

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information			
Building number, street name			Unit no.
Municipality RICHMOND HILL			Postal code
Plan number/ other description			Lot/con.
B. Individual who reviews and takes responsibility for design activities			
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 375 FINLEY AVE		Unit no. 202	Lot/con. N/A
Municipality AJAX	Postal code L1S 2E2	Province ONTARIO	E-mail info@hvacdsgns.ca
Telephone number (905) 619-2300	Fax number (905) 619-2375	Cell number ()	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]			
☐ House ☐ Small Buildings ☐ Large Buildings ☐ Complex Buildings ☒ HVAC – House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection ☐ Building Structural ☐ Plumbing – House ☐ Plumbing – All Buildings ☐ On-site Sewage Systems			
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: 2010 FIN BSMT Project: CENTREFIELD (WEST GORMLEY)	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> (print name)		declare that (choose one as appropriate):	
☐ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____			
☒ I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: <u>19669</u> Basis for exemption from registration and qualification: <u>O.B.C SENTENCE 3.2.4.1 (4)</u>			
☐ The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____			
I certify that:			
1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm.			
September 10, 2021 Date		 Signature of Designer	

NOTE:

- For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d) of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

SITE NAME: CENTREFIELD (WEST GORMLEY)			FIN BSMT		DATE: Sep-21		WINTER NATURAL AIR CHANGE RATE		HEAT LOSS AT °F.		CSA-F280-12	
BUILDER: ROYAL PINE HOMES			TYPE: 2010		LO# 87541		SUMMER NATURAL AIR CHANGE RATE		HEAT GAIN AT °F.		SB-12 PERFORMANCE	
ROOM USE			ENS		BED-2		BED-3		BATH		B-BATH	
EXP. WALL			22		10		0		42		0	
CLG. HT.			9		9		11		9		10	
FACTORS			198		90		462		0		0	
GRS.WALL AREA			LOSS		LOSS		LOSS		LOSS		LOSS	
GLAZING			GAIN		GAIN		GAIN		GAIN		GAIN	
NORTH			21.8	16.0	0	0	0	0	0	0	0	0
EAST			21.8	41.6	0	0	0	0	0	0	0	0
SOUTH			21.8	24.9	0	0	23	501	73	0	0	0
WEST			21.8	41.6	32	697	1330	9	196	374	0	0
SKYLT.			35.8	101.2	0	0	0	0	0	0	0	0
DOORS			25.8	4.3	0	0	0	0	0	0	0	0
NET EXPOSED WALL			4.2	0.7	94	395	65	166	698	115	0	0
NET EXPOSED BMNT WALL ABOVE GR			3.7	0.6	0	0	0	0	0	0	0	0
EXPOSED CLG			1.3	0.6	298	392	175	105	138	62	0	0
NO ATTIC EXPOSED CLG			2.8	1.3	0	0	0	0	0	0	0	0
EXPOSED FLOOR			2.6	0.4	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			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
SUBTOTAL HT LOSS			1484	1570	1533	1561	3986	3305	225	63	305	0
SUB TOTAL HT GAIN			0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.50	0
LEVEL FACTOR / MULTIPLIER			295	304	310	310	791	45	45	314	1.03	0
AIR CHANGE HEAT LOSS			64	46	57	57	135	3	3	0	0	0
AIR CHANGE HEAT GAIN			0	0	187	187	478	27	27	0	0	0
DUCT LOSS			0	0	0	0	0	0	0	0	0	0
DUCT GAIN			2	480	0	0	240	1	240	0	0	0
HEAT GAIN PEOPLE			240	643	1	643	643	643	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			1779	3584	2059	3325	5255	6182	297	94	618	0
TOTAL HT LOSS BTU/H			1779	3584	1838	1520	6182	6182	297	94	618	0
TOTAL HT GAIN x 1.3 BTU/H			1779	3584	1838	1520	6182	6182	297	94	618	0

[illegible]

TOTAL HEAT GAIN BTU/H:

