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	**Postal code**	**Plan number/ other description**		
VAUGHAN (WOODBRIDGE)				

B. Individual who reviews and takes responsibility for design activities

Name		Firm		
MICHAEL O'ROURKE		**HVAC DESIGNS LTD.**		
Street address			Unit no.	Lot/con.
375 FINLEY AVE			**202**	**N/A**
Municipality	Postal code	Province	E-mail	
AJAX	**L1S 2E2**	**ONTARIO**	**info@hvacdesigns.ca**	
Telephone number	Fax number		Cell number	
(905) 619-2300	**(905) 619-2375**		( )	

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 OPT 5 BED - OPT 5 BED - WO/LOFT - 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.

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

SITE NAME: PINE VALLEY PH 2 | OPT 5 BED - OPT 5 BED - WO/LOFT - 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# 96636 | 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		
EXP. WALL			37			16			10			18			12			47		
CLG. HT.			9			9			9			9			9			9		
	FACTORS																			
GRS.WALL AREA	LOSS	GAIN	333			144			90			162			108			423		
GLAZING				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
EAST	21.3	41.6	0	0	0	0	0	0	0	0	0	0	0	0	75	1596	3116	69	1468	2867
SOUTH	21.3	24.9	0	0	0	30	638	747	6	128	149	0	0	0	0	0	0	0	0	0
WEST	21.3	41.6	46	979	1911	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
DOORS	25.2	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	505	85
NET EXPOSED WALL	4.5	0.8	287	1281	216	114	509	86	84	375	63	142	634	107	33	147	25	326	1455	245
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
EXPOSED CLG	1.3	0.6	340	436	200	256	329	150	119	153	70	286	367	168	224	287	132	233	299	137
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
EXPOSED FLOOR	2.6	0.4	0	0	0	0	0	0	0	0	0	204	520	88	250	638	107	0	0	0
BASEMENT/CRAWL HEAT LOSS				0			0			0			0			0			0	
SLAB ON GRADE HEAT LOSS				0			0			0			0			0			0	
SUBTOTAL HT LOSS				2696			1476			655			1947			2740			3994	
SUB TOTAL HT GAIN					2327			983			282			682			3413			3506
LEVEL FACTOR / MULTIPLIER			0.20	0.41		0.20	0.41		0.20	0.41		0.20	0.41		0.20	0.41		0.20	0.41	
AIR CHANGE HEAT LOSS				1119			612			272			808			1137			1657	
AIR CHANGE HEAT GAIN					176			75			21			52			259			266
DUCT LOSS				0			0			0			275			388			0	
DUCT GAIN					0			0			0			209			503			0
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	1		240	1		240	1		240
HEAT GAIN APPLIANCES/LIGHTS					1117			0			0			1117			1117			1117
TOTAL HT LOSS BTU/H				3815			2088			927			3030			4264			5650	
TOTAL HT GAIN x 1.3 BTU/H					5331			1375			395			2990			7191			6667

