

SITE NAME: LAMBERT'S LANE PH.2

BUILDER: GREENPARK HOMES

TYPE: PRESTON 12 - LOT 14

GFA: 2758

DATE: Aug-19

LO# 83127

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	BED-2	BED-3	BED-4	BATH	ENS-2	HALL
			35	30	41	37	17	10	6	5
			8	8	8	9	8	8	8	8
FACTORS										
GRS.WALL AREA	LOSS	GAIN	283	242	331	336	137	81	48	40
GLAZING	LOSS	GAIN								
NORTH	18.6	15.1	0	0	0	0	0	0	0	0
EAST	18.6	40.7	0	0	0	0	0	0	0	0
SOUTH	18.6	24.1	48	890	1155	0	0	0	0	0
WEST	18.6	40.7	18	334	733	14	260	570	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	217	763	113	208	733	109		
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	0	0	0	0	0	0		
EXPOSED CLG	1.3	0.6	327	410	182	174	218	97		
NO ATTIC EXPOSED CLG	2.7	1.2	43	116	51	0	0	0		
EXPOSED FLOOR	2.5	0.4	0	0	0	0	0	0		
BASEMENT/CRAWL HEAT LOSS			0	0	0	0	0	0		
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0		
SUBTOTAL HT LOSS			2512	1582						
SUB TOTAL HT GAIN				2235	1079					
LEVEL FACTOR / MULTIPLIER	0.20	0.17		0.20	0.17					
AIR CHANGE HEAT LOSS			429	270						
AIR CHANGE HEAT GAIN				84	41					
DUCT LOSS			0	0						
DUCT GAIN			0	0						
HEAT GAIN PEOPLE	240	2	480	0	0					
HEAT GAIN APPLIANCES/LIGHTS			563	0	0					
TOTAL HT LOSS BTU/H			2941	1852						
TOTAL HT GAIN x 1.3 BTU/H			4370	1455						

ROOM USE	EXP. WALL	CLG. HT.	LV/DN	FAM	KIT	LAUN	WR	FOY	MUD	BAS
			69	37	36	8	8	18	22	174
			10	10	10	8	10	10	12	9
FACTORS										
GRS.WALL AREA	LOSS	GAIN	590	370	360	0	80	180	264	1044
GLAZING	LOSS	GAIN								
NORTH	18.6	15.1	0	0	0	0	0	0	9	167
EAST	18.6	40.7	45	835	1832	0	0	0	0	0
SOUTH	18.6	24.1	59	1094	1420	45	835	1083	0	0
WEST	18.6	40.7	0	0	0	24	445	977	61	1132
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	486	1709	253	301	1058	157	299	1051
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.7	1.2	15	40	18	30	80	36	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			3678	2419	2183					
SUB TOTAL HT GAIN				3523	2253					
LEVEL FACTOR / MULTIPLIER	0.30	0.27		0.30	0.27					
AIR CHANGE HEAT LOSS			979	644	581					
AIR CHANGE HEAT GAIN				133	85					
DUCT LOSS			0	0	0					
DUCT GAIN			0	0	0					
HEAT GAIN PEOPLE	240	0	0	0	0					
HEAT GAIN APPLIANCES/LIGHTS			563	563	563					
TOTAL HT LOSS BTU/H			4658	3063	2764					
TOTAL HT GAIN x 1.3 BTU/H			5485	3771	4292					

TOTAL HEAT GAIN BTU/H: 36067

TONS: 3.01

LOSS DUE TO VENTILATION LOAD BTU/H: 1593

STRUCTURAL HEAT LOSS: 44045

TOTAL COMBINED HEAT LOSS BTU/H: 46638

Michael O'Rourke

RECEIVED
AUG 20 2019
TOWN OF CALEDON
BUILDING SECTION
FILE NO

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

TYPE: PRESTON 12 - LOT 14

DATE: Aug-19

GFA: 2758 LO# 83127

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 44,045 TOTAL HEAT GAIN 35,831
AIR FLOW RATE CFM 25.68 AIR FLOW RATE CFM 31.56

