

ROOM USE			FAM		L/D		K/B		L/H		LND		W/R		FOY		MUD						WUB		BAS				
EXP. WALL			36		30		37		19		12		18		18		30						25		155				
CLG. HT.			10		10		10		10		9		10		11		11						8		8				
FACTORS																													
GRS.WALL AREA	LOSS GAIN		360		300		370		190		108		180		198		330						200		863				
GLAZING			LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN						LOSS GAIN		LOSS GAIN				
NORTH	19.8	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	138	112				0	0	0	5	99	80	
EAST	19.8	41.6	0	0	0	0	0	0	0	0	0	0	22	435	914	6	119	249	0	0	0	0	0	0	0	0	0	0	
SOUTH	19.8	24.9	0	0	0	40	791	996	0	0	13	257	324	7	138	174	0	0	0	0	0	0	0	0	0	10	198	249	
WEST	19.8	41.6	40	791	1662	0	0	0	60	1185	2483	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SKYL.T.	34.6	101.5	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	0	
DOORS	23.5	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	40	938	170	0	0	0		20	469	55	20	469	85	
NET EXPOSED WALL	4.1	0.8	320	1327	241	260	1078	195	310	1285	233	177	734	133	101	419	76	158	655	119	152	630	114	323	1339	243			
NET EXPOSED BSMT WALL ABOVE GR	3.3	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	180	746	135	0	0	0	
EXPOSED CLG	1.2	0.6	0	0	0	0	0	0	0	0	0	0	0	180	215	106	0	0	0	0	0	0	0	0	0	388	1295	236	
NO ATTIC EXPOSED CLG	2.6	1.3	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	0	
EXPOSED FLOOR	2.4	0.4	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	0	
BASEMENT/CRAWL HEAT LOSS																													
SLAB ON GRADE HEAT LOSS																													
SUBTOTAL HT LOSS																													
SUB TOTAL HT GAIN																													
LEVEL FACTOR / MULTIPLIER			0.30	0.42		0.30	0.42		0.30	0.42		0.30	0.42	0.20	0.25		0.30	0.42		0.30	0.42		0.30	0.42					
AIR CHANGE HEAT LOSS																													
AIR CHANGE HEAT GAIN																													
DUCT LOSS																													
DUCT GAIN																													
HEAT GAIN PEOPLE																													
HEAT GAIN APPLIANCES/LIGHTS																													
TOTAL HT LOSS BTU/H																													
TOTAL HT GAIN x 1.3 BTU/H																													

TOTAL HEAT GAIN BTU/H:	35960	TONS: 3.00	LOSS DUE TO VENTILATION LOAD BTU/H: 1819	STRUCTURAL HEAT LOSS: 50178	TOTAL COMBINED HEAT LOSS BTU/H: 51997
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Michael K. Rourke

SITE NAME: RUSSEL GARDENS PHASE 3
BUILDER: GREENPARK HOMES

LOT 222
TYPE: MOUNTAINASH 5

DATE: Dec-20

GFA: 3288 LO# 88542

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 50,178 TOTAL HEAT GAIN 35,650
AIR FLOW RATE CFM 22.54 AIR FLOW RATE CFM 31.72

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

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	14	8	4
R/A	0	0	6	2	1

plenum pressure s/a 0.18 r/a pressure 0.17
max s/a diff press. loss 0.03 r/a grille press. Loss 0.02
min adjusted pressure s/a 0.15 adjusted pressure r/a 0.15

