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 (WOODBRIDGE)	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	☒ HVAC – House	☐ Building Structural
☐ Small Buildings	☐ Building Services	☐ Plumbing – House
☐ Large Buildings	☐ Detection, Lighting and Power	☐ Plumbing – All Buildings
☐ Complex Buildings	☐ Fire Protection	☐ 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:** 5013 - ELEV B - RIVERVIEW WOB **Project:** PINE VALLEY PH 2

D. Declaration of Designer

I **MICHAEL O'ROURKE** 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 Di vision C, of the Building Code.

Individual BCIN: 19669
Basis for exemption from registration and qualification: O.B.C SENTENCE 3.2.4.1 (4)

☐ 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 5, 2022
Date

Signature of Designer

NOTE:

1. 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.
2. 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.

HVAC DESIGNS LTD.

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Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: PINE VALLEY PH 2 | WOB | DATE May-22 | WINTER NATURAL AIR CHANGE RATE 0.407 | HEAT LOSS ΔT °F. 76 | CSA-F280-12

BUILDER: GOLD PARK HOMES | TYPE: 5013 - ELEV B - RIVERVIEW | GFA: 4501 | LO# 96633 | SUMMER NATURAL AIR CHANGE RATE 0.137 | HEAT GAIN ΔT °F. 13 | SB-12 PACKAGE A1

ROOM USE			PBR			ENS			WIC			BED-2			BED-3			BED-4			ENS-2			ENS-3			LOFT			ENS-4			WIC-E		
EXP. WALL			37			16			10			11			12			47			7			25			11			7			8		
CLG. HT.			9			9			9			9			9			9			9			9			9			9			9		
	FACTORS																																	
GRS.WALL AREA	LOSS	GAIN	333			144			90			99			108			423			63			225			99			63			72		
GLAZING			LOSS		GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN
NORTH	21.3	16.0	0	0	0	0	0	0	0	0	0	20	426	319	0	0	0	8	170	128	10	213	160	0	0	0	10	213	160	0	0	0	0	0	0
EAST	21.3	41.6	0	0	0	0	0	0	0	0	0	0	0	0	75	1596	3116	69	1468	2867	0	0	0	12	255	499	0	0	0	0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	30	638	747	6	128	149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	213	249	6	128	149
WEST	21.3	41.6	46	979	1911	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	25.2	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	505	85	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.8	287	1281	216	114	509	86	84	375	63	79	353	59	33	147	25	326	1455	245	53	237	40	213	951	160	89	397	67	53	237	40	66	295	50
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	340	436	200	256	329	150	89	114	52	219	281	129	224	287	132	310	398	182	67	86	39	127	163	75	255	327	150	107	137	63	117	150	69
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0	0	0	0	26	71	33	35	96	44	0	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	137	349	59	250	638	107	0	0	0	67	171	29	59	150	25	135	344	58	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS				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	
SUBTOTAL HT LOSS				2696			1476			617			1409			2740			4092			706			1519			1282			587			572	
SUB TOTAL HT GAIN					2327			983			265			566			3413			3551			268			759			434			352			268
LEVEL FACTOR / MULTIPLIER			0.20	0.43		0.20	0.43		0.20	0.43		0.20	0.43		0.20	0.43		0.20	0.43		0.20	0.43		0.20	0.43		0.20	0.43		0.20	0.43		0.20	0.43	
AIR CHANGE HEAT LOSS				1162			636			266			607			1181			1764			304			655			552			253			247	
AIR CHANGE HEAT GAIN					178			75			20			43			261			271			20			58			33			27			20
DUCT LOSS				0			0			0			202			392			0			101			217			183			0			0	
DUCT GAIN					0			0			0			166			472			0			29			82			128			0			0
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240	1		240	0		0	0		0	0		0	0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS					811			0			0			811			811			811			0			0			811			0			0
TOTAL HT LOSS BTU/H				3858			2112			883			2217			4313			5856			1112			2392			2017			839			819	
TOTAL HT GAIN x 1.3 BTU/H					4934			1376			371			2374			6756			6335			412			1168			1828			492			375

ROOM USE			GRT			DIN			KT/BF			OFF			LND						FOY			MUD						WOB			BAS		
EXP. WALL			55			32			59			30			0						21			34						53			173		
CLG. HT.			11			11			11			11			9						11			11						10			10		
	FACTORS																																		
GRS.WALL AREA	LOSS	GAIN	605			352			649			330			0						231			374						530			1211		
GLAZING			LOSS		GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN					LOSS	GAIN		LOSS	GAIN					LOSS	GAIN		LOSS	GAIN
NORTH	21.3	16.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0				44	936	703	0	0	0
EAST	21.3	41.6	0	0	0	0	0	0	0	0	0	48	1021	1994	0	0	0				25	532	1039	0	0	0				0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	28	596	697	38	809	946	0	0	0	0	0	0				0	0	0	0	0	0				7	149	174	0	0	0
WEST	21.3	41.6	192	4086	7978	0	0	0	102	2171	4238	0	0	0	0	0	0				0	0	0	0	0	0				38	809	1579	0	0	0
SKYLT.	37.2	101.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	0	0				0	0	0	0	0	0
DOORS	25.2	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				30	757	128	20	505	85				0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.8	413	1843	310	324	1446	244	509	2272	383	282	1258	212	0	0	0				176	785	132	354	1580	266				441	1968	331	0	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	0				0	0	0	0	0	0				0	0	0	519	1868	315
EXPOSED CLG	1.3	0.6	397	509	233	0	0	0	0	0	0	0	0	0	81	104	48				0	0	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	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	24	61	10				0	0	0	0	0	0				0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS				0			0			0			0			0						0			0								3110		
SLAB ON GRADE HEAT LOSS				0			0			0			0			0						0			0						763				
SUBTOTAL HT LOSS				6438			2042			5251			2280			165						2075			2085						4625			4977	
SUB TOTAL HT GAIN					8522			941			5567			2206			58					1299			351							2788			315
LEVEL FACTOR / MULTIPLIER			0.30	0.57		0.30	0.57		0.30	0.57		0.30	0.57		0.20	0.43					0.30	0.57		0.30	0.57								0.50	2.00	
AIR CHANGE HEAT LOSS				3686			1169			3006			1305			71						1188			1193									19244	
AIR CHANGE HEAT GAIN					651			72			426			169			4					99			27										237
DUCT LOSS				0			0			0			0			24						0			0									0	
DUCT GAIN					0			0			0			0			87						0			0										0
HEAT GAIN PEOPLE	240		0		0	0		0	0		0	0		0	0		0				0		0	0		0				0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS					811			811			811			811			811						0			0									
TOTAL HT LOSS BTU/H				10124			3211			8256			3585			260						3263			3278						5388			24221	
TOTAL HT GAIN x 1.3 BTU/H					12979			2370			8844			4142			1248					1817			491							3624			717