ROOM USE			ENS-3			ENS-2			BED-5			ENS-5			ENS-4		
EXP. WALL			25			11			7			8			15		
CLG. HT.			9			9			9			9			9		
	FACTORS																
GRS.WALL AREA	LOSS	GAIN	225			99			63			72			135		
GLAZING				LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN		LOSS	GAIN
NORTH	21.3	16.0	0	0	0	10	213	160	0	0	0	0	0	0	8	170	128
EAST	21.3	41.6	12	255	499	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	0	0	0	10	213	249	6	128	149	0	0	0
WEST	21.3	41.6	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
DOORS	25.2	4.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.5	0.8	213	951	160	89	397	67	53	237	40	66	295	50	127	567	95
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
EXPOSED CLG	1.3	0.6	127	163	75	255	327	150	107	137	63	147	189	86	77	99	45
NO ATTIC EXPOSED CLG	2.7	1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.6	0.4	59	150	25	135	344	58	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS				0			0			0			0			0	
SLAB ON GRADE HEAT LOSS				0			0			0			0			0	
SUBTOTAL HT LOSS				1519			1282			587			611			836	
SUB TOTAL HT GAIN					759			434			352			285			268
LEVEL FACTOR / MULTIPLIER			0.20	0.41		0.20	0.41		0.20	0.41		0.20	0.41		0.20	0.41	
AIR CHANGE HEAT LOSS				630			532			243			253			347	
AIR CHANGE HEAT GAIN					58			33			27			22			20
DUCT LOSS				215			181			0			0			0	
DUCT GAIN					82			47			0			0			0
HEAT GAIN PEOPLE	0			0		0		0	1		240	0		0	0		0
HEAT GAIN APPLIANCES/LIGHTS					0			0			1117			0			0
TOTAL HT LOSS BTU/H				2365			1995			830			864			1183	
TOTAL HT GAIN x 1.3 BTU/H					1167			668			2256			399			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	7	149	174
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	118	151	69	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						3079	
SLAB ON GRADE HEAT LOSS				0			0			0			0			0			0			0			763				
SUBTOTAL HT LOSS				6438			2042			5251			2280			213			2075			2085			4625			5095	
SUB TOTAL HT GAIN					8522			941			5567			2206			80			1299			351			2788			489
LEVEL FACTOR / MULTIPLIER			0.30	0.57		0.30	0.57		0.30	0.57		0.30	0.57		0.20	0.41		0.30	0.57		0.30	0.57					0.50	1.98	
AIR CHANGE HEAT LOSS				3686			1169			3006			1305			88			1188			1193						19244	
AIR CHANGE HEAT GAIN					646			71			422			167			6			98			27						248
DUCT LOSS				0			0			0			0			30			0			0						0	
DUCT GAIN					0			0			0			0			120			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					1117			1117			1117			1117			1117			0			0						
TOTAL HT LOSS BTU/H				10124			3211			8256			3585			331			3263			3278			5388			24339	
TOTAL HT GAIN x 1.3 BTU/H					13370			2768			9238			4538			1720			1816			491			3624			958

TOTAL HEAT GAIN BTU/H: 67857 TONS: 5.65 LOSS DUE TO VENTILATION LOAD BTU/H: 6156 STRUCTURAL HEAT LOSS: 88785 TOTAL COMBINED HEAT LOSS BTU/H: 94941

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

SITE NAME: PINE VALLEY PH 2
BUILDER: GOLD PARK HOMES

OPT 5 BED - OPT 5 BED - WO/LOFT - WOB
TYPE: 5013 - ELEV B - RIVERVIEW DATE: May-22

GFA: 4501 LO# 96636

FURNACE 1

HEATING CFM	1170	COOLING CFM	1170
TOTAL HEAT LOSS	61,444	TOTAL HEAT GAIN	36,803
AIR FLOW RATE CFM	19.04	AIR FLOW RATE CFM	31.79

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 = 64522 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	3.34	3.34	3.34	3.34	2.77
CFM PER RUN COOLING	58	106	106	106	106	88
ADJUSTED PRESSURE	0.17	0.16	0.16	0.16	0.16	0.16
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	0.1	0.08	0.09	0.09	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)	426	540	540	540	540	646
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	4.95	4.95	4.95	4.95	4.95	4.95
CFM PER RUN HEAT	52	52	52	34	34	62	94	94	94	94	94	94
RM GAIN MBH.	3.08	3.08	3.08	2.27	2.27	0.49	0.76	0.76	0.76	0.76	0.76	0.76
CFM PER RUN COOLING	98	98	98	72	72	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)	265	265	265	250	250	455	479	479	479	479	479	479
COOLING VELOCITY (ft/min)	500	500	500	529	529	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	724	0.08	12.4	20	x	8	652	TRUNK K	0	0.00	0	0	x	8	0
TRUNK F	441	0.09	10	12	x	8	662	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	485	415	0	0	0	0	0	0	0	0	0	270
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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SITE NAME: PINE VALLEY PH 2
BUILDER: GOLD PARK HOMES

OPT 5 BED - OPT 5 BED - WO/LOFT - WOB
TYPE: 5013 - ELEV B - RIVERVIEW DATE: May-22

GFA: 4501 LO# 96636 **FURNACE 2**

HEATING CFM	980	COOLING CFM	980
TOTAL HEAT LOSS	27,341	TOTAL HEAT GAIN	30,535
AIR FLOW RATE CFM	35.84	AIR FLOW RATE CFM	32.09