TONS: 2.47

LOSS DUE TO VENTILATION LOAD BTU/H- 1336

STRUCTURAL HEAT LOSS: 34663

TOTAL COMBINED HEAT LOSS BTU/H: 35999

SITE NAME: CENTREFIELD (WEST GORMLEY)
BUILDER: ROYAL PINE HOMES

FIN BSMIT

TYPE: 2010

DATE: Sep-21

GFA: 1742 LO# 87541

HEATING CFM 875 COOLING CFM 875
TOTAL HEAT LOSS 34,663 TOTAL HEAT GAIN 29,480
AIR FLOW RATE CFM 25.24 AIR FLOW RATE CFM 29.68AFUE = 97 %
INPUT (BTU/H) = 60,000
OUTPUT (BTU/H) = 58,000

**CARRIER

59TN6A-060-14V

FAN SPEED 60

LOW 820

MEDLOW 875

MEDIUM 0

MEDIUM HIGH 0

HIGH 1520

DESIGN CFM = 875

CFM @ .5" E.S.P.

TEMPERATURE RISE 61 °F

furnace pressure 0.6

furnace filter 0.05

a/c coil pressure 0.2

available pressure for s/a & r/a 0.35

plenum pressure s/a 0.18

max s/a diff press. loss 0.02

min adjusted pressure s/a 0.16

r/a grille press. loss 0.02

adjusted pressure r/a 0.15

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

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	4	5	6	7	10	13	14	15	17	18	19	20	21	22	23
ROOM NAME	MBR	ENS	BED-2	BED-3	BED-3	BATH	MBR	K/B/G	K/B/G	K/B/G	LAUND	PWD	FOY	FOY	BAS	BAS	B-BATH
RM LOSS MBH	0.89	1.84	2.06	2.63	2.63	0.30	0.89	2.07	2.07	2.07	1.10	1.22	2.70	2.70	2.96	2.96	0.62
CFM PER RUN HEAT	22	46	52	66	66	7	22	52	52	52	28	31	68	68	75	75	16
RM GAIN MBH	1.79	1.52	3.33	3.09	3.09	0.09	1.79	2.70	2.70	2.70	2.02	0.21	1.92	1.92	0.20	0.20	0.00
CFM PER RUN COOLING	53	45	99	92	92	3	53	80	80	80	60	6	57	57	6	6	0
ADJUSTED PRESSURE	0.17	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	40	25	48	55	46	29	33	4	19	24	41	22	34	36	39	22	9
EQUIVALENT LENGTH	110	130	130	190	170	150	110	150	150	170	190	160	110	130	160	160	140
TOTAL EFFECTIVE LENGTH	150	155	178	245	216	179	143	154	169	194	231	182	144	166	199	182	149
ADJUSTED PRESSURE	0.11	0.11	0.09	0.07	0.08	0.1	0.12	0.11	0.1	0.09	0.07	0.09	0.12	0.1	0.09	0.09	0.12
ROUND DUCT SIZE	5	4	6	6	6	4	5	5	5	5	5	4	5	5	5	5	4
HEATING VELOCITY (ft/min)	162	528	265	337	337	80	162	382	382	382	206	356	499	499	551	551	184
COOLING VELOCITY (ft/min)	389	516	505	469	469	34	389	587	587	587	441	69	419	419	44	44	0
OUTLET GRILL SIZE	3X10	3X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	C	C	B	A	A	B	C	B	C	C	B	B	A	A	C	C	B

RUN #	25
ROOM NAME	BAS
RM LOSS MBH	2.96
CFM PER RUN HEAT	75
RM GAIN MBH	0.20
CFM PER RUN COOLING	6
ADJUSTED PRESSURE	0.17
ACTUAL DUCT LGH.	35
EQUIVALENT LENGTH	120
TOTAL EFFECTIVE LENGTH	155
ADJUSTED PRESSURE	0.11
ROUND DUCT SIZE	5
HEATING VELOCITY (ft/min)	551
COOLING VELOCITY (ft/min)	44
OUTLET GRILL SIZE	3X10
TRUNK	A

