


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.	Lot/con.
Municipality VAUGHAN (WOODBIDGE)	Postal code	Plan number/ other description	
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]			
<input type="checkbox"/> House <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Structural <input type="checkbox"/> Small Buildings <input type="checkbox"/> Building Services <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Large Buildings <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Plumbing – All Buildings <input type="checkbox"/> Complex Buildings <input type="checkbox"/> Fire Protection <input type="checkbox"/> 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: 4000 - BRIARWOOD OPT GROUND - WOB Project: PINE VALLEY PH 2	
D. Declaration of Designer			
I <u>MICHAEL O'ROURKE</u> (print name)		declare that (choose one as appropriate):	
<input type="checkbox"/> 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: _____			
<input checked="" type="checkbox"/> 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: _____ O.B.C SENTENCE 3.2.4.1 (4)			
<input type="checkbox"/> 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.			
April 14, 2022 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.

DATE: APR-22 WINTER NATURAL AIR CHANGE RATE 0.459 HEAT LOSS AT °F: 76 CSA-F280-12
 LOW: 96117 SUMMER NATURAL AIR CHANGE RATE 0.153 HEAT GAIN AT °F: 13 SB-F2 PACKAGE A1

ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	TYPE: 4000 - BRIARWOOD	GFA: 2827	BED-3	BED-4	BATH-2	MEDIA	WINTER NATURAL AIR CHANGE RATE	HEAT LOSS AT °F: 76	CSA-F280-12
GRS.WALL AREA GLAZING	FACTORS	LOSS GAIN	LOSS GAIN									
NORTH	21.3 16.0	0 0	22 488 351									
EAST	21.3 41.6	0 0	0 0									
SOUTH	21.3 24.9	0 0	0 0									
WEST	21.3 41.6	42 894 1745	0 0									
SKYLT.	37.2 101.5	0 0	0 0									
DOORS	20.1 3.4	0 0	0 0									
NET EXPOSED WALL	4.5 0.8	376 1678 283	121 540 91									
NET EXPOSED BSMT WALL ABOVE GR	3.6 0.6	0 0	0 0									
EXPOSED CLG	1.3 0.6	328 421	193 0									
NO ATTIC EXPOSED CLG	2.7 1.3	0 0	0 0									
EXPOSED FLOOR	2.6 0.4	0 0	0 0									
BASEMENT/CRAWL HEAT LOSS		0 0	0 0									
SLAB ON GRADE HEAT LOSS		0 0	0 0									
SUBTOTAL HT LOSS		2993	1008									
SUB TOTAL HT GAIN		0.30 0.36	0.30 0.36									
LEVEL FACTOR / MULTIPLIER		1066	359									
AIR CHANGE HEAT LOSS		0	0									
AIR CHANGE HEAT GAIN		0	0									
DUCT LOSS		0	0									
DUCT GAIN		0	0									
HEAT GAIN PEOPLE	240	2	480 0									
HEAT GAIN APPLIANCES/LIGHTS		4059	1367									
TOTAL HT LOSS BTU/H		4923	620									
TOTAL HT GAIN x 1.3 BTU/H												