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 = 30419 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	19	0	0
R/A	0	0	5	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	16	17	18
ROOM NAME	PBR	PBR	ENS	ENS	WIC	ENS-5	BED-2	BED-2	ENS-3	BED-3	ENS-4	BED-4	BED-4	ENS-2	BED-3	BED-5	LND
RM LOSS MBH.	1.91	1.91	1.04	1.04	0.93	0.86	1.51	1.51	2.36	1.42	1.18	1.88	1.88	1.99	1.42	0.83	0.33
CFM PER RUN HEAT	68	68	37	37	33	31	54	54	85	51	42	68	68	71	51	30	12
RM GAIN MBH.	2.67	2.67	0.69	0.69	0.40	0.40	1.49	1.49	1.17	2.40	0.38	2.22	2.22	0.67	2.40	2.26	1.72
CFM PER RUN COOLING	86	86	22	22	13	13	48	48	37	77	12	71	71	21	77	72	55
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
ACTUAL DUCT LGH.	52	63	48	16	51	19	72	77	78	69	69	66	73	84	64	75	60
EQUIVALENT LENGTH	190	180	255	130	245	120	170	180	200	190	180	190	170	190	180	160	130
TOTAL EFFECTIVE LENGTH	242	243	303	146	296	139	242	257	278	259	249	256	243	274	244	235	190
ADJUSTED PRESSURE	0.07	0.07	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	0.09
ROUND DUCT SIZE	**6**	**6**	4	4	4	4	5	5	**6**	**6**	**6**	**6**	**6**	**6**	**6**	**6**	5
HEATING VELOCITY (ft/min)	347	347	424	424	379	356	396	396	433	260	214	347	347	362	260	153	88
COOLING VELOCITY (ft/min)	438	438	252	252	149	149	352	352	189	393	61	362	362	107	393	367	404
OUTLET GRILL SIZE	4X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10
TRUNK	C	C	C	C	C	C	B	B	A	A	A	A	A	B	A	A	B

RUN #	37	38
ROOM NAME	BED-3	BED-4
RM LOSS MBH.	1.42	1.88
CFM PER RUN HEAT	51	68
RM GAIN MBH.	2.40	2.22
CFM PER RUN COOLING	77	71
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)	260	347
COOLING VELOCITY (ft/min)	393	362
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	514	0.06	11.7	18	x	8	514	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	705	0.06	13.2	22	x	8	577	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	979	0.06	15	26	x	8	678	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												BR
AIR VOLUME	155	260	115	115	335	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
ACTUAL DUCT LGH.	62	78	79	75	69	1	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	170	235	195	245	230	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	232	313	274	320	299	1	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.06	0.05	0.05	0.05	0.05	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	7.5	9.5	7	7	10.5	0	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	0	0
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	30	14	14	30	0	0	0	0	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

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TYPE: 5013 - ELEV B - RIVERVIEW LO # 96636
SITE NAME: PINE VALLEY PH 2 OPT 5 BED - OPT 5 BED - WO/LOFT - 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	4	@ 10.6 cfm	42.4	cfm
Kitchen & Bathrooms	7	@ 10.6 cfm	74.2	cfm
Other Rooms	4	@ 10.6 cfm	42.4	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	150	cfm
Required Supplemental Capacity	51.4	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#: 96636 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	9,720	1.980
2	0.3		20,170	0.572
3	0.2		18,554	0.415
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 OPT 5 BED - OPT 5 BED - WO/LOFT **BUILDER:** GOLD PARK HOMES
SFQT: 4501 **LO#** 96636 **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:	6
INTERIOR LIGHTING LOAD ($Btu/h/ft^2$):	1.75	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	7.0 ft
LENGTH: 70.0 ft WIDTH:	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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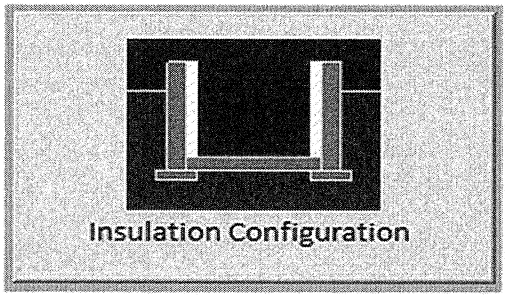
Residential Foundation Thermal Load Calculator

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)

