

SITE NAME: RUSSEL GARDENS
BUILDER: GREENPARK HOMES
DATE: Jul-17
LO# 75034
GFA: 2399
TYPE: HIGHGROVE 12
WINTER NATURAL AIR CHANGE RATE 0.409
SUMMER NATURAL AIR CHANGE RATE 0.142
HEAT LOSS AT °F. 71
HEAT GAIN AT °F. 13
CSA-F280-12
SB-12 PACKAGE A1

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	KIT/FM	BED-2	BED-3	BED-4	BATH	ENS-2	WINTER NATURAL AIR CHANGE RATE	SUMMER NATURAL AIR CHANGE RATE	HEAT LOSS AT °F.	HEAT GAIN AT °F.
GRS.WALL AREA	279		279	81		90	295	152	90	0				
GLAZING														
NORTH	19.8	16.0	0	0	0	0	0	0	0	0				
EAST	19.8	41.5	0	0	0	0	0	0	0	0				
SOUTH	19.8	24.9	24	0	0	24	474	997	40	0				
WEST	19.8	41.6	24	0	0	0	0	21	415	523				
SKYLT.	34.6	101.5	0	0	0	0	0	0	0	0				
DOORS	23.5	4.3	0	0	0	0	0	0	0	0				
NET EXPOSED WALL	4.1	0.8	231	958	174	62	257	47	83	344				
NET EXPOSED BSMT WALL ABOVE GR	3.3	0.6	0	0	0	0	0	0	0	0				
EXPOSED CLG	1.2	0.6	240	286	141	117	139	69	100	119				
NO ATTIC EXPOSED CLG	2.6	1.3	0	0	0	0	0	0	0	0				
EXPOSED FLOOR	2.4	0.4	0	0	0	0	0	0	0	0				
BASEMENT/CRAWL HEAT LOSS			0	0	0	135	320	58	0	0				
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0	0				
SUBTOTAL HT LOSS	2193		1909	772	905	1265	2423	1222	637	247				
SUB TOTAL HT GAIN			0.20	0.36		0.20	0.36		0.20	0.36				
LEVEL FACTOR / MULTIPLIER	800		800	282		461	884	446	233	90				
AIR CHANGE HEAT LOSS	176		0	0	83	173	0	0	0	34				
AIR CHANGE HEAT GAIN			0	0	0	0	0	0	0	0				
DUCT LOSS			0	0	0	1	240	1	0	0				
DUCT GAIN			480	0	0	0	0	0	0	0				
HEAT GAIN PEOPLE	240		2	0	0	0	0	0	0	0				
HEAT GAIN APPLIANCES/LIGHTS			449	0	0	0	0	0	0	0				
TOTAL HT LOSS BTU/H	2993		2993	1054	1265	1899	3308	1668	870	371				
TOTAL HT GAIN x 1.3 BTU/H	3918		3918	1265	1265	2862	4421	1892	445	128				

ROOM USE	EXP. WALL	CLG. HT.	OFF	DIN	KIT/FM	LAUN	WIR	FOY	WOD	BAS
GRS.WALL AREA	370		370	290	420		60	160	225	918
GLAZING										
NORTH	19.8	16.0	0	0	0	0	0	0	0	0
EAST	19.8	41.5	37	0	0	0	0	0	0	0
SOUTH	19.8	24.9	25	0	0	0	0	0	0	0
WEST	19.8	41.6	0	0	0	0	0	0	0	0
SKYLT.	34.6	101.5	0	0	0	0	0	0	0	0
DOORS	23.5	4.3	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.1	0.8	308	1277	231	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.3	0.6	0	0	0	0	0	0	0	0
EXPOSED CLG	1.2	0.6	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.6	1.3	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.4	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	2502		2391	2166	3288	118	249	1571	600	4412
SUB TOTAL HT GAIN			0.30	0.50		0.20	0.36			
LEVEL FACTOR / MULTIPLIER	1244		1244	1077	1634	43	124	781	337	5522
AIR CHANGE HEAT LOSS	220		0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN			0	0	0	0	0	0	0	0
DUCT LOSS			0	0	0	0	0	0	0	0
DUCT GAIN			0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240		0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			449	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	3746		3746	3243	4922	161	372	2351	600	13619
TOTAL HT GAIN x 1.3 BTU/H	3919		3919	2261	6057	665	4421	404	438	1323

