


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]				
<input type="checkbox"/> House <input type="checkbox"/> Small Buildings <input type="checkbox"/> Large Buildings <input type="checkbox"/> Complex Buildings <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Services <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Fire Protection <input type="checkbox"/> Building Structural <input type="checkbox"/> Plumbing – House <input type="checkbox"/> Plumbing – All Buildings <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: 4004 - LOT 94 - OPT. 5 BED WOB THE DALERIDGE Project: PINE VALLEY & TESTON		
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: <u>O.B.C SENTENCE 3.2.4.1 (4)</u>				
<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.				
November 5, 2018		 Signature of Designer		
Date				

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

THE DALERIDGE										DATE: Nov-18		WINTER NATURAL AIR CHANGE RATE 0.407		HEAT LOSS AT °F. 76		CSA-F280-12	
TYPE: 4004 - LOT 94 - OPT. 5 BED WOB										LO# 80586		SUMMER NATURAL AIR CHANGE RATE 0.137		HEAT GAIN AT °F. 13		SB-12 PACKAGE A1	
PINE VALLEY & TESTON										GFA: 3312		5 BED WOB		ENS-2/3		ENS-4/5	
BUILDER: GOLD PARK HOMES										BED-3		BED-4		BED-5		LOFT	
ROOM USE										WIC		ENS		WOB		BAS	
EXP. WALL										CLG. HT.		CLG. HT.		CLG. HT.		CLG. HT.	
FACTORS										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
GRS.WALL AREA										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
GLAZING										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
NORTH										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
EAST										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
SOUTH										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
WEST										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
SKYL.										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
DOORS										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
NET EXPOSED WALL										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
NET EXPOSED BSMT WALL ABOVE GR										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
EXPOSED CLG										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
NO ATTIC EXPOSED CLG										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
EXPOSED FLOOR										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
BASEMENT/CRAWL HEAT LOSS										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
SLAB ON GRADE HEAT LOSS										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
SUBTOTAL HT LOSS										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
SUB TOTAL HT GAIN										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
LEVEL FACTOR / MULTIPLIER										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
AIR CHANGE HEAT LOSS										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
AIR CHANGE HEAT GAIN										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
DUCT LOSS										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
DUCT GAIN										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
HEAT GAIN PEOPLE										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
HEAT GAIN APPLIANCES/LIGHTS										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
TOTAL HT LOSS BTU/H										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	
TOTAL HT GAIN x 1.3 BTU/H										LOSS GAIN		LOSS GAIN		LOSS GAIN		LOSS GAIN	

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

THE DALERIDGE
TYPE: 4004 - LOT 94 - OPT. 5 BED WOB DATE: Nov-18

GFA: 3312 LO# 80586

HEATING CFM	1255	COOLING CFM	1255
TOTAL HEAT LOSS	67,566	TOTAL HEAT GAIN	42,485
AIR FLOW RATE CFM	18.57	AIR FLOW RATE CFM	29.54
RUN COUNT	4th	3rd	2nd
SIA	0	0	14
R/A	0	0	5
	0	0	3
	0	0	1

EL286UH090XE48C	90	AFUE = 96 %
FAN SPEED	LOW	INPUT (BTU/H) = 88,000
	MEDLOW	OUTPUT (BTU/H) = 85,000
	MEDIUM	DESIGN CFM = 1255
	HIGH	CFM @ .6" E.S.P.
		TEMPERATURE RISE 63 °F