MEDLOW
MEDIUM 928
MEDIUM HIGH 1017
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"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	WIC	BED-3	BED-4	BED-5	ENS-3	BED-2	WIC-4	MBR	ENS-2	FAM	L/D	K/B	K/B	L/H	LND	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.30	2.14	0.54	1.68	1.40	1.14	0.79	1.49	0.65	1.30	0.52	3.01	2.66	1.76	1.76	1.41	0.97	1.55	2.40	2.10	4.14	4.14	4.14	4.14
CFM PER RUN HEAT	29	48	12	38	32	26	18	34	15	29	12	68	60	40	40	32	22	35	54	47	93	93	93	93
RM GAIN MBH	1.89	1.42	0.18	2.07	1.90	1.90	0.33	1.94	0.68	1.89	0.35	3.45	2.45	2.30	2.30	1.42	1.28	1.45	0.75	0.50	0.30	0.30	0.30	0.30
CFM PER RUN COOLING	60	45	6	66	60	60	11	62	22	60	11	109	78	73	73	45	41	46	24	16	10	10	10	10
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.15	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	37	54	39	59	58	34	34	51	45	39	39	22	10	40	31	27	20	33	41	44	38	33	5	31
EQUIVALENT LENGTH	190	130	150	130	170	200	220	160	110	130	150	140	130	150	160	140	180	110	90	140	140	140	140	130
TOTAL EFFECTIVE LENGTH	227	184	189	189	226	234	254	211	155	169	189	162	140	190	191	167	200	143	131	184	178	173	145	161
ADJUSTED PRESSURE	0.08	0.09	0.09	0.09	0.08	0.07	0.07	0.08	0.11	0.1	0.09	0.09	0.12	0.09	0.09	0.1	0.09	0.12	0.13	0.09	0.09	0.09	0.11	0.1
ROUND DUCT SIZE	5	5	4	5	5	6	4	6	4	5	4	6	6	5	5	5	4	4	5	5	6	6	6	6
HEATING VELOCITY (ft/min)	213	352	138	279	235	133	207	173	172	213	138	347	306	294	294	235	252	402	396	345	474	474	474	474
COOLING VELOCITY (ft/min)	441	330	69	485	441	306	126	316	252	441	126	556	398	536	536	330	470	528	176	117	51	51	51	51
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	B	A	B	D	C	C	C	A	D	B	D	B	D	A	A	C	B	C	C	A	A	B	D	C

RUN #	25	26
ROOM NAME	BED-3	BED-4
RM LOSS MBH	1.68	1.40
CFM PER RUN HEAT	38	32
RM GAIN MBH	2.07	1.90
CFM PER RUN COOLING	66	60
ADJUSTED PRESSURE	0.17	0.17
ACTUAL DUCT LGH	52	48
EQUIVALENT LENGTH	120	170
TOTAL EFFECTIVE LENGTH	172	218
ADJUSTED PRESSURE	0.1	0.08
ROUND DUCT SIZE	5	5
HEATING VELOCITY (ft/min)	279	235
COOLING VELOCITY (ft/min)	485	441
OUTLET GRILL SIZE	3X10	3X10
TRUNK	D	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	302	0.08	9	10	x	8	544		TRUNK G	0	0.00	0	0	x	8	0	TRUNK O	0	0.05	0	0	x	8	0
TRUNK B	555	0.08	11.2	14	x	8	714		TRUNK H	0	0.00	0	0	x	8	0	TRUNK P	0	0.05	0	0	x	8	0
TRUNK C	322	0.07	9.5	10	x	8	580		TRUNK I	0	0.00	0	0	x	8	0	TRUNK Q	0	0.05	0	0	x	8	0
TRUNK D	578	0.07	11.8	16	x	8	650		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	1041	0.05	16	30	x	8	625
																	TRUNK Y	695	0.05	13.8	22	x	8	569
																	TRUNK Z	445	0.05	11.6	16	x	8	501
																	DROP	1131	0.05	16.5	24	x	10	679

RETURN AIR #	1	2	3	4	5	6	7	8							BR
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AIR VOLUME	90	85	90	90	85	75	360	85	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
ACTUAL DUCT LGH.	41	52	53	58	53	59	45	41	1	1	1	1	1	1	15
EQUIVALENT LENGTH	185	195	165	165	215	265	165	190	0	0	0	0	0	0	150
TOTAL EFFECTIVE LH	226	247	218	223	268	324	210	231	1	1	1	1	1	1	165
ADJUSTED PRESSURE	0.07	0.06	0.07	0.07	0.06	0.05	0.07	0.06	14.80	14.80	14.80	14.80	14.80	14.80	0.09
ROUND DUCT SIZE	5.9	6	5.9	5.9	6	6	9.9	6	0	0	0	0	0	0	7
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	0	0	0	0	0	8
	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	14	0	0	0	0	0	0	14

