

20.130089.000.00.CM

Issue Date: 02/10/21

LAMPONE INVESTMENT INC

ALL CONSTRUCTION SHALL COMPLY WITH THE
ONTARIO BUILDING CODE.

CITY OF MARKHAM

HEAT LOSS/HEAT GAIN CALCULATIONS

MODEL NAME : PEYTON 1

ELEV 1A, 1B, 2A, 2B, 3A & 3B

SITE NAME: LAMPONE INVESTMENTS										DATE: Jul-20		WINTER NATURAL AIR CHANGE RATE 0.367		HEAT LOSS ΔT °F. 78		CSA-F280-12	
BUILDER: GREENPARK HOMES										LO# 86806		SUMMER NATURAL AIR CHANGE RATE 0.111		HEAT GAIN ΔT °F. 13		SB-12 PACKAGE A1	
TYPE: PAYTON 1										GFA: 1904							
ROOM USE				MBR		ENS		BED-2		BED-3		S-BATH				F-CLO	
EXP. WALL				34		9		11		38		9				12	
CLG. HT.				9		9		9		9		9				11	
FACTORS																	
GRS.WALL AREA		LOSS GAIN		306		81		99		342		81				132	
GLAZING				LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN				LOSS GAIN	
NORTH		21.8	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST		21.8	41.6	0	0	0	0	0	0	0	0	0	0	0	0	9	196 374
SOUTH		21.8	24.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST		21.8	41.6	21	457	873	10	218	416	0	0	0	0	0	0	0	0
SKYLT.		38.1	101.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS		25.8	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL		4.6	0.8	285	1302	214	71	324	53	66	302	50	315	1439	237	70	320 53
NET EXPOSED BSMT WALL ABOVE GR		3.7	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG		1.3	0.6	288	378	169	180	236	106	106	139	62	228	300	134	117	154 69
NO ATTIC EXPOSED CLG		2.8	1.3	0	0	0	0	0	0	33	93	42	24	68	30	0	0
EXPOSED FLOOR		2.6	0.4	0	0	0	0	0	0	131	342	56	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				2138		779		1595		2394		713				758	
SUB TOTAL HT GAIN				1256		575		1581		1523		395				466	
LEVEL FACTOR / MULTIPLIER		0.20	0.33			0.20	0.33	0.20		0.33		0.20		0.33		0.30	0.43
AIR CHANGE HEAT LOSS				705		257		526		789		235				323	
AIR CHANGE HEAT GAIN				93		43		117		113		29				35	
DUCT LOSS				0		0		212		0		0				0	
DUCT GAIN				0		0		253		0		0				0	
HEAT GAIN PEOPLE		240		2	480	0	0	1	240	1	240	0	240	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS				590		0		590		590		0				0	
TOTAL HT LOSS BTU/H				2842		1035		2332		3183		948				1081	
TOTAL HT GAIN x 1.3 BTU/H				3144		802		3614		3205		552				651	