All S/A diffusers 4"x10" 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	ENS-4/5	ENS-2/3	BED-5	LOFT	MBR	WIC-3	DIN	KT/GT	KT/GT	KT/GT	KT/GT	LN/MD	BED-4	FOY	STUDY	BAS	BAS	BAS	BAS
RM LOSS MBH	1.66	2.32	0.96	1.55	2.15	0.47	0.72	1.59	1.89	1.66	0.75	2.56	2.60	2.60	2.60	2.60	2.74	1.20	2.64	1.36	4.04	4.04	4.04	4.04
CFM PER RUN HEAT	31	43	18	29	40	9	13	29	35	31	14	47	48	48	48	48	51	22	49	25	75	75	75	75
RM GAIN MBH	1.96	2.12	0.34	1.89	1.92	0.13	0.31	1.97	2.29	1.96	0.57	1.96	2.25	2.25	2.25	2.25	1.28	1.86	0.41	1.33	1.09	1.09	1.09	1.09
CFM PER RUN COOLING	58	63	10	56	57	4	9	58	68	58	17	58	66	66	66	66	38	55	12	39	32	32	32	32
ADJUSTED PRESSURE	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	0.17	0.17
ACTUAL DUCT LGH	71	58	51	49	42	40	37	33	44	63	35	18	45	37	39	46	11	55	16	27	36	39	28	21
EQUIVALENT LENGTH	200	150	150	180	190	150	220	200	140	210	180	130	140	150	160	160	160	140	140	80	100	90	110	110
TOTAL EFFECTIVE LENGTH	271	208	201	229	232	190	257	233	184	273	215	148	185	187	199	196	171	195	156	107	136	129	138	131
ADJUSTED PRESSURE	0.06	0.08	0.09	0.08	0.07	0.09	0.07	0.07	0.09	0.06	0.08	0.12	0.09	0.09	0.09	0.09	0.1	0.09	0.1	0.16	0.13	0.13	0.12	0.13
ROUND DUCT SIZE	5	5	4	6	5	5	4	6	5	5	4	6	5	5	5	5	4	6	5	5	5	5	5	5
HEATING VELOCITY (ft/min)	228	316	207	148	294	66	149	148	257	228	161	240	352	352	352	352	585	112	360	184	551	551	551	551
COOLING VELOCITY (ft/min)	426	463	115	286	419	29	103	296	499	426	195	296	485	485	485	485	436	280	88	286	235	235	235	235
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	A	B	B	D	C	D	C	D	A	D	C	A	A	A	A	C	C	D	C	B	B	B	C

RUN #	25	26	27	28	29
ROOM NAME	BAS	BAS	BED-3	LOFT	FOY
RM LOSS MBH	4.04	4.04	2.15	1.89	2.64
CFM PER RUN HEAT	75	75	40	35	49
RM GAIN MBH	1.09	1.09	1.92	2.29	0.41
CFM PER RUN COOLING	32	32	57	68	12
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH	19	32	48	57	25
EQUIVALENT LENGTH	120	120	200	200	120
TOTAL EFFECTIVE LENGTH	139	152	248	257	145
ADJUSTED PRESSURE	0.12	0.11	0.07	0.07	0.12
ROUND DUCT SIZE	5	5	5	5	5
HEATING VELOCITY (ft/min)	551	551	294	257	360
COOLING VELOCITY (ft/min)	235	235	419	499	88
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10
TRUNK	C	D	D	D	D

TRUNK	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 CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	0.06	9.6	14	382	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	8
TRUNK B	0.06	12.2	18	569	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	8
TRUNK C	0.06	14.5	24	677	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	8
TRUNK D	0.07	9.8	12	525	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	8
TRUNK E	0.00	0	0	0	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	8
TRUNK F	0.00	0	0	0	0	0.00	0	0	8	0	0.00	0	0	8	0	0.00	0	0	8

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
AIR VOLUME	130	155	85	85	85	170	185	145	0	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	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH	51	36	44	37	45	28	31	23	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	190	155	205	165	165	185	145	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	241	191	249	202	210	213	176	218	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.08	0.06	0.07	0.07	0.07	0.08	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	7	7	6	5.8	5.8	7.5	7.5	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	14	14	14	14	14	14	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TYPE: 4004 - LOT 94 - OPT. 5 BED WOB
SITE NAME: PINE VALLEY & TESTON

LO # 80586
THE DALERIDGE

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES		9.32.3.1(1)
a) <input checked="" type="checkbox"/>	Direct vent (sealed combustion) only	
b) <input type="checkbox"/>	Positive venting induced draft (except fireplaces)	
c) <input type="checkbox"/>	Natural draft, B-vent or induced draft gas fireplace	
d) <input type="checkbox"/>	Solid Fuel (including fireplaces)	
e) <input type="checkbox"/>	No Combustion Appliances	