TYPE: MOUNTAINASH 5
SITE NAME: RUSSEL GARDENS PHASE 3

LO # 88542
LOT 222

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>4</u> @ 10.6 cfm <u>42.4</u> cfm	
Kitchen & Bathrooms	<u>5</u> @ 10.6 cfm <u>53</u> cfm	
Other Rooms	<u>7</u> @ 10.6 cfm <u>74.2</u> cfm	
Table 9.32.3.A.	TOTAL <u>212.0</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	95.4 cfm	

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>212</u> cfm	
Less Principal Ventill. Capacity	<u>95.4</u> cfm	
Required Supplemental Capacity	<u>116.6</u> cfm	

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

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
95.4 CFM	X 71 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		PANASONIC		
Location	Model	cfm	HVI	Sonos
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		
<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:	December-20

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

LO#: 88542

Model: MOUNTAINASH 5

Builder: GREENPARK HOMES

Date: 07/12/2020

Volume Calculation
House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	1452	8	11616
First	1452	10	14520
Second	1846	9	16614
Third	0	9	0
Fourth	0	9	0
Total:			42,750.0 ft³
Total:			1210.5 m³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.305
SUMMER NATURAL AIR CHANGE RATE	0.109

Design Temperature Difference				
	Tin °C	Tout °C	ΔT °C	ΔT °F
Winter DTDh	22	-17	39	71
Summer DTDc	24	31	7	13

5.2.3.1 Heat Loss due to Air Leakage

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

0.305 x 336.26 x 39 °C x 1.2 = 4824 W

= 16458 Btu/h

6.2.6 Sensible Gain due to Air Leakage

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

= 0.109 x 336.26 x 7 °C x 1.2 = 313 W

= 1068 Btu/h

5.2.3.2 Heat Loss due to Mechanical Ventilation

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

95 CFM x 71 °F x 1.08 x 0.25 = 1819 Btu/h

6.2.7 Sensible heat Gain due to Ventilation

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

95 CFM x 13 °F x 1.08 x 0.25 = 330 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)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{clevel})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HL _{clevel})
1	0.5	16,458	8,315	0.990
2	0.3		11,702	0.422
3	0.2		13,131	0.251
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:	MOUNTAINASH 5	LOT 222	BUILDER:	GREENPARK HOMES
SFQT:	3288	LO# 88542	SITE:	RUSSEL GARDENS PHASE 3

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	1	OUTDOOR DESIGN TEMP.	88
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:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	42750.0	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:	5.5 ft
LENGTH: 54.0 ft	WIDTH: 36.0 ft	EXPOSED PERIMETER:	155.0 ft

2012 OBC - COMPLIANCE PACKAGE		Compliance Package A1	
Component		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	-

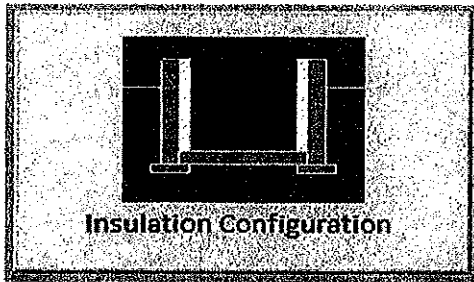
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

Michael O'Rourke

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

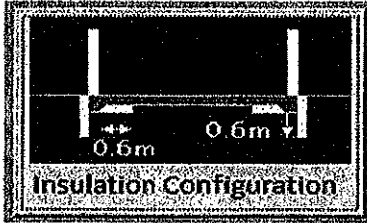
Weather Station Description		
Province:	Ontario	
Region:	Hamilton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	16.5	 Insulation Configuration
Floor Width (m):	11.0	
Exposed Perimeter (m):	47.2	
Wall Height (m):	2.4	
Depth Below Grade (m):	1.68	
Window Area (m ²):	1.4	
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):		1413

TYPE: MOUNTAINASH 5
LO# 88542

LOT 222

Residential Slab on Grade Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Hamilton	
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	 Insulation Configuration
Width (m):	4.6	
Exposed Perimeter (m):	7.6	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		64