SUPPLY AIR TRUNK SIZE	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	343	0.07	9.7	12	8	0.00	0	0	8
TRUNK B	529	0.07	11.4	16	8	0.00	0	0	8
TRUNK C	344	0.09	9.1	10	8	0.00	0	0	8
TRUNK D	0	0.00	0	0	8	0.00	0	0	8
TRUNK E	0	0.00	0	0	8	0.00	0	0	8
TRUNK F	0	0.00	0	0	8	0.00	0	0	8

RETURN AIR TRUNK SIZE	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK G	0	0.00	0	0	0
TRUNK H	0	0.00	0	0	0
TRUNK I	0	0.00	0	0	0
TRUNK J	0	0.00	0	0	0
TRUNK K	0	0.00	0	0	0
TRUNK L	0	0.00	0	0	0
TRUNK U	0	0.05	0	0	0
TRUNK V	0	0.05	0	0	0
TRUNK W	0	0.05	0	0	0
TRUNK X	770	0.05	14.3	24	8
TRUNK Y	490	0.05	12.1	18	8
TRUNK Z	0	0.05	0	0	8
DROP	875	0.05	15	24	10

TYPE: 2010
SITE NAME: CENTREFIELD (WEST GORMLEY)

LO # 87541
FIN BSMT

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	2 @ 10.6 cfm	21.2 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	1 @ 10.6 cfm	10.6 cfm
Table 9.32.3.A.	TOTAL	127.2 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		63.6 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	127.2	cfm
Less Principal Ventil. Capacity	63.6	cfm
Required Supplemental Capacity	63.6	cfm

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

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	$\Delta T \text{ } ^\circ\text{F}$	FACTOR	% LOSS
63.6 CFM	X 78 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		BY INSTALLING CONTRACTOR	
Location	Model	cfm	HVI
ENS	BY INSTALLING CONTRACTOR	50	☒
BATH	BY INSTALLING CONTRACTOR	50	☒
PWD	BY INSTALLING CONTRACTOR	50	☒

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: ROYAL PINE 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:	September-21

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																															
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																															
LO#: 87541	Model: 2010	Builder: ROYAL PINE HOMES	Date: 9/10/2021																																																												
Volume Calculation		Air Change & Delta T Data																																																													
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6.2.6 Sensible Gain due to Air Leakage																																																															
$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																																															
0.284	x	192.08	x																																																												
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			141 W																																																												
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			481 Btu/h																																																												
6.2.7 Sensible heat Gain due to Ventilation																																																															
$HL_{vaib} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																															
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)																																																															
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{aglevel} + HL_{bglevel})\}$																																																															
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*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: 2010	FIN BSMT	BUILDER: ROYAL PINE HOMES
SFQT: 1742	LO# 87541	SITE: CENTREFIELD (WEST GORMLEY)

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:	3.00	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	24419.7	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 52.0 ft	WIDTH: 22.0 ft	EXPOSED PERIMETER:	120.0 ft

2012 OBC - COMPLIANCE PACKAGE**Component****Compliance Package
SB-12 PERFORMANCE****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	22+1.5	18.50
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	1.6	-
Skylights Maximum U-Value	2.6	-
Space Heating Equipment Minimum AFUE	0.96	-
HRV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	TE=94%	-

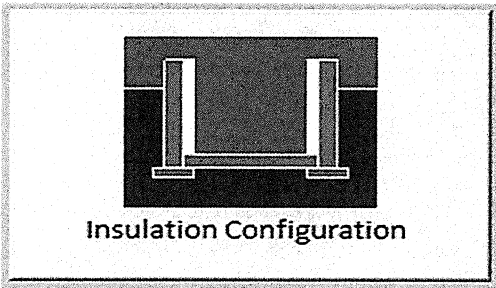
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Richmond Hill	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	15.8	 Insulation Configuration
Floor Width (m):	6.7	
Exposed Perimeter (m):	36.6	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	0.9	
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):		1156

