

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: 5003 - THE OAKGROVE OPT 5-BED Project: PINE VALLEY & TESTON		
D. Declaration of Designer				
I, <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate): (print name)				
☐ 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.				
October 5, 2018				
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.

Application for a Permit Construct or Demolish – Effective January 1, 2015

TOTAL HEAT GAIN BTU/H:

SITE NAME: PINE VALLEY & TESTON
BUILDER: GOLD PARK HOMES

OPT 5-BED
TYPE: 5003 - THE OAKGROVE

DATE: Nov-18

GFA: 3862

LO# 77476

HEATING CFM 1955 COOLING CFM 1955
TOTAL HEAT LOSS 72,739 TOTAL HEAT GAIN 59,471
AIR FLOW RATE CFM 26.88 AIR FLOW RATE CFM 32.87

furnace pressure 0.6
furnace filter 0.05
a/c coil pressure 0.2
available pressure
for s/a & r/a 0.35

^LENNOX
EL296UH110XE60C 110
FAN SPEED
LOW 0
MEDLOW 1380
MEDIUM 1505
MEDIUM HIGH 1685
HIGH 1955

AFUE = 96 %
INPUT (BTU/H) = 110,000
OUTPUT (BTU/H) = 106,000

DESIGN CFM = 1955
CFM @ 8" E.S.P.

TEMPERATURE RISE 50 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	17	10	7
R/A	0	0	6	3	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	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-2	BED-3	BED-4	BATH	BED-5	BATH-2	MBR	BATH-2	DIN	LIV	KT/GT	KT/GT	KT/GT	KT/GT	KT/GT	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH	1.77	0.73	0.90	2.04	1.75	1.61	1.61	2.15	0.83	1.77	0.83	1.76	1.90	2.58	2.58	2.58	2.58	2.58	3.97	3.20	3.31	3.31	3.31	3.31
CFM PER RUN HEAT	47	20	24	55	47	43	43	58	22	47	22	47	51	69	69	69	69	69	107	86	89	89	89	89
RM GAIN MBH	2.21	0.56	0.29	2.38	2.50	2.36	2.77	3.38	0.45	2.21	0.45	2.14	2.43	3.11	3.11	3.11	3.11	3.11	0.81	1.81	0.49	0.49	0.49	0.49
CFM PER RUN COOLING	73	18	10	78	82	78	91	111	15	73	15	70	80	102	102	102	102	102	27	59	16	16	16	16
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.16	0.17	0.16	0.15	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.15	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	48	26	36	48	45	54	42	63	45	41	49	26	39	36	27	31	38	45	35	40	30	22	42	41
EQUIVALENT LENGTH	185	205	120	165	140	195	150	150	130	185	170	90	110	110	110	170	160	110	120	150	110	150	130	120
TOTAL EFFECTIVE LENGTH	233	231	156	213	185	249	192	213	175	226	219	116	149	146	137	201	198	155	155	190	140	172	172	161
ADJUSTED PRESSURE	0.07	0.07	0.11	0.08	0.09	0.07	0.08	0.07	0.1	0.08	0.08	0.15	0.12	0.11	0.12	0.08	0.08	0.1	0.1	0.09	0.12	0.09	0.09	0.1
ROUND DUCT SIZE	5	4	4	5	6	6	6	6	4	5	4	4	5	6	6	6	6	6	6	5	5	6	6	5
HEATING VELOCITY (ft/min)	345	229	275	404	240	219	219	296	252	345	252	539	374	352	352	352	352	352	546	631	653	454	454	653
COOLING VELOCITY (ft/min)	536	207	115	573	418	398	464	566	172	536	172	803	587	520	520	520	520	520	138	433	117	82	82	117
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	4X10	4X10	3X10
TRUNK	A	E	C	E	E	D	D	F	F	A	B	E	D	A	A	B	B	F	D	B	A	A	F	F