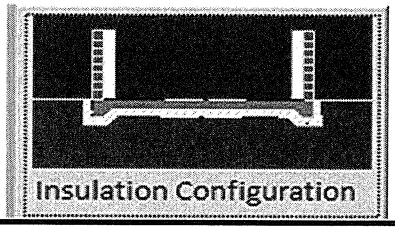
Foundation Dimensions		
Floor Length (m):	**4.6**	 Insulation Configuration
Floor Width (m):	**13.1**	
Exposed Perimeter (m):	**52.7**	
Wall Height (m):	**3.0**	
Depth Below Grade (m):	**1.84**	
Window Area (m^2):	**0.7**	
Door Area (m^2):	**0.0**	
Radiant Slab		
Heated Fraction of the Slab:	**0**	
Fluid Temperature (°C):	**33**	
Design Months		
Heating Month	**1**	
Foundation Loads		
Heating Load (Watts):	**902**	

TYPE: 5013 - ELEV B - RIVERVIEW OPT 5 BED - OPT 5 BED - WO/LOFT - WOB
LO# 96636

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**	 Insulation Configuration
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 OPT 5 BED - OPT 5 BED - WO/LOFT - WOB
LO# 96636

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

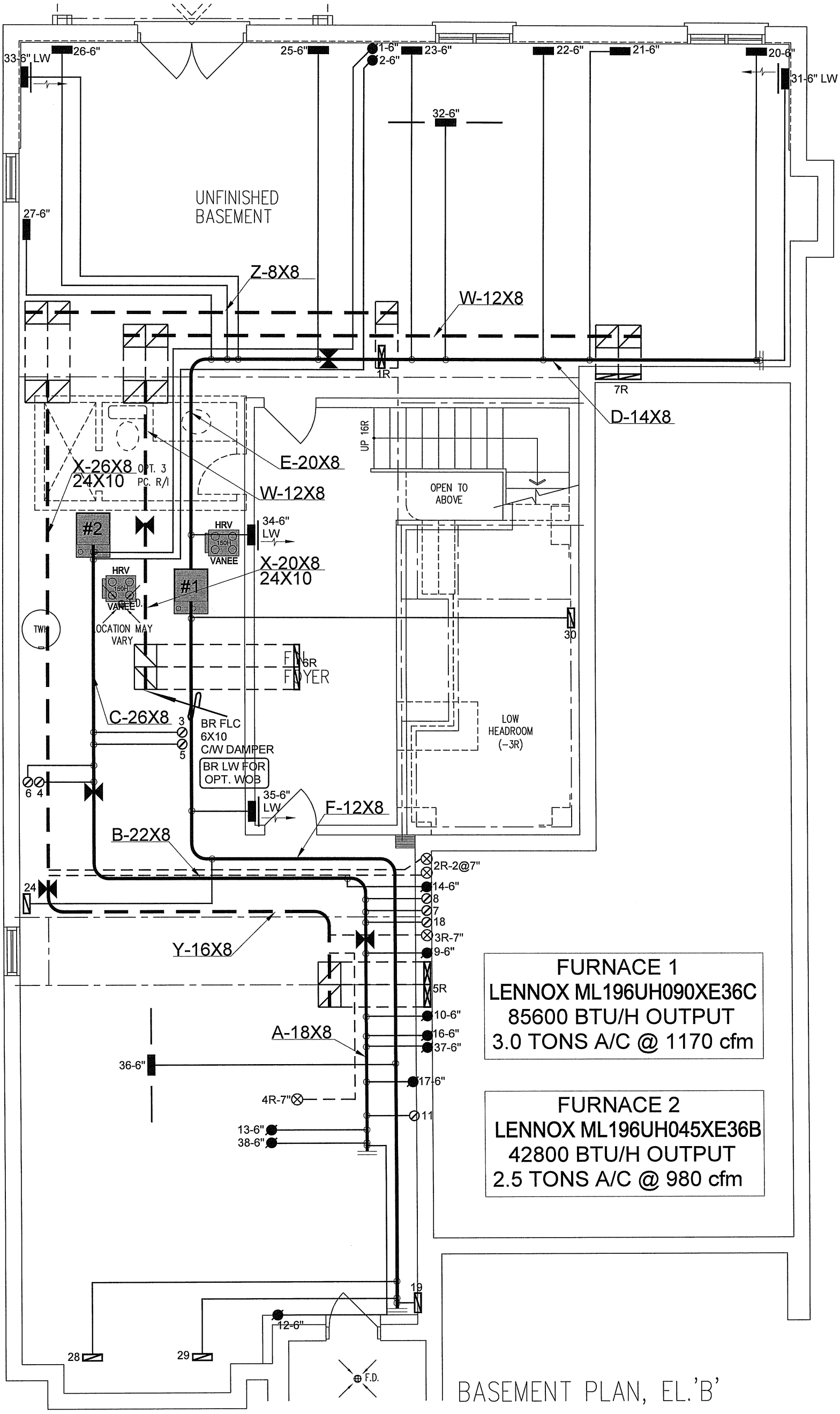
Air Infiltration Residential Load Calculator