TOTAL HEAT GAIN BTU/H: 63173 TONS: 5.26 LOSS DUE TO VENTILATION LOAD BTU/H: 6156 STRUCTURAL HEAT LOSS: 88003 TOTAL COMBINED HEAT LOSS BTU/H: 94159

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE

HVAC DESIGNS LTD.

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Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: PINE VALLEY PH 2 — WOB
BUILDER: GOLD PARK HOMES — TYPE: 5013 - ELEV B - RIVERVIEW — DATE: May-22 — GFA: 4501 — LO# 96633 — **FURNACE 1**

HEATING CFM	1170	COOLING CFM	1170
TOTAL HEAT LOSS	61,326	TOTAL HEAT GAIN	34,985
AIR FLOW RATE CFM	19.08	AIR FLOW RATE CFM	33.44

furnace pressure	0.6
furnace filter	0.05
a/c coil pressure	0.2
available pressure for s/a & r/a	0.35
plenum pressure s/a	0.18
max s/a dif press. loss	0.03
min adjusted pressure s/a	0.15
r/a pressure	0.17
r/a grille press. Loss	0.02
adjusted pressure r/a	0.15

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 64404 BTUH

$LENNOX
ML196UH090XE36C **90**
FAN SPEED
LOW 0
MEDLOW 0
MEDIUM 0
MEDIUM HIGH 1170
HIGH 1300

AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = **85,600**
DESIGN CFM = **1170**
CFM @ .6 " E.S.P.
TEMPERATURE RISE 68 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	12	6
R/A	0	0	0	2	1

All S/A diffusers 4"x10" unless noted otherwise on layout.
All S/A runs 5"Ø unless noted otherwise on layout.

RUN #	19	20	21	22	23	24
ROOM NAME	FOY	GRT	GRT	GRT	GRT	DIN
RM LOSS MBH.	3.26	2.53	2.53	2.53	2.53	3.21
CFM PER RUN HEAT	62	48	48	48	48	61
RM GAIN MBH.	1.82	3.24	3.24	3.24	3.24	2.37
CFM PER RUN COOLING	61	109	109	109	109	79
ADJUSTED PRESSURE	0.17	0.15	0.15	0.15	0.15	0.17
ACTUAL DUCT LGH.	47	56	49	45	38	27
EQUIVALENT LENGTH	100	110	150	130	150	140
TOTAL EFFECTIVE LENGTH	147	166	199	175	188	167
ADJUSTED PRESSURE	0.12	0.09	0.08	0.09	0.08	0.1
ROUND DUCT SIZE	5	**6**	**6**	**6**	**6**	5
HEATING VELOCITY (ft/min)	455	245	245	245	245	448
COOLING VELOCITY (ft/min)	448	556	556	556	556	580
OUTLET GRILL SIZE	3X10	4X10	4X10	4X10	4X10	3X10
TRUNK	F	D	D	D	D	F

RUN #	25	26	27	28	29	30	31	32	33	34	35	36
ROOM NAME	KT/BF	KT/BF	KT/BF	OFF	OFF	MUD	BAS	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH.	2.75	2.75	2.75	1.79	1.79	3.28	4.93	4.93	4.93	4.93	4.93	4.93
CFM PER RUN HEAT	53	53	53	34	34	63	94	94	94	94	94	94
RM GAIN MBH.	2.95	2.95	2.95	2.07	2.07	0.49	0.72	0.72	0.72	0.72	0.72	0.72
CFM PER RUN COOLING	99	99	99	69	69	16	24	24	24	24	24	24
ADJUSTED PRESSURE	0.16	0.16	0.16	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	34	39	31	65	60	21	66	37	49	16	15	49
EQUIVALENT LENGTH	100	140	170	130	120	140	130	140	140	130	130	130
TOTAL EFFECTIVE LENGTH	134	179	201	195	180	161	196	177	189	146	145	179
ADJUSTED PRESSURE	0.12	0.09	0.08	0.09	0.1	0.11	0.08	0.09	0.09	0.11	0.11	0.09
ROUND DUCT SIZE	**6**	**6**	**6**	5	5	5	**6**	**6**	**6**	**6**	**6**	**6**
HEATING VELOCITY (ft/min)	270	270	270	250	250	463	479	479	479	479	479	479
COOLING VELOCITY (ft/min)	505	505	505	507	507	117	122	122	122	122	122	122
OUTLET GRILL SIZE	4X10	4X10	4X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10
TRUNK	E	E	E	F	F	F	D	D	E	E	F	F