RUN #	25	26	27	28	29	30	31	32	33	34
ROOM NAME	BAS	BAS	BAS	MBR	BED-3	BED-3	LIV	ENS	LAUN	
RM LOSS MBH	3.31	3.31	3.31	1.77	1.75	1.75	1.61	1.90	0.73	0.36
CFM PER RUN HEAT	89	89	89	47	47	47	43	51	20	10
RM GAIN MBH	0.49	0.49	0.49	2.21	2.50	2.50	2.36	2.43	0.56	1.20
CFM PER RUN COOLING	16	16	16	73	82	82	78	80	18	39
ADJUSTED PRESSURE	0.16	0.16	0.16	0.17	0.16	0.16	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	21	23	36	38	52	56	43	34	37	48
EQUIVALENT LENGTH	180	100	130	160	145	155	190	100	195	190
TOTAL EFFECTIVE LENGTH	201	123	166	198	197	211	233	134	232	238
ADJUSTED PRESSURE	0.08	0.13	0.1	0.09	0.08	0.08	0.07	0.13	0.07	0.07
ROUND DUCT SIZE	6	5	5	5	5	5	6	5	4	4
HEATING VELOCITY (ft/min)	454	653	653	345	345	345	219	374	229	115
COOLING VELOCITY (ft/min)	82	117	117	536	602	602	398	587	207	447
OUTLET GRILL SIZE	4X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10
TRUNK	E	E	D	A	E	E	D	D	E	B

SUPPLY AIR TRUNK SIZE

	TRUNK	STATIC	ROUND	RECT			VELOCITY		TRUNK	STATIC	ROUND	RECT			VELOCITY	
	CFM	PRESS.	DUCT	DUCT			(ft/min)		CFM	PRESS.	DUCT	DUCT			(ft/min)	
TRUNK A	457	0.07	10.8	14	x	8	588		TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	583	0.07	11.8	16	x	8	656		TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	1064	0.07	14.8	26	x	8	737		TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	427	0.07	10.5	14	x	8	549		TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	888	0.07	13.9	22	x	8	727		TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	327	0.07	9.5	10	x	8	589		TRUNK L	0	0.00	0	0	x	8	0

RETURN AIR TRUNK SIZE

	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT		VELOCITY (ft/min)	
TRUNK O	0	0.05	0	0	x	8	0
TRUNK P	0	0.05	0	0	x	8	0
TRUNK Q	0	0.05	0	0	x	8	0
TRUNK R	0	0.05	0	0	x	8	0
TRUNK S	0	0.05	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	1665	0.05	19.1	34	x	10	705
TRUNK Y	590	0.05	12.9	20	x	8	531
TRUNK Z	0	0.05	0	0	x	8	0
DROP	1955	0.05	20.3	24	x	18	652

RETURN AIR #	1	2	3	4	5	6	7	8	9		BR
AIR VOLUME	0	0	0	0	0	0	0	0	0	0	265
PLENUM PRESSURE	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	50	26	44	49	53	17	19	32	66	1	14
EQUIVALENT LENGTH	175	135	185	190	185	160	135	145	215	0	135
TOTAL EFFECTIVE LH	225	161	229	239	238	177	154	177	281	1	149
ADJUSTED PRESSURE	0.07	0.09	0.06	0.06	0.06	0.08	0.10	0.08	0.05	14.80	0.10
ROUND DUCT SIZE	6.6	8.9	7.1	7.1	6.8	7.2	8.7	9.2	4.9	0	8.1
INLET GRILL SIZE	8	8	8	8	8	8	8	8	8	0	8
	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	30	14	14	14	14	30	30	14	0	24

TYPE: 5003 - THE OAKGROVE
SITE NAME: PINE VALLEY & TESTON

LO # 77476
OPT 5-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	4 @ 10.6 cfm	42.4 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	6 @ 10.6 cfm	63.6 cfm
Table 9.32.3.A.	TOTAL	201.4 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	201.4	cfm
Less Principal Ventil. Capacity	155	cfm
Required Supplemental Capacity	46.4	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
155.0 cfm	3.0 sones
☒	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
155.0 CFM	X 76 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	✓
BATH	QTXEN050C	50	✓
BATH-2	QTXEN050C	50	✓
PWD	QTXEN050C	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: 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:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	October-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations									
Formula Sheet (For Air Leakage / Ventilation Calculation)									
LO#: 77476		Model: 5003 - THE OAK GROVE		Builder: GOLD PARK HOMES		Date: 10/5/2018			
Volume Calculation				Air Change & Delta T Data					
House Volume									
Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)						
Bsmt	1760	10	17600						
First	1760	11	19360						
Second	2125	9	19125						
Third	0	9	0						
Fourth	0	9	0						
		Total:	56,085.0 ft³						
		Total:	1588.2 m³						
6.2.6 Sensible Gain due to Air Leakage									
$HC_{satb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$				$= 0.124 \times 441.15 \times 9^\circ\text{C} \times 1.2 = 576 \text{ W}$					
				$= 1966 \text{ Btu/h}$					
6.2.7 Sensible heat Gain due to Ventilation									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$				$155 \text{ CFM} \times 16^\circ\text{F} \times 1.08 \times 0.25 = 661 \text{ Btu/h}$					
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)									
$HL_{airr} = \text{Level Factor} \times HL_{airbv} \times \{(HL_{ugcr} + HL_{bgcr}) \div (HL_{uglevel} + HL_{bglevel})\}$									
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	25,934	10,196	1.272					
2	0.3		17,829	0.436					
3	0.2		18,118	0.286					
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: 5003 - THE OAKGROVE	OPT 5-BED	BUILDER: GOLD PARK HOMES
SFQT: 3862	LO# 77476	SITE: PINE VALLEY & TESTON