TOTAL HEAT GAIN BTU/H: 30623
TONS: 2.55
TOTAL COMBINED HEAT LOSS BTU/H: 43825
STRUCTURAL HEAT LOSS: 41176
HEAT LOSS DUE TO VENTILATION LOAD BTU/H: 2650
TOTAL COMBINED HEAT LOSS BTU/H: 43825

Michael O'Rourke

SITE NAME: RUSSEL GARDENS
BUILDER: GREENPARK HOMES

TYPE: HIGHGROVE 12

DATE: JUL-17

GFA: 2309 LO# 75034

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 41,176 TOTAL HEAT GAIN 30,142
AIR FLOW RATE CFM 27.47 AIR FLOW RATE CFM 37.52

#GOODMAN
GMEC960603BNA 60
FAN SPEED LOW
MEDIUM HIGH

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

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	10	8	4
R/A	0	0	4	2	1

All S/A diffusers 4"x10" unless noted otherwise on layout.

All S/A fans 5'x2' unless noted otherwise on layout.

ROOM NAME	1	2	3	4	5	6	7	8	10	12	13	14	15	16	17	18	19	20	21	22	23	24
MBR	1.50	1.05	1.65	1.90	1.65	1.67	0.87	0.37	1.50	1.87	3.24	1.64	1.64	1.64	1.64	0.16	0.37	2.35	1.87	3.55	3.55	BAS
RM LOSS MBH	41	29	45	52	45	46	24	10	41	51	89	45	45	45	4	10	65	51	98	98	98	BAS
CFM PER RUN HEAT	1.96	1.28	2.21	2.86	2.21	1.89	0.44	0.13	1.96	1.99	2.26	2.02	2.02	2.02	0.67	0.06	0.40	1.99	0.44	0.44	0.44	BAS
RM GAIN MBH	74	48	83	107	83	71	17	5	74	75	85	76	76	76	25	2	15	75	17	17	17	BAS
CFM PER RUN COOLING	0.17	0.17	0.16	0.15	0.16	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	BAS
ADJUSTED PRESSURE	38	47	48	43	40	27	30	28	43	23	4	14	31	40	29	20	7	31	33	14	12	19
EQUIVALENT LENGTH	130	150	150	150	130	150	130	130	160	120	130	130	110	130	160	80	140	110	130	90	110	130
TOTAL EFFECTIVE LENGTH	168	197	208	193	170	177	160	158	203	143	134	94	141	170	189	100	147	141	163	104	122	149
ADJUSTED PRESSURE	0.1	0.09	0.08	0.08	0.1	0.1	0.11	0.11	0.08	0.12	0.12	0.18	0.12	0.1	0.09	0.17	0.12	0.12	0.1	0.16	0.13	0.11
ROUND DUCT SIZE	5	4	6	6	5	5	4	4	5	5	5	5	5	5	4	4	5	5	6	5	5	5
HEATING VELOCITY (ft/min)	301	333	229	265	330	338	275	115	301	374	653	558	558	558	46	115	477	374	500	720	720	720
COOLING VELOCITY (ft/min)	543	551	423	546	609	521	195	57	543	624	558	558	558	558	287	23	110	551	87	125	125	125
OUTLET GRILL SIZE	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10
TRUNK	C	D	A	B	A	D	B	B	C	A	D	D	C	C	C	B	B	A	C	D	B	A