SUPPLY 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	0.00	0	0	x	8	0	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	0	0.00	0	0	x	8	0	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	0	0.00	0	0	x	8	0	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	380	0.08	9.8	14	x	8	489	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	727	0.08	12.4	20	x	8	654	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	442	0.09	10	12	x	8	663	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	0.07	0	0	x	8	0
TRUNK P	0	0.07	0	0	x	8	0
TRUNK Q	0	0.07	0	0	x	8	0
TRUNK R	0	0.07	0	0	x	8	0
TRUNK S	0	0.07	0	0	x	8	0
TRUNK T	0	0.07	0	0	x	8	0
TRUNK U	0	0.07	0	0	x	8	0
TRUNK V	0	0.07	0	0	x	8	0
TRUNK W	415	0.07	10.4	12	x	8	623
TRUNK X	755	0.07	13.1	20	x	8	680
TRUNK Y	0	0.07	0	0	x	8	0
TRUNK Z	0	0.07	0	0	x	8	0
DROP	1170	0.07	15.4	24	x	10	**702**

RETURN AIR #						6	7										BR
AIR VOLUME	0	0	0	0	0	490	415	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	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	1	1	1	1	1	24	50	1	1	1	1	1	1	1	1	1	16
EQUIVALENT LENGTH	0	0	0	0	0	145	170	0	0	0	0	0	0	0	0	0	150
TOTAL EFFECTIVE LH	1	1	1	1	1	169	220	1	1	1	1	1	1	1	1	1	166
ADJUSTED PRESSURE	14.80	14.80	14.80	14.80	14.80	0.09	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.09
ROUND DUCT SIZE	0	0	0	0	0	10.4	10.4	0	0	0	0	0	0	0	0	0	8.3
INLET GRILL SIZE	0	0	0	0	0	8	8	0	0	0	0	0	0	0	0	0	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	0	0	0	0	0	30	30	0	0	0	0	0	0	0	0	0	24

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke — INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE

HVAC DESIGNS LTD.

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Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: PINE VALLEY PH 2 — WOB
BUILDER: GOLD PARK HOMES — TYPE: 5013 - ELEV B - RIVERVIEW — DATE: May-22 — GFA: 4501 — LO# 96633 — **FURNACE 2**

HEATING CFM	980	COOLING CFM	980
TOTAL HEAT LOSS	26,677	TOTAL HEAT GAIN	27,670
AIR FLOW RATE CFM	36.74	AIR FLOW RATE CFM	35.42

furnace pressure	0.6
furnace filter	0.05
a/c coil pressure	0.2
available pressure for s/a & r/a	0.35
plenum pressure s/a	0.18
max s/a dif press. loss	0.02
min adjusted pressure s/a	0.16
r/a pressure	0.17
r/a grille press. Loss	0.02
adjusted pressure r/a	0.15

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 29755 BTUH

$LENNOX
ML196UH045XE36B **45**

FAN SPEED	
LOW	620
MEDLOW	685
MEDIUM	980
MEDIUM HIGH	1110
HIGH	0

AFUE = 96 %
INPUT (BTU/H) = 44,000
OUTPUT (BTU/H) = **42,800**
DESIGN CFM = **980**
CFM @ .6 " E.S.P.
TEMPERATURE RISE 40 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	20	0	0
R/A	0	0	6	0	0

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
ROOM NAME	PBR	PBR	ENS	ENS	WIC	WIC-E	BED-2	BED-2	ENS-3	BED-3	BED-4	BED-4	BED-4	LOFT	ENS-2	BED-3	ENS-4	LND
RM LOSS MBH.	1.93	1.93	1.06	1.06	0.88	0.82	1.11	1.11	2.39	1.44	1.46	1.46	1.46	2.02	1.11	1.44	0.84	0.26
CFM PER RUN HEAT	71	71	39	39	32	30	41	41	88	53	54	54	54	74	41	53	31	10
RM GAIN MBH.	2.47	2.47	0.69	0.69	0.37	0.37	1.19	1.19	1.17	2.25	1.58	1.58	1.58	1.83	0.41	2.25	0.49	1.25
CFM PER RUN COOLING	87	87	24	24	13	13	42	42	41	80	56	56	56	65	15	80	17	44
ADJUSTED PRESSURE	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	52	63	48	16	51	19	72	77	78	69	69	66	73	84	65	64	75	46
EQUIVALENT LENGTH	210	190	255	130	245	120	170	180	200	190	180	190	170	190	170	180	160	130
TOTAL EFFECTIVE LENGTH	262	253	303	146	296	139	242	257	278	259	249	256	243	274	235	244	235	176
ADJUSTED PRESSURE	0.06	0.06	0.06	0.12	0.06	0.12	0.07	0.07	0.06	0.07	0.07	0.07	0.07	0.06	0.07	0.07	0.07	0.1
ROUND DUCT SIZE	**6**	**6**	5	4	4	4	5	5	**6**	**6**	**6**	**6**	**6**	**6**	5	**6**	4	4
HEATING VELOCITY (ft/min)	362	362	286	447	367	344	301	301	449	270	275	275	275	377	301	270	356	115
COOLING VELOCITY (ft/min)	444	444	176	275	149	149	308	308	209	408	286	286	286	331	110	408	195	505
OUTLET GRILL SIZE	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	4X10	3X10	3X10
TRUNK	C	C	C	C	C	C	B	B	A	A	A	A	A	B	B	A	A	B