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 OPT 5 BED - OPT 5 BED - WO/LOFT - W

LO# 96636



FURNACE 1
LENNOX ML196UH090XE36C
85600 BTU/H OUTPUT
3.0 TONS A/C @ 1170 cfm

FURNACE 2
LENNOX ML196UH045XE36B
42800 BTU/H OUTPUT
2.5 TONS A/C @ 980 cfm

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

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO
WO/LOFT - WOB
RIVERVIEW - OPT 5 BED
5013 - ELEV B 4501 sqft

HVAC DESIGNS LTD.
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Email: info@hvacdesigns.ca
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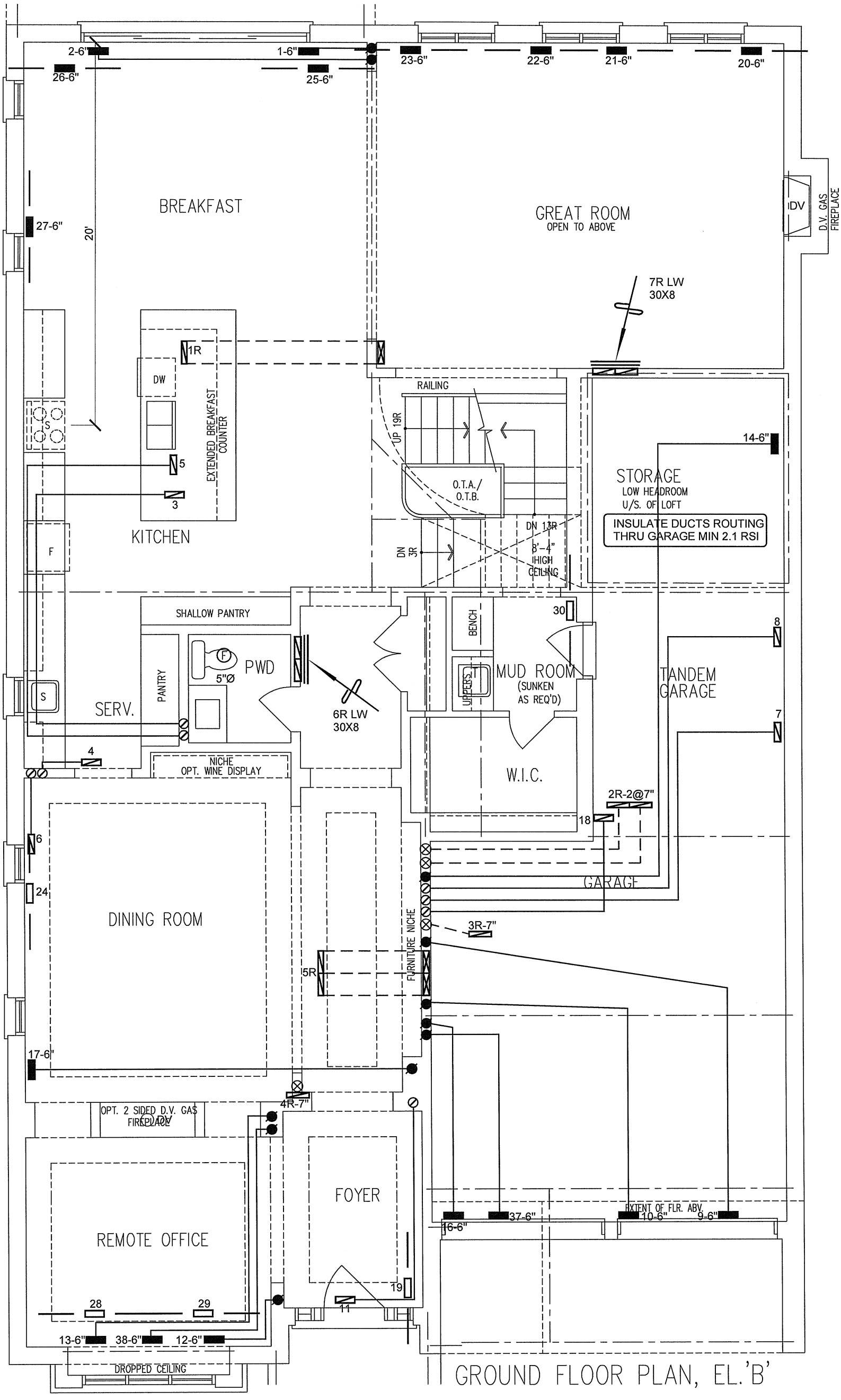
Specializing in Residential Mechanical Design Services

