

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@hvacdesigns.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: 3103 INT - OPT 4-BED Project: PINE VALLEY DRIVE	
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.			
May 3, 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: PINE VALLEY DRIVE
BUILDER: GOLD PARK HOMES
INT - OPT 4-BED
TYPE: 3103
DATE: May-21
LO# 90625
GFA: 2203
WINTER NATURAL AIR CHANGE RATE 0.352
SUMMER NATURAL AIR CHANGE RATE 0.115
HEAT LOSS AT °F. 76
HEAT GAIN AT °F. 13
CSA-F280-12
SB-12 PACKAGE A1

ROOM USE	EXP. WALL	CLG. HT.	GRS.WALL AREA	GLAZING	FACTORS	ENS	BED-4	BED-3	MBR	ENS-4	LAUN	BATH	B-BTH
GRS.WALL AREA	13	9	117	21.3	41.0	54	153	225	108	0	0	54	48
GLAZING	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST	0	0	0	0	0	0	0	0	0	0	0	0	0
SKYLT.	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	0	0	0	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	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
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	0.20	0.32	832	1983	1701	2302	1507	4081	1282	200	801	895	15
SUB TOTAL HT GAIN	0.20	0.32	319	631	706	167	413	1507	413	64	258	277	549
LEVEL FACTOR / MULTIPLIER	0	0	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
AIR CHANGE HEAT GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	1	240	0	0	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	1311	1043	781	880	4444	2900	1043	1695	1695	265	1165	1250	899
TOTAL HT GAIN x 1.3 BTU/H	2828	0	0	0	0	0	0	4878	4081	128	326	1373	20

ROOM USE	EXP. WALL	CLG. HT.	FACTORS		KID/G	FOY	BAS
GRS.WALL AREA	GLAZING	LOSS	GAIN				
NORTH	21.3	16.0	0	0	693	351	486
EAST	21.3	41.6	0	0	0	0	0
SOUTH	21.3	24.9	0	0	21	447	873
WEST	21.3	41.6	99	2107	0	0	0
SKYLT.	37.2	101.5	0	0	0	0	0
DOORS	25.2	4.3	0	0	44	1111	187
NET EXPOSED WALL	4.5	0.8	594	2651	286	1276	215
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0
EXPOSED CLG	1.3	0.6	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			0	0			2672
SLAB ON GRADE HEAT LOSS			0	0			
SUBTOTAL HT LOSS			4758		2834		4222
SUB TOTAL HT GAIN							565
LEVEL FACTOR / MULTIPLIER	0.30	0.57	0.30	0.57	0.30	0.57	0.50
AIR CHANGE HEAT LOSS			2695		1605		6618
AIR CHANGE HEAT GAIN						93	41
DUCT LOSS			0			0	0
DUCT GAIN							
HEAT GAIN PEOPLE			0		0		0
HEAT GAIN APPLIANCES/LIGHTS					0		0
TOTAL HT LOSS BTU/H			7453			4440	10840
TOTAL HT GAIN x 1.3 BTU/H						1778	2143

TOTAL HEAT GAIN BTU/H: 30868 TONS: 2.57 LOSS DUE TO VENTILATION LOAD BTU/H: 1631 STRUCTURAL HEAT LOSS: 35882 TOTAL COMBINED HEAT LOSS BTU/H: 37513

Michael O'Rourke

**SITE NAME: PINE VALLEY DRIVE
BUILDER: GOLD PARK HOMES**

INT - OPT 4-BED
TYPE: 3103

DATE: May-21

LO# 90625

HEATING CFM	980	COOLING CFM	980
TOTAL HEAT LOSS	35,882	TOTAL HEAT GAIN	30,593
AIR FLOW RATE CFM	27.31	AIR FLOW RATE CFM	32.03

furnace pressure	0.05
a/c coil pressure	0.2
available pressure	

ML196UH045XE36B 45
FAN SPEED \$LENNOX

AFUE = 96 %
INPUT (BTU/H) = 44,000
OUTPUT (BTU/H) = 42,800

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	11	6	5
R/A	0	0	4	1	1

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

All S/A runs 5"Ø unless noted otherwise on layout.

