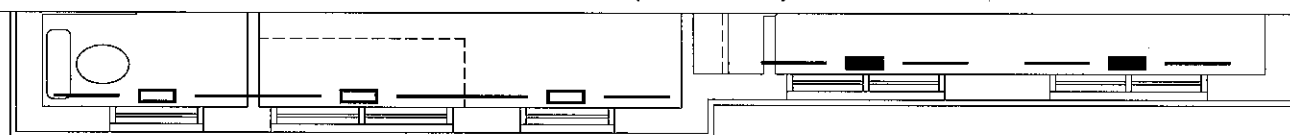
19669

LO#

83307



OPT. SECOND FLOOR PLAN (5 BED) – ELEV. '2'



OPT. SECOND FLOOR PLAN (5 BED) – ELEV. '3'

WOB
CSA-F280-12

ENERGY STAR

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GREENPARK HOMES Project Name LAMBERTS LANE HOME CORP PH2 CALEDON, ONTARIO OPT 2ND WOB WOODCROFT 3 2907 sqft			SECOND FLOOR HEATING LAYOUT Date JULY/2019 Scale 3/16" = 1'-0" BCIN# 19669 LO# 83307
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.			