HEATING SYSTEM	
<input checked="" type="checkbox"/>	Forced Air
<input type="checkbox"/>	Non Forced Air
<input type="checkbox"/>	Electric Space Heat

HOUSE TYPE		9.32.1(2)
<input checked="" type="checkbox"/>	I Type a) or b) appliance only, no solid fuel	
<input type="checkbox"/>	II Type I except with solid fuel (including fireplaces)	
<input type="checkbox"/>	III Any Type c) appliance	
<input type="checkbox"/>	IV Type I, or II with electric space heat	
<input type="checkbox"/>	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
<input type="checkbox"/>	1 Exhaust only/Forced Air System	
<input type="checkbox"/>	2 HRV with Ducting/Forced Air System	
<input checked="" type="checkbox"/>	3 HRV Simplified/connected to forced air system	
<input type="checkbox"/>	4 HRV with Ducting/non forced air system	
<input type="checkbox"/>	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: VANE 65H	Location: BSMT
155.0 cfm	3.0 sones
<input checked="" type="checkbox"/> HVI Approved	

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

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	✓
ENS-2/3	QTXEN050C	50	✓
ENS-4/5	QTXEN050C	50	✓
PWD	QTXEN050C	50	✓

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANE 65H		
155	cfm high	64 cfm low
75	% Sensible Efficiency	<input checked="" type="checkbox"/> 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:	November-18

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																											
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																											
LO#: 80586		Model: 4004 - LOT 94 - OPT. 5 BED WOB		Builder: GOLD PARK HOMES		Date: 05/11/2018																																																					
Volume Calculation					Air Change & Delta T Data																																																						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> </thead> <tbody> <tr> <td>Bsmt</td> <td>1494</td> <td>10</td> <td>14940</td> </tr> <tr> <td>First</td> <td>1494</td> <td>11</td> <td>16434</td> </tr> <tr> <td>Second</td> <td>1818</td> <td>9</td> <td>16362</td> </tr> <tr> <td>Third</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td>Fourth</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>47,736.0 ft³</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>1351.7 m³</td> </tr> </tbody> </table>					Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)	Bsmt	1494	10	14940	First	1494	11	16434	Second	1818	9	16362	Third	0	9	0	Fourth	0	9	0	Total:			47,736.0 ft³	Total:			1351.7 m³	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th></th> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> <th>ΔT °F</th> </tr> </thead> <tbody> <tr> <td>Winter DTDh</td> <td>22</td> <td>-20</td> <td>42</td> <td>76</td> </tr> <tr> <td>Summer DTDc</td> <td>24</td> <td>31</td> <td>7</td> <td>13</td> </tr> </tbody> </table>					Design Temperature Difference				Tin °C	Tout °C	ΔT °C	ΔT °F	Winter DTDh	22	-20	42	76	Summer DTDc	24	31	7	13
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5.2.3.1 Heat Loss due to Air Leakage					6.2.6 Sensible Gain due to Air Leakage																																																						
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$					$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$																																																						
0.407 x 375.48 x 42 °C x 1.2 = 7741 W = 26411 Btu/h					= 0.137 x 375.48 x 7 °C x 1.2 = 437 W = 1492 Btu/h																																																						
5.2.3.2 Heat Loss due to Mechanical Ventilation					6.2.7 Sensible heat Gain due to Ventilation																																																						
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$					$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$																																																						
155 CFM x 76 °F x 1.08 x 0.25 = 3181 Btu/h					155 CFM x 13 °F x 1.08 x 0.25 = 536 Btu/h																																																						
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																											
$HL_{airr} = Level Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{aglevel} + HL_{bglevel})\}$																																																											
Level		Level Factor (LF)		HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)		Level Conductive Heat Loss: (HLlevel)		Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)																																																			
1	0.5	26,411		10,741	1.229																																																						
2	0.3			14,418	0.550																																																						
3	0.2			15,013	0.352																																																						
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 HLairbv = 0

