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:** 6002 - KINGSVIEW OPT 2ND **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.

April 14, 2022
Date

Michael O'Rourke
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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Tel: 905.619.2300 Fax: 905.619.2375
Web: www.hvacdesigns.ca E-mail: info@hvacdesigns.ca

SITE NAME: PINE VALLEY PH 2 | OPT 2ND | DATE Apr-22 | WINTER NATURAL AIR CHANGE RATE 0.342 | HEAT LOSS ΔT °F. 76 | CSA-F280-12
BUILDER: GOLD PARK HOMES | TYPE: 6002 - KINGSVIEW | GFA: 5901 | LO# 96140 | SUMMER NATURAL AIR CHANGE RATE 0.115 | HEAT GAIN ΔT °F. 13 | SB-12 PACKAGE A1

ROOM USE																														
EXP. WALL																														
CLG. HT.																														
	FACTORS																													
GRS.WALL AREA	LOSS	GAIN																												
GLAZING																														
NORTH	21.3	16.0																												
EAST	21.3	41.6																												
SOUTH	21.3	24.9																												
WEST	21.3	41.6																												
SKYLT.	37.2	101.5																												
DOORS	25.2	4.3																												
NET EXPOSED WALL	4.5	0.8																												
NET EXPOSED BSMT WALL ABOVE GR	3.6	0.6																												
EXPOSED CLG	1.3	0.6																												
NO ATTIC EXPOSED CLG	2.7	1.3																												
EXPOSED FLOOR	2.6	0.4																												
BASEMENT/CRAWL HEAT LOSS																														
SLAB ON GRADE HEAT LOSS																														
SUBTOTAL HT LOSS																														
SUB TOTAL HT GAIN																														
LEVEL FACTOR / MULTIPLIER																														
AIR CHANGE HEAT LOSS																														
AIR CHANGE HEAT GAIN																														
DUCT LOSS																														
DUCT GAIN																														
HEAT GAIN PEOPLE	240																													
HEAT GAIN APPLIANCES/LIGHTS																														
TOTAL HT LOSS BTU/H																														
TOTAL HT GAIN x 1.3 BTU/H																														

ROOM USE			OFFCE			FM/DN			KIT			GRT			CATER			PWD			FOY			MUD					WOD			BAS		
EXP. WALL			32			30			47			44			19			11			68			21					73			244		
CLG. HT.			11			11			11			11			11			11			11			11					10			10		
	FACTORS																																	
GRS.WALL AREA	LOSS	GAIN	355			333			522			488			211			122			755			233					737			2170		
GLAZING			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	0	0	0	0	0	0	0	0	0	0	0	0	0	12	255	192			0	0	0	0	0	0
EAST	21.3	41.6	67	1426	2784	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	2171	4238	0	0	0			0	0	0	0	0	0
SOUTH	21.3	24.9	0	0	0	69	1468	1718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			0	0	0	8	170	199
WEST	21.3	41.6	0	0	0	0	0	0	120	2554	4986	54	1149	2244	14	298	582	0	0	0	0	0	0	0	0	0			25	532	1039	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
DOORS	25.2	4.3	0	0	0	0	0	0	20	505	85	0	0	0	10	252	43	0	0	0	13	328	55	0	0	0			0	0	0	20	505	85
NET EXPOSED WALL	4.5	0.8	288	1286	217	264	1178	198	382	1703	287	434	1939	327	187	834	140	122	545	92	640	2855	481	221	987	166			0	0	0	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			413	1486	250	294	1058	178
EXPOSED CLG	1.3	0.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	116	149	68	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	0	0	0
EXPOSED FLOOR	2.6	0.4	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
BASEMENT/CRAWL HEAT LOSS			0			0			0			0			0			0			0			0								8537		
SLAB ON GRADE HEAT LOSS			0			0			0			0			0			0			0			0					0					
SUBTOTAL HT LOSS			2712			2646			4762			3088			1384			545			5503			1242					2018			10271		
SUB TOTAL HT GAIN					3001			1916			5358			2570			765			92			4843			358				1289			462
LEVEL FACTOR / MULTIPLIER			0.30	0.55		0.30	0.55		0.30	0.55		0.30	0.55		0.30	0.55		0.30	0.55		0.30	0.55		0.30	0.55							0.50	1.63	
AIR CHANGE HEAT LOSS				1491			1455			2619			1698			761			300			3026			683								20057		
AIR CHANGE HEAT GAIN					229			146			409			196			58			7			369			27								134
DUCT LOSS				0			0			0			0			0			0			0			0								0		
DUCT GAIN					0			0			0			0			0			0			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	0		0
HEAT GAIN APPLIANCES/LIGHTS					1371			1371			1371			1371			0			0			0			0								
TOTAL HT LOSS BTU/H				4203			4102			7381			4786			2146			845			8529			1925				2018			30327		
TOTAL HT GAIN x 1.3 BTU/H					5981			4464			9280			5379			1070			128			6776			501					1676			775

TOTAL HEAT GAIN BTU/H: 72519 TONS: 6.04 LOSS DUE TO VENTILATION LOAD BTU/H: 6156 STRUCTURAL HEAT LOSS: 96374 TOTAL COMBINED HEAT LOSS BTU/H: 102530

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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BUILDER: GOLD PARK HOMES | TYPE: 6002 - KINGSVIEW | GFA: 5901 | LO# 96140 | SUMMER NATURAL AIR CHANGE RATE 0.115 | HEAT GAIN ΔT °F. 13 | SB-12 PACKAGE A1