RUN #	ROOM NAME	TEST DATA																							
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
BED-4	MBR	0.85	1.44	1.44	1.44	1.45	1.45	1.17	0.26	0.85	0.78	1.86	1.86	1.86	1.86	1.86	1.86	1.86	2.22	2.22	2.22	2.22	2.71	2.71	2.71
	RM LOSS MBH	36	23	39	39	40	40	32	7	23	21	34	51	51	51	51	51	51	61	61	74	74	74	74	
	CFM PER RUN HEAT	2.83	2.04	2.22	2.22	2.44	2.44	0.33	0.13	2.04	0.88	1.37	1.93	1.93	1.93	1.93	1.93	1.93	0.89	0.89	0.54	0.54	0.54	0.54	
	RM GAIN MBH	91	65	71	71	78	78	10	4	65	28	44	62	62	62	62	62	62	28	28	17	17	17	17	
BED-3	MBR	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	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	
	ADJUSTED PRESSURE	48	54	61	55	59	53	42	36	46	38	50	18	26	37	42	35	41	35	28	26	49	35	41	
	ACTUAL DUCT LGH	150	130	140	120	150	150	160	160	130	150	160	110	140	160	130	140	150	140	150	120	140	150	120	
	EQUIVALENT LENGTH	198	184	201	175	209	203	202	196	176	188	210	128	166	197	172	172	175	175	178	146	189	185	161	
TOTAL	EFFECTIVE LENGTH	0.08	0.09	0.09	0.1	0.08	0.08	0.09	0.09	0.1	0.09	0.08	0.13	0.1	0.09	0.1	0.09	0.1	0.1	0.1	0.12	0.09	0.09	0.11	
	ADJUSTED PRESSURE	6	5	5	5	6	6	4	4	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	
	ROUND DUCT SIZE	184	169	286	286	204	204	367	80	169	241	250	374	374	374	374	374	374	448	448	543	543	543	543	
	HEATING VELOCITY (ft/min)	464	477	521	521	398	398	115	46	477	321	323	455	455	455	455	455	455	206	206	125	125	125	125	
BED-1	COOLING VELOCITY (ft/min)	3X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	
	OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	
	TRUNK	B	A	A	B	C	C	A	B	B	B	B	D	B	A	A	A	A	C	C	D	A	A	C	
	TRUNK	B	A	A	B	C	C	A	B	B	B	B	D	B	A	A	A	A	C	C	D	A	A	C	

25	ROOM NAME	B-BTH
0.90	RM LOSS MBH	
25	CFM PER RUN HEAT	
0.02	RM GAIN MBH	
1	CFM PER RUN COOLING	
0.17	ADJUSTED PRESSURE	
16	ACTUAL DUCT LGH	
100	EQUIVALENT LENGTH	
116	TOTAL EFFECTIVE LENGTH	
0.15	ADJUSTED PRESSURE	
4	ROUND DUCT SIZE	
287	HEATING VELOCITY (ft/min)	
11	COOLING VELOCITY (ft/min)	
3X10	OUTLET GRILL SIZE	
D	TRUNK	

SUPPLY AIR TRUNK SIZE						RETURN 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 A	0.09	10	16	8		TRUNK G	0	0.00	0	0	
TRUNK B	0.08	11.2	16	8	X	TRUNK H	0	0.00	0	8	X
TRUNK C	0.08	8.7	10	8	X	TRUNK I	0	0.00	0	8	X
TRUNK D	0.08	13.9	22	8	X	TRUNK J	0	0.00	0	8	X
TRUNK E	0	0	0	8	X	TRUNK K	0	0.00	0	8	X
TRUNK F	0	0	0	8	X	TRUNK L	0	0.00	0	8	X

[illegible]

TYPE: 3103
SITE NAME: PINE VALLEY DRIVE

LO # 90625
INT - OPT 4-BED

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	6 @ 10.6 cfm	63.6 cfm
Other Rooms	2 @ 10.6 cfm	21.2 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		79.5 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	159	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	79.5	cfm

PRINCIPAL EXHAUST FAN CAPACITY			
Model:	VANEE V150H		
Location:	BSMT		
79.5 cfm	☒ HVI Approved		
PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	$\Delta T^{\circ}F$	FACTOR	% LOSS
79.5 CFM	X 76 F	X 1.08	X 0.25