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

#GOODMAN
GMCEC960603BNA 60

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

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	13	9	4
R/A	0	0	5	2	1

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

LOW
MEDLOW
MEDIUM
MEDIUM HIGH
HIGH 1131

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

TEMPERATURE RISE 47 °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	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	MBR	ENS	ENS	BED-2	BED-3	BED-4	BATH	BED-2	BED-3	MBR	HALL	LV/DN	FAM	KIT	KIT	LV/DN	LAUN	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.47	1.39	0.46	1.70	1.74	1.31	0.58	1.70	1.74	1.47	0.98	2.33	1.53	1.38	1.38	2.33	0.29	0.58	1.99	1.88	3.46	3.46	3.46	3.46
CFM PER RUN HEAT	38	36	12	44	45	34	15	44	45	38	25	60	39	35	35	60	8	15	51	48	89	89	89	89
RM GAIN MBH	2.19	1.09	0.36	1.95	2.64	2.06	0.34	1.95	2.64	2.19	0.75	2.74	1.89	2.15	2.15	2.74	0.91	0.44	0.49	0.45	0.44	0.44	0.44	0.44
CFM PER RUN COOLING	69	34	11	61	83	65	11	61	83	69	24	87	59	68	68	87	29	14	15	14	14	14	14	14
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.17	0.17	0.16	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	50	65	71	65	70	60	49	71	74	44	54	55	34	32	26	61	36	41	29	23	16	31	29	52
EQUIVALENT LENGTH	190	150	140	150	200	200	190	160	220	160	210	140	110	100	120	120	180	110	170	150	130	130	160	130
TOTAL EFFECTIVE LENGTH	240	215	211	215	270	260	239	231	294	204	264	195	144	132	146	181	216	151	199	173	146	161	189	182
ADJUSTED PRESSURE	0.07	0.08	0.08	0.08	0.06	0.07	0.07	0.07	0.06	0.08	0.07	0.08	0.12	0.13	0.12	0.09	0.08	0.11	0.09	0.1	0.11	0.1	0.09	0.09
ROUND DUCT SIZE	6	4	4	6	6	6	4	5	6	6	4	6	5	5	5	6	4	4	5	4	6	6	6	6
HEATING VELOCITY (ft/min)	194	413	138	224	229	173	172	323	229	194	287	306	286	257	257	306	92	172	374	551	454	454	454	454
COOLING VELOCITY (ft/min)	352	390	126	311	423	331	126	448	423	352	275	444	433	499	499	444	333	161	110	161	71	71	71	71
OUTLET GRILL SIZE	4X10	3X10	3X10	4X10	4X10	4X10	3X10	3X10	4X10	4X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	C	D	D	B	A	A	B	B	A	C	A	A	C	D	D	A	B	B	B	D	D	C	B	A

RUN #	25	26
ROOM NAME	ENS-2	FAM
RM LOSS MBH	0.42	1.53
CFM PER RUN HEAT	11	39
RM GAIN MBH	0.10	1.89
CFM PER RUN COOLING	3	59
ADJUSTED PRESSURE	0.17	0.17
ACTUAL DUCT LGH.	62	33
EQUIVALENT LENGTH	160	110
TOTAL EFFECTIVE LENGTH	222	143
ADJUSTED PRESSURE	0.08	0.12
ROUND DUCT SIZE	4	5
HEATING VELOCITY (ft/min)	126	286
COOLING VELOCITY (ft/min)	34	433
OUTLET GRILL SIZE	3X10	3X10
TRUNK	A	C

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

SUPPLY AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	369	0.06	10.4	14	x 8
TRUNK B	635	0.06	12.7	20	x 8
TRUNK C	243	0.07	8.5	10	x 8
TRUNK D	1131	0.06	15.8	28	x 8
TRUNK E	0	0.00	0	0	x 8
TRUNK F	0	0.00	0	0	x 8

RETURN AIR TRUNK SIZE

TRUNK	CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK G	0	0.00	0	0	x 8
TRUNK H	0	0.00	0	0	x 8
TRUNK I	0	0.00	0	0	x 8
TRUNK J	0	0.00	0	0	x 8
TRUNK K	0	0.00	0	0	x 8
TRUNK L	0	0.00	0	0	x 8
TRUNK O	0	0.05	0	0	x 8
TRUNK P	0	0.05	0	0	x 8
TRUNK Q	0	0.05	0	0	x 8
TRUNK R	0	0.05	0	0	x 8
TRUNK S	0	0.05	0	0	x 8
TRUNK T	0	0.05	0	0	x 8
TRUNK U	0	0.05	0	0	x 8
TRUNK V	0	0.05	0	0	x 8
TRUNK W	0	0.05	0	0	x 8
TRUNK X	1131	0.05	16.5	32	x 8
TRUNK Y	405	0.05	11.2	14	x 8
TRUNK Z	235	0.05	9.2	10	x 8
DROP	1131	0.05	16.5	24	x 10