ROOM USE			PRI			ENS			WIC			WIC-2			BED-2				ENS-2			BED-3			WIC-3			ENS-3				
EXP. WALL			21			35			39			0			14				5			39			0			5				
CLG. HT.			9			9			9			9			9				9			9			9			9				
	FACTORS																															
GRS.WALL AREA	LOSS	GAIN	191			319			355			0			127				46			355			0			46				
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	20	426	319		9	192	144	0	0	0	0	0	0	9	192	144		
EAST	21.3	41.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	79	1681	3283	0	0	0	0	0	0		
SOUTH	21.3	24.9	0	0	0	0	0	0	9	192	224	0	0	0	0	0	0		0	0	0	0	0	0	0	0	0	0	0	0		
WEST	21.3	41.6	44	936	1828	28	596	1163	32	681	1330	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		
DOORS	25.2	4.3	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		
NET EXPOSED WALL	4.5	0.8	147	656	111	291	1296	218	314	1401	236	0	0	0	107	479	81		37	163	27	276	1231	207	0	0	0	37	163	27		
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		
EXPOSED CLG	1.3	0.6	440	565	259	304	390	179	375	481	220	165	212	97	285	366	167		65	83	38	386	495	227	86	110	51	65	83	38		
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	55	140	24	218	556	94		65	166	28	296	755	127	86	219	37	65	166	28		
BASEMENT/CRAWL HEAT LOSS				0			0			0			0			0				0			0			0			0			
SLAB ON GRADE HEAT LOSS				0			0			0			0			0				0			0			0			0			
SUBTOTAL HT LOSS				2157			2282			2755			352			1827				604			4163			330			604			
SUB TOTAL HT GAIN					2197			1560			2010			121			661				237			3844			87			237		
LEVEL FACTOR / MULTIPLIER			0.20	0.38		0.20	0.38		0.20	0.38		0.20	0.38		0.20	0.38			0.20	0.38		0.20	0.38		0.20	0.38		0.20	0.38			
AIR CHANGE HEAT LOSS				824			872			1052			134			698				231			1590			126			231			
AIR CHANGE HEAT GAIN					168			119			153			9			50				18			293			7			18		
DUCT LOSS				0			0			0			49			252				83			575			46			83			
DUCT GAIN					0			0			0			13			232				26			575			9			26		
HEAT GAIN PEOPLE	240		2		480	0		0	0		0	0		0	1		240		0		0	1		240	0		0	0		0		
HEAT GAIN APPLIANCES/LIGHTS					1371			0			0			0			1371				0			1371			0			0		
TOTAL HT LOSS BTU/H				2982			3154			3807			535			2777				918			6328			501			918			
TOTAL HT GAIN x 1.3 BTU/H					5481			2183			2812			186			3322				365			8220			135			365		

ROOM USE			BED-4			ENS-4			LAUN			BED-5			ENS-5																	
EXP. WALL			31			5			7			14			7																	
CLG. HT.			9			9			9			9			9																	
	FACTORS																															
GRS.WALL AREA	LOSS	GAIN	282			46			64			127			64																	
GLAZING				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															
EAST	21.3	41.6	67	1426	2784	0	0	0	0	0	0	0	0	0	0	0	0															
SOUTH	21.3	24.9	0	0	0	9	192	224	9	192	224	20	426	498	9	192	224															
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	215	960	162	37	163	27	55	244	41	107	479	81	55	244	41															
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	332	426	195	56	72	33	220	282	129	414	531	243	78	100	46															
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	0	0	0	0	0	0	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				2812			426			718			1436			536															
SUB TOTAL HT GAIN					3141			284			394			822			311															
LEVEL FACTOR / MULTIPLIER			0.20	0.38		0.20	0.38		0.20	0.38		0.20	0.38		0.20	0.38															
AIR CHANGE HEAT LOSS				1074			163			274			549			205															
AIR CHANGE HEAT GAIN					240			22			30			63			24															
DUCT LOSS				0			0			0			0			0															
DUCT GAIN					0			0			0			0			0															
HEAT GAIN PEOPLE	240		1		240	0		0	0		0	1		240	0		0															
HEAT GAIN APPLIANCES/LIGHTS					1371			0			1371			1371			0															
TOTAL HT LOSS BTU/H				3886			589			992			1985			740															
TOTAL HT GAIN x 1.3 BTU/H					6489			398			2335			3245			435															

TOTAL HEAT GAIN BTU/H: 72519 TONS: 6.04 LOSS DUE TO VENTILATION LOAD BTU/H: 6156 STRUCTURAL HEAT LOSS: 96374 TOTAL COMBINED HEAT LOSS BTU/H: 102530

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SITE NAME: PINE VALLEY PH 2 | OPT 2ND
BUILDER: GOLD PARK HOMES | TYPE: 6002 - KINGSVIEW | DATE: Apr-22 | GFA: 5901 | LO# 96140 | **FURNACE 1**

HEATING CFM	1190	COOLING CFM	1190	furnace pressure	0.6
TOTAL HEAT LOSS	66,262	TOTAL HEAT GAIN	36,029	furnace filter	0.05
AIR FLOW RATE CFM	17.96	AIR FLOW RATE CFM	33.03	a/c coil pressure	0.2
				available pressure for s/a & r/a	0.35

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 69340 BTUH

$*LENNOX
ML196UH090XE48C **90**
AFUE = 96 %
INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = **85,600**

FAN SPEED	
LOW	0
MEDLOW	1080
MEDIUM	1190
MEDIUM HIGH	1340
HIGH	1575

DESIGN CFM = **1190** CFM @ .6 " E.S.P.
TEMPERATURE RISE 67 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	0	17	7
R/A	0	0	0	4	1

plenum pressure s/a	0.18	r/a pressure	0.17
max s/a dif press. loss	0.02	r/a grille press. Loss	0.02
min adjusted pressure s/a	0.16	adjusted pressure r/a	0.15