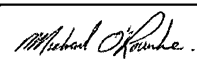
SUPPLEMENTAL FANS		BY INSTALLING CONTRACTOR		
Location	Model	cfm	HVI	Sones
ENS	BY INSTALLING CONTRACTOR	50	☒	3.5
ENS-4	BY INSTALLING CONTRACTOR	50	☒	3.5
BATH	BY INSTALLING CONTRACTOR	50	☒	3.5

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:	
HRAI #	001820
Date:	May-21

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																																																			
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																																																			
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6.2.6 Sensible Gain due to Air Leakage																																																																																			
$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ $= 0.115 \times 235.45 \times 7^\circ\text{C} \times 1.2 = 230 \text{ W}$ $= 14335 \text{ Btu/h} = 786 \text{ Btu/h}$																																																																																			
6.2.7 Sensible heat Gain due to Ventilation																																																																																			
$HL_{vaibrb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ $80 \text{ CFM} \times 13^\circ\text{F} \times 1.08 \times 0.25 = 275 \text{ Btu/h}$																																																																																			
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																																																			
$HL_{airrr} = \text{Level Factor} \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$ <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Level</th> <th>Level Factor (LF)</th> <th>HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)</th> <th>Level Conductive Heat Loss: (HL_{level})</th> <th>Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)</th> </tr> <tr> <td>1</td> <td>0.5</td> <td rowspan="5" style="text-align: center; vertical-align: middle;">14,335</td> <td>4,572</td> <td>1.568</td> </tr> <tr> <td>2</td> <td>0.3</td> <td>7,592</td> <td>0.566</td> </tr> <tr> <td>3</td> <td>0.2</td> <td>8,901</td> <td>0.322</td> </tr> <tr> <td>4</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> <tr> <td>5</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> </table>				Level	Level Factor (LF)	HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{level})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)	1	0.5	14,335	4,572	1.568	2	0.3	7,592	0.566	3	0.2	8,901	0.322	4	0	0	0.000	5	0	0	0.000																																																						
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1	0.5	14,335	4,572	1.568																																																																															
2	0.3		7,592	0.566																																																																															
3	0.2		8,901	0.322																																																																															
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: 3103	INT - OPT 4-BED	BUILDER: GOLD PARK HOMES
SFQT: 2203	LO# 90625	SITE: PINE VALLEY DRIVE

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

BUILDING DATA

ATTACHMENT:	ATTACHED	# 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):	29934.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	2.00	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 43.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	89.0 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 Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

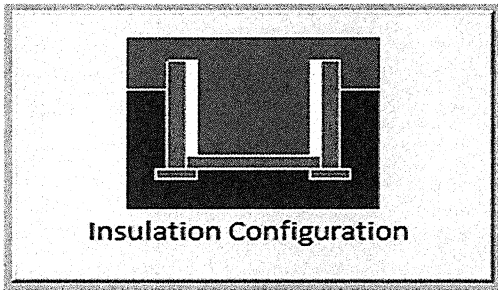
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	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):	13.1	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	27.1	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	0.7	
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):		860