RUN #	37	38
ROOM NAME	BED-3	BED-4
RM LOSS MBH.	1.44	1.46
CFM PER RUN HEAT	53	54
RM GAIN MBH.	2.25	1.58
CFM PER RUN COOLING	80	56
ADJUSTED PRESSURE	0.17	0.17
ACTUAL DUCT LGH.	67	71
EQUIVALENT LENGTH	190	170
TOTAL EFFECTIVE LENGTH	257	241
ADJUSTED PRESSURE	0.07	0.07
ROUND DUCT SIZE	**6**	**6**
HEATING VELOCITY (ft/min)	270	275
COOLING VELOCITY (ft/min)	408	286
OUTLET GRILL SIZE	4X10	4X10
TRUNK	A	A

SUPPLY 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	494	0.06	11.6	16	x	8	556	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	701	0.06	13.2	22	x	8	574	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	983	0.06	15	26	x	8	681	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	0	0.00	0	0	x	8	0	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	0	0.00	0	0	x	8	0	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	0	0.00	0	0	x	8	0	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	825	0.05	14.7	26	x	8	571
TRUNK Y	450	0.05	11.7	16	x	8	506
TRUNK Z	155	0.05	7.8	8	x	8	349
DROP	980	0.05	15.7	24	x	10	588

RETURN AIR #	1	2	3	4	5			8								BR
AIR VOLUME	155	115	115	115	335	0	0	145	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
ACTUAL DUCT LGH.	62	93	79	75	69	1	1	59	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	170	235	195	245	230	0	0	165	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	232	328	274	320	299	1	1	224	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.05	0.05	0.05	0.05	14.80	14.80	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80
ROUND DUCT SIZE	7.5	7	7	7	10.5	0	0	7	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	0	0	8	0	0	0	0	0	0	0	0
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	30	0	0	14	0	0	0	0	0	0	0	0

I REVIEW AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke — INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE

HVAC DESIGNS LTD.

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TYPE: 5013 - ELEV B - RIVERVIEW LO # 96633
SITE NAME: PINE VALLEY PH 2 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	3	@ 10.6 cfm	31.8	cfm
Kitchen & Bathrooms	6	@ 10.6 cfm	63.6	cfm
Other Rooms	5	@ 10.6 cfm	53.0	cfm
Table 9.32.3.A.		TOTAL	190.8	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	190.8	cfm
Less Principal Ventil. Capacity	150	cfm
Required Supplemental Capacity	40.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY

Model: VANEE V150H Location: BSMT

150.0 cfm [✓] HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION

CFM		ΔT °F		FACTOR		% LOSS
150.0 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-2	BY INSTALLING CONTRACTOR	50	✓	3.5
ENS-3	BY INSTALLING CONTRACTOR	50	✓	3.5
ENS-4	BY INSTALLING CONTRACTOR	50	✓	3.5

HEAT RECOVERY VENTILATOR 9.32.3.11.

Model: VANEE V150H INSTALL 2 HRV / ERV's

150 cfm high 35 cfm low

75 % Sensible Efficiency @ 32 deg F (0 deg C) [✓] HVI Approved

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: May-22

I REVIEW AND TAKE RESPONIBILITY FOR THE DESIGN WORK AND AM QUALIFIED IN THE APPROPRIATE CATEGORY AS AN "OTHER DESIGNER" UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

INDIVIDUAL BCIN: 19669 Michael O'Rourke. MICHAEL O'ROURKE

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CSA F280-12 Residential Heat Loss and Heat Gain Calculations

Formula Sheet (For Air Leakage / Ventiliation Calculation)

LO#: 96633 Model: 5013 - ELEV B - RIVERVIEW Builder: GOLD PARK HOMES Date: 2022-05-05

Volume Calculation

House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	2122	10	21220
First	2122	11	23342
Second	2778	9	25002
Third	0	9	0
Fourth	0	9	0
		Total:	69,564.0 ft³
		Total:	1969.8 m³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.407
SUMMER NATURAL AIR CHANGE RATE	0.137

Design Temperature Difference

	Tin °C	Tout °C	ΔT °C	ΔT °F
Winter DTDh	22	-20	42	76
Summer DTDc	24	31	7	13

5.2.3.1 Heat Loss due to Air Leakage

$$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$$

0.407 x 547.18 x 42 °C x 1.2 = 11280 W

= **38487 Btu/h**

6.2.6 Sensible Gain due to Air Leakage

$$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$$

= 0.137 x 547.18 x 7 °C x 1.2 = 637 W

= **2175 Btu/h**

5.2.3.2 Heat Loss due to Mechanical Ventilation

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

x 2 HRV / ERV's

300 CFM x 76 °F x 1.08 x 0.25 = **6156 Btu/h**

6.2.7 Sensible heat Gain due to Ventilation

$$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$$

300 CFM x 13 °F x 1.08 x 0.25 = **1,037 Btu/h**

5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)

$$HL_{airr} = Level\ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$$

Level	Level Factor (LF)	HLairve Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL_{clevel})	Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)
1	0.5	38,487	9,602	2.004
2	0.3		20,170	0.572
3	0.2		17,861	0.431
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

Michael O'Rourke
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HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 5013 - ELEV B - RIVERVIEW WOB **BUILDER:** GOLD PARK HOMES
SFQT: 4501 **LO#** 96633 **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):	69564.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
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: 70.0 ft WIDTH:	43.0 ft	EXPOSED PERIMETER:	173.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	53.0 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

Michael O'Rourke

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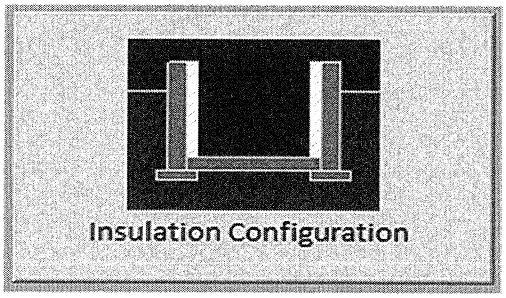
Residential Foundation Thermal Load Calculator