DESIGN ASSUMPTIONS

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

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):	56085.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 61.0 ft	WIDTH: 40.0 ft	EXPOSED PERIMETER:	202.0 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	-

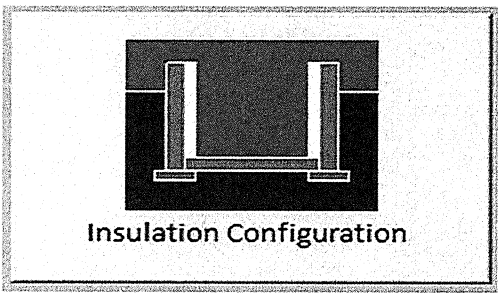
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	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):	18.6	 Insulation Configuration
Floor Width (m):	12.2	
Exposed Perimeter (m):	0.0	
Wall Height (m):	3.0	
Depth Below Grade (m):	2.13	
Window Area (m ²):	3.0	
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):		2025

TYPE: 5003 - THE OAKGROVE
LO# 77476

OPT 5-BED

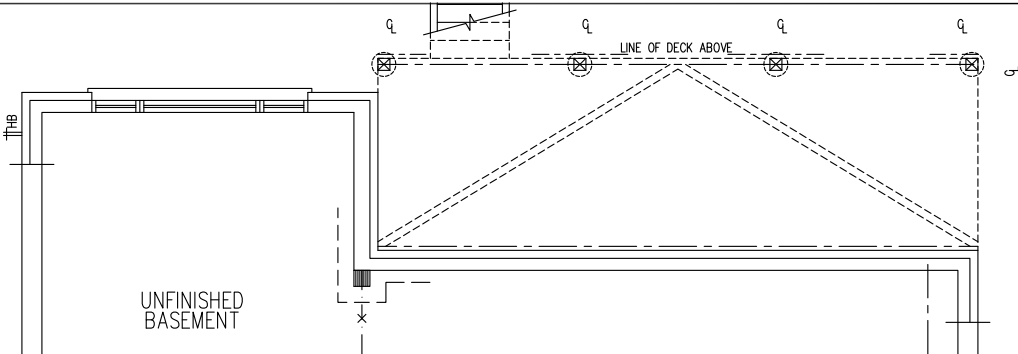
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

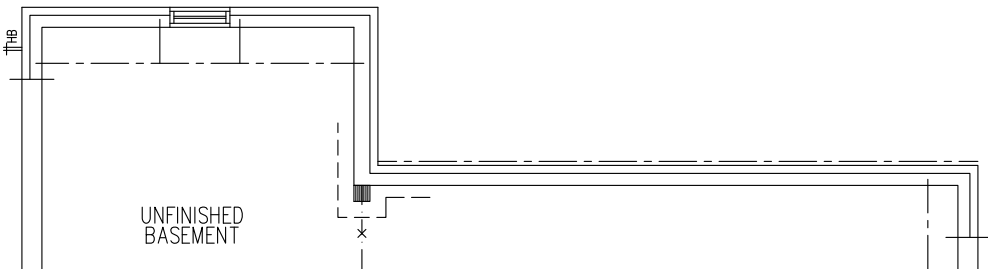
Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	7.01			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1588.2			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	2117.1 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	73.2	73.2		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.340			
Cooling Air Leakage Rate (ACH/H):	0.124			