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

RUN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	FOY	FOY	FOY	OFFCE	OFFCE	FM/DN	FM/DN	GRT	GRT	GRT	KIT	KIT	KIT	KIT	CATER	MUD	PWD	BAS	BAS	BAS	BAS	BAS	BAS	BAS
RM LOSS MBH.	2.84	2.84	2.84	2.10	2.10	2.05	2.05	1.60	1.60	1.60	1.85	1.85	1.85	1.85	2.15	1.93	0.84	4.62	4.62	4.62	4.62	4.62	4.62	4.62
CFM PER RUN HEAT	51	51	51	38	38	37	37	29	29	29	33	33	33	33	39	35	15	83	83	83	83	83	83	83
RM GAIN MBH.	2.26	2.26	2.26	2.99	2.99	2.23	2.23	1.79	1.79	1.79	2.32	2.32	2.32	2.32	1.07	0.50	0.13	0.35	0.35	0.35	0.35	0.35	0.35	0.35
CFM PER RUN COOLING	75	75	75	99	99	74	74	59	59	59	77	77	77	77	35	17	4	12	12	12	12	12	12	12
ADJUSTED PRESSURE	0.17	0.17	0.17	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	58	60	52	51	58	37	27	45	45	36	31	32	32	42	49	36	32	36	24	41	28	28	52	41
EQUIVALENT LENGTH	150	180	150	160	190	110	170	120	110	110	190	140	130	110	120	120	120	120	150	110	130	130	160	110
TOTAL EFFECTIVE LENGTH	208	240	202	211	248	147	197	165	155	146	221	172	162	152	169	156	152	156	174	151	158	158	212	151
ADJUSTED PRESSURE	0.08	0.07	0.09	0.08	0.07	0.12	0.09	0.1	0.11	0.12	0.08	0.1	0.11	0.11	0.1	0.11	0.11	0.1	0.09	0.11	0.1	0.1	0.08	0.11
ROUND DUCT SIZE	**6**	**6**	5	**6**	**6**	5	5	5	5	5	**6**	**6**	**6**	**6**	4	4	4	**6**	5	**6**	**6**	**6**	**6**	**6**
HEATING VELOCITY (ft/min)	260	260	374	194	194	272	272	213	213	213	168	168	168	168	447	402	172	423	609	423	423	423	423	423
COOLING VELOCITY (ft/min)	382	382	551	505	505	543	543	433	433	433	393	393	393	393	402	195	46	61	88	61	61	61	61	61
OUTLET GRILL SIZE	4X10	4X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	4X10	3X10	4X10	4X10	4X10	4X10	4X10
TRUNK	A	A	A	A	A	B	B	C	C	C	E	E	E	E	E	E	B	E	E	C	C	B	A	B

RUN #	
ROOM NAME	
RM LOSS MBH.	
CFM PER RUN HEAT	
RM GAIN MBH.	
CFM PER RUN COOLING	
ADJUSTED PRESSURE	
ACTUAL DUCT LGH.	
EQUIVALENT LENGTH	
TOTAL EFFECTIVE LENGTH	
ADJUSTED PRESSURE	
ROUND DUCT SIZE	
HEATING VELOCITY (ft/min)	
COOLING VELOCITY (ft/min)	
OUTLET GRILL SIZE	
TRUNK	

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	312	0.07	9.4	14	x	8	401	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	567	0.07	11.7	18	x	8	567	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	253	0.10	7.9	8	x	8	569	TRUNK I	0	0.00	0	0	x	8	0
TRUNK D	820	0.07	13.5	22	x	8	671	TRUNK J	0	0.00	0	0	x	8	0
TRUNK E	372	0.08	9.7	12	x	8	558	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	0.06	0	0	x	8	0
TRUNK P	0	0.06	0	0	x	8	0
TRUNK Q	0	0.06	0	0	x	8	0
TRUNK R	0	0.06	0	0	x	8	0
TRUNK S	0	0.06	0	0	x	8	0
TRUNK T	0	0.06	0	0	x	8	0
TRUNK U	0	0.06	0	0	x	8	0
TRUNK V	0	0.06	0	0	x	8	0
TRUNK W	175	0.06	7.8	8	x	8	394
TRUNK X	1190	0.06	16.1	32	x	8	669
TRUNK Y	975	0.06	14.9	26	x	8	675
TRUNK Z	430	0.06	11	14	x	8	553
DROP	1190	0.06	16.1	24	x	12	595

RETURN AIR #	1	2	3	4													**BR**
AIR VOLUME	120	310	370	175	0	0	0	0	0	0	0	0	0	0	0	215	
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.	58	53	44	34	1	1	1	1	1	1	1	1	1	1	1	15	
EQUIVALENT LENGTH	195	200	150	160	0	0	0	0	0	0	0	0	0	0	0	140	
TOTAL EFFECTIVE LH	253	253	194	194	1	1	1	1	1	1	1	1	1	1	1	155	
ADJUSTED PRESSURE	0.06	0.06	0.08	0.08	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.10	
ROUND DUCT SIZE	6.8	9.7	9.7	7.3	0	0	0	0	0	0	0	0	0	0	0	7.5	
INLET GRILL SIZE	8	8	8	8	0	0	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	
INLET GRILL SIZE	14	30	30	14	0	0	0	0	0	0	0	0	0	0	0	14	

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

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

OPT 2ND
TYPE: 6002 - KINGSVIEW

DATE: Apr-22

GFA: 5901 LO# 96140

FURNACE 2

HEATING CFM	1110	COOLING CFM	1110
TOTAL HEAT LOSS	30,112	TOTAL HEAT GAIN	35,971
AIR FLOW RATE CFM	36.86	AIR FLOW RATE CFM	30.86

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

FURNACE HEAT LOSS + HRV / ERV HEAT LOSS = 33190 BTUH

r/a pressure	0.17
r/a grille press. Loss	0.02
adjusted pressure r/a	0.15

$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 = **1110**
CFM @ .6 " E.S.P.