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)

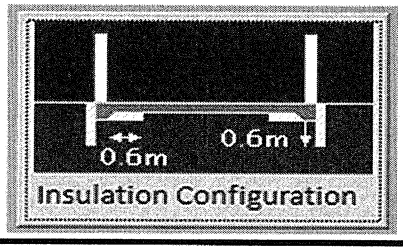
Foundation Dimensions		
Floor Length (m):	**4.6**	 Insulation Configuration
Floor Width (m):	**13.1**	
Exposed Perimeter (m):	**52.7**	
Wall Height (m):	**3.0**	
Depth Below Grade (m):	**1.84**	
Window Area (m^2):	**0.0**	
Door Area (m^2):	**0.0**	
Radiant Slab		
Heated Fraction of the Slab:	**0**	
Fluid Temperature (°C):	**33**	
Design Months		
Heating Month	**1**	
Foundation Loads		
Heating Load (Watts):	**911**	

TYPE: 5013 - ELEV B - RIVERVIEW WOB
LO# 96633

HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
905-619-2300

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):	**1.5**	
Width (m):	**13.1**	
Exposed Perimeter (m):	**16.2**	
Radiant Slab		
Heated Fraction of the Slab:	**0**	
Fluid Temperature (°C):	**33**	
Design Months		
Heating Month	**1**	
Results		
Heating Load (Watts):	**224**	

TYPE: 5013 - ELEV B - RIVERVIEW WOB
LO# 96633

HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
905-619-2300

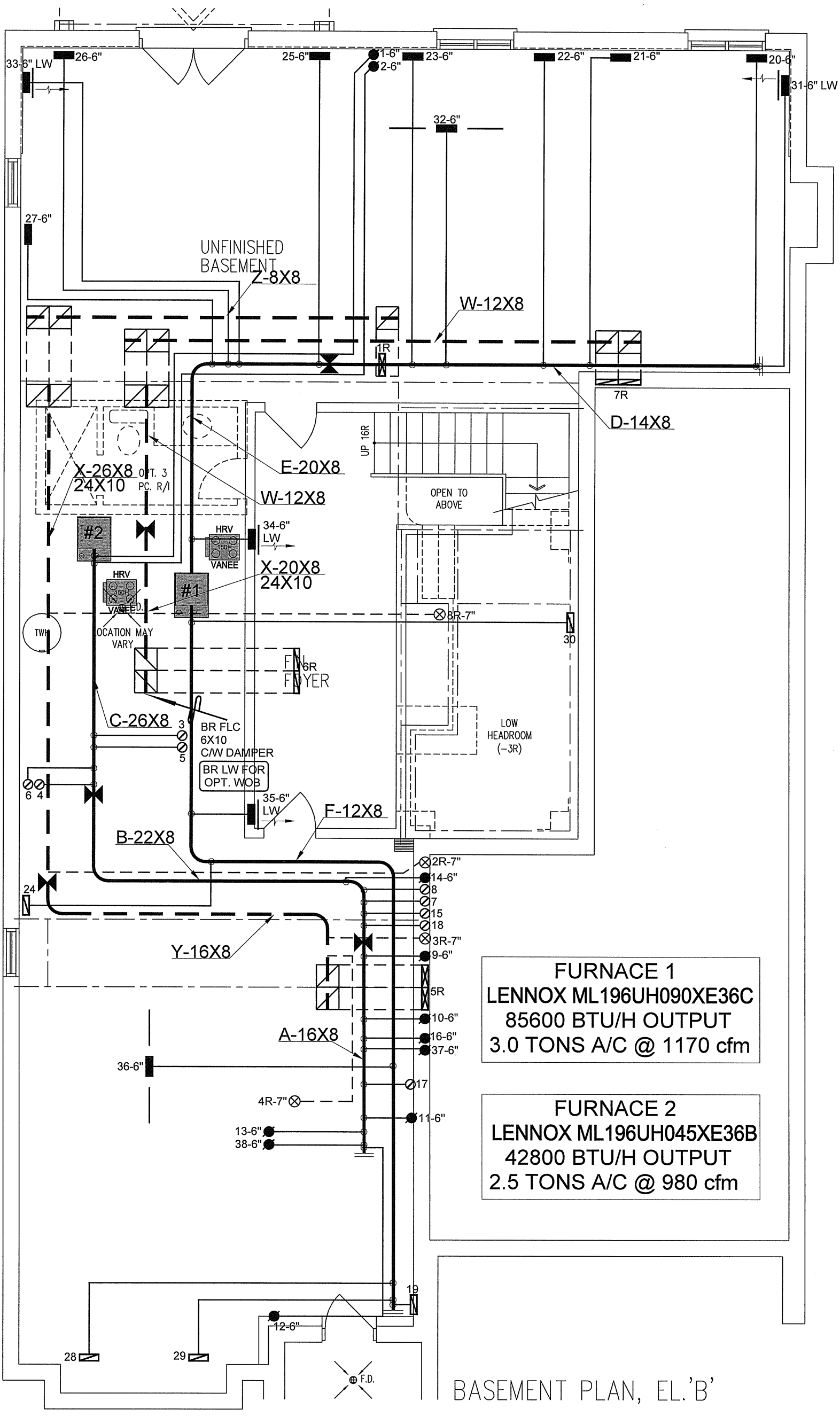
Air Infiltration Residential Load Calculator

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):	1969.8
Air Leakage/Ventilation	
Air Tightness Type:	Present (1961-) (3.57 ACH)
Custom BDT Data:	ELA @ 10 Pa. 2625.8 cm^2
	3.57 ACH @ 50 Pa
Mechanical Ventilation (L/s):	Total Supply 70.8 / Total Exhaust 70.8
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: 5013 - ELEV B - RIVERVIEW WOB