ROOM USE	EXP. WALL CLG. HT.	FORM	KT/GT	LAUN	PWD	FOY	WOB	BAS
GRS.WALL AREA GLAZING	FACTORS	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN
NORTH	21.3 16.0	0 0	0 0	22 468 351	0 0	0 0	0 0	0 0
EAST	21.3 41.6	0 0	0 0	0 0	0 0	0 0	0 0	0 0
SOUTH	21.3 24.9	58 1234 1444	58 1234 1444	0 0	0 0	0 0	0 0	0 0
WEST	21.3 41.6	0 0	0 0	0 0	0 0	0 0	0 0	0 0
SKYLT.	37.2 101.5	0 0	0 0	0 0	0 0	0 0	0 0	0 0
DOORS	20.1 3.4	0 0	0 0	20 401 66	0 0	0 0	0 0	0 0
NET EXPOSED WALL	4.5 0.8	542 2419 407	882 3936 663	335 1495 252	91 406 68	1088 4855 818	318 1419 239	0 0
NET EXPOSED BSMT WALL ABOVE GR	3.6 0.6	0 0	0 0	0 0	0 0	0 0	0 0	0 0
EXPOSED CLG	1.3 0.6	168 216 99	432 554 254	0 0	0 0	0 0	0 0	0 0
NO ATTIC EXPOSED CLG	2.7 1.3	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	0 0	0 0	0 0	0 0
BASEMENT/CRAWL HEAT LOSS		0 0	0 0	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	0 0	0 0
SUBTOTAL HT LOSS		3869	7853	2364	406	6497	517	4828
SUB TOTAL HT GAIN		0.30 0.36	0.30 0.36	0.30 0.36	0.30 0.36	0.30 0.36	0.50 1.70	0.50 1.70
LEVEL FACTOR / MULTIPLIER		1378	2797	842	145	2314	3894	14836
AIR CHANGE HEAT LOSS		0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN		0	0	0	0	0	0	0
DUCT LOSS		0	0	0	0	0	0	0
DUCT GAIN		0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS		5247	10650	3206	551	8811	3894	19664
TOTAL HT LOSS BTU/H		3920	10318	2127	96	4123	5280	2286
TOTAL HT GAIN x 1.3 BTU/H								

TOTAL HEAT GAIN BTU/H: 47152 TONS: 3.93 LOSS DUE TO VENTILATION LOAD BTU/H: 1305 STRUCTURAL HEAT LOSS: 72815 TOTAL COMBINED HEAT LOSS BTU/H: 74120

Michael O'Rourke

TYPE: 4000 - BRIARWOOD
 SITE NAME: PINE VALLEY PH 2

LO # 96117
 OPT GROUND - WOB

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	4	@ 10.6 cfm	42.4	cfm
Table 9.32.3.A.		TOTAL	159.0	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	159	cfm
Less Principal Ventil. Capacity	63.6	cfm
Required Supplemental Capacity	95.4	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANEE V150H Location: BSMT

63.6 cfm HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM	ΔT °F	FACTOR	% LOSS
63.6 CFM	X 76 F	X 1.08	X 0.25

SUPPLEMENTAL FANS BY INSTALLING CONTRACTOR

Location	Model	cfm	HVI	Sones
ENS	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5
BATH-2	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5
PWD	BY INSTALLING CONTRACTOR	50	<input checked="" type="checkbox"/>	3.5

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANEE V150H

150 cfm high 35 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: GOLD PARK 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: April-22