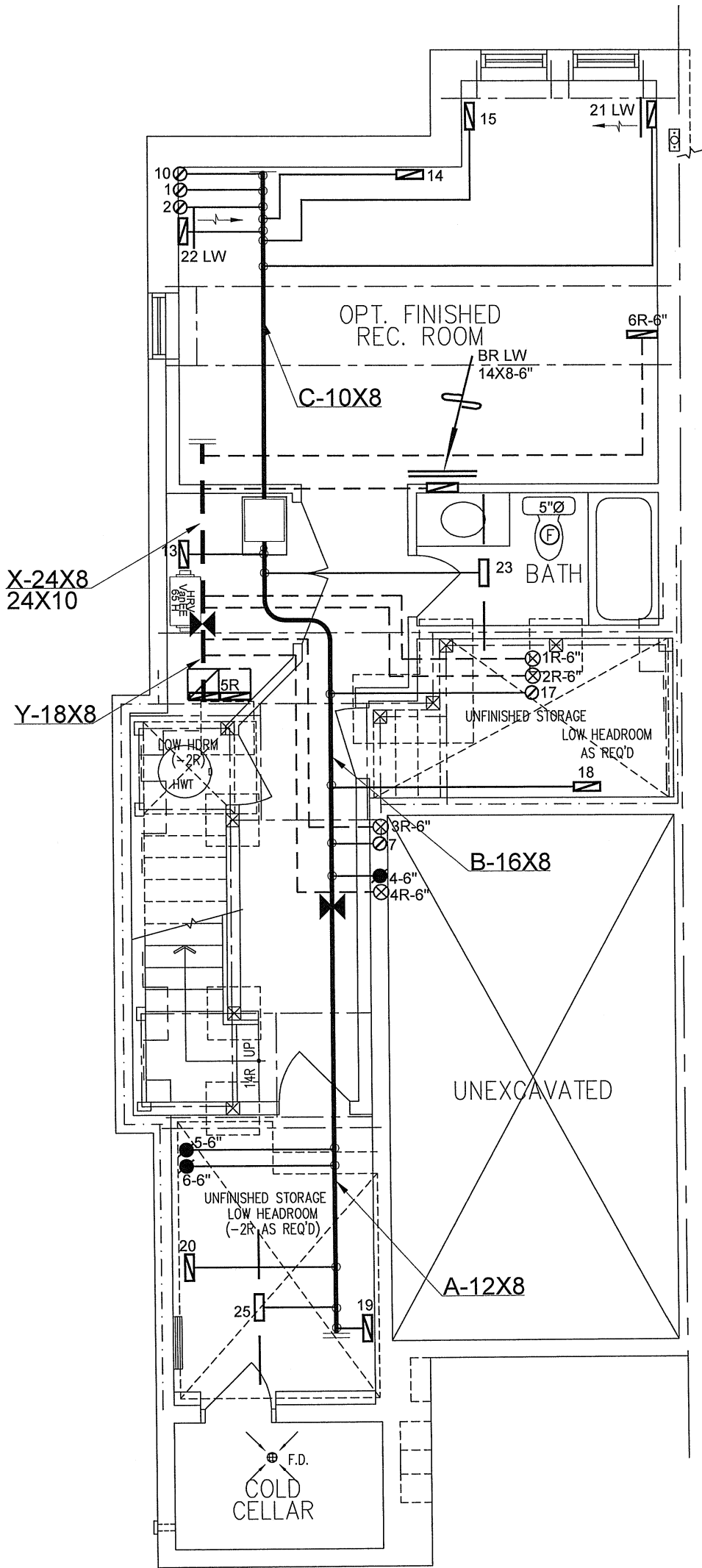
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Richmond Hill			
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):	6.74			
Building Configuration				
Type:	Semi			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	691.5			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Attached (3.0 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	774.6 cm ²		
	3.00	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):	0.284			
Cooling Air Leakage Rate (ACH/H):	0.086			

TYPE: 2010
LO# 87541

FIN BSMT



OPT. FINISHED
BASEMENT PLAN, EL. 'A' & 'B'

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.