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
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
175	85	75	85	85	380	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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
41	74	74	58	65	31	53	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
175	195	235	185	190	195	240	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
216	269	309	243	255	226	293	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0.07	0.06	0.05	0.06	0.06	0.07	0.05	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
7.5	6	6	6	6	10.1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	8	8	8	8	8	8	0	0	0	0	0	0	0	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	X	X	X	X	X	X	X	X
14	14	14	14	14	30	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE: PRESTON 12-LOT 14
 SITE NAME: LAMBERT'S LANE PH.2

LO # 83127

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	5	@ 10.6 cfm	53.0	cfm
Table 9.32.3.A.	TOTAL		180.2	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	180.2	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	100.7	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANEE 65H Location: BSMT

79.5 cfm 3.0 sones ☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM	AT °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
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

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: August-10

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

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

LO#: 83127

Model: PRESTON 12 - LOT 14

Builder: GREENPARK HOMES

Date: 8/22/2019

Volume Calculation
House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	1230	9	11070
First	1230	10	12300
Second	1528	8	12350.824
Third	0	9	0
Fourth	0	9	0
Total:			35,720.8 ft³
Total:			1011.5 m³

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 x 280.97 x 41 °C x 1.2 = 3069 W

= 10470 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 x 280.97 x 6 °C x 1.2 = 148 W

= 504 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 CFM x 74 °F x 1.08 x 0.25 = 1593 Btu/h

6.2.7 Sensible heat Gain due to Ventilation

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

80 CFM x 11 °F x 1.08 x 0.25 = 236 Btu/h

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

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

Level	Level Factor (LF)	HL _{airbv} Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{clevel})	Air Leakage Heat Loss Multiplier (LF x HL _{airbv} / HL _{clevel})
1	0.5	10,470	8,610	0.608
2	0.3		11,797	0.266
3	0.2		12,269	0.171
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

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HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: PRESTON 12 - LOT 14	BUILDER: GREENPARK HOMES
SFQT: 2758	SITE: LAMBERT'S LANE PH.2
LO# 83127	

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):	35720.8	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: 53.0 ft	WIDTH: 34.0 ft	EXPOSED PERIMETER:	174.0 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

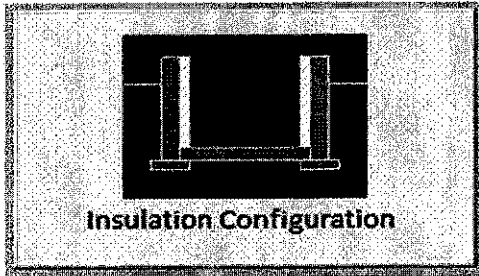
Nominal	Min. Eff.
60	59.20
31	27.70
31	29.80
R22+R5	21.10
20	21.12
-	-
10	10
10	11.13
ZONE 2	-
ZONE 2	-
0.96	-
75%	-
0.9	-

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):	16.2	 Insulation Configuration
Floor Width (m):	10.4	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
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):	1776	