TYPE: 5003 - THE OAKGROVE
LO# 77476

OPT 5-BED

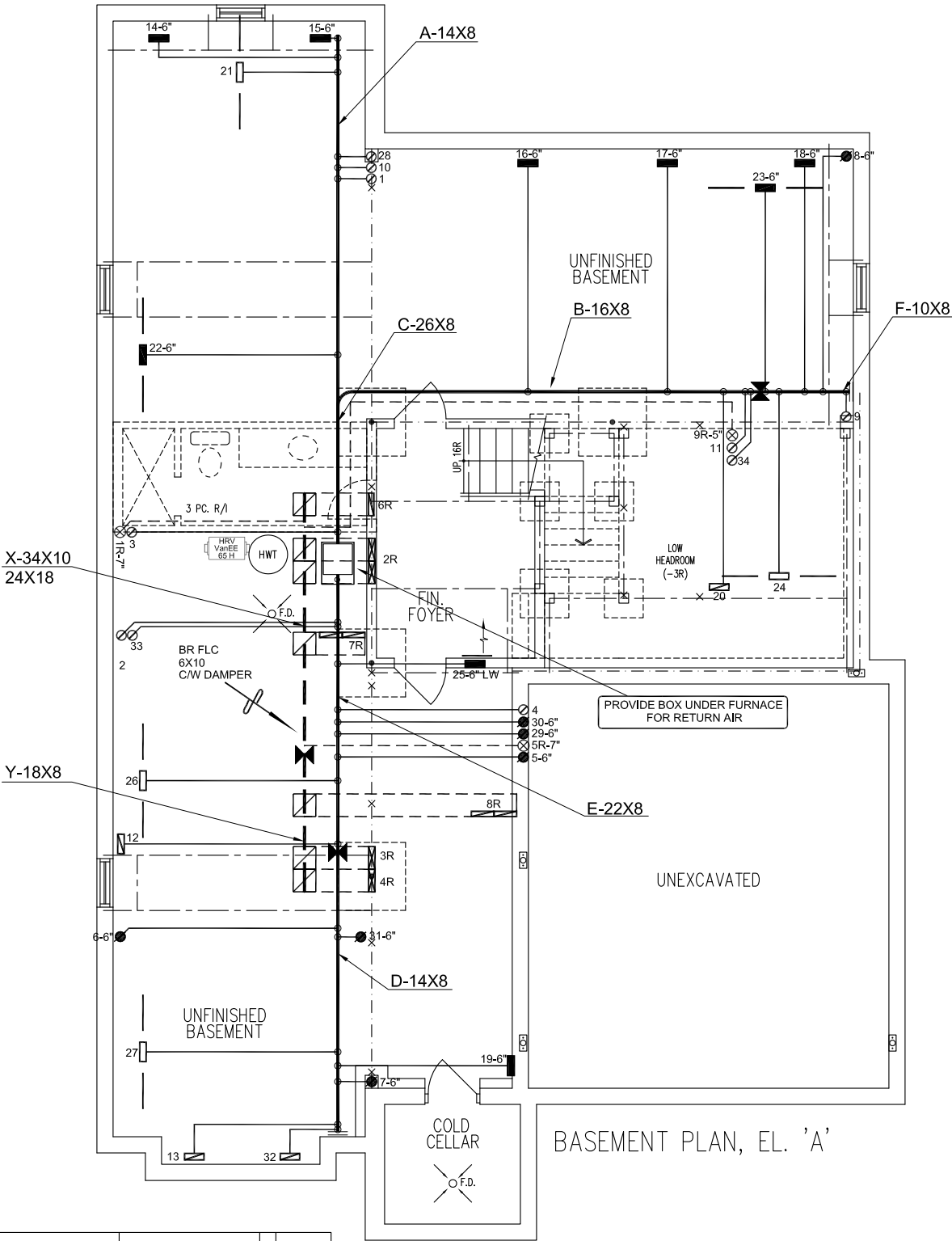
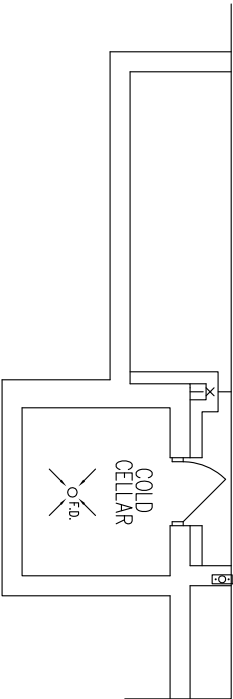


PART. BASEMENT PLAN ELEV. 'A', 'B' & 'C' - L.O.D. COND.