TYPE: 3103
LO# 90625

INT - OPT 4-BED

Air Infiltration Residential Load Calculator

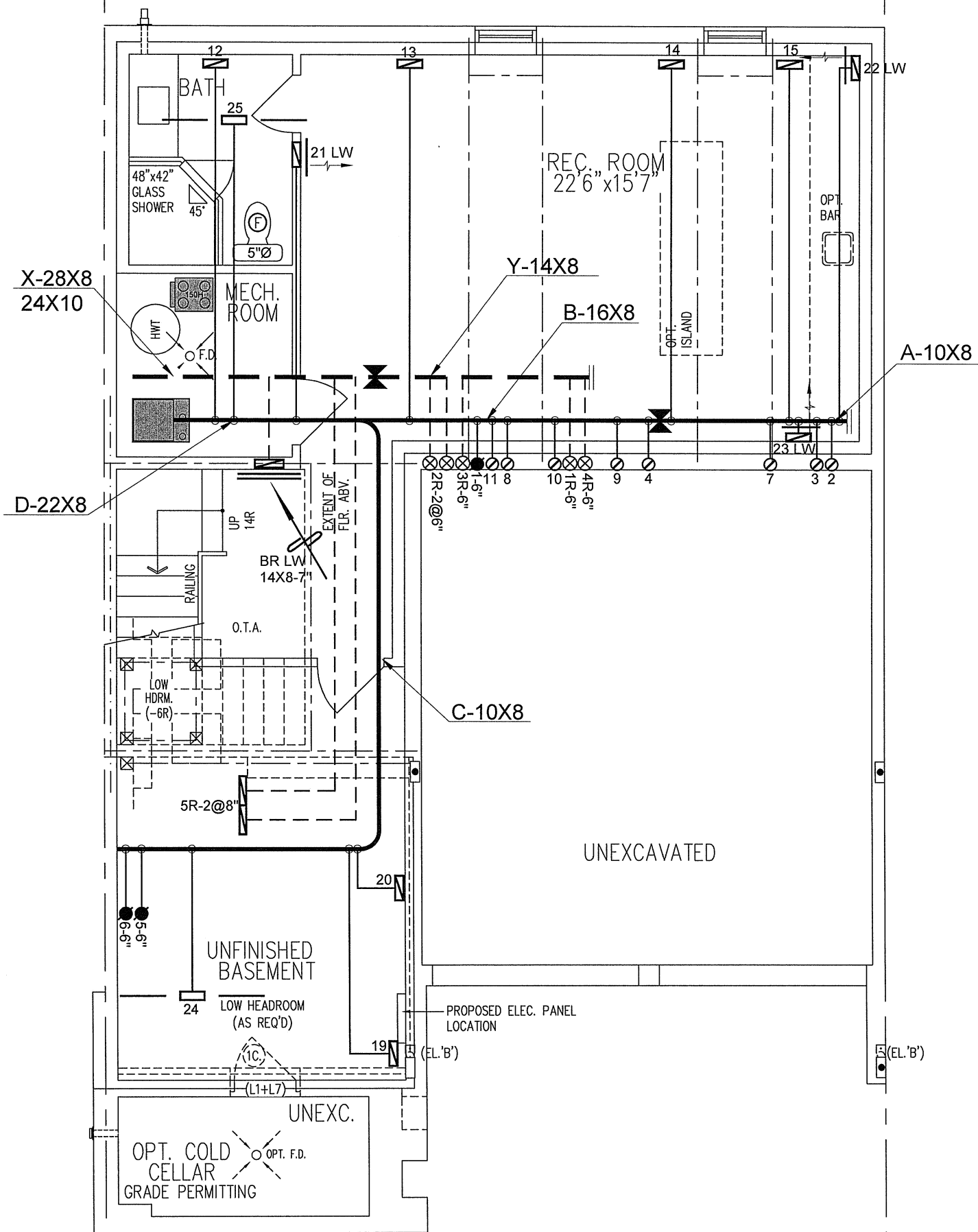
Supplemental tool for CAN/CSA-F280

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):	7.01			
Building Configuration				
Type:	Semi			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	847.6			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1129.9 cm ²		
	3.57	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):	0.352			
Cooling Air Leakage Rate (ACH/H):	0.115			

TYPE: 3103
LO# 90625

INT - OPT 4-BED

UNEXCAVATED



BASEMENT PLAN, ELEV. 'A' & 'B'

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.