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** 4004 - LOT 94 - OPT. 5 BED WOB THE DALERIDGE
SFQT: 3312 **LO#** 80586**BUILDER:** GOLD PARK HOMES
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)	75

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):	47736.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 58.0 ft	WIDTH: 32.0 ft	EXPOSED PERIMETER:	138.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	42.0 ft

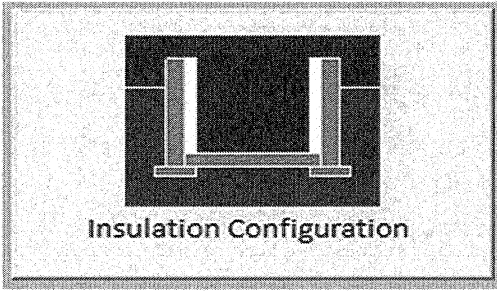
2012 OBC - COMPLIANCE PACKAGE**Component****Compliance Package
A1****Nominal** **Min. Eff.**

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

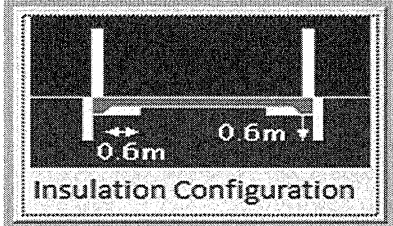