TEMPERATURE RISE 36 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	22	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 #																						
ROOM NAME																						
RM LOSS MBH.																						
CFM PER RUN HEAT																						
RM GAIN MBH.																						
CFM PER RUN COOLING																						
ADJUSTED PRESSURE																						
ACTUAL DUCT LGH.																						
EQUIVALENT LENGTH																						
TOTAL EFFECTIVE LENGTH																						
ADJUSTED PRESSURE																						
ROUND DUCT SIZE																						
HEATING VELOCITY (ft/min)																						
COOLING VELOCITY (ft/min)																						
OUTLET GRILL SIZE																						
TRUNK																						

RUN #	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46
ROOM NAME	PRI	PRI	ENS	ENS	WIC	WIC-2	BED-2	BED-2	ENS-2	WIC	WIC-3	ENS-3	BED-3	BED-3	BED-3	BED-4	BED-4	BED-4	ENS-4	LAUN	BED-5	ENS-5
RM LOSS MBH.	1.49	1.49	1.18	1.97	1.90	0.54	1.39	1.39	0.92	1.90	0.50	0.92	2.11	2.11	2.11	1.30	1.30	1.30	0.59	0.99	1.98	0.74
CFM PER RUN HEAT	55	55	44	73	70	20	51	51	34	70	18	34	78	78	78	48	48	48	22	37	73	27
RM GAIN MBH.	2.74	2.74	0.82	1.36	1.41	0.19	1.66	1.66	0.37	1.41	0.13	0.37	2.74	2.74	2.74	2.16	2.16	2.16	0.40	2.33	3.24	0.44
CFM PER RUN COOLING	85	85	25	42	43	6	51	51	11	43	4	11	85	85	85	67	67	67	12	72	100	13
ADJUSTED PRESSURE	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.16	0.17
ACTUAL DUCT LGH.	53	67	61	57	55	26	40	42	43	50	40	47	57	53	50	59	79	72	60	49	47	55
EQUIVALENT LENGTH	230	170	170	160	200	180	190	200	110	200	140	120	160	170	180	150	190	170	160	160	170	200
TOTAL EFFECTIVE LENGTH	283	237	231	217	255	206	230	242	153	250	180	167	217	223	230	209	269	242	220	209	217	255
ADJUSTED PRESSURE	0.06	0.07	0.07	0.08	0.07	0.08	0.07	0.07	0.11	0.07	0.1	0.1	0.07	0.07	0.07	0.08	0.06	0.07	0.08	0.08	0.07	0.07
ROUND DUCT SIZE	**6**	**6**	5	**6**	**6**	4	5	5	4	**6**	4	4	**6**	**6**	**6**	5	**6**	**6**	4	5	**6**	4
HEATING VELOCITY (ft/min)	280	280	323	372	357	229	374	374	390	357	207	390	398	398	398	352	245	245	252	272	372	310
COOLING VELOCITY (ft/min)	433	433	184	214	219	69	374	374	126	219	46	126	433	433	433	492	342	342	138	529	510	149
OUTLET GRILL SIZE	4X10	4X10	3X10	4X10	4X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	4X10	4X10	4X10	3X10	4X10	4X10	3X10	3X10	4X10	3X10
TRUNK	B	B	B	B	B	B	B	B	C	B	C	C	C	C	C	A	A	A	A	A	A	B

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	276	0.06	9.3	14	x	8	355	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	516	0.06	11.8	16	x	8	581	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	836	0.06	14.1	24	x	8	627	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	270	0.05	9.7	12	x	8	405
TRUNK X	1110	0.05	16.4	32	x	8	624
TRUNK Y	550	0.05	12.6	20	x	8	495
TRUNK Z	420	0.05	11.4	16	x	8	473
DROP	1110	0.05	16.4	24	x	10	666

RETURN AIR #	1	2	3	4	5	6											
AIR VOLUME	270	155	135	110	130	310	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.	90	31	48	78	91	75	1	1	1	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	110	135	175	200	150	195	0	0	0	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	200	166	223	278	241	270	1	1	1	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.07	0.09	0.07	0.05	0.06	0.05	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	8.9	6.8	6.8	6.9	7	10.2	0	0	0	0	0	0	0	0	0	0	0
INLET GRILL SIZE	8	8	8	8	8	8	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	30	14	14	14	14	30	0	0	0	0	0	0	0	0	0	0	0

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Michael O'Rourke

INDIVIDUAL BCIN: 19669 MICHAEL O'ROURKE

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TYPE: 6002 - KINGSVIEW LO # 96140
SITE NAME: PINE VALLEY PH 2 OPT 2ND

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	6	@ 10.6 cfm	63.6	cfm
Table 9.32.3.A.		TOTAL	222.6	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	222.6	cfm
Less Principal Ventil. Capacity	150	cfm
Required Supplemental Capacity	72.6	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
PWD	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: April-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.