TYPE: MOUNTAINASH 5
LO# 88542

LOT 222

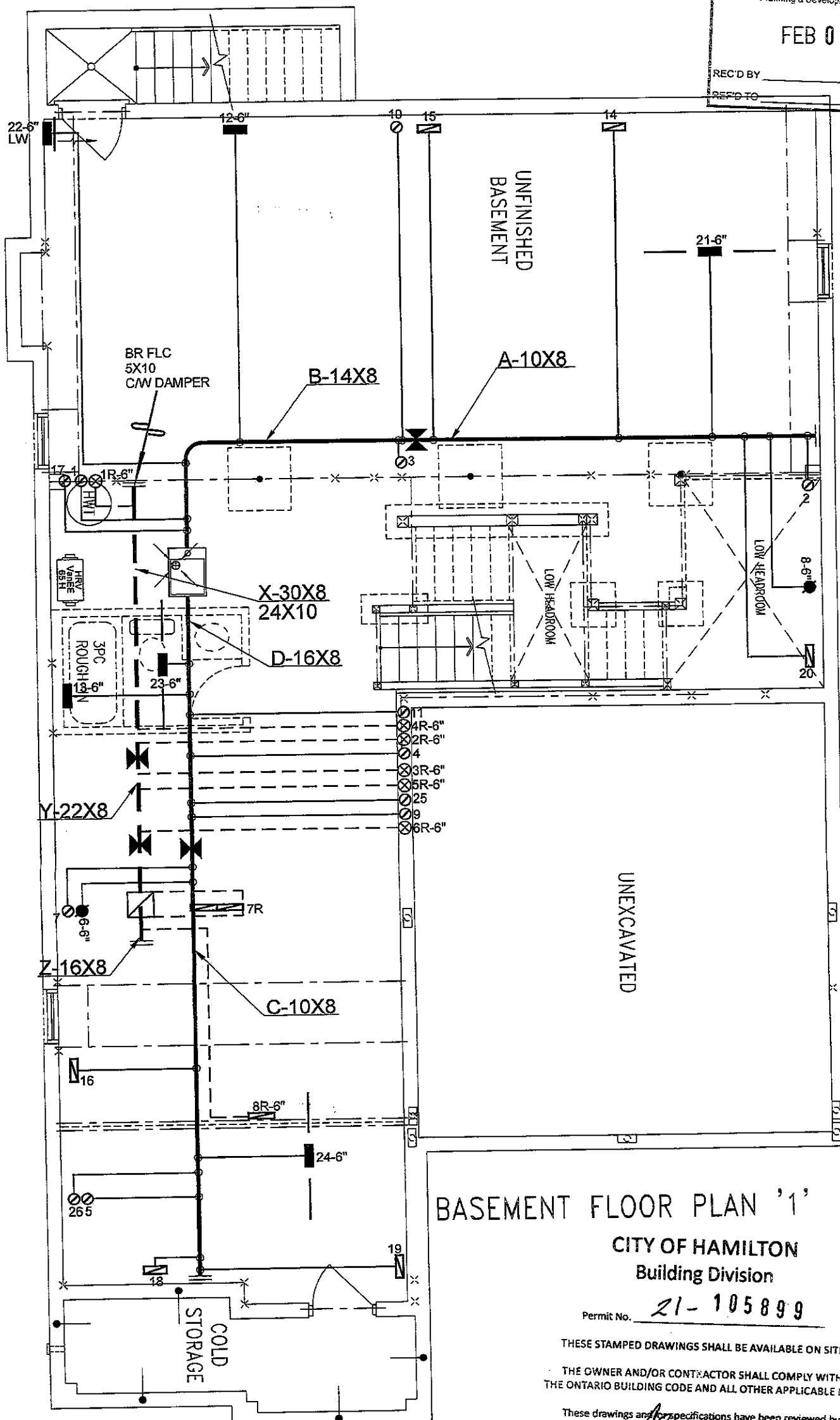
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description			
Province:	Ontario		
Region:	Hamilton		
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):	6.55		
Building Configuration			
Type:	Detached		
Number of Stories:	Two		
Foundation:	Full		
House Volume (m ³):	1210.5		
Air Leakage/Ventilation			
Air Tightness Type:	Present (1961-) (3.57 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1613.7 cm ²	
	3.57	ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust	
	45.0	45.0	
Flue Size			
Flue #:	#1	#2	#3
Diameter (mm):	0	0	0
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.305		
Cooling Air Leakage Rate (ACH/H):	0.109		

TYPE: MOUNTAINASH 5
LO# 88542

LOT 222



Permit No. 21-105899

These drawings and specifications have been reviewed by

WKS 02/19/71

FOR CHIEF BUILDING OFFICIAL DATE

LOT 222
WUB
CSA-F280-12
PACKAGE A1

Michael O'Rourke
Michael O'Rourke, BCIN# 19609
HVAC DESIGNS LTD.