CSA F280-12 Residential Heat Loss and Heat Gain Calculations Formula Sheet (For Air Leakage / Ventilation Calculation)																									
LO#: 96117	Model: 4000 - BRIARWOOD	Builder: GOLD PARK HOMES	Date: 4/14/2022																						
Volume Calculation																									
House Volume	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)																						
Bsmt	1746	10	17460																						
First	1746	11	19206																						
Second	1206	9	10854																						
Third	0	0	0																						
Fourth	0	9	0																						
	Total:		47,520.0 ft³																						
	Total:		1345.6 m³																						
5.2.3.1 Heat Loss due to Air Leakage																									
$HL_{airb} = LR_{airb} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$																									
0.459	x	373.78	x																						
		42 °C	x																						
			1.2																						
			= 8696 W																						
			= 29671 Btu/h																						
5.2.3.2 Heat Loss due to Mechanical Ventilation																									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																									
64 CFM	x	76 °F	x																						
		1.08	x																						
			0.25																						
			= 1305 Btu/h																						
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																									
$HL_{airrr} = Level\ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) + (HL_{agclevel} + HL_{bgclevel})\}$																									
Level	Level Factor (LF)	HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)	HLairrv / HLlevel																						
1	0.5	8,722	1.701																						
2	0.3	24,989	0.356																						
3	0.2	8,194	0.724																						
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 HLairrv = 0																									
6.2.6 Sensible Gain due to Air Leakage																									
$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																									
=	0.153	x	373.78																						
		x	7 °C																						
			x																						
			1.2																						
			= 489 W																						
			= 1669 Btu/h																						
6.2.7 Sensible heat gain due to Ventilation																									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																									
64 CFM	x	13 °F	x																						
		1.08	x																						
			0.25																						
			= 220 Btu/h																						
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Air Change & Delta T Data</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">WINTER NATURAL AIR CHANGE RATE</td> <td style="text-align: center;">0.459</td> </tr> <tr> <td style="text-align: center;">SUMMER NATURAL AIR CHANGE RATE</td> <td style="text-align: center;">0.153</td> </tr> </tbody> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th style="text-align: center;">Tin °C</th> <th style="text-align: center;">Tout °C</th> <th style="text-align: center;">ΔT °C</th> <th style="text-align: center;">ΔT °F</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Winter DTDh</td> <td style="text-align: center;">-20</td> <td style="text-align: center;">42</td> <td style="text-align: center;">76</td> </tr> <tr> <td style="text-align: center;">Summer DTDc</td> <td style="text-align: center;">31</td> <td style="text-align: center;">7</td> <td style="text-align: center;">13</td> </tr> </tbody> </table>				Air Change & Delta T Data		WINTER NATURAL AIR CHANGE RATE	0.459	SUMMER NATURAL AIR CHANGE RATE	0.153	Design Temperature Difference				Tin °C	Tout °C	ΔT °C	ΔT °F	Winter DTDh	-20	42	76	Summer DTDc	31	7	13
Air Change & Delta T Data																									
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Winter DTDh	-20	42	76																						
Summer DTDc	31	7	13																						
Michael O'Rourke BCIN# 19669 																									

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 4000 - BRIARWOOD	OPT GROUND - WOB	BUILDER: GOLD PARK HOMES
SFQT: 2827	LO# 96117	SITE: PINE VALLEY PH 2

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	75
		WINDOW SHGC	0.50

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 (ft ³):	47520.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	4
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.75	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 70.0 ft	WIDTH: 33.0 ft	EXPOSED PERIMETER:	165.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	41.0 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	96%	-
HRV/ERV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

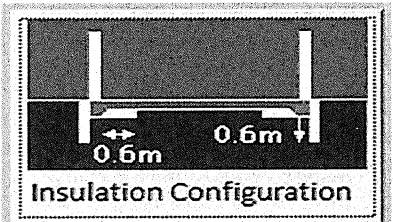
Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	4.3	<p>Insulation Configuration</p>
Floor Width (m):	10.1	
Exposed Perimeter (m):	50.3	
Wall Height (m):	3.0	
Depth Below Grade (m):	1.78	
Window Area (m ²):	0.6	
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):	738	

TYPE: 4000 - BRIARWOOD
 LO# 96117

OPT GROUND - WOB

Residential Slab on Grade Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Length (m):	1.2	 <p style="text-align: center; font-size: small;">Insulation Configuration</p>
Width (m):	10.1	
Exposed Perimeter (m):	12.5	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):	152	