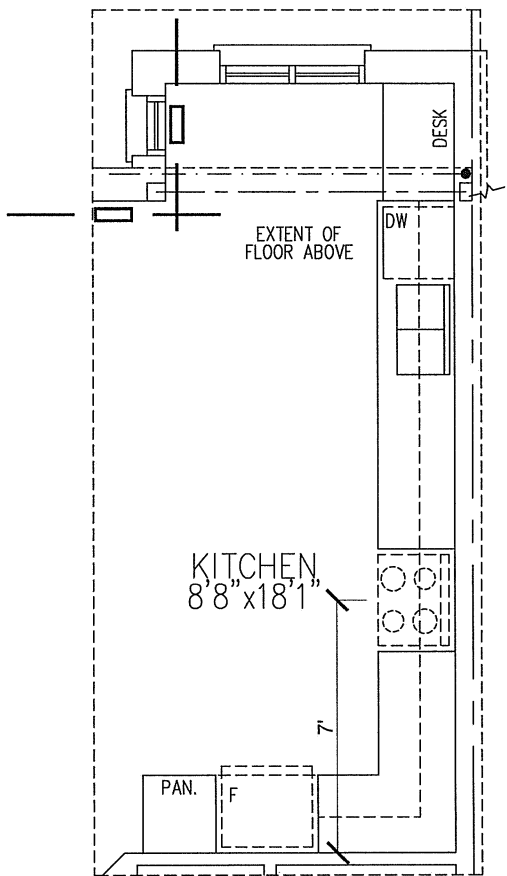
CSA-F280-12

SB-12 PERFORMANCE

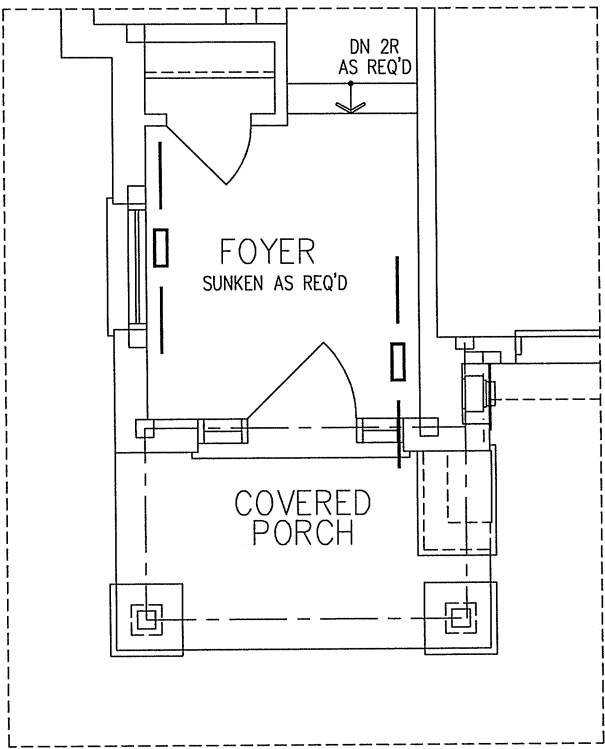
HVAC LEGEND								3.	REVISED ACH	SEPT/2021
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	REVISED TO PERFORMANCE	SEPT/2020
	SUPPLY 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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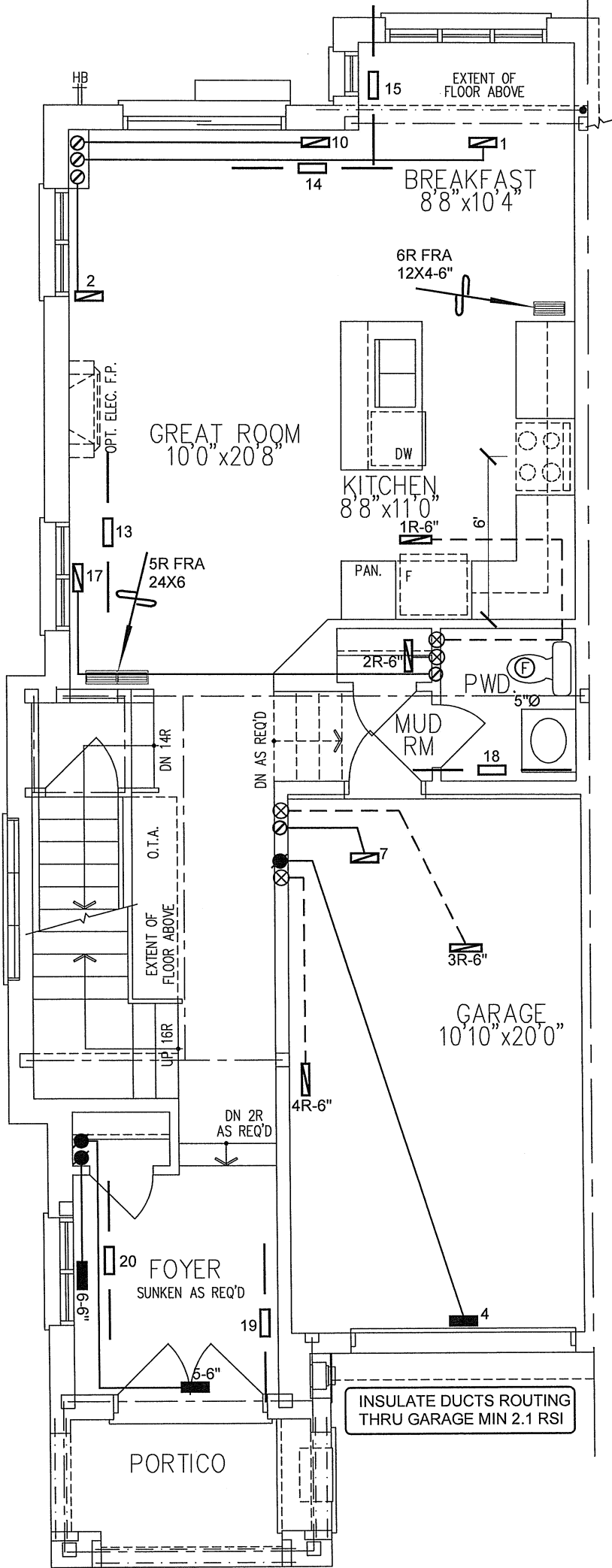
Client		HVACDESIGNS LTD. 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services Installation to comply with the latest Ontario Building Code. All supply 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 35999 BTU/H		# OF RUNS		S/A		R/A		FANS		Sheet Title BASEMENT HEATING LAYOUT	
ROYAL PINE HOMES			UNIT DATA		3RD FLOOR									
			MAKE		2ND FLOOR		8	4	2					
			MODEL		1ST FLOOR		6	2	2					
Project Name			59TN6A-060-14V		BASEMENT		4	1	1	Date		SEPT/2020		
CENTREFIELD (WEST GORMLEY) RICHMOND HILL, ONTARIO			60 MBTU/H		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"		BCIN# 19669			
			OUTPUT 58 MBTU/H								LO# 87541			
			COOLING 2.5 TONS											
		FAN SPEED 875 cfm @ 0.6" w.c.												
FIN BSMT 2010		1742 sqft												



PART. GROUND FLOOR PLAN
- OPT. KITCHEN LAYOUT



GROUND FLOOR PLAN, EL. 'B'



GROUND FLOOR PLAN, EL. 'A'

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

CSA-F280-12

SB-12 PERFORMANCE

HVAC LEGEND								3.	REVISED ACH	SEPT/2021
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
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	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 ROYAL PINE 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	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name CENTREFIELD (WEST GORMLEY) RICHMOND HILL, ONTARIO			Date SEPT/2020	
FIN BSMT 2010			Scale 3/16" = 1'-0"	
1742 sqft			BCIN# 19669	
			LO#	87541

SECOND FLOOR PLAN, EL. 'B'

SECOND FLOOR PLAN, EL. 'A'

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

CSA-F280-12

SB-12 PERFORMANCE

HVAC LEGEND								3.	REVISED ACH	SEPT/2021
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	REVISED AS PER ARCHITECTURALS	APR/2021
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	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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ROYAL PINE HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name		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.	Date	SEPT/2020
CENTREFIELD (WEST GORMLEY) RICHMOND HILL, ONTARIO			Scale	3/16" = 1'-0"
FIN BSMT			BCIN# 19669	
2010			LO#	87541
1742 sqft				