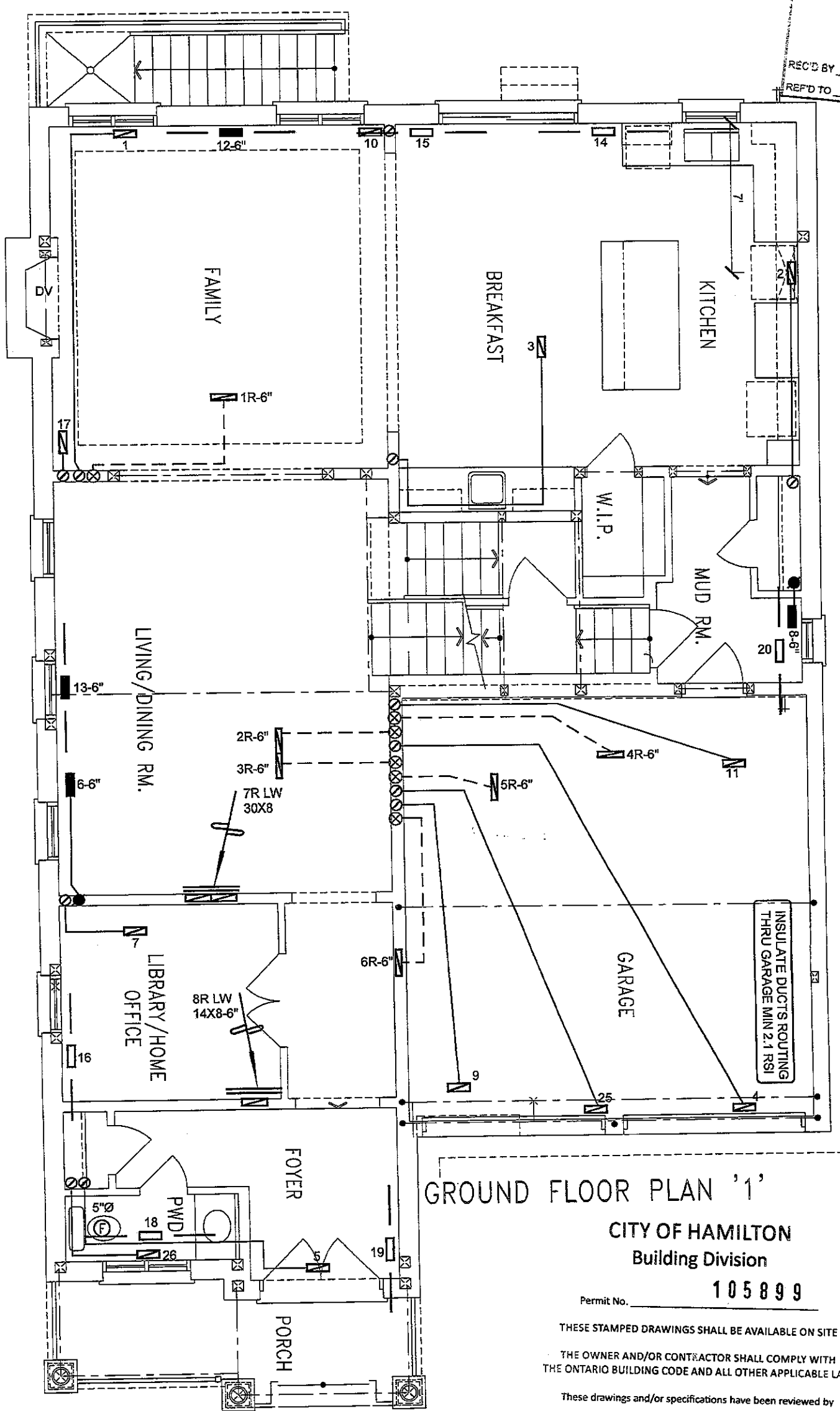
Michael O'Rourke, BCMP 19669 HVAC DESIGNS LTD.		HVAC LEGEND						3.		
SYMBOL		DESCRIPTION		SYMBOL		DESCRIPTION		2.		
		SUPPLY AIR GRILLE				6" SUPPLY AIR BOOT ABOVE		1.		
		SUPPLY AIR GRILLE 8" BOOT				30"x6" RETURN AIR GRILLE		No.	Description	Date
		SUPPLY AIR STACK FROM 2nd FLOOR				RETURN AIR STACK 2nd FLOOR		REVISIONS		
		6" SUPPLY AIR STACK 2nd FLOOR				FRA- FLOOR RETURN AIR GRILLE				
		REDUCER								