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CSA F280-12 Residential Heat Loss and Heat Gain Calculations

Formula Sheet (For Air Leakage / Ventiliation Calculation)

LO#: 96140 Model: 6002 - KINGSVIEW Builder: GOLD PARK HOMES Date: 2022-04-14

Volume Calculation

House Volume

Level	Floor Area (ft²)	Floor Height (ft)	Volume (ft³)
Bsmt	2602	10	26280.2
First	2602	11	28882.2
Second	3415	9	31076.5
Third	0	9	0
Fourth	0	9	0
		Total:	86,238.9 ft³
		Total:	2442.0 m³

Air Change & Delta T Data

WINTER NATURAL AIR CHANGE RATE	0.342
SUMMER NATURAL AIR CHANGE RATE	0.115

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

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

0.342 x 678.34 x 42 °C x 1.2 = 11757 W

= **40114 Btu/h**

6.2.6 Sensible Gain due to Air Leakage

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

= 0.115 x 678.34 x 7 °C x 1.2 = 666 W

= **2271 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	40,114	12,289	1.632
2	0.3		21,882	0.550
3	0.2		21,001	0.382
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

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HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 6002 - KINGSVIEW OPT 2ND **BUILDER:** GOLD PARK HOMES
SFQT: 5901 **LO#** 96140 **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):	86238.9	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:	7.1 ft
LENGTH: 69.0 ft	WIDTH: 53.0 ft	EXPOSED PERIMETER:	244.0 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	-

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MICHAEL O'ROURKE

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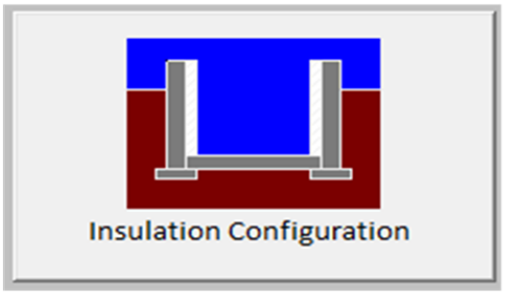
Residential Foundation Thermal Load Calculator

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):	**21.0**	 Insulation Configuration
Floor Width (m):	**16.2**	
Exposed Perimeter (m):	**0.0**	
Wall Height (m):	**3.1**	
Depth Below Grade (m):	**2.16**	
Window Area (m^2):	**3.1**	
Door Area (m^2):	**1.9**	
Radiant Slab		
Heated Fraction of the Slab:	**0**	
Fluid Temperature (°C):	**33**	
Design Months		
Heating Month	**1**	
Foundation Loads		
Heating Load (Watts):	**2501**	

TYPE: 6002 - KINGSVIEW OPT 2ND
LO# 96140

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

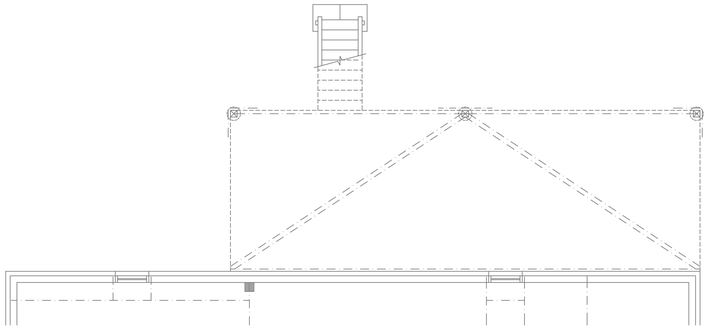
Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

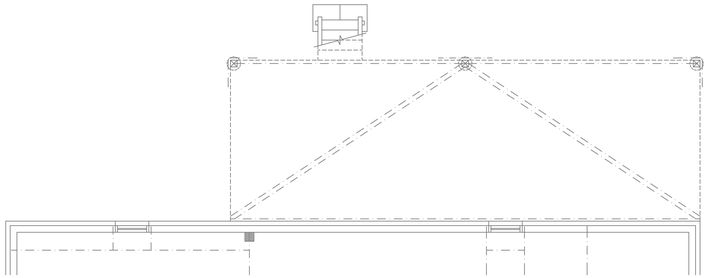
Weather Station Description	
Province:	Ontario
Region:	Vaughan (Woodbridge)
Weather Station Location:	Open flat terrain, grass
Anemometer height (m):	10
Local Shielding	
Building Site:	Suburban, forest
Walls:	Heavy
Flue:	Heavy
Highest Ceiling Height (m):	7.07
Building Configuration	
Type:	Detached
Number of Stories:	Two
Foundation:	Full
House Volume (m^3):	2442.0
Air Leakage/Ventilation	
Air Tightness Type:	Present (1961-) (3.57 ACH)
Custom BDT Data:	ELA @ 10 Pa. 3255.3 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):	**0.342**
Cooling Air Leakage Rate (ACH/H):	**0.115**

TYPE: 6002 - KINGSVIEW OPT 2ND

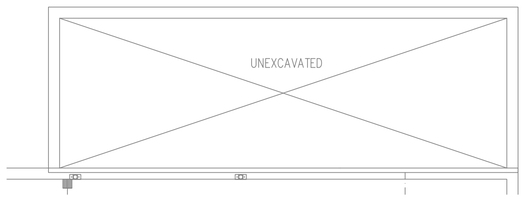
LO# 96140



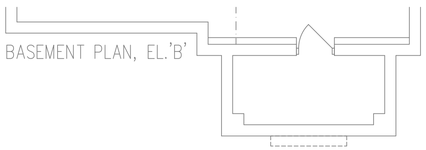
BASEMENT PLAN ELEV. 'A', 'B' & 'C' – L.O.D. COND.



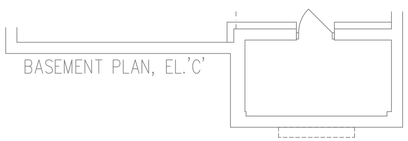
BASEMENT PLAN ELEV. 'A', 'B' & 'C' – W.O.D. COND.