LO# 96633



BASEMENT PLAN, EL.'B'

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

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

WOB

CSA-F280-12

PACKAGE A1

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
N	SUPPLY AIR GRILLE		SUPPLY AIR BOOT ABOVE		SUPPLY AIR GRILLE 6" BOOT
	6" SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK FROM 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE
	14"x8" RETURN AIR GRILLE		30"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE
	RETURN AIR STACK 2nd FLOOR		REDUCER		

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO

RIVERVIEW - WOB
5013 - ELEV B 4501 sqft

HVAC DESIGNS LTD.
375 Finley Ave. Suite 202 - Ajax, Ontario
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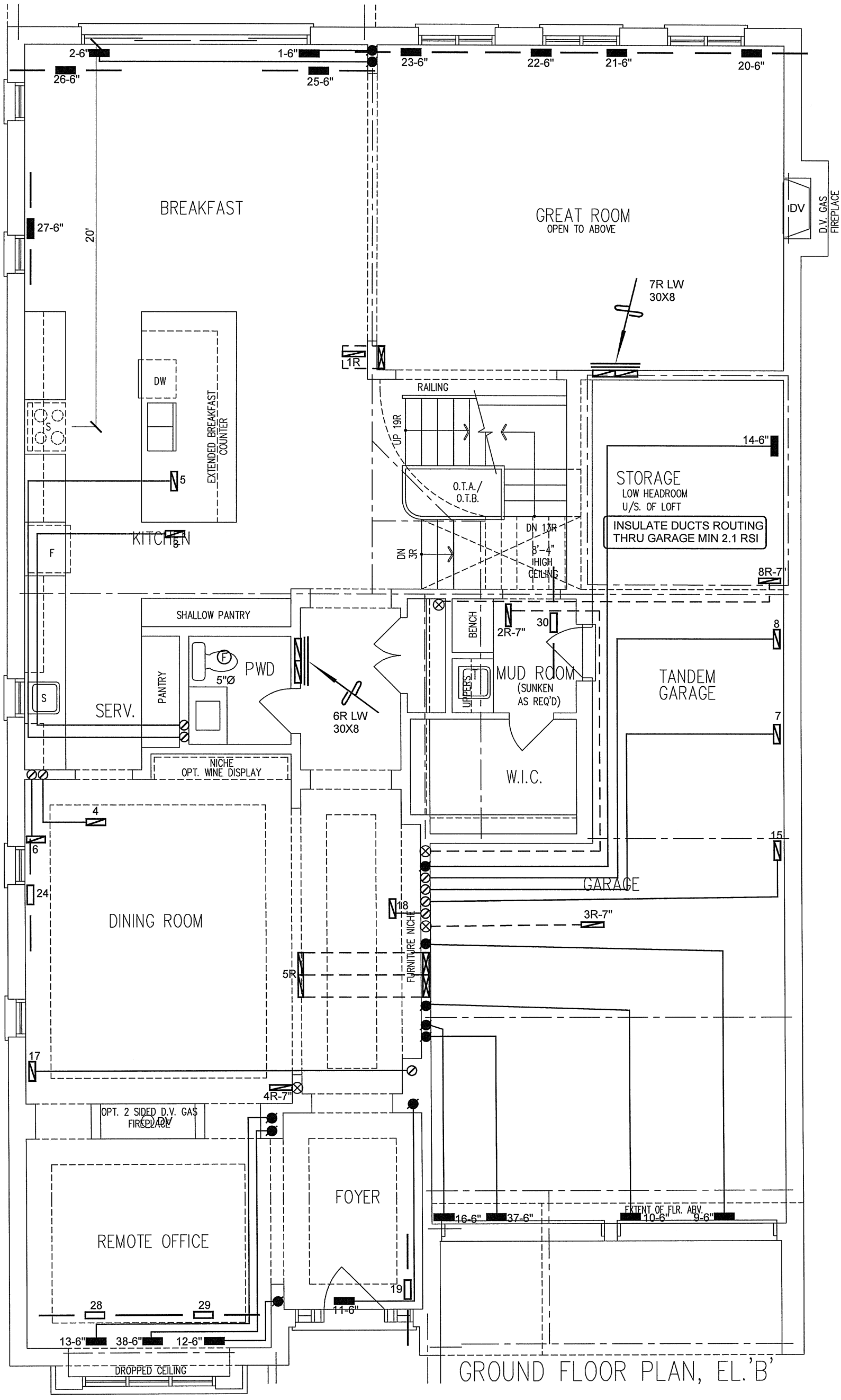
Email: info@hvacdesigns.ca
Web: www.hvacdesigns.ca
Specializing in Residential Mechanical Design Services

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.