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Client GREENPARK HOMES		 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		HEAT LOSS 51996 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS		Sheet Title BASEMENT HEATING LAYOUT	
Project Name RUSSEL GARDENS PHASE 3 HAMILTON, ONTARIO		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.		MAKE GOODMAN		3RD FLOOR		Date DEC/2020	
LOT 222 MOUNTAINASH 5 3288 sqft				MODEL GMEC960603BNA		2ND FLOOR 14 6 3		Scale 3/16" = 1'-0"	
				INPUT 60 MBTU/H		1ST FLOOR 8 2 2		BCIN# 19669	
				OUTPUT 57.6 MBTU/H		BASEMENT 4 1 0		LO# 88542	
				COOLING 3.0 TONS		ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5' UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A			
				FAN SPEED 1131 cfm @ 0.6" w.g.					

FEB 04 2021

REC'D BY _____ DATE _____
REF'D TO _____ DATE _____



GROUND FLOOR PLAN '1'

CITY OF HAMILTON
Building Division

Permit No. 105899

THESE STAMPED DRAWINGS SHALL BE AVAILABLE ON SITE
THE OWNER AND/OR CONTRACTOR SHALL COMPLY WITH
THE ONTARIO BUILDING CODE AND ALL OTHER APPLICABLE LAW
These drawings and/or specifications have been reviewed by

FOR CHIEF BUILDING OFFICIAL _____ DATE _____

LOT 222
WUB
CSA-F280-12
PACKAGE A1

I MICHAEL O'Rourke HAVE REVIEWED
AND TAKE RESPONSIBILITY FOR THE
DESIGN WORK AND AM QUALIFIED
UNDER DIVISION C.32.3 OF THE
BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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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ONTARIO BUILDING CODE.

Client
GREENPARK HOMES
Project Name
**RUSSEL GARDENS PHASE 3
HAMILTON, ONTARIO**
**LOT 222
MOUNTAINASH 5 3288 sqft**

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.

Sheet Title
**FIRST FLOOR
HEATING
LAYOUT**
Date **DEC/2020**
Scale **3/16" = 1'-0"**
BCIN# 19669
LO# 88542