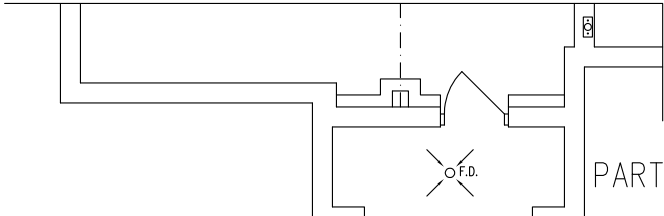


PART. BASEMENT PLAN ELEV. 'A', 'B' & 'C' - W.O.D. COND.

PART. BASEMENT PLAN, EL. 'B'



BASEMENT PLAN, EL. 'A'



PART. BASEMENT PLAN, EL. 'C'

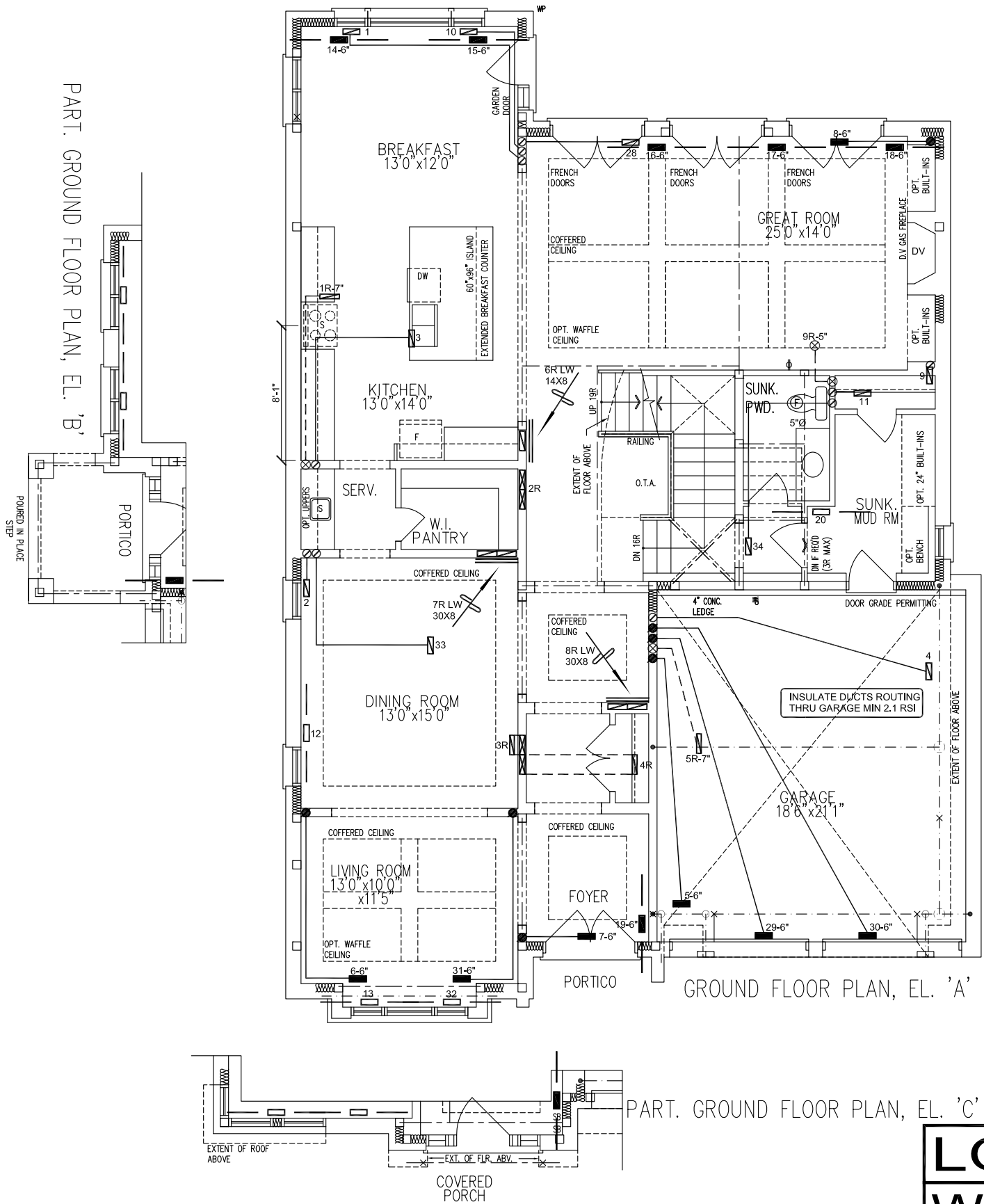
I MICHAEL O'ROURKE HAVE REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