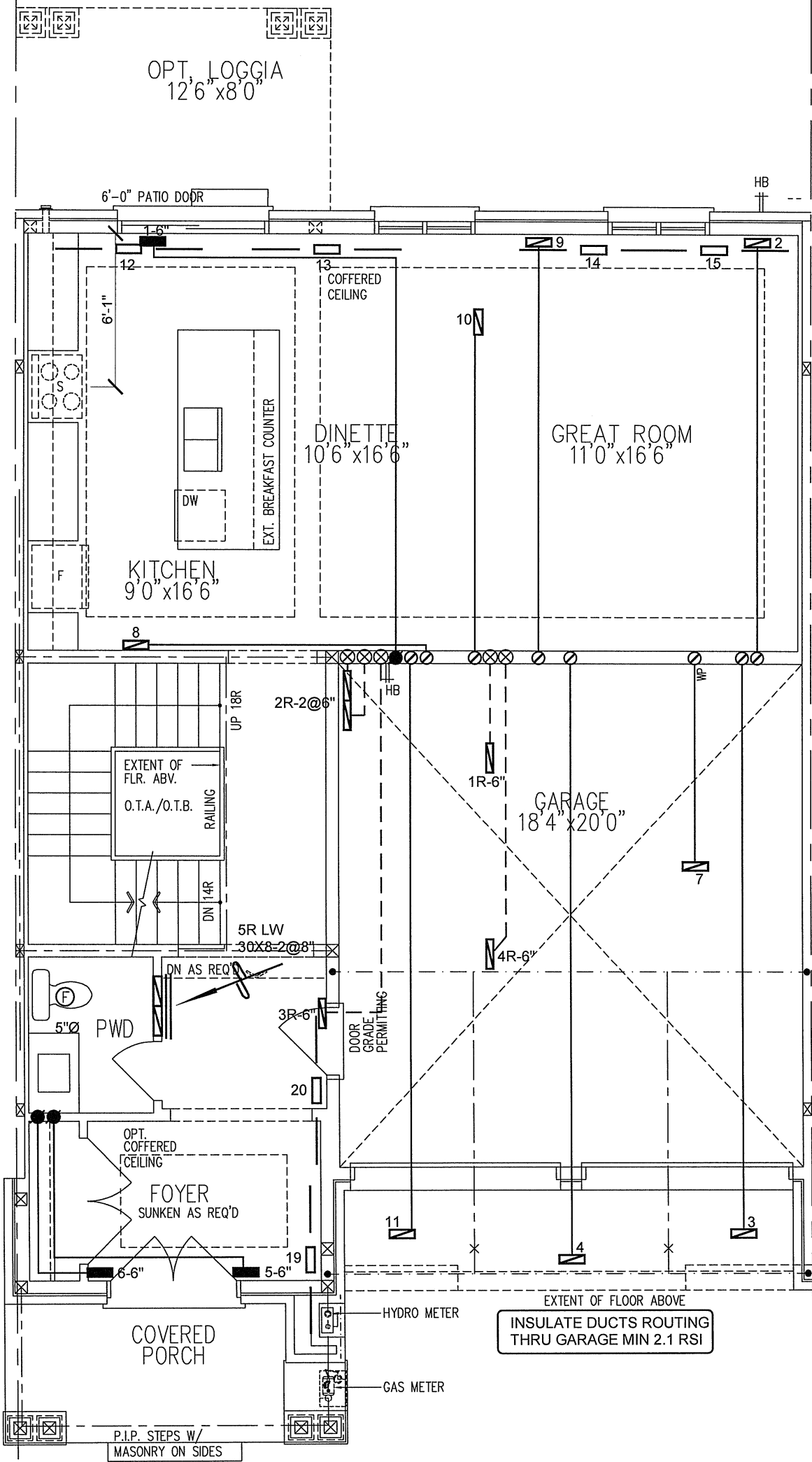
CSA-F280-12

PACKAGE A1

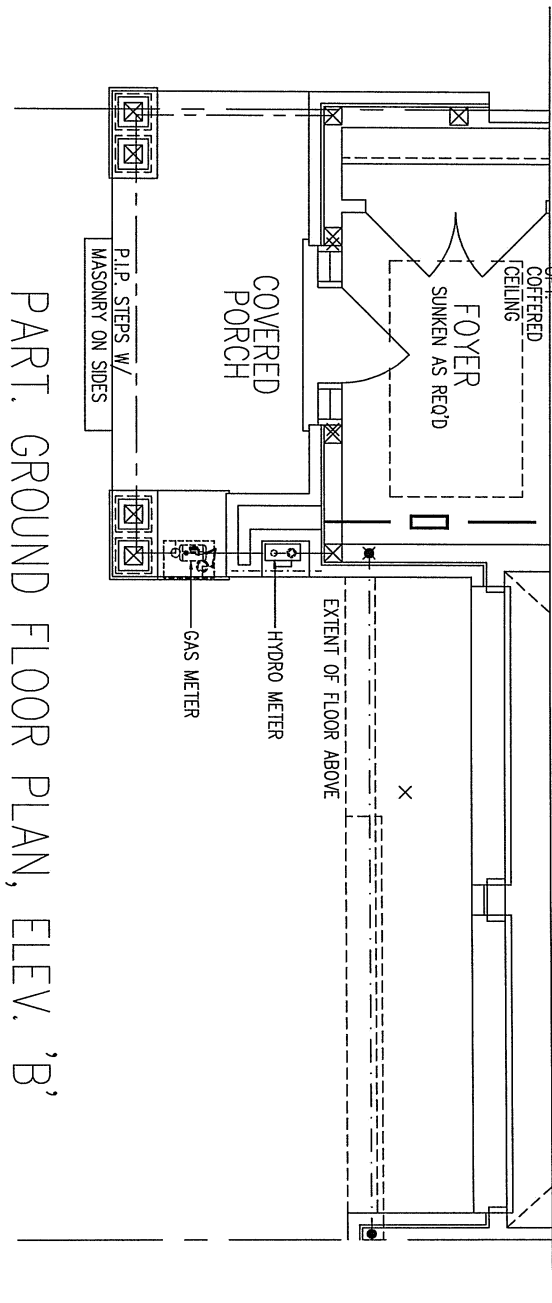
HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR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