	S/A	R/A	FANS
2ND	20	6	6
1ST	12	2	2
BAS	6	1	0

Sheet Title
BASEMENT HEATING LAYOUT

Date MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96633



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Michael O'Rourke

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

WOB

CSA-F280-12

PACKAGE A1

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE
	REDUCER		RETURN AIR STACK 2nd FLOOR		RETURN AIR STACK ABOVE

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO

RIVERVIEW - WOB
5013 - ELEV B 4501 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@hvacdesigns.ca
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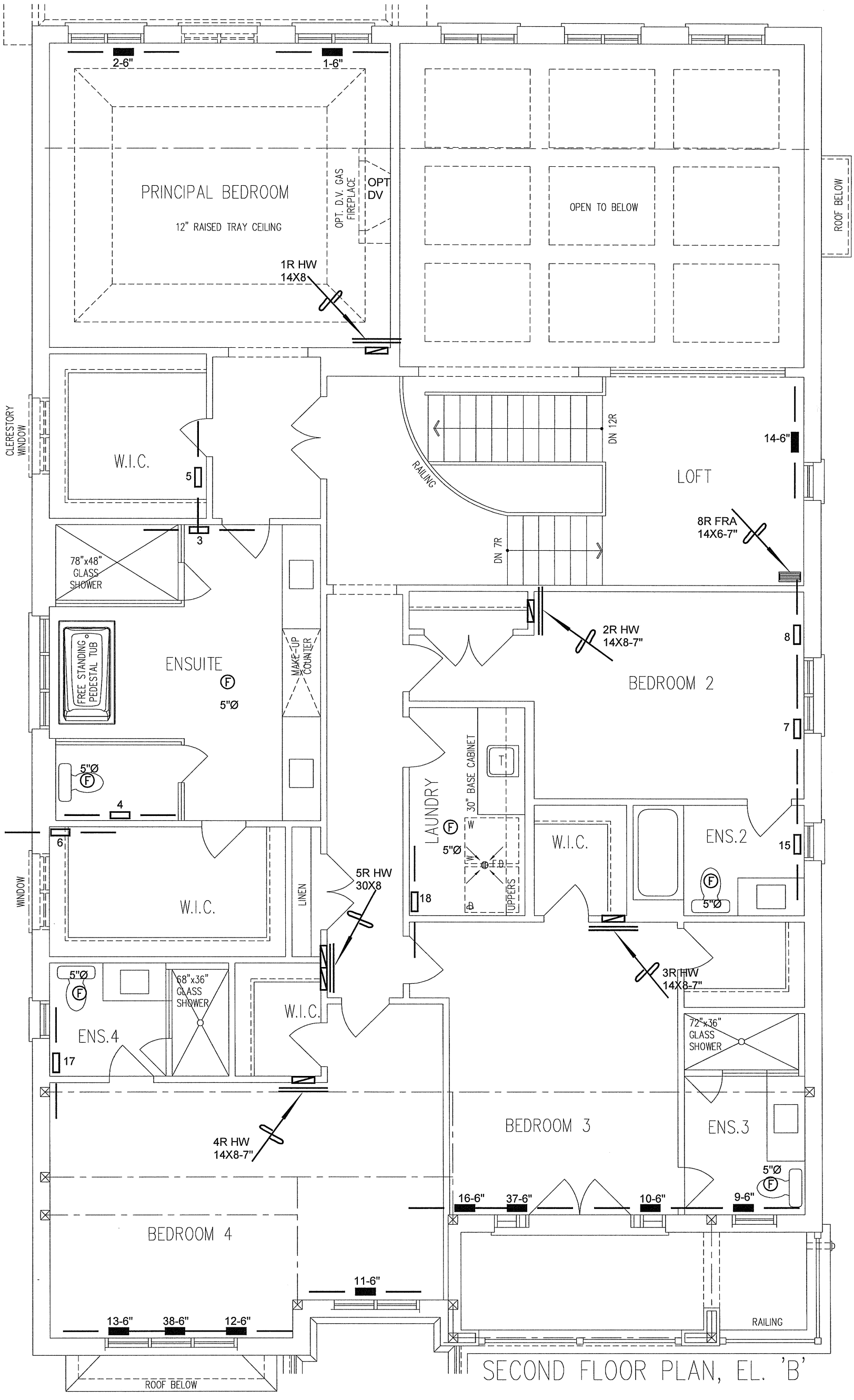
Specializing in Residential Mechanical Design Services

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 MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96633



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, BCIN# 19669
HVAC DESIGNS LTD.

WOB

CSA-F280-12

PACKAGE A1

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
N	SUPPLY AIR BOOT ABOVE		SUPPLY AIR GRILLE		RETURN AIR GRILLE
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR BOOT ABOVE		RETURN AIR STACK ABOVE
	6" SUPPLY AIR STACK FROM 2nd FLOOR		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE
	14"x8" RETURN AIR GRILLE		30"x8" RETURN AIR GRILLE		REDUCER

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REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO

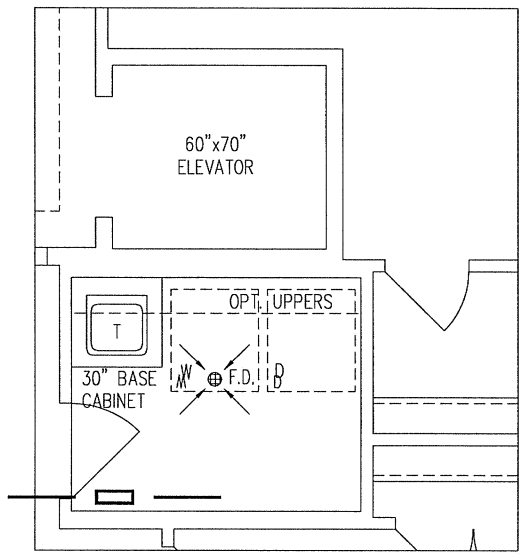
RIVERVIEW - WOB
5013 - ELEV B 4501 sqft

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@hvacdesigns.ca
Web: www.hvacdesigns.ca
Specializing in Residential Mechanical Design Services