Supplemental tool for CAN/CSA-F280

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):	12.8	 Insulation Configuration
Floor Width (m):	9.8	
Exposed Perimeter (m):	42.1	
Wall Height (m):	3.0	
Depth Below Grade (m):	1.89	
Window Area (m ²):	0.7	
Door Area (m ²):	3.7	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1161

TYPE: 4004 - LOT 94 - OPT. 5 BED WOB THE DALERIDGE
LO# 80586

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		
Length (m):	9.8	
Width (m):	1.5	
Exposed Perimeter (m):	12.8	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		93

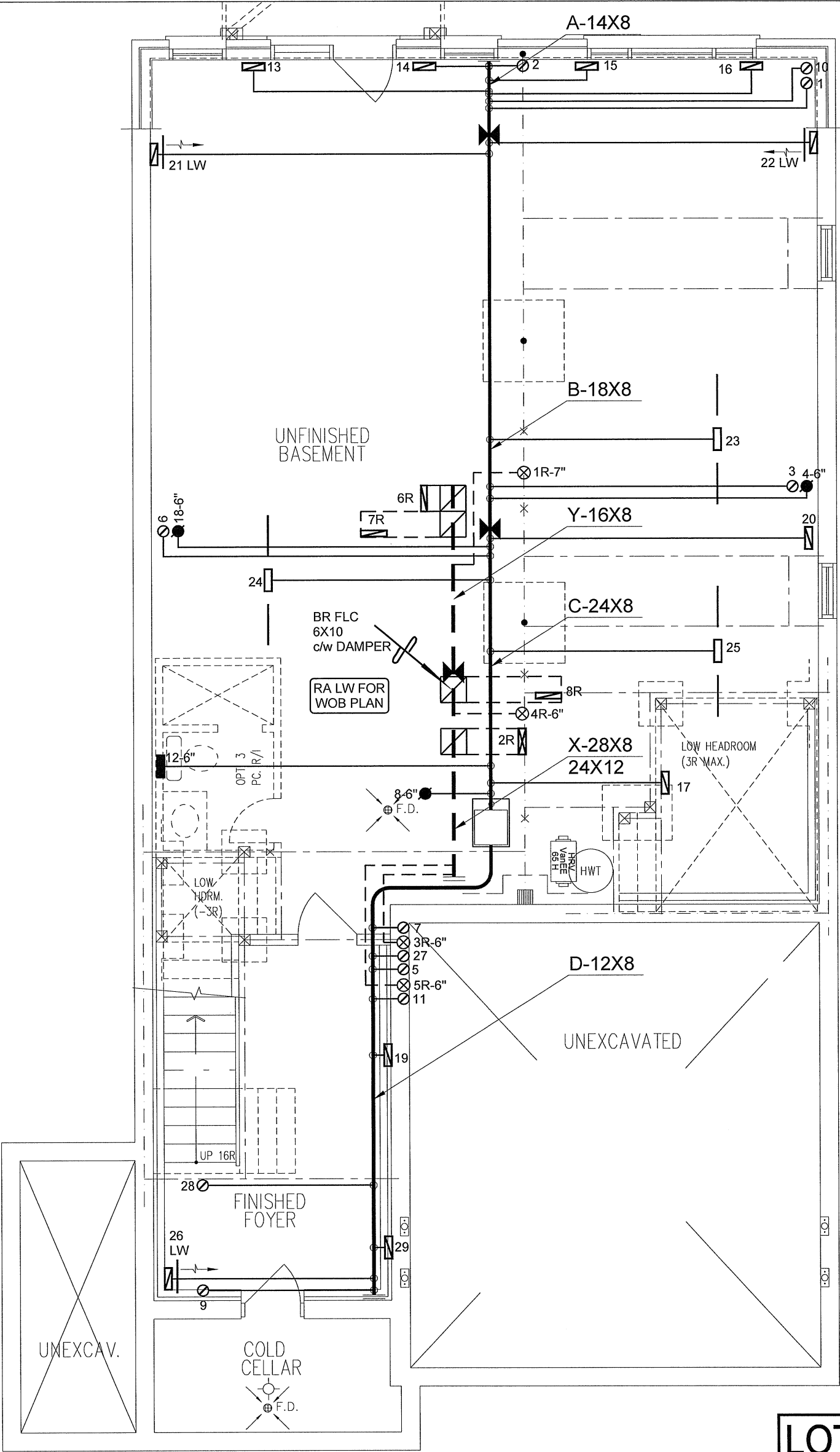
TYPE: 4004 - LOT 94 - OPT. 5 BED WOB THE DALERIDGE
LO# 80586