ROOM NAME	1	2	3	4	5	6	7	8	10	12	13	14	15	16	17	18	19	20	21	22	23	24
RM LOSS MBH	41	29	45	52	45	46	24	10	41	51	89	45	45	45	4	10	65	51	98	98	98	BAS
CFM PER RUN HEAT	1.96	1.28	2.21	2.86	2.21	1.89	0.44	0.13	1.96	1.99	2.26	2.02	2.02	2.02	0.67	0.06	0.40	1.99	0.44	0.44	0.44	BAS
RM GAIN MBH	74	48	83	107	83	71	17	5	74	75	85	76	76	76	25	2	15	75	17	17	17	BAS
CFM PER RUN COOLING	0.17	0.17	0.16	0.15	0.16	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	BAS
ADJUSTED PRESSURE	38	47	48	43	40	27	30	28	43	23	4	14	31	40	29	20	7	31	33	14	12	19
EQUIVALENT LENGTH	130	150	150	150	130	150	130	130	160	120	130	130	110	130	160	80	140	110	130	90	110	130
TOTAL EFFECTIVE LENGTH	168	197	208	193	170	177	160	158	203	143	134	94	141	170	189	100	147	141	163	104	122	149
ADJUSTED PRESSURE	0.1	0.09	0.08	0.08	0.1	0.1	0.11	0.11	0.08	0.12	0.12	0.18	0.12	0.1	0.09	0.17	0.12	0.12	0.1	0.16	0.13	0.11
ROUND DUCT SIZE	5	4	6	6	5	5	4	4	5	5	5	5	5	5	4	4	5	5	6	5	5	5
HEATING VELOCITY (ft/min)	301	333	229	265	330	338	275	115	301	374	653	558	558	558	46	115	477	374	500	720	720	720
COOLING VELOCITY (ft/min)	543	551	423	546	609	521	195	57	543	624	558	558	558	558	287	23	110	551	87	125	125	125
OUTLET GRILL SIZE	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10
TRUNK	C	D	A	B	A	D	B	B	C	A	D	D	C	C	C	B	B	A	C	D	B	A

SUPPLY 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	290	0.08	8.8	10	8	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK B	549	0.08	11.2	14	8	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK C	270	0.08	8.6	8	8	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK D	581	0.08	11.4	16	8	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK E	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
TRUNK F	0	0.00	0	0	0	0	0.00	0	0	0	0	0.00	0	0	0
RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AIR VOLUME	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
ACTUAL DUCT LGH	47	45	44	46	28	14	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	140	175	215	145	220	135	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	187	220	259	191	248	149	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.08	0.07	0.06	0.08	0.06	0.10	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	5.8	6	6	5.8	7.5	9	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
INLET GRILL SIZE	14	14	14	14	14	14	30	0	0	0	0	0	0	0	0

TYPE: HIGHGROVE 12
SITE NAME: RUSSEL GARDENS

LO # 75034

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	4 @ 10.6 cfm	42.4 cfm
Table 9.32.3.A. TOTAL		169.6 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	169.6	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	30.6	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 60H-V+	Location: BSMT
139.0 cfm	3.0 sones
☒ HVI Approved	

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

SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	☒	0.3
BATH	QTXEN050C	50	☒	0.3
W/R	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 60H-V+		
139	cfm high	50 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-17

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** HIGHGROVE 12**BUILDER:** GREENPARK HOMES**SFQT:** 2309**LO#** 75034**SITE:** RUSSEL GARDENS**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

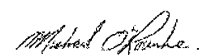
ATTACHMENT:	ATTACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	4.55	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	31341.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.20	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 53.0 ft	WIDTH: 25.0 ft	EXPOSED PERIMETER:	128.0 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	-

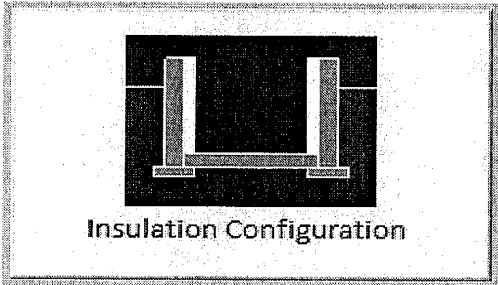
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	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):	16.2	 Insulation Configuration
Floor Width (m):	7.6	
Exposed Perimeter (m):	39.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	1.3	
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):		1205