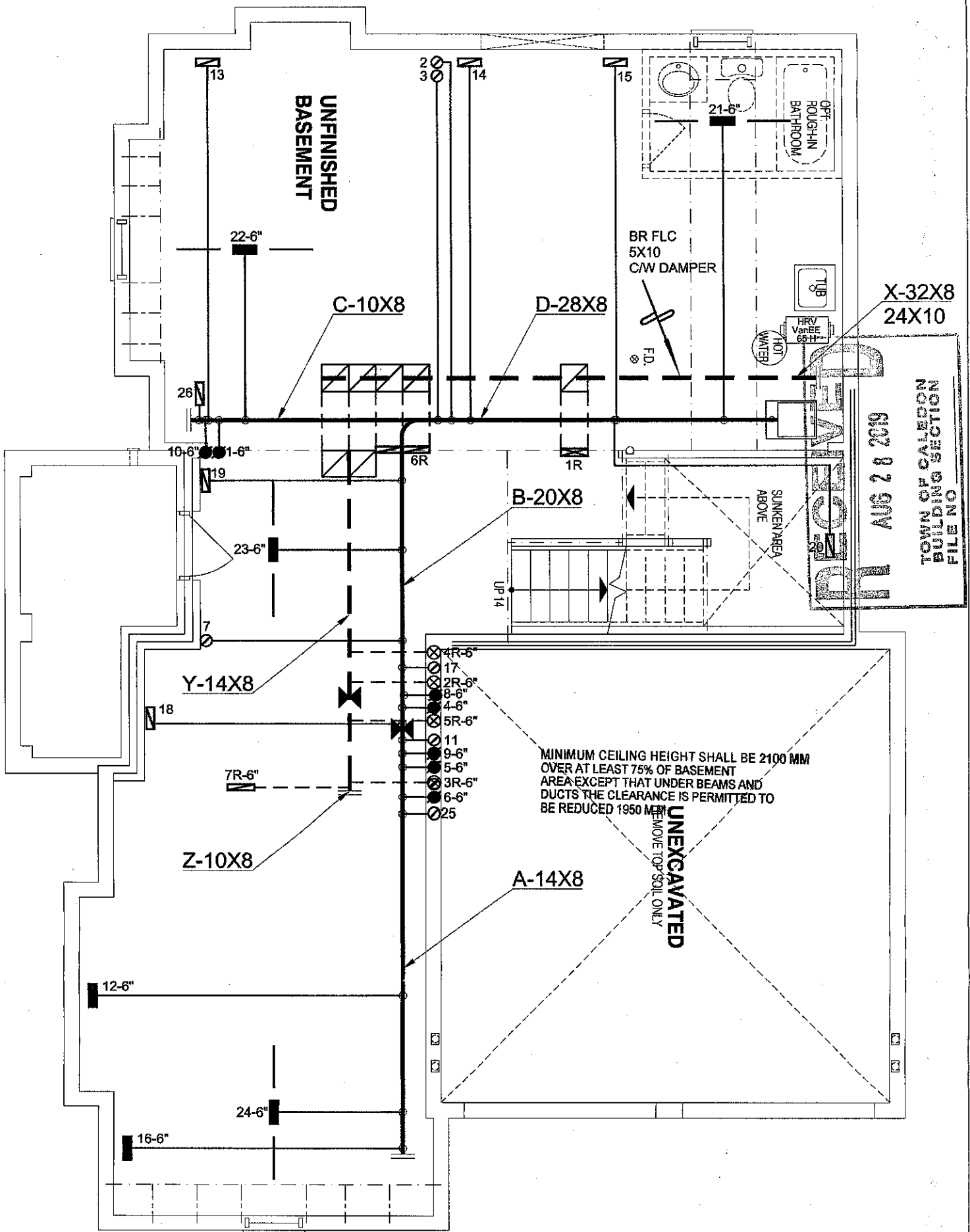
TYPE: PRESTON 12 - LOT 14
LO# 83127

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):	6.43			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1011.5			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Detached (2.5 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	944.2 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: PRESTON 12 - LOT 14
LO# 83127



APPROVED
For construction as per the
Ontario Building Code
Town of Caledon Building Department
Initial SA
Date SEP 05 2019
File # BA11910469

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

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.