TYPE: 4000 - BRIARWOOD
 LO# 96117

OPT GROUND - WOB



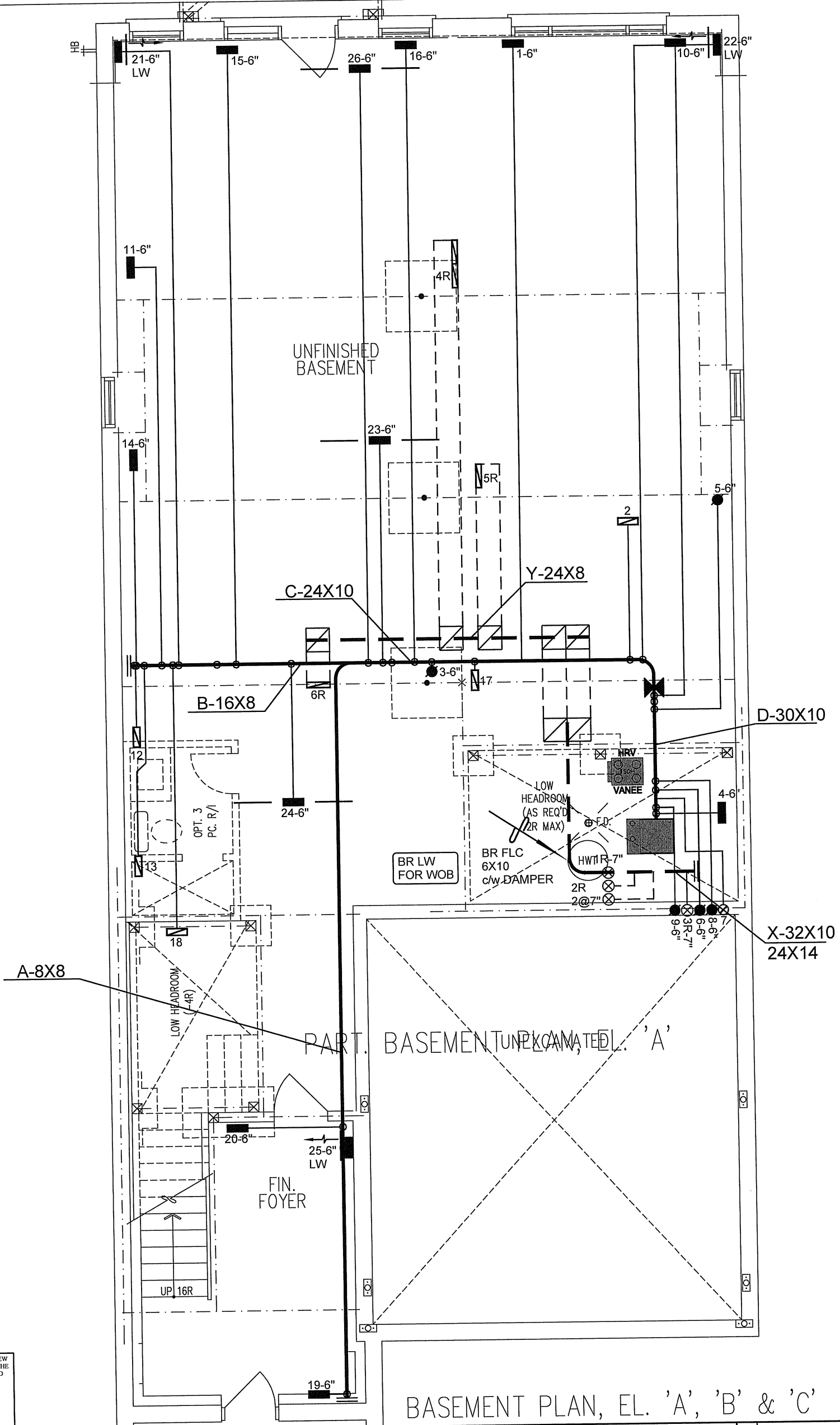
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
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):	10.97			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1345.6			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa. 3.57	1793.7 cm ² ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply 30.0	Total Exhaust 30.0		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.459			
Cooling Air Leakage Rate (ACH/H):	0.153			

TYPE: 4000 - BRIARWOOD
 LO# 96117

OPT GROUND - WOB



WOB
CSA-F280-12
PACKAGE A1

BASEMENT PLAN, EL. 'A', 'B' & 'C'

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.