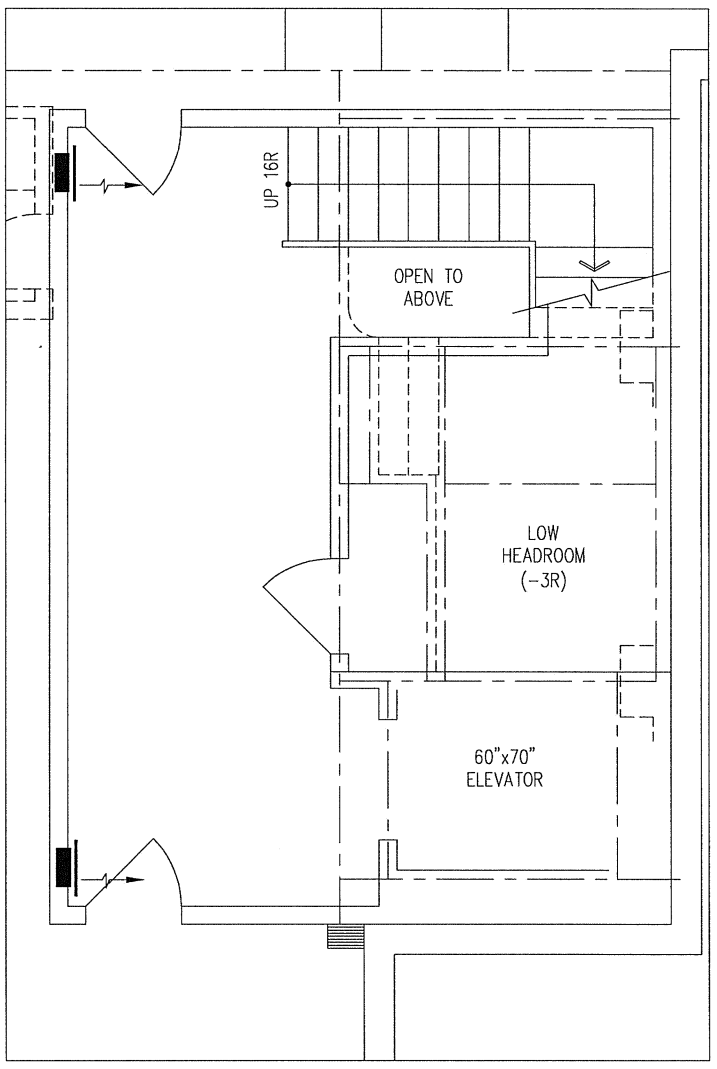
Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

Sheet Title
SECOND FLOOR HEATING LAYOUT

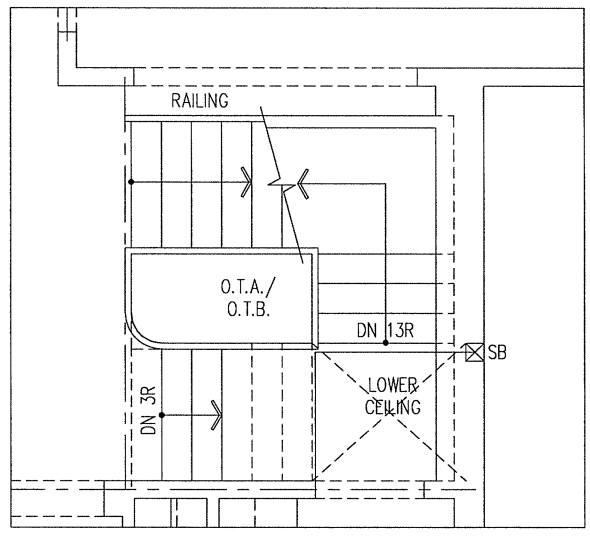
Date MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96633



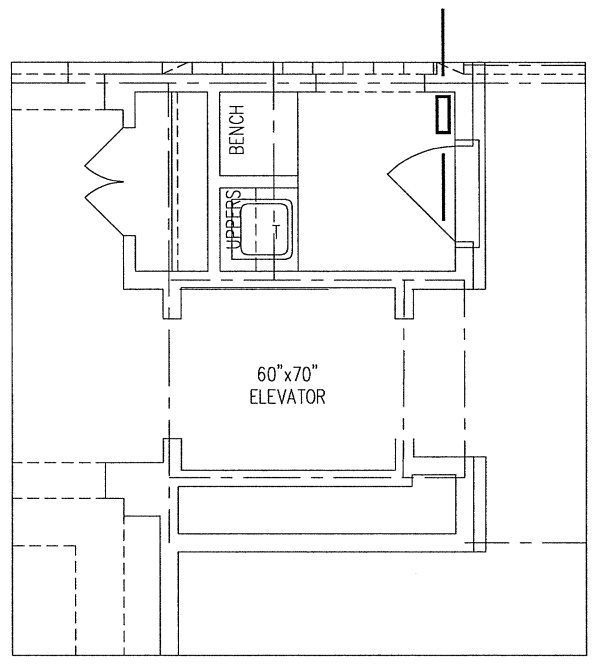
PART. SECOND FLOOR PLAN, W/
OPT. ELEVATOR, EL. 'B'



PART BASEMENT FLOOR PLAN, W/
OPT. ELEVATOR, EL. 'B'



PART. GROUND FLOOR PLAN, W/
NO LOFT CONDITION, EL. 'B'



PART. GROUND FLOOR PLAN, W/
OPT. ELEVATOR, EL. 'B'

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

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

WOB

CSA-F280-12

PACKAGE A1

HVAC LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
N	SUPPLY AIR BOOT ABOVE		SUPPLY AIR GRILLE		REDUCER
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR BOOT ABOVE	W	RETURN AIR STACK ABOVE
	6" SUPPLY AIR STACK 2nd FLOOR		SUPPLY AIR STACK FROM 2nd FLOOR		14"x8" RETURN AIR GRILLE
	FRA- FLOOR RETURN AIR GRILLE		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO

RIVERVIEW - WOB
5013 - ELEV B 4501 sqft

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Sheet Title
STRIP PLAN
HEATING
LAYOUT

Date MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96633