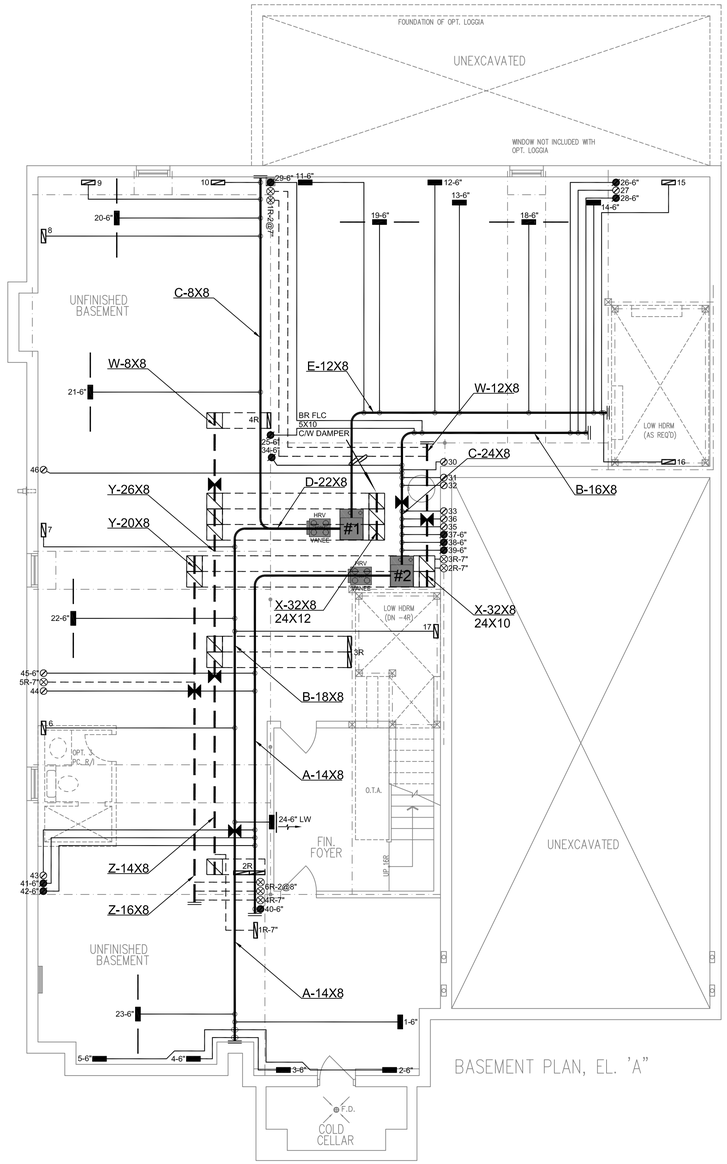
BASEMENT PLAN ELEV. 'A', 'B'&'C' (OPT. COVERED LOGGIA)



BASEMENT PLAN, EL.'B'



BASEMENT PLAN, EL.'C'



FURNACE 1
LENNOX ML196UH090XE48C
85,600 BTU/H OUTPUT
3.0 TONS A/C @ 1190 cfm

FURNACE 2
LENNOX ML196UH045XE36B
42,800 BTU/H OUTPUT
3.0 TONS A/C @ 1110 cfm

	S/A	R/A	FANS
2ND	22	6	6
1ST	17	4	2
BAS	7	1	0

HVAC LEGEND	
	OUTLET BY AIRMAX
	4"x10" SUPPLY GRILLE + 5" BOOT
	4"x10" SUPPLY GRILLE + 6" BOOT
	FLEX DUCT
	H&V SUPPLY AIR STACK
	14X8 RETURN AIR GRILLE
	30X8 RETURN AIR GRILLE
	FLOOR RETURN AIR GRILLE
	RETURN STACK ABOVE
	RETURN AIR STACK
	REDUCER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
LT	UNIT TRAP by REVERSOMATIC
F	EXHAUST FAN
DF	DRYER BOOSTER FAN PROVIDE ACCESS PANEL as Req'd
DV	DIRECT VENT
LW	LOW WALL
HW	HIGH WALL
CLG.	CEILING
M	MOTORIZED ZONE DAMPER
	EXHAUST PIPE
	CONCENTRIC VENT KIT
	CONCENTRIC HRV or ERV VENT KIT
	SINGLE WALL BOX by REVERSOMATIC
	DOUBLE WALL BOX by REVERSOMATIC
	TRIPLE WALL BOX by REVERSOMATIC
	CONCENTRIC HRV / VENT by REVERSOMATIC

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.

No.	Revision	Date	By
2			
1	ISSUED FOR PERMIT	APRIL 2022	AK

SB-12 PACKAGE

A1

HVAC DESIGNS LTD.
375 Finley Ave - Unit 202 - Ajax, Ontario L1S 2E2
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Email: Info@hvacdesigns.ca
Web: www.hvacdesigns.ca
Specializing in Residential Mechanical Design Services