HVAC LEGEND						REVISIONS	
—	FLOOR SUPPLY AIR GRILLE	■	6" SUPPLY AIR BOOT ABOVE	—	14"x8" RETURN AIR GRILLE	—	RETURN AIR STACK ABOVE
—	FLOOR 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

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Client
GOLD PARK HOMES

Project Name
**PINE VALLEY PH 2
 VAUGHAN, ONTARIO
 OPT GROUND - WOB
 BRIARWOOD
 4000**

2827 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@hvacdsgns.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 74120 BTU/H	# OF RUNS	S/A	R/A	FANS
UNIT DATA	3RD FLOOR			
MAKE LENNOX	2ND FLOOR	6	3	1
MODEL ML196UH090XE48C	1ST FLOOR	14	3	3
INPUT 88 MBTU/H	BASEMENT	6	1	0
OUTPUT 85.6 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			
COOLING 4.0 TONS				
FAN SPEED 1575 cfm @ 0.6" w.c.				

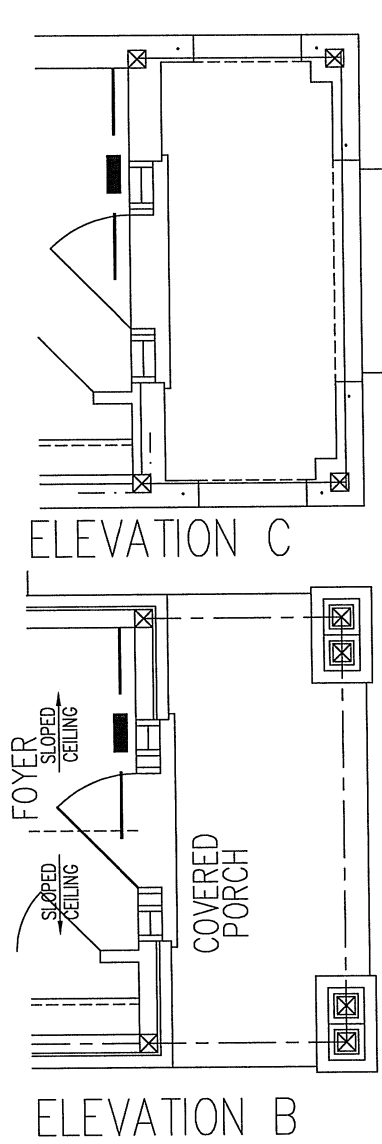
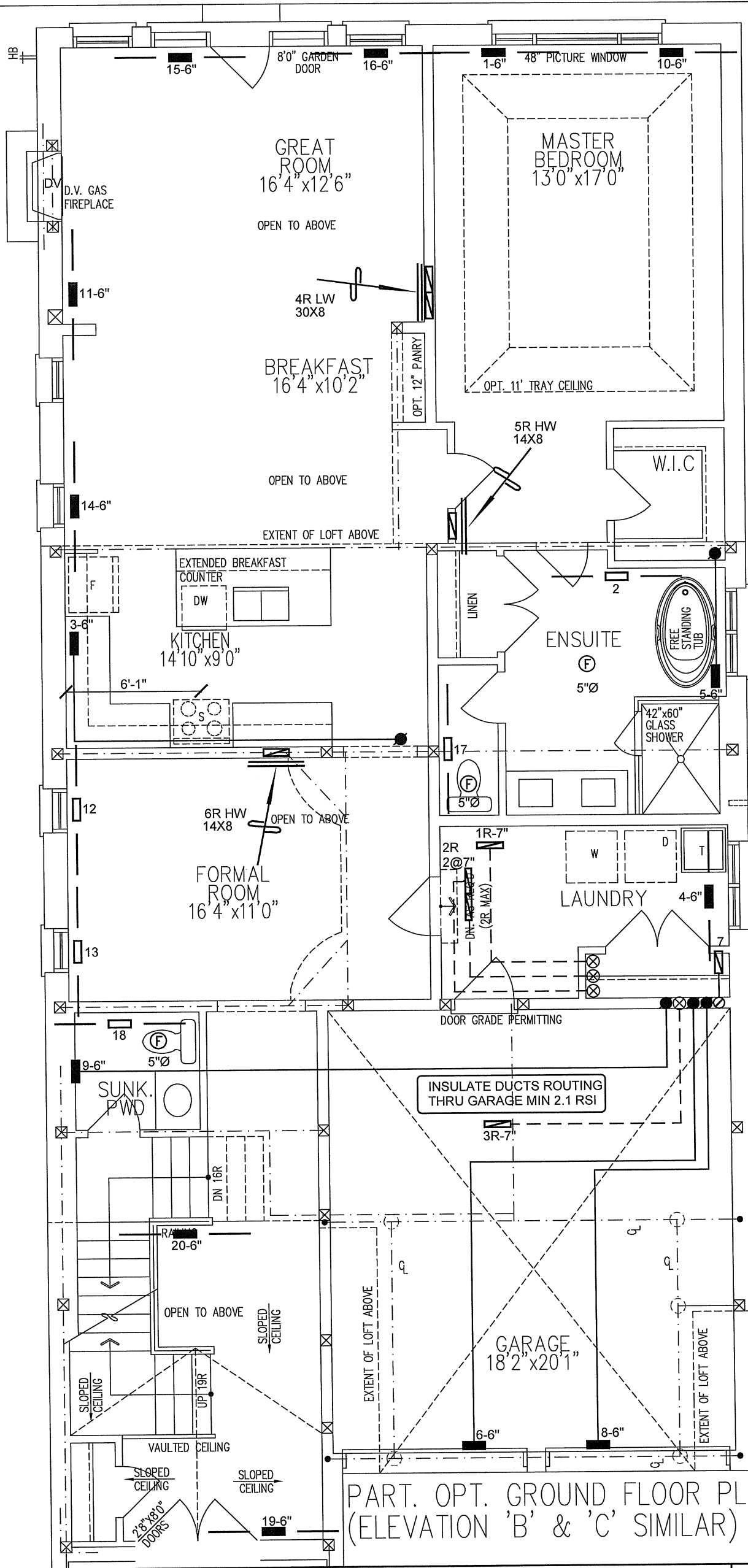
Sheet Title
BASEMENT HEATING LAYOUT