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):	9.14			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1351.7			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1801.9 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):	0.407			
Cooling Air Leakage Rate (ACH/H):	0.137			

TYPE: 4004 - LOT 94 - OPT. 5 BED WOB THE DALERIDGE
LO# 80586



BASEMENT PLAN ELEV. 'A' – LOT 94

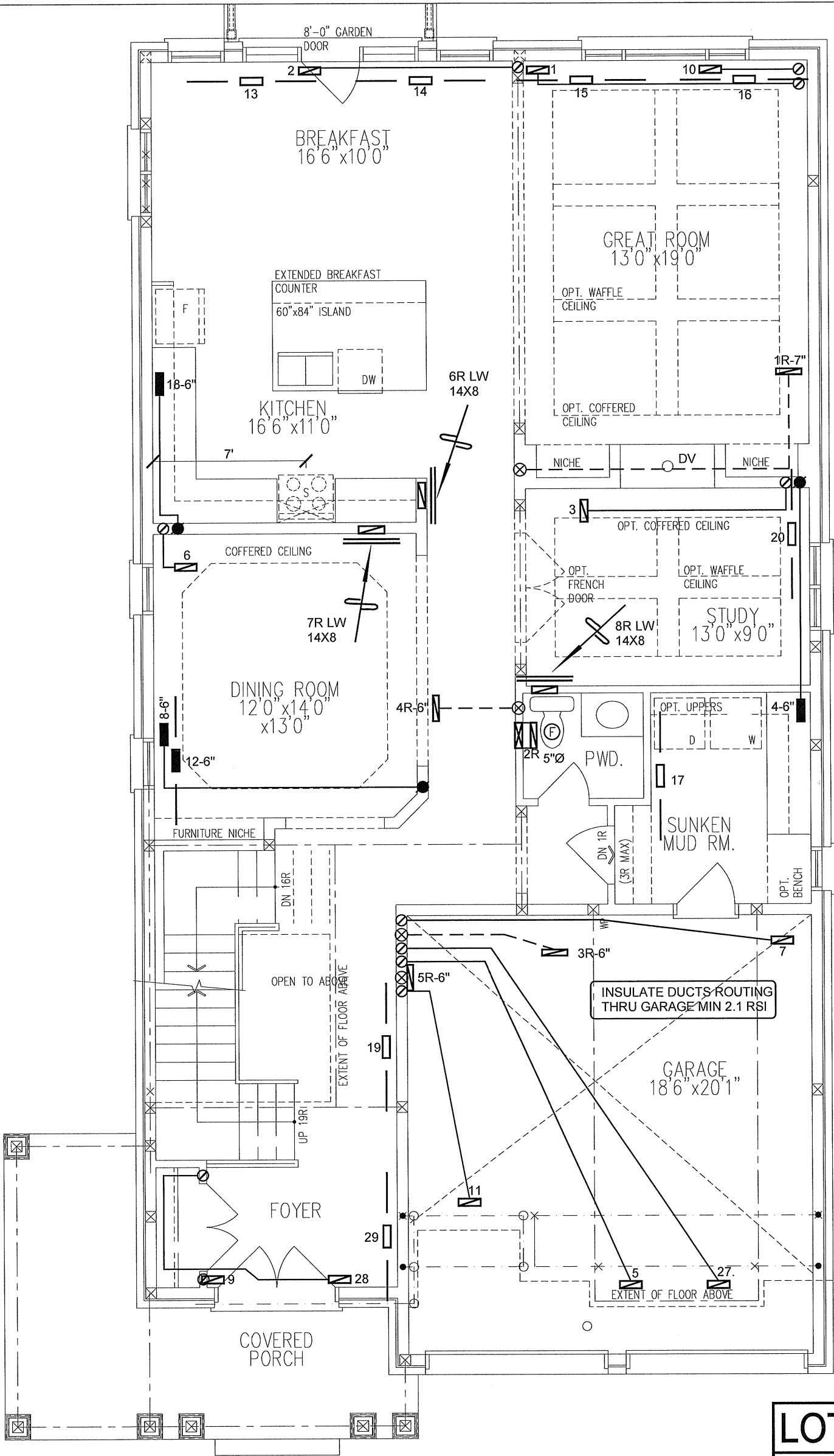
LOT 94
CSA-F280-12
WOB PACKAGE A1

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.		
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.
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	Description
							REVISIONS	
							Date	

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Client	<div><p>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</p><p>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.</p></div>	HEAT LOSS 70746 BTU/H		# OF RUNS S/A R/A FANS			Sheet Title		
GOLD PARK HOMES		UNIT DATA		3RD FLOOR			BASEMENT HEATING LAYOUT		
Project Name		MAKE LENNOX		2ND FLOOR			14	5	3
PINE VALLEY & TESTON VAUGHAN, ONTARIO		MODEL EL296UH090XE48C		1ST FLOOR			9	3	2
THE DALERIDGE		INPUT 88 MBTU/H		BASEMENT			6	1	0
OPT. 5 BED	OUTPUT 85 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						
4004 - LOT 94 WOB 3312 sqft	COOLING 3.5 TONS		Date NOV/2018						
	FAN SPEED 1255 cfm @ 0.6" w.c.		Scale 3/16" = 1'-0"						
			BCIN# 19669						
			LO#		80586				