Client: GOLDPARK HOMES

Project Name: PINE VALLEY PH2
VAUGHAN, ONTARIO
6002 - KINGSVIEW
OPT 2ND
5901 SQFT

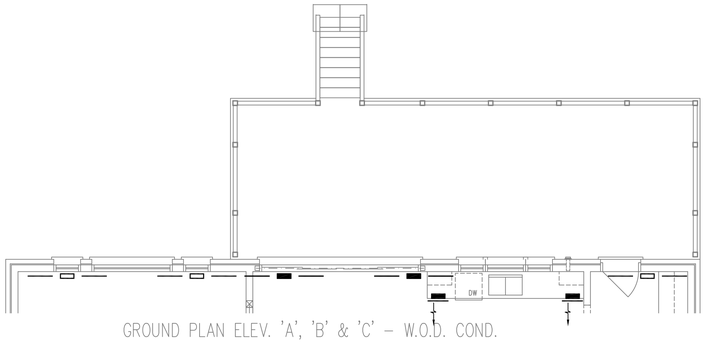
Sheet Title: BASEMENT HVAC LAYOUT

Drawn By: AK | Checked By: MO

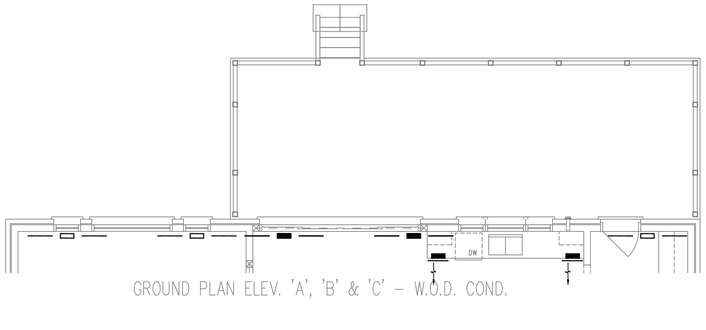
Scale: 3/16"=1'-0" | Sheet No.: 1

Date: APRIL 2022

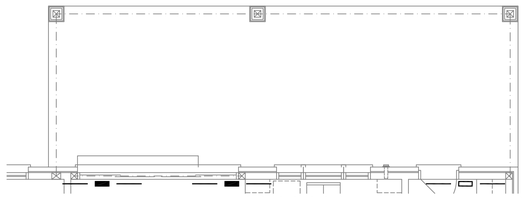
LO #: 96140



GROUND PLAN ELEV. 'A', 'B' & 'C' – W.O.D. COND.

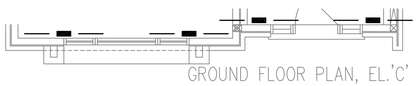


GROUND PLAN ELEV. 'A', 'B' & 'C' – W.O.D. COND.

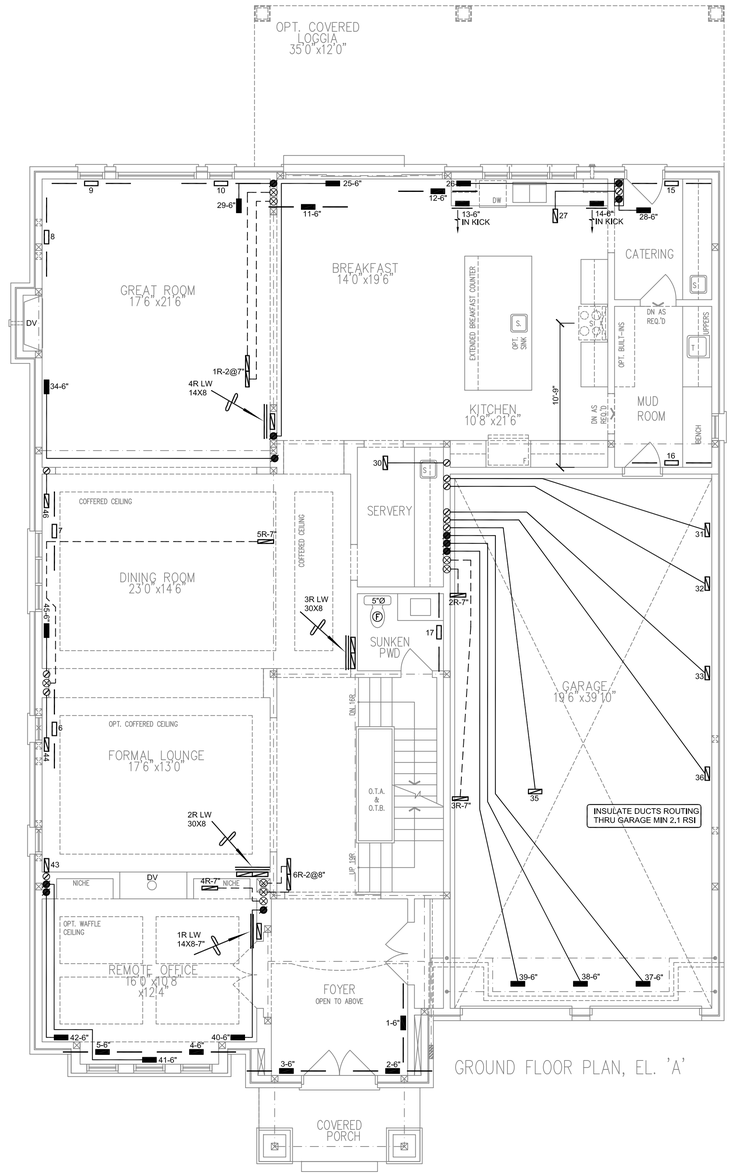


GROUND FLOOR PLAN ELEV. 'A', 'B'&'C' (OPT. COVERED LOGGIA)

GROUND FLOOR PLAN, EL.'B'



GROUND FLOOR PLAN, EL.'C'



GROUND FLOOR PLAN, EL. 'A'

HVAC LEGEND	
	OUTLET BY AIRMAX
	4"x10" SUPPLY GRILLE + 5" BOOT
	4"x10" SUPPLY GRILLE + 6" BOOT
	FLEX DUCT
	HMV SUPPLY AIR STACK
	14X8 RETURN AIR GRILLE
	30X8 RETURN AIR GRILLE
	FLOOR RETURN AIR GRILLE
	RETURN STACK ABOVE
	RETURN AIR STACK
	REDUCER
	SUPPLY DUCTWORK
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F	EXHAUST FAN
DF	DRYER BOOSTER FAN PROVIDE ACCESS PANEL as Req'd
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LW	LOW WALL
HW	HIGH WALL
CLG.	CEILING
M	MOTORIZED ZONE DAMPER
	EXHAUST PIPE
	CONCENTRIC VENT KIT
	CONCENTRIC HRV or ERV VENT KIT
	SINGLE WALL BOX by REVERSOMATIC
	DOUBLE WALL BOX by REVERSOMATIC
	TRIPLE WALL BOX by REVERSOMATIC
	CONCENTRIC HRV VENT by REVERSOMATIC