Date
APR/2022

Scale
3/16" = 1'-0"

BCIN# 19669

LO# **96117**



PART. OPT. GROUND FLOOR PLAN, EL. 'A'
(ELEVATION 'B' & 'C' SIMILAR)

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

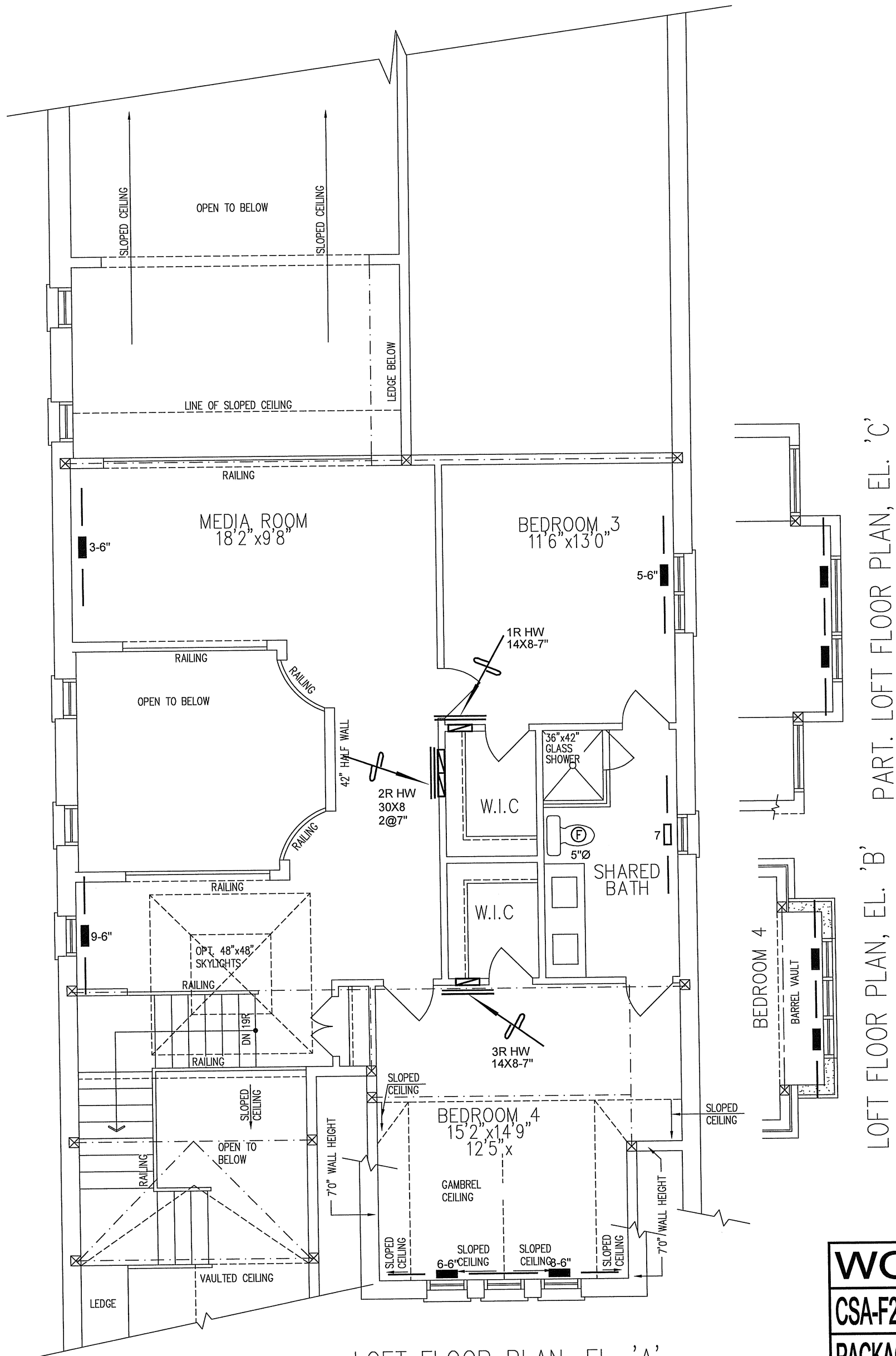
HVAC LEGEND						REVISIONS	
—○—	FLOOR SUPPLY AIR GRILLE	—■—	6" SUPPLY AIR BOOT ABOVE	—■—	14"x8" RETURN AIR GRILLE	3.	
—■—	FLOOR SUPPLY AIR GRILLE 6" BOOT	○	SUPPLY AIR STACK FROM 2nd FLOOR	—■—	30"x8" RETURN AIR GRILLE	2.	
—■—	SUPPLY AIR BOOT ABOVE	●	6" SUPPLY AIR STACK 2nd FLOOR	—■—	FRA- FLOOR RETURN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

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Client
GOLD PARK HOMES
Project Name
**PINE VALLEY PH 2
VAUGHAN, ONTARIO
OPT GROUND - WOB
BRIARWOOD
4000** 2827 sqft

HVACDESIGNS LTD.
375 Finley Ave - Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdsgns.ca
Web: www.hvacdsgns.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 **APR/2022**
Scale **3/16" = 1'-0"**
BCIN# 19669
LO# **96117**



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

LOFT FLOOR PLAN, EL. 'A'

LOFT FLOOR PLAN, EL. 'B'

PART. LOFT FLOOR PLAN, EL. 'C'

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

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 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
SECOND FLOOR HEATING LAYOUT
 Date **APR/2022**
 Scale **3/16" = 1'-0"**
 BCIN# 19669
 LO# **96117**