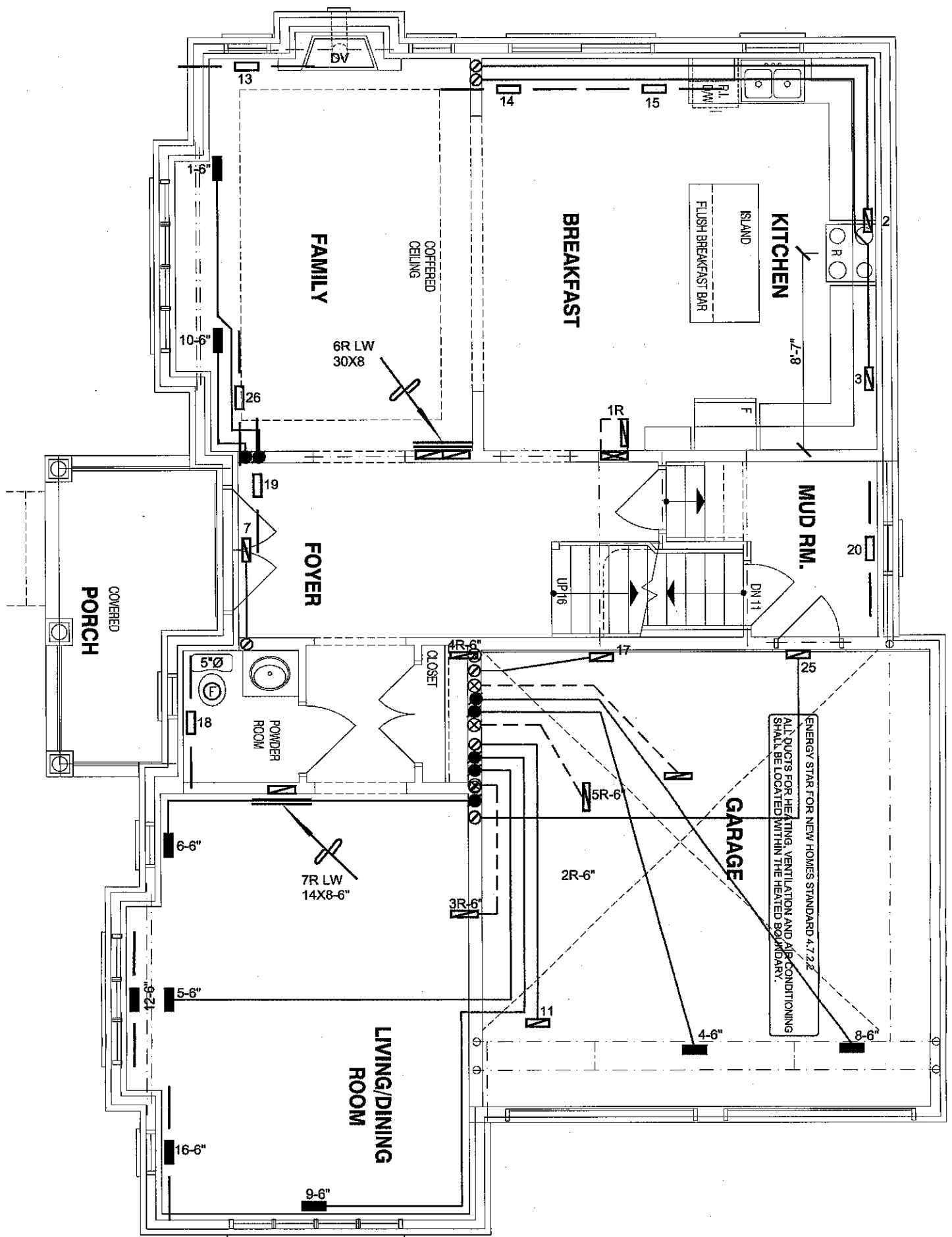
LOT 14
CSA-F280-12

ENERGY STAR

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"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER		Date
								REVISIONS	

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

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 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 45638 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GREENPARK HOMES			MAKE GOODMAN	3RD FLOOR			BASEMENT HEATING LAYOUT		
Project Name LAMBERT'S LANE HOME CORP PH 2 CALEDON, ONTARIO			MODEL GMEC960603BNA	2ND FLOOR 13 5 5					
			INPUT 60 MBTU/H	1ST FLOOR 9 2 2					
LOT 14 PRESTON 12			OUTPUT 57.6 MBTU/H	BASEMENT 4 1 0			Date JULY/2019		
2758 sqft		COOLING 3.0 TONS	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			Scale 3/16" = 1'-0"			
		FAN SPEED 1131 cfm @ 0.6" w.c.				BCIN# 19669			
						LO#	83127		



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

LOT 14

CSA-F280-12



ENERGY STAR

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Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

HVAC LEGEND								REVISIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	No.	Description
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	3.	
	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.	Date

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Client

GREENPARK HOMES

Project Name

LAMBERT'S LANE HOME CORP PH 2
CALEDON, ONTARIO

LOT 14
PRESTON 12

2758 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.