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.

	S/A	R/A	FANS
2ND	19	5	7
1ST	12	2	2
BAS	6	1	0

Sheet Title
BASEMENT HEATING LAYOUT

Date MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96636



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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
	RETURN AIR STACK ABOVE		RETURN AIR STACK 2nd FLOOR		REDUCER

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

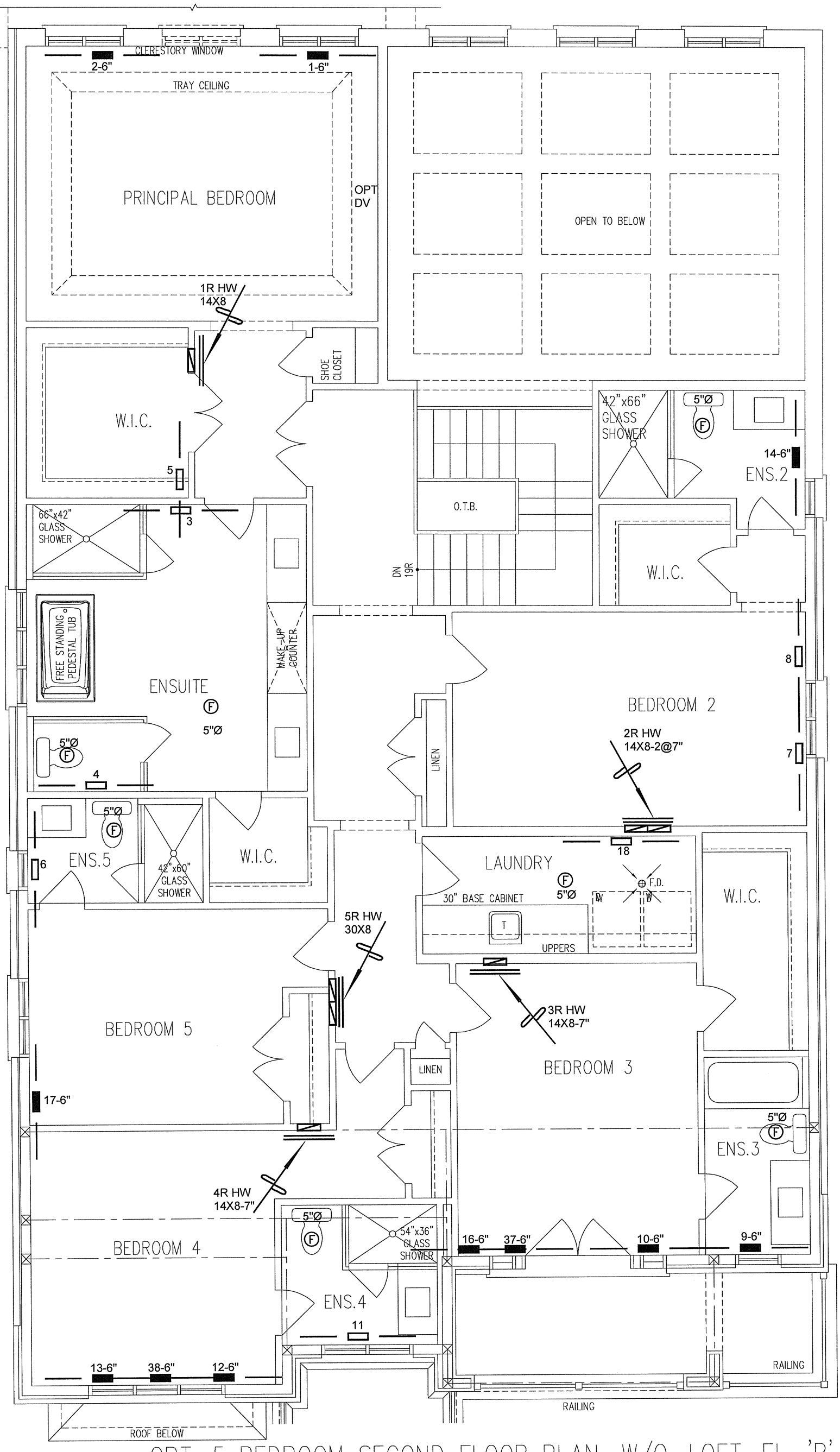
Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO
WO/LOFT - WOB
RIVERVIEW - OPT 5 BED
5013 - ELEV B 4501 sqft