TYPE: HIGHGROVE 12
LO# 75034

Air Infiltration Residential Load Calculator

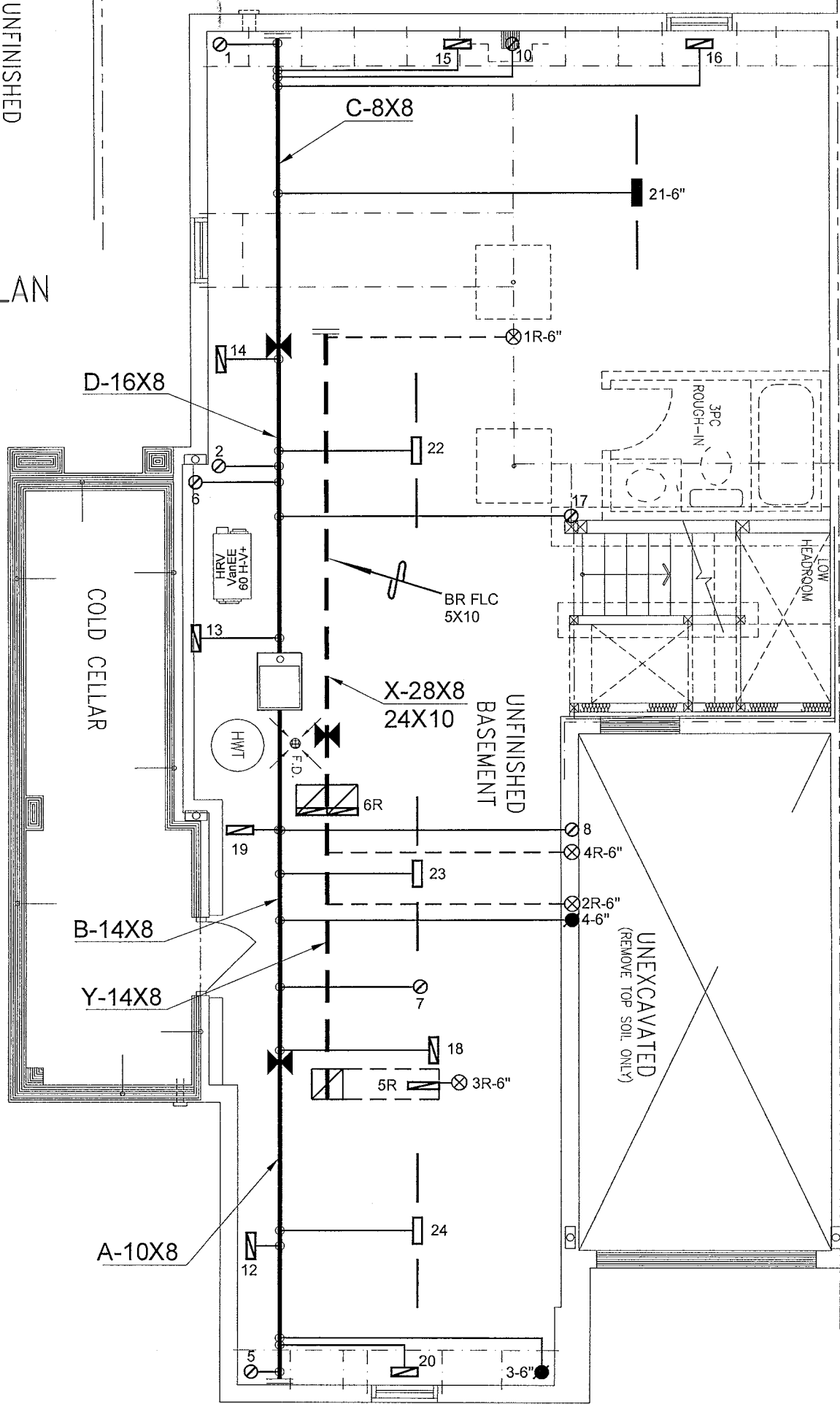
Supplemental tool for CAN/CSA-F280

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):	6.71			
Building Configuration				
Type:	Semi			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	887.5			
Air Leakage/Ventilation				
Air Tightness Type:	Average (1946-1960) (4.55 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1507.8 cm ²		
	4.55	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	65.6	65.6		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.409			
Cooling Air Leakage Rate (ACH/H):	0.142			

TYPE: HIGHGROVE 12

LO# 75034

PART. BASEMENT PLAN
W.O.D CONDITION



BASEMENT PLAN - ELEV. '1'