ROOM USE			KT/BF		LV/DN		LAUN		W/R		FOY		MUD						WOD		BAS	
EXP. WALL			39		36		0		6		17		11						29		118	
CLG. HT.			10		10		9		11		11		11						9		9	
FACTORS																						
GRS.WALL AREA	LOSS	GAIN	390		360		0		66		187		121						261		929	
GLAZING			LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN	LOSS	GAIN
NORTH	21.8	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	21.8	41.6	0	0	0	10	218	416	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.8	24.9	0	0	0	38	828	946	0	0	0	0	0	0	0	0	0	0	0	6	131	149
WEST	21.8	41.6	61	1329	2535	0	0	0	0	0	9	196	374	0	0	0	0	0	0	6	131	249
SKYLT.	38.1	101.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	25.8	4.3	0	0	0	0	0	0	0	0	0	0	0	40	1034	170	20	517	85	0	517	85
NET EXPOSED WALL	4.6	0.8	329	1503	247	312	1425	235	0	0	57	260	43	147	672	110	101	461	76	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.7	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	168	619	102
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	81	106	48	0	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.8	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0	81	211	35	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS																						
SLAB ON GRADE HEAT LOSS																						
SUBTOTAL HT LOSS			2832		2471		318		456		1705		978				750				3200	
SUB TOTAL HT GAIN			2782		1596		82		417		281		161				351				315	
LEVEL FACTOR / MULTIPLIER	0.30	0.43			0.30		0.20		0.30		0.30		0.30		0.30				0.50		1.29	
AIR CHANGE HEAT LOSS			1208		1054		105		195		727		417								6540	
AIR CHANGE HEAT GAIN			206		118		6		31		21		12								49	
DUCT LOSS			0		0		42		0		0		0								0	
DUCT GAIN			0		0		68		0		0		0								0	
HEAT GAIN PEOPLE	240		0		0		0		0		0		0		0		0		0		0	
HEAT GAIN APPLIANCES/LIGHTS			590		590		590		0		0		0				0		0		590	
TOTAL HT LOSS BTU/H			4040		3525		465		651		2433		1396				750				10879	
TOTAL HT GAIN x 1.3 BTU/H			4651		2995		970		582		392		225				456				1240	

TOTAL HEAT GAIN BTU/H: 23699 TONS: 1.97 LOSS DUE TO VENTILATION LOAD BTU/H: 1336 STRUCTURAL HEAT LOSS: 35560 TOTAL COMBINED HEAT LOSS BTU/H: 36896



SITE NAME: LAMPONE INVESTMENTS
BUILDER: GREENPARK HOMES

TYPE: PAYTON 1

DATE: Jul-20

GFA: 1904 LO# 86806

HEATING CFM 890 COOLING CFM 890
TOTAL HEAT LOSS 35,560 TOTAL HEAT GAIN 23,479
AIR FLOW RATE CFM 25.03 AIR FLOW RATE CFM 37.91

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

#GOODMAN
GMEC960402BNA 40

AFUE = 96 %
INPUT (BTU/H) = 40,000
OUTPUT (BTU/H) = 38,400

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	9	7	4
R/A	0	0	4	1	1

plenum pressure s/a 0.18
max s/a dif press. loss 0.03
min adjusted pressure s/a 0.15

r/a pressure 0.17
r/a grille press. Loss 0.02
adjusted pressure r/a 0.15

FAN SPEED LOW
MEDLOW
MEDIUM 695
MEDIUM HIGH 890

DESIGN CFM = 890
CFM @ .6" E.S.P.

TEMPERATURE RISE 40 °F

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	10	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	BED-2	BED-2	BED-3	BED-3	S-BATH	MBR	KT/BF	KT/BF	LV/DN	LAUN	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.42	1.04	1.17	1.17	1.59	1.59	0.95	1.42	2.02	2.02	3.52	0.46	0.65	2.43	1.40	2.91	2.91	2.91	2.91
CFM PER RUN HEAT	36	26	29	29	40	40	24	36	51	51	88	12	16	61	35	73	73	73	73
RM GAIN MBH.	1.57	0.80	1.81	1.81	1.60	1.60	0.55	1.57	2.33	2.33	3.00	0.97	0.58	0.39	0.22	0.42	0.42	0.42	0.42
CFM PER RUN COOLING	60	30	69	69	61	61	21	60	88	88	114	37	22	15	9	16	16	16	16
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.15	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	35	39	48	42	39	35	17	39	30	23	14	32	34	33	22	23	8	11	23
EQUIVALENT LENGTH	190	150	150	130	150	160	170	190	140	140	140	140	160	150	90	130	150	90	130
TOTAL EFFECTIVE LENGTH	225	189	198	172	189	195	187	229	170	163	154	172	194	183	112	153	158	101	153
ADJUSTED PRESSURE	0.08	0.09	0.09	0.1	0.09	0.09	0.09	0.08	0.1	0.1	0.1	0.1	0.09	0.09	0.15	0.11	0.11	0.17	0.11
ROUND DUCT SIZE	5	4	5	5	5	5	4	5	6	6	6	4	4	5	4	5	5	5	5
HEATING VELOCITY (ft/min)	264	298	213	213	294	294	275	264	260	260	449	138	184	448	402	536	536	536	536
COOLING VELOCITY (ft/min)	441	344	507	507	448	448	241	441	449	449	581	424	252	110	103	117	117	117	117
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	C	B	B	A	A	B	B	C	C	A	B	C	A	C	C	C	B	A