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

No.	Revision	Date	By
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1	ISSUED FOR PERMIT	APRIL 2022	AK

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Client: GOLDPARK HOMES

Project Name: PINE VALLEY PH2
VAUGHAN, ONTARIO

6002 - KINGSVIEW
OPT 2ND
5901 SQFT

Sheet Title: FIRST FLOOR HVAC LAYOUT

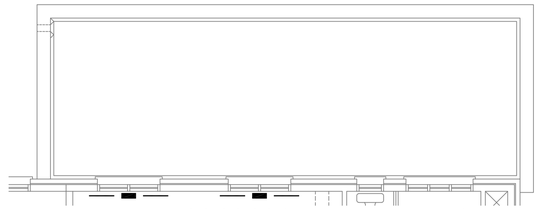
Drawn By: AK | Checked By: MO

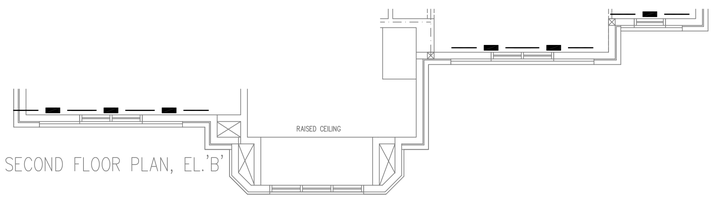
Scale: 3/16"=1'-0"

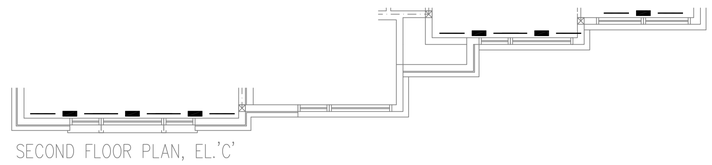
Sheet No.: 2

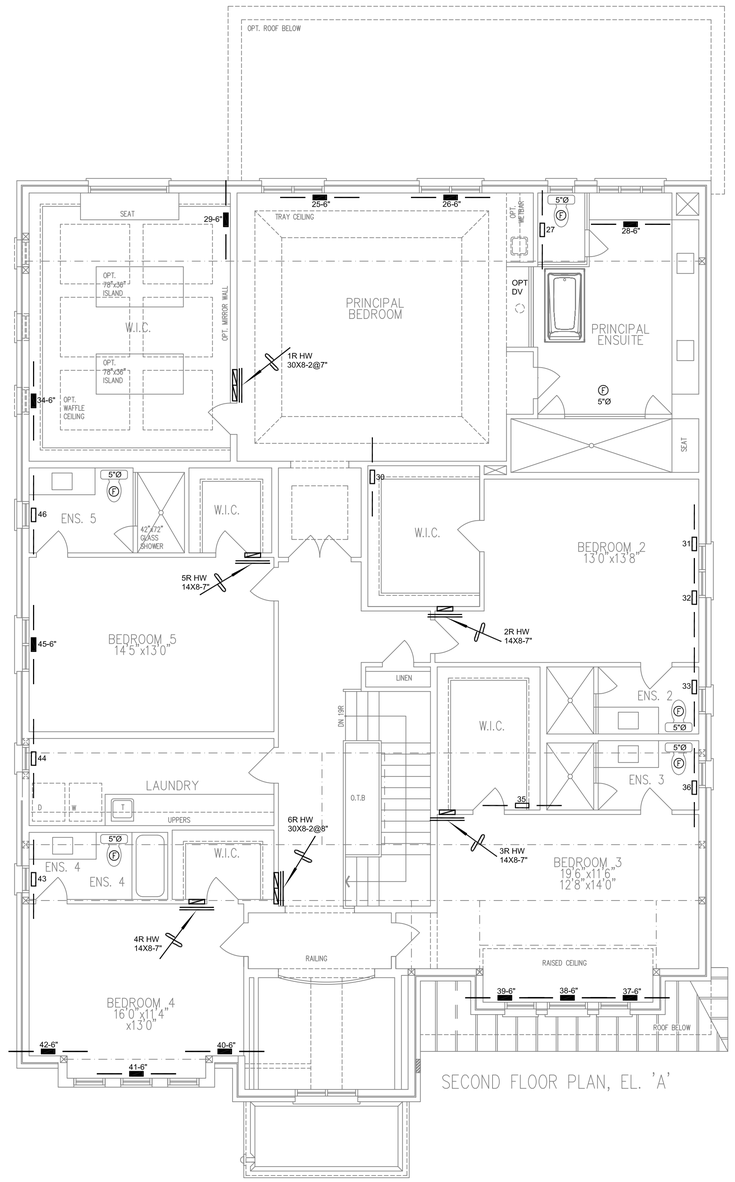
Date: APRIL 2022

LO.# 96140









HVAC LEGEND

	OUTLET BY AIRMAX
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	4"x10" SUPPLY GRILLE + 6" BOOT
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Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

No.	Revision	Date	By
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Client: GOLDPARK HOMES

Project Name: PINE VALLEY PH2
VAUGHAN, ONTARIO

6002 - KINGSVIEW
OPT 2ND
5961 SQFT

Sheet Title: SECOND FLOOR HVAC LAYOUT
Drawn By: AK
Checked By: MO
Scale: 3/16"=1'-0"
Sheet No.: 3
Date: APRIL 2022
LO #: 96140