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
FIRST FLOOR HEATING LAYOUT

Date MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96636



OPT. 5 BEDROOM SECOND FLOOR PLAN, W/O. LOFT, 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
	SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE
	SUPPLY AIR GRILLE 6" BOOT		30"x8" RETURN AIR GRILLE
	SUPPLY AIR GRILLE		FRA- FLOOR RETURN AIR GRILLE
	SUPPLY AIR STACK FROM 2nd FLOOR		RETURN AIR STACK ABOVE
	6" SUPPLY AIR BOOT ABOVE		RETURN AIR STACK 2nd FLOOR
	6" SUPPLY AIR STACK 2nd FLOOR		REDUCER

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client
GOLD PARK HOMES

Project Name
PINE VALLEY PH 2
VAUGHAN, ONTARIO
WO/LOFT - WOB
RIVERVIEW - OPT 5 BED
5013 - ELEV B 4501 sqft

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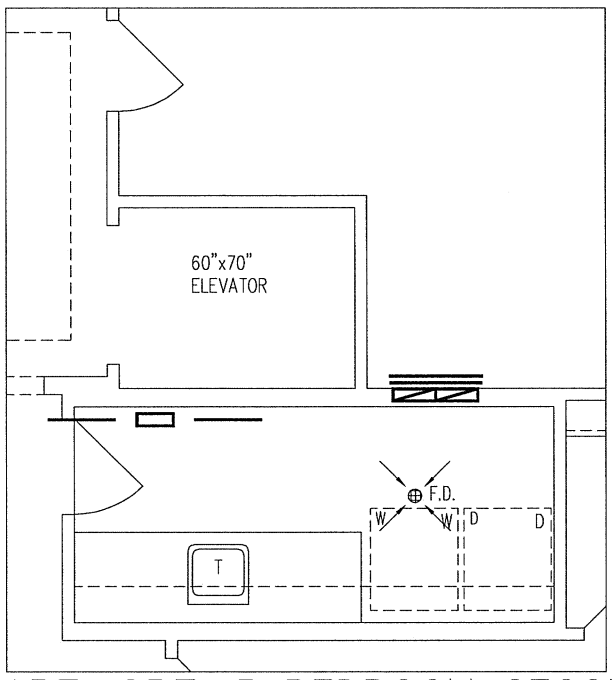
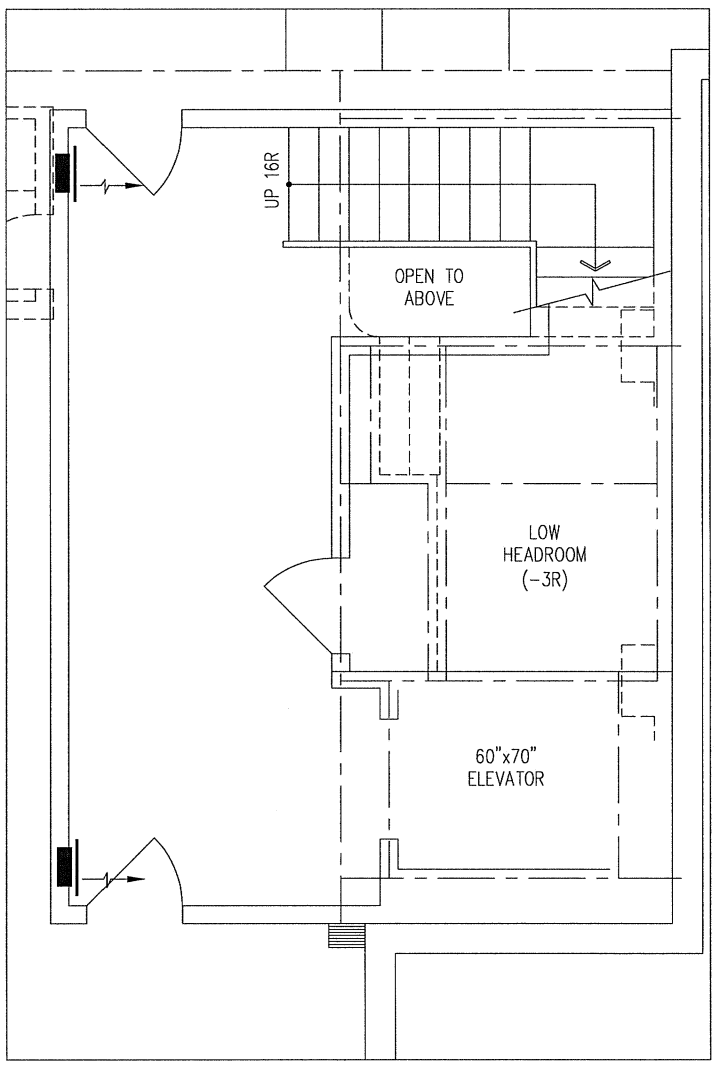
Sheet Title
SECOND FLOOR HEATING LAYOUT