RUN #	25
ROOM NAME	F-CLO
RM LOSS MBH.	1.08
CFM PER RUN HEAT	27
RM GAIN MBH.	0.65
CFM PER RUN COOLING	25
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH.	28
EQUIVALENT LENGTH	120
TOTAL EFFECTIVE LENGTH	148
ADJUSTED PRESSURE	0.12
ROUND DUCT SIZE	4
HEATING VELOCITY (ft/min)	310
COOLING VELOCITY (ft/min)	287
OUTLET GRILL SIZE	3X10
TRUNK	A

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	329	0.09	9	10	x	8	592		TRUNK G	0	0.00	0	0	x	8	0	TRUNK O	0	0.05	0	0	x	8	0	
TRUNK B	568	0.08	11.3	16	x	8	639		TRUNK H	0	0.00	0	0	x	8	0	TRUNK P	0	0.05	0	0	x	8	0	
TRUNK C	325	0.09	8.9	10	x	8	585		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	

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	95	95	75	75	410	0	0	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.	41	39	44	58	17	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	185	180	255	235	145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	226	219	299	293	162	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.07	0.07	0.05	0.05	0.09	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	14.80	14.80
ROUND DUCT SIZE	6	6	6	6	9.7	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	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	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE: PAYTON 1
SITE NAME: LAMPONE INVESTMENTS

LO # 86806

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	<u>2</u> @ 21.2 cfm <u>42.4</u> cfm	
Other Bedrooms	<u>2</u> @ 10.6 cfm <u>21.2</u> cfm	
Kitchen & Bathrooms	<u>4</u> @ 10.6 cfm <u>42.4</u> cfm	
Other Rooms	<u>4</u> @ 10.6 cfm <u>42.4</u> cfm	
Table 9.32.3.A.	TOTAL <u>148.4</u> 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	63.6 cfm	

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>148.4</u> cfm	
Less Principal Ventil. Capacity	<u>63.6</u> cfm	
Required Supplemental Capacity	<u>84.8</u> cfm	

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
<u>63.6</u> cfm	☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION				
CFM	ΔT °F	FACTOR	% LOSS	
63.6 CFM	X 78 F	X 1.08	X	0.25

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

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 65H		
<u>155</u> cfm high	<u>64</u> cfm low	
<u>75</u> % 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-20