LOD	CSA-F280-12
WOD	PACKAGE A1

HVAC LEGEND								3.	REVISED AS PER ARCHITECTURALS	FEB/2020
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	ADDED RETURN # 9	OCT/2018
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	DECK CONDITIONS ADDED	OCT/2018
	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		

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

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 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 75919 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS				Sheet Title			
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO OPT 5-BED THE OAKGROVE 5003				MAKE LENNOX		3RD FLOOR				BASEMENT HEATING LAYOUT			
				MODEL EL296UH110XE60C		2ND FLOOR		17	6			6	
				INPUT 110 MBTU/H		1ST FLOOR		10	3			2	
				OUTPUT 106 MBTU/H		BASEMENT		7	1	0	Date	JAN/2018	
				COOLING 5.0 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						Scale	1/8" = 1'-0"
FAN SPEED 1955 cfm @ 0.6" w.c.				BCIN# 19669									
3862 sqft								LO#	77476				



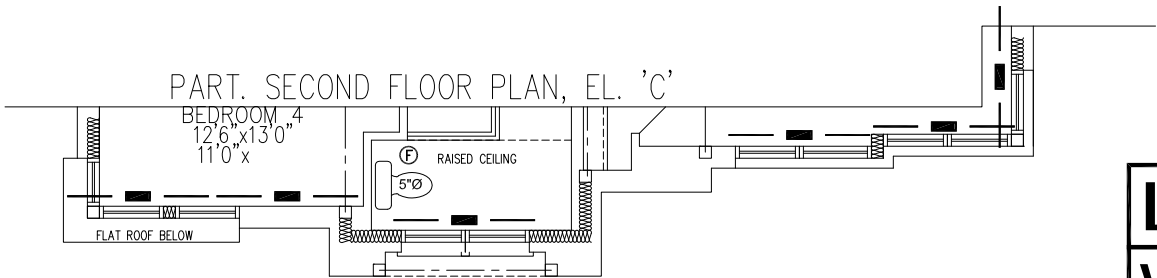
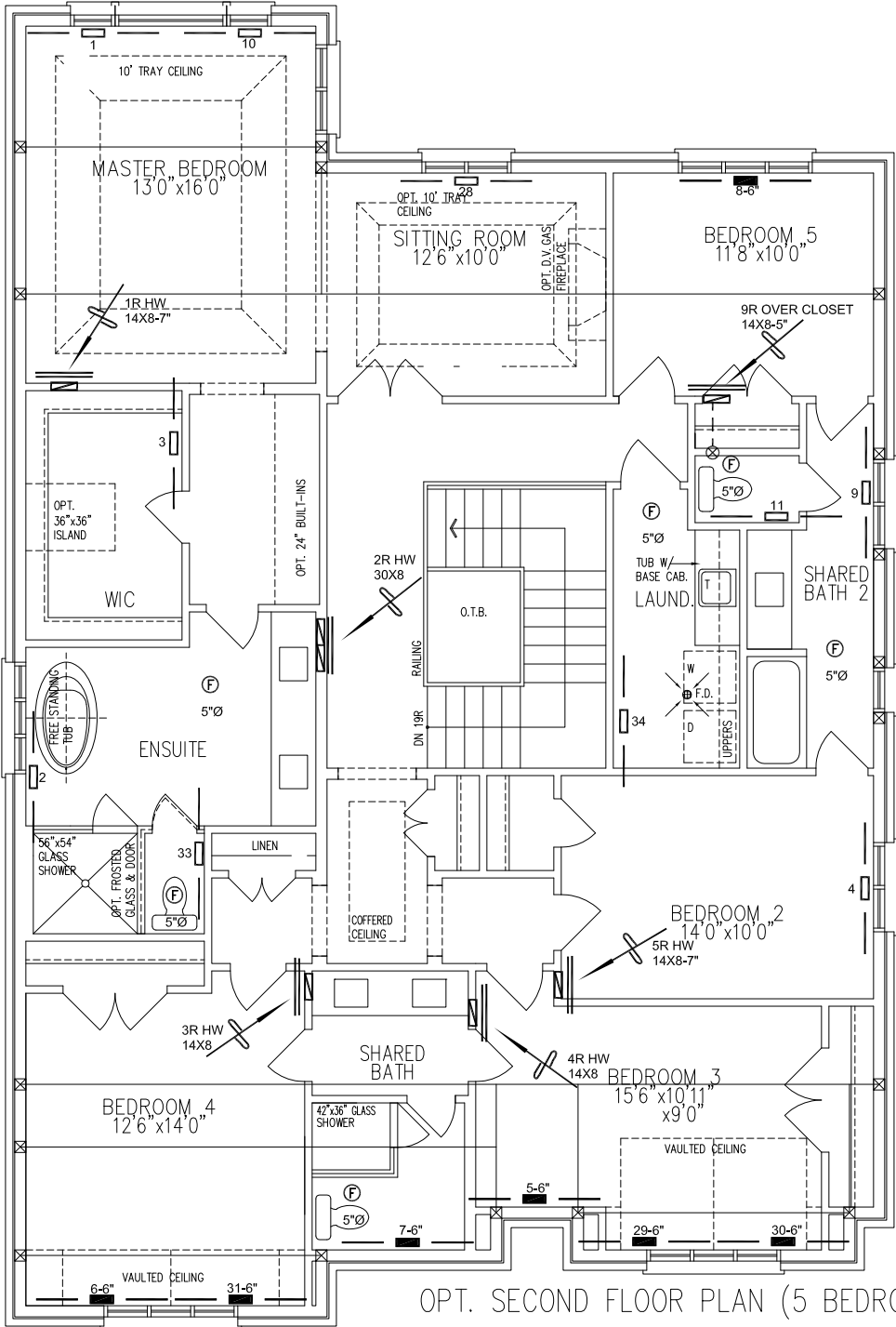
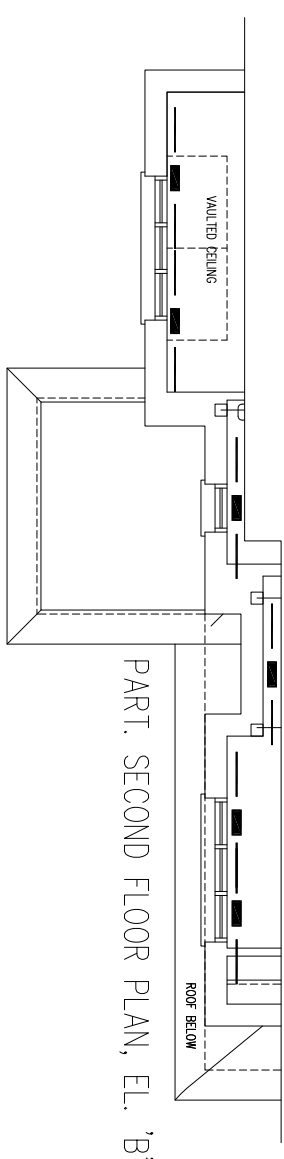
I MICHAEL O'ROURKE HAVE REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

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

HVAC LEGEND								3.	REVISED AS PER ARCHITECTURALS	FEB/2020
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	ADDED RETURN # 9	OCT/2018
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	DECK CONDITIONS ADDED	OCT/2018
	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		

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

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 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	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	1/8" = 1'-0"
OPT 5-BED THE OAKGROVE 5003 3862 sqft			BCIN# 19669	
			LO#	77476



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.

LOD	CSA-F280-12
WOD	PACKAGE A1

HVAC LEGEND								3.	REVISED AS PER ARCHITECTURALS	FEB/2020
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	ADDED RETURN # 9	OCT/2018
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.	DECK CONDITIONS ADDED	OCT/2018
	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		

ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.

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 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	
GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	1/8" = 1'-0"
OPT 5-BED THE OAKGROVE 5003			BCIN# 19669	
3862 sqft			LO#	77476