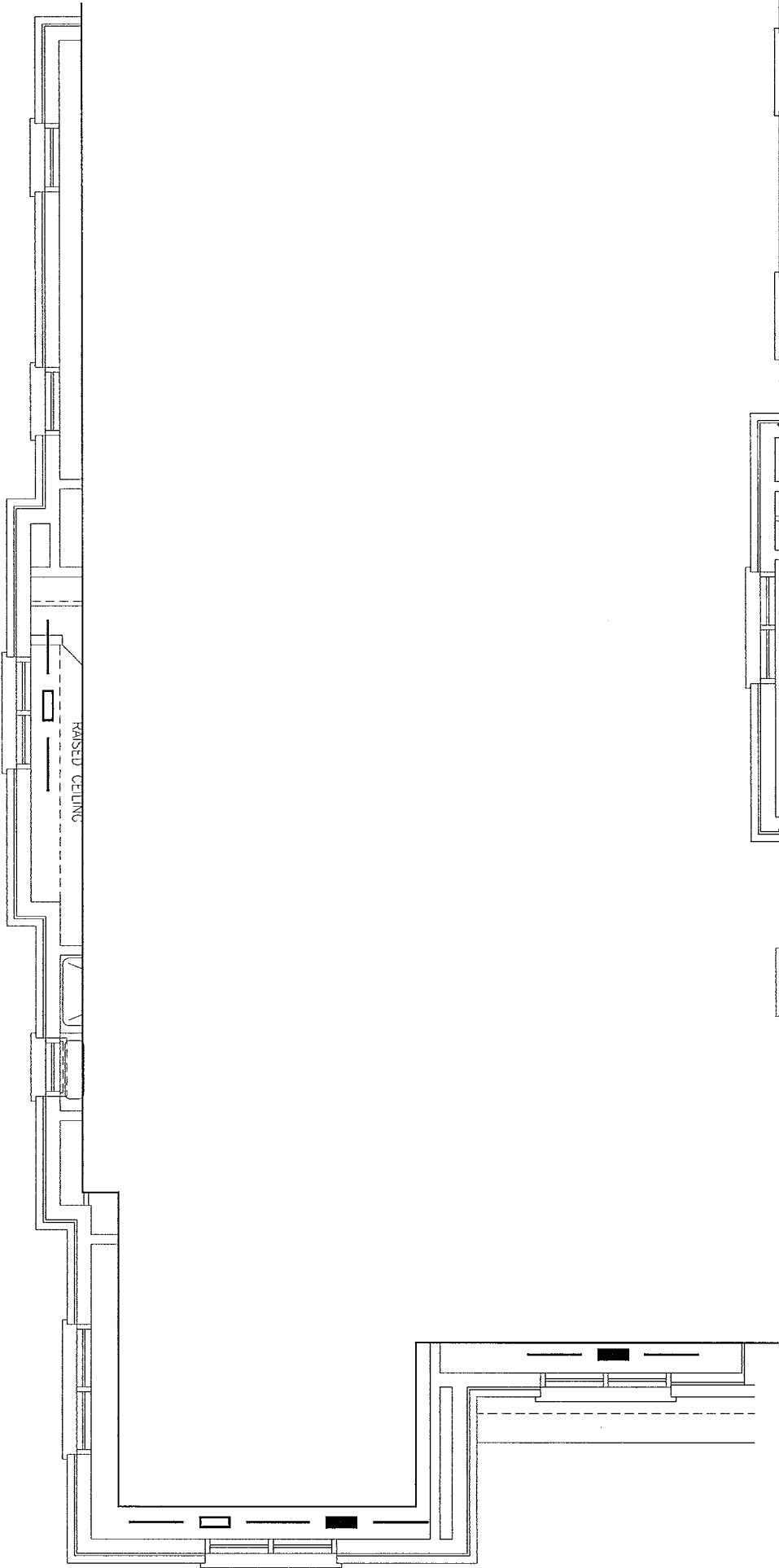
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.3.2.5 OF THE BUILDING CODE:
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE A1