GROUND FLOOR PLAN ELEV. 'A' – LOT 94

LOT 94

CSA-F280-12

WOB

PACKAGE A1

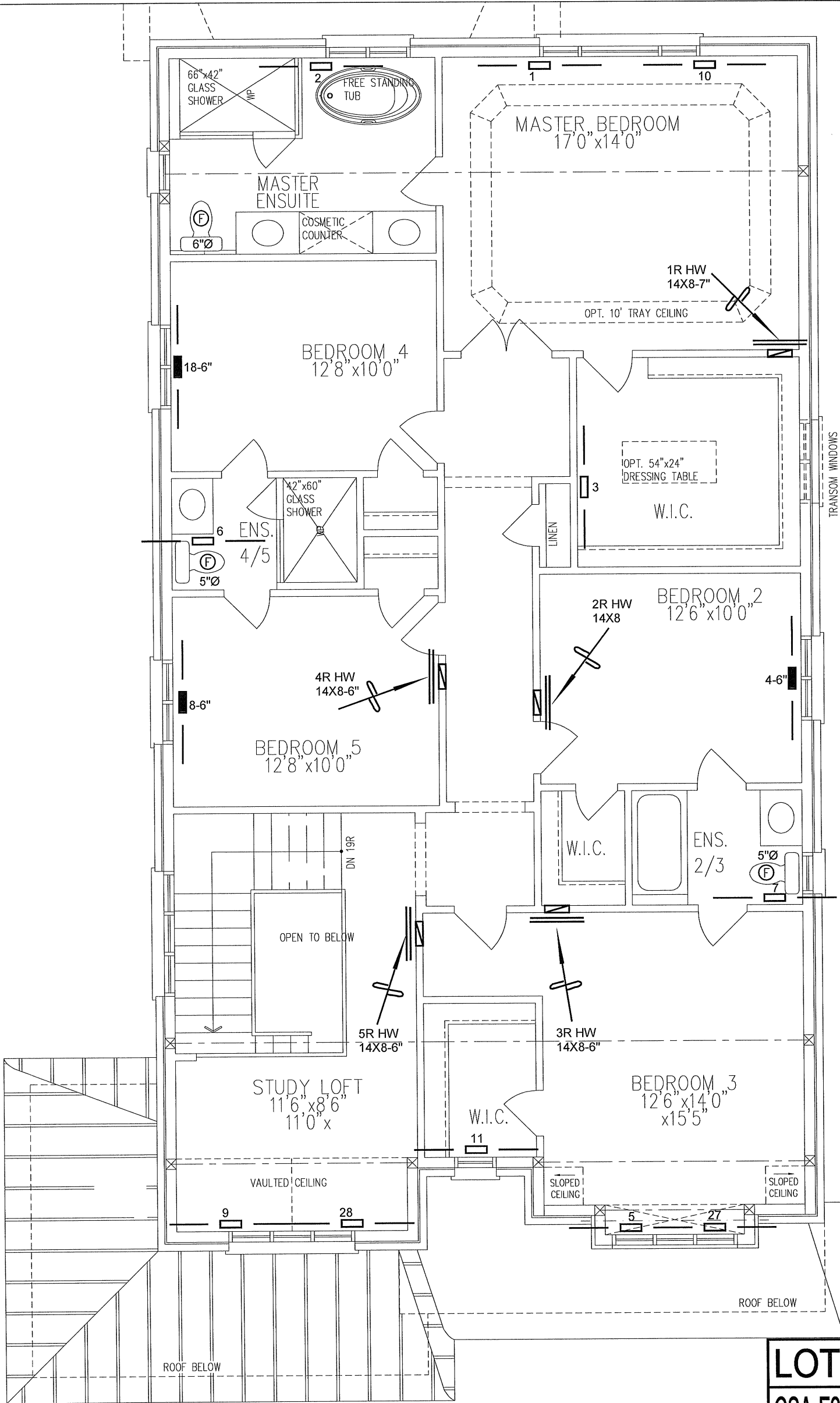
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Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

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		<div></div> <div>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</div> <div>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.</div>	Sheet Title	
GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	NOV/2018
PINE VALLEY & TESTON VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
THE DALERIDGE			BCIN# 19669	
OPT. 5 BED			LO#	80586
4004 - LOT 94 WOB 3312 sqft				



SECOND FLOOR PLAN ELEV. 'A' – LOT 94

LOT 94
CSA-F280-12
WOB PACKAGE A1

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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.	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	
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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	1.
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	No. Description Date

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Client GOLD PARK HOMES	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@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	Sheet Title SECOND FLOOR HEATING LAYOUT
Project Name PINE VALLEY & TESTON VAUGHAN, ONTARIO THE DALERIDGE OPT. 5 BED 4004 - LOT 94 WOB 3312 sqft	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 NOV/2018
		Scale 3/16" = 1'-0"
		BCIN# 19669
		LO# 80586