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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	HEAT LOSS 37513 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
GOLD PARK HOMES			MAKE LENNOX		3RD FLOOR			BASEMENT HEATING LAYOUT	
Project Name PINE VALLEY DRIVE VAUGHAN, ONTARIO			MODEL ML196UH045XE36B		2ND FLOOR 11 4 4			Date APR/2021	
OPT 4-BED 3103 - INT 2203 sqft			INPUT 44 MBTU/H		1ST FLOOR 6 1 2			Scale 3/16" = 1'-0"	
			OUTPUT 42.8 MBTU/H		BASEMENT 5 1 1			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# 90625		
		FAN SPEED 980 cfm @ 0.6" w.c.							



GROUND FLOOR PLAN, ELEV. 'A'



PART. GROUND FLOOR PLAN, ELEV. 'B'

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.

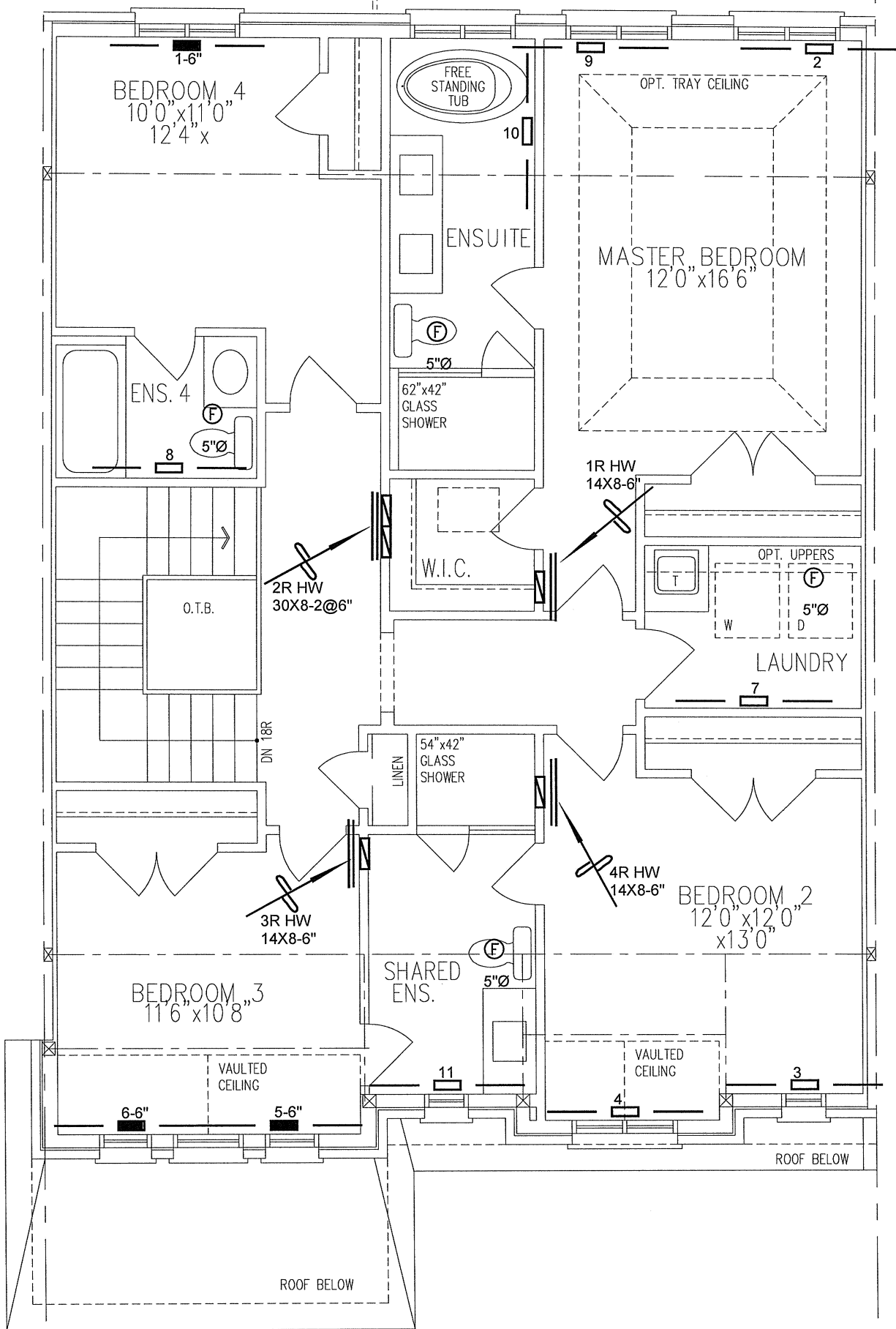
CSA-F280-12
PACKAGE A1

HVAC LEGEND							3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
	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	REVISIONS	

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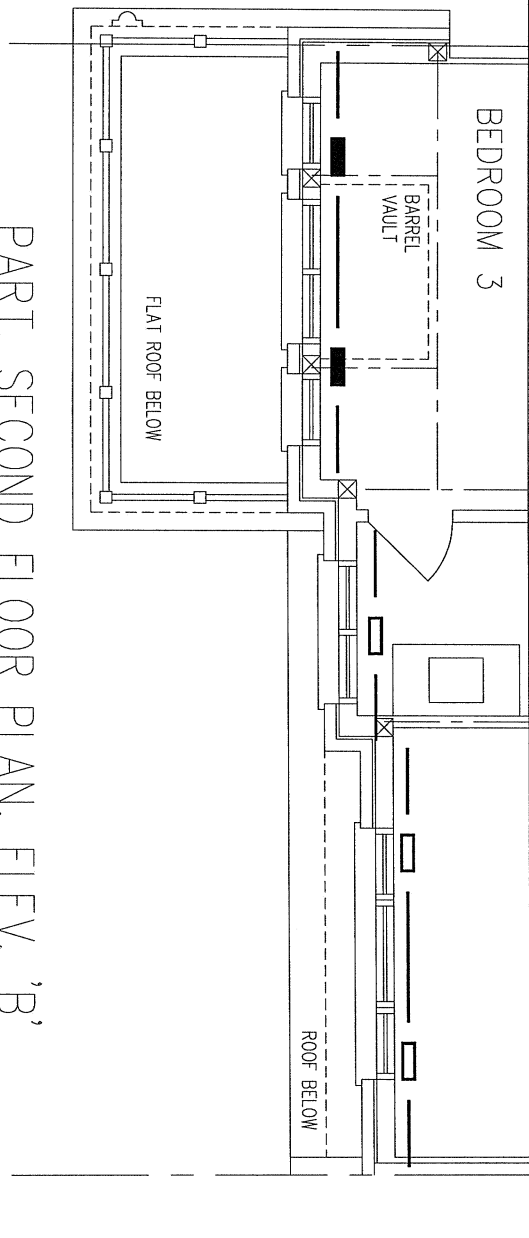
Client GOLD PARK HOMES		 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name PINE VALLEY DRIVE VAUGHAN, ONTARIO			Date APR/2021	Scale 3/16" = 1'-0"
OPT 4-BED 3103 - INT		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.	BCIN# 19669	
2203 sqft			LO#	90625

ROOF BELOW FOR OPT.
COVERED LOGGIA



OPT. 4-BEDROOM FLOOR PLAN, ELEV. 'A'

PART. SECOND FLOOR PLAN, ELEV. 'B'



4-BEDROOM
IS STANDARD

I MICHAEL O'ROURKE HAVE REVIEW
AND TAKE RESPONSIBILITY FOR THE
DESIGN WORK AND AM QUALIFIED
UNDER DIVISION C.32.5 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.		
	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
	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	Sheet Title	
GOLD PARK 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	APR/2021
PINE VALLEY DRIVE VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
OPT 4-BED 3103 - INT			BCIN# 19669	
2203 sqft			LO#	90625

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.