Sheet Title

FIRST FLOOR
HEATING
LAYOUT

Date

JULY/2019

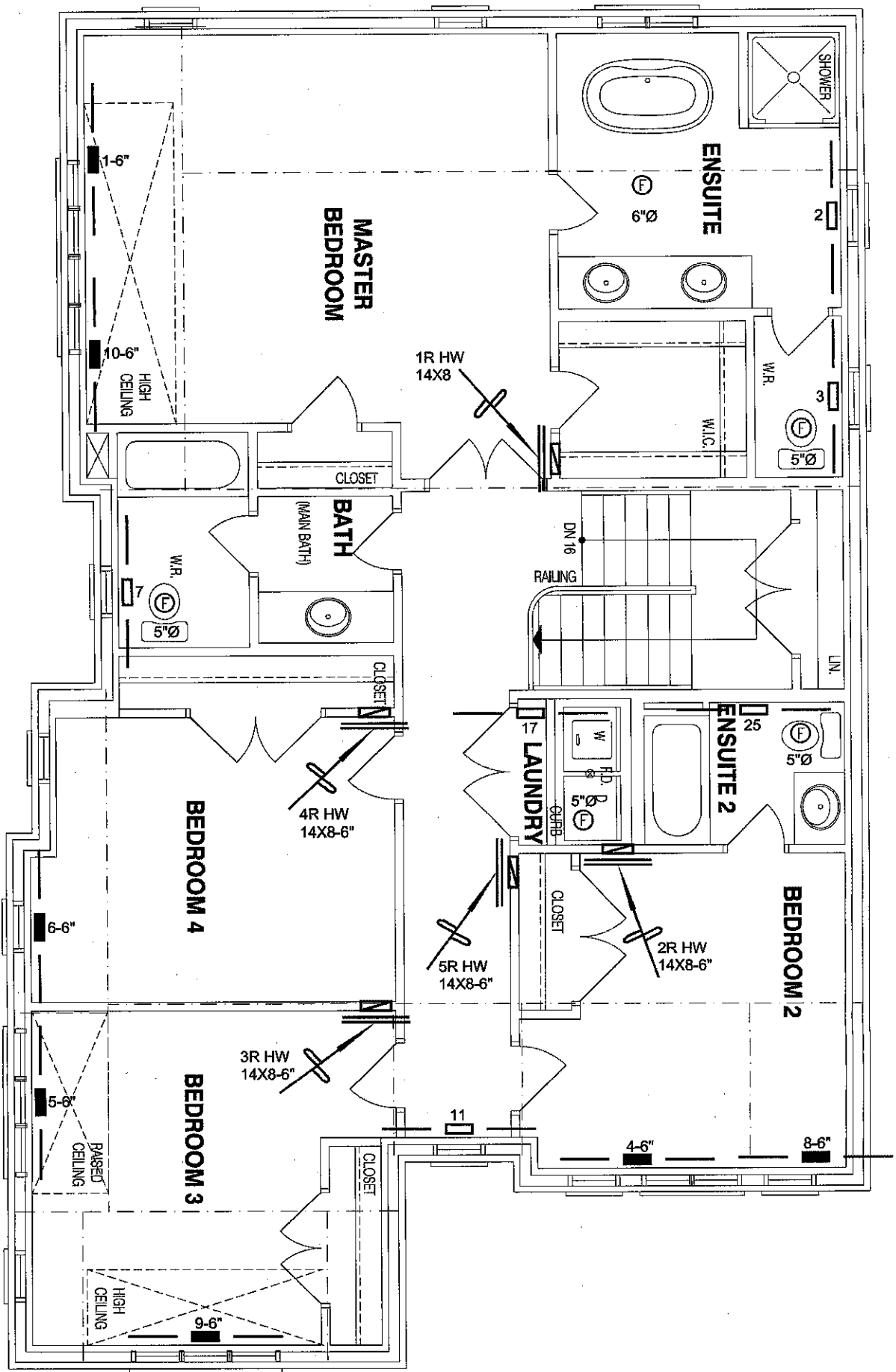
Scale

3/16" = 1'-0"

BCIN# 19669

LO# 83127

THIS DRAWING WAS
CONSTRUCTED BY
EXCEPT THE
THE ONTARIO BUILDING CODE



LOT 14

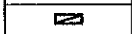
CSA-F280-12



ENERGY STAR

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 1.2.3 OF THE BUILDING CODE.

Michael O'Rourke
Michael O'Rourke, 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"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
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Client

GREENPARK HOMES

Project Name

LAMBERT'S LANE HOME CORP PH 2
CALEDON, ONTARIO

LOT 14
PRESTON 12

2758 sqft



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L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
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Sheet Title

SECOND FLOOR
HEATING
LAYOUT

Date

JULY/2019

Scale

3/16" = 1'-0"

BCIN# 19669

LO#

83127