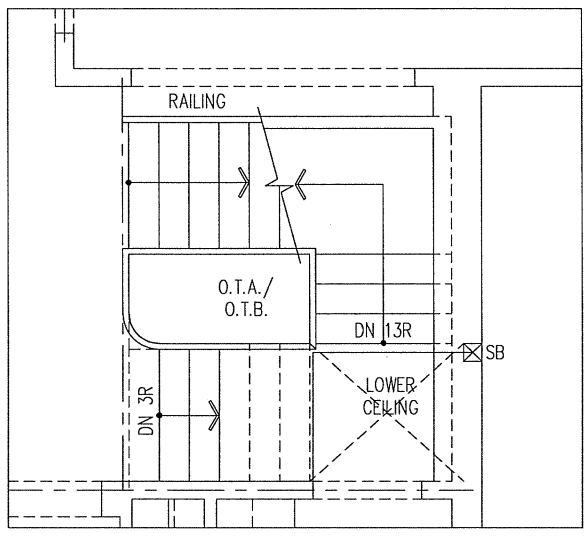
Date MAY/2022
Scale 3/16" = 1'-0"
BCIN# 19669
LO# 96636



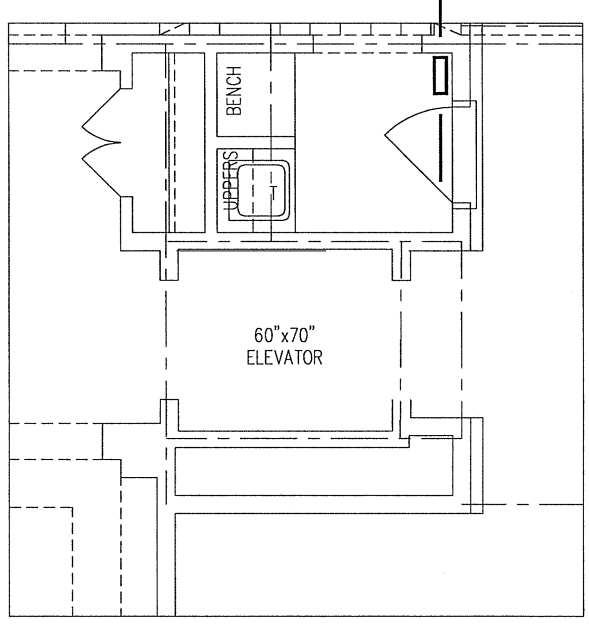
PART. OPT. 5 BEDROOM SECOND FLOOR PLAN, W/O. LOFT W/ ELEVATOR, EL. 'B'



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

REVISIONS

No.	Description	Date
1.		
2.		
3.		

Client

GOLD PARK HOMES

Project Name

PINE VALLEY PH 2
VAUGHAN, ONTARIO
WO/LOFT - WOB
RIVERVIEW - OPT 5 BED
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# 96636