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

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																												
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																												
LO#: 86806	Model: PAYTON 1	Builder: GREENPARK HOMES	Date: 29/07/2020																																																									
Volume Calculation			Air Change & Delta T Data																																																									
House Volume <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> </thead> <tbody> <tr> <td>Bsmt</td> <td>847</td> <td>9</td> <td>7623</td> </tr> <tr> <td>First</td> <td>847</td> <td>10</td> <td>8470</td> </tr> <tr> <td>Second</td> <td>1057</td> <td>9</td> <td>9513</td> </tr> <tr> <td>Third</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td>Fourth</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>25,606.0 ft³</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>725.1 m³</td> </tr> </tbody> </table>			Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	847	9	7623	First	847	10	8470	Second	1057	9	9513	Third	0	9	0	Fourth	0	9	0	Total:			25,606.0 ft³	Total:			725.1 m³	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">WINTER NATURAL AIR CHANGE RATE</td> <td style="width: 20%; text-align: center;">0.367</td> </tr> <tr> <td>SUMMER NATURAL AIR CHANGE RATE</td> <td style="text-align: center;">0.111</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="5" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th></th> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> <th>ΔT °F</th> </tr> <tr> <td>Winter DTDh</td> <td style="text-align: center;">22</td> <td style="text-align: center;">-21</td> <td style="text-align: center;">43</td> <td style="text-align: center;">78</td> </tr> <tr> <td>Summer DTDc</td> <td style="text-align: center;">24</td> <td style="text-align: center;">31</td> <td style="text-align: center;">7</td> <td style="text-align: center;">13</td> </tr> </table>		WINTER NATURAL AIR CHANGE RATE	0.367	SUMMER NATURAL AIR CHANGE RATE	0.111	Design Temperature Difference						Tin °C	Tout °C	ΔT °C	ΔT °F	Winter DTDh	22	-21	43	78	Summer DTDc	24	31	7	13
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)																																																									
Bsmt	847	9	7623																																																									
First	847	10	8470																																																									
Second	1057	9	9513																																																									
Third	0	9	0																																																									
Fourth	0	9	0																																																									
Total:			25,606.0 ft³																																																									
Total:			725.1 m³																																																									
WINTER NATURAL AIR CHANGE RATE	0.367																																																											
SUMMER NATURAL AIR CHANGE RATE	0.111																																																											
Design Temperature Difference																																																												
	Tin °C	Tout °C	ΔT °C	ΔT °F																																																								
Winter DTDh	22	-21	43	78																																																								
Summer DTDc	24	31	7	13																																																								
5.2.3.1 Heat Loss due to Air Leakage			6.2.6 Sensible Gain due to Air Leakage																																																									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ 0.367 x 201.41 x 43 °C x 1.2 = 3833 W = 13080 Btu/h			$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ = 0.111 x 201.41 x 7 °C x 1.2 = 191 W = 653 Btu/h																																																									
5.2.3.2 Heat Loss due to Mechanical Ventilation			6.2.7 Sensible heat Gain due to Ventilation																																																									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 64 CFM x 78 °F x 1.08 x 0.25 = 1336 Btu/h			$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 64 CFM x 13 °F x 1.08 x 0.25 = 220 Btu/h																																																									
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																												
$HL_{airr} = Level\ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$																																																												
Level	Level Factor (LF)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{clevel})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)																																																								
1	0.5	13,080	5,089	1.285																																																								
2	0.3		9,201	0.426																																																								
3	0.2		7,936	0.330																																																								
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:** PAYTON 1**BUILDER:** GREENPARK HOMES**SFQT:** 1904**LO#** 86806**SITE:** LAMPONE INVESTMENTS**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-6	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75

BUILDING DATA

ATTACHMENT:	ATTACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft ³):	25606.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.5 ft
LENGTH: 45.0 ft	WIDTH: 24.0 ft	EXPOSED PERIMETER:	118.0 ft

2012 OBC - COMPLIANCE PACKAGE**Component****Compliance Package
A1****Nominal Min. Eff.**

Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.80
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 ci	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	0.28	-
Skylights Maximum U-Value	0.49	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

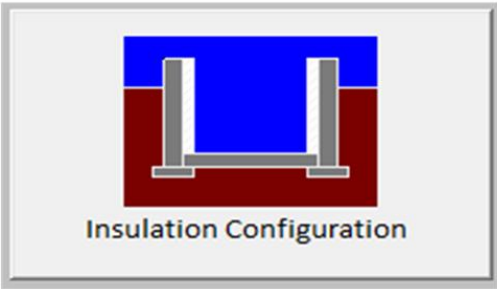
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Markham	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	13.7	 Insulation Configuration
Floor Width (m):	7.3	
Exposed Perimeter (m):	36.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	2.29	
Window Area (m ²):	1.1	
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):		938

TYPE: PAYTON 1

LO# 86806

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Markham			
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):	7.62			
Building Configuration				
Type:	Semi			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	725.1			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	966.6 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	30.0	30.0		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.367			
Cooling Air Leakage Rate (ACH/H):	0.111			

TYPE: PAYTON 1

LO# 86806