CITY OF HAMILTON
BUILDING DIVISION
Planning & Development Department

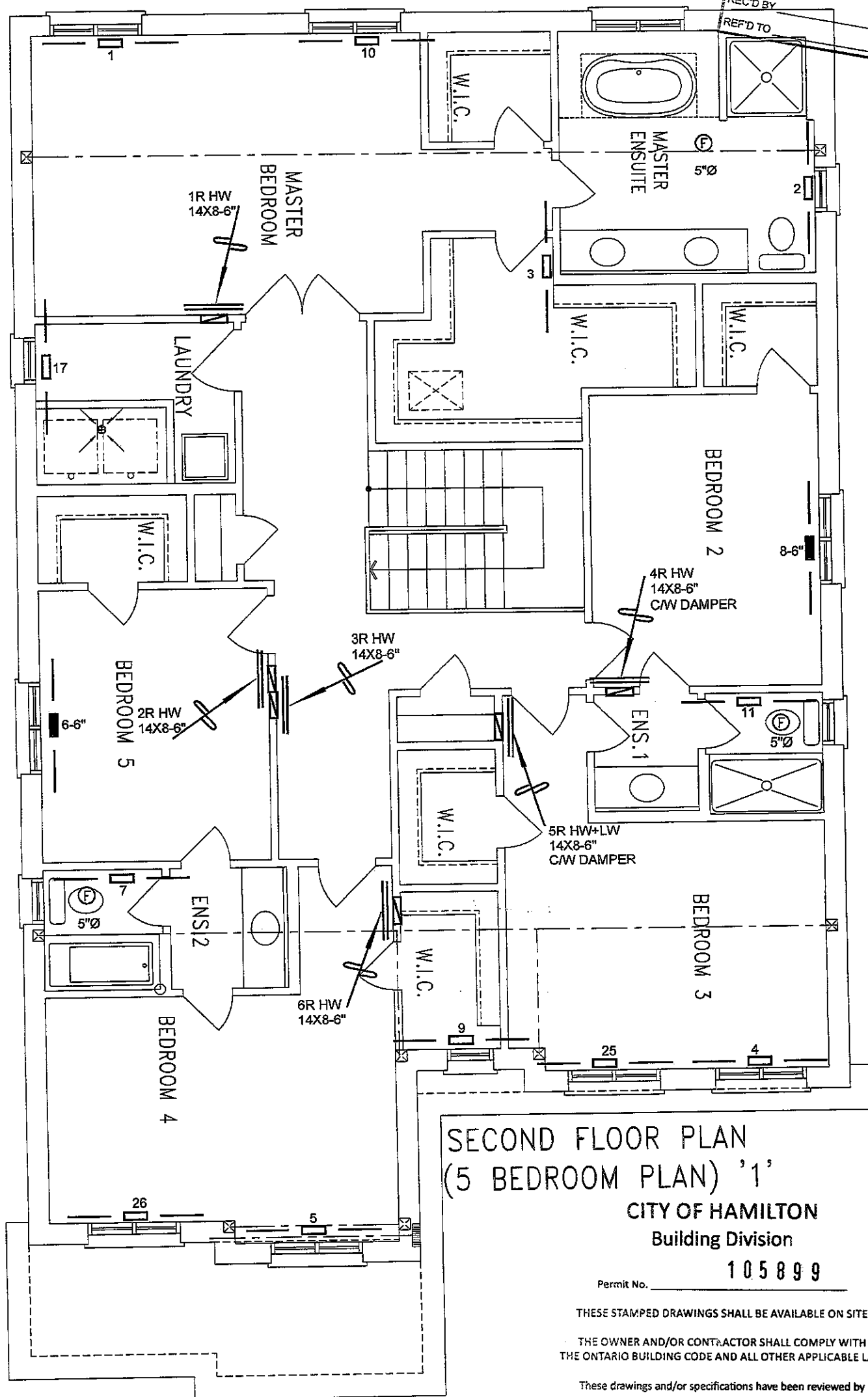
FEB 04 2021

REC'D BY

REF'D TO

DATE

DATE



SECOND FLOOR PLAN
(5 BEDROOM PLAN) '1'

CITY OF HAMILTON
Building Division

105899

Permit No.

THESE STAMPED DRAWINGS SHALL BE AVAILABLE ON SITE

THE OWNER AND/OR CONTRACTOR SHALL COMPLY WITH
THE ONTARIO BUILDING CODE AND ALL OTHER APPLICABLE LAW

These drawings and/or specifications have been reviewed by

FOR CHIEF BUILDING OFFICIAL

DATE

LOT 222
WUB
CSA-F280-12
PACKAGE A1

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

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

No.	Description	Date
3.		
2.		
1.		
No.		

REVISIONS

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ONTARIO BUILDING CODE.

Client
GREENPARK HOMES

Project Name
**RUSSEL GARDENS PHASE 3
HAMILTON, ONTARIO**

**LOT 222
MOUNTAINASH 5 3288 sqft**

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Ductwork which passes through the garage or unheated spaces shall be
adequately insulated and be gas-proofed.

Sheet Title
**SECOND FLOOR
HEATING
LAYOUT**

Date **DEC/2020**

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

BCIN# 19669

LO# **88542**