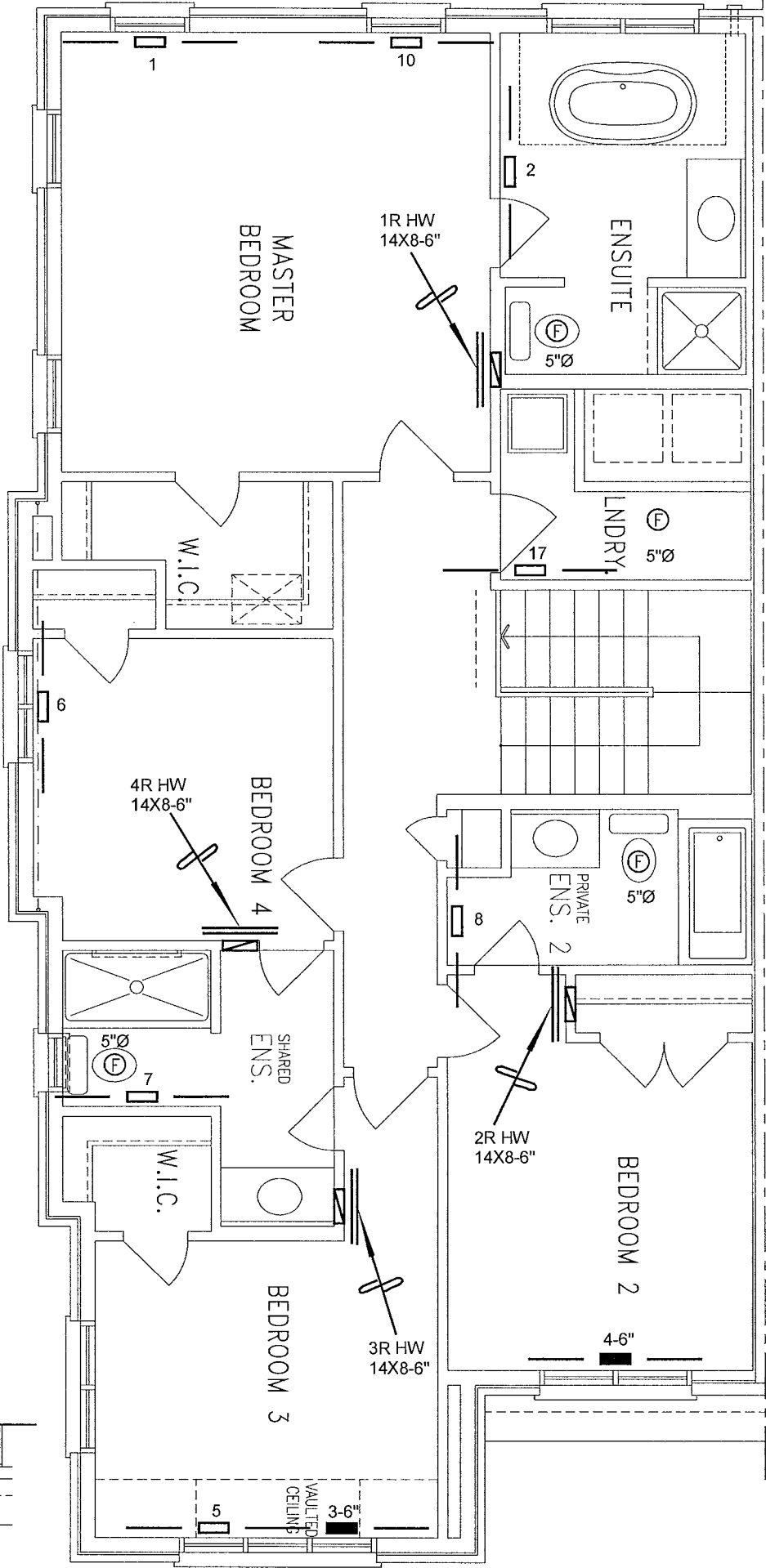
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE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

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Client		HVACDESIGNS 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.	HEAT LOSS 43825 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS				Sheet Title	
GREENPARK HOMES			MAKE GOODMAN	3RD FLOOR					BASEMENT HEATING LAYOUT	
Project Name RUSSEL GARDENS HAMILTON, ONTARIO			MODEL GMEC960603BNA-60	2ND FLOOR		10	4	4	Date JUL/2017	
HIGHGROVE 12 2309 sqft			INPUT 60 MBTU/H	1ST FLOOR		8	2	2	Scale 3/16" = 1'-0"	
			OUTPUT 57.6 MBTU/H	BASEMENT		4	1	0	BCIN# 19669	
		COOLING 2.5 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		LO# 75034					
		FAN SPEED 1131 cfm @ 0.5" w.c.								



SECOND FLOOR PLAN - ELEV. '2'



SECOND FLOOR PLAN - ELEV. '1'

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

CSA-F280-12
PACKAGE A1

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		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS	

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GREENPARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JUL/2017
RUSSEL GARDENS HAMILTON, ONTARIO			Scale	3/16" = 1'-0"
HIGHGROVE 12 2309 sqft			BCIN# 19669	
		LO#	75034	