

Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information			
Building number, street name		Unit no.	Lot/con.
Municipality VAUGHAN (WOODBIDGE)	Postal code	Plan number/ other description	
B. Individual who reviews and takes responsibility for design activities			
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.	
Street address 375 FINLEY AVE		Unit no. 202	Lot/con. N/A
Municipality AJAX	Postal code L1S 2E2	Province ONTARIO	E-mail info@hvacdesigns.ca
Telephone number (905) 619-2300	Fax number (905) 619-2375	Cell number ()	
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]			
☐ House ☐ Small Buildings ☐ Large Buildings ☐ Complex Buildings ☒ HVAC – House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection ☐ Building Structural ☐ Plumbing – House ☐ Plumbing – All Buildings ☐ On-site Sewage Systems			
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12		Model: 6002 - KINGSVIEW Project: PINE VALLEY PH 2	
D. Declaration of Designer			
I, <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate): (print name)			
☐ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____			
☒ I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: <u>19669</u> Basis for exemption from registration and qualification: <u>O.B.C SENTENCE 3.2.4.1 (4)</u>			
☐ The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____			
I certify that:			
1. The information contained in this schedule is true to the best of my knowledge. 2. I have submitted this application with the knowledge and consent of the firm.			
April 14, 2022 Date		 Signature of Designer	

NOTE:

- For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d) of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

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

[illegible]

ROOM USE			OFFICE			FM/DN			KIT			GRT			CATER			PWD			FOY			MUD									WOD			BAS		
EXP. WALL			32			30			47			83			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			921			211			122			755			233						2170					
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	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	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	8	170	199						
WEST			21.3	41.6	0	0	0	0	0	0	120	2554	4986	108	2298	4488	14	298	582	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					
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	0	0	0				
NET EXPOSED WALL			4.5	0.8	288	1286	217	264	1178	198	382	1703	287	813	3630	611	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	0	0	0	0	0					
EXPOSED CLG			1.3	0.6	0	0	0	0	0	0	0	0	0	375	481	220	0	0	0	0	0	0	116	149	68	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					
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					
BASEMENT/CRAWL HEAT LOSS																																						
SLAB ON GRADE HEAT LOSS																																						
SUBTOTAL HT LOSS						2712			2646			4762			6409			1384			545			5503			1242						0			8537		
SUB TOTAL HT GAIN						3001			1916			5358			5319			765			92			4843			358						1289			462		
LEVEL FACTOR / MULTIPLIER			0.30			0.48			0.30			0.48			0.30			0.48			0.30			0.48			0.30			0.48			0.50			1.63		
AIR CHANGE HEAT LOSS						1295			1264			2274			3060			661			260			2627			593						20057					
AIR CHANGE HEAT GAIN						224			143			401			398			57			7			362			27									131		
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	0	0	0	0	0	0	0	0	0					
HEAT GAIN APPLIANCES/LIGHTS						1371			1371			1371			1371			0			0			0			0									0		
TOTAL HT LOSS BTU/H						4007			3910			7036			9469			2046			805			8130			1835						2018			30327		
TOTAL HT GAIN x 1.3 BTU/H						5975			4460			9269			9215			1068			128			6766			500						1676			771		

TOTAL HEAT GAIN BTU/H: 73478

TONS: 6.12

LOSS DUE TO VENTILATION LOAD BTU/H: 6156

STRUCTURAL HEAT LOSS: 96986

TOTAL COMBINED HEAT LOSS BTU/H: 103142

SITE NAME: PINE VALLEY PH 2										DATE Apr-22				WINTER NATURAL AIR CHANGE RATE 0.342				HEAT LOSS ΔT °F. 76		CSA-F280-1										
BUILDER: GOLD PARK HOMES										TYPE: 6002 - KINGSVIEW				GFA: 5526				LO# 96139				SUMMER NATURAL AIR CHANGE RATE 0.115				HEAT GAIN ΔT °F. 13		SB-12 PACKAGE A		
ROOM USE			PRI		ENS		PWIC-1		PWIC-2		BED-2		WIC-2		ENS-2		BED-3		WIC-3		ENS-3									
EXP. WALL			21		35		0		0		14		0		5		39		0		5									
CLG. HT.			9		9		9		9		9		9		9		9		9		9									
FACTORS																														
GRS.WALL AREA			LOSS GAIN		191		319		0		0		127		0		46		355		0		46							
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	9	192	144				
EAST			21.3	41.6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	1681	3283	0	0	0	0	0				
SOUTH			21.3	24.9	0	0	0	0	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	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				
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				
NET EXPOSED WALL			4.5	0.8	147	656	111	291	1296	218	0	0	0	107	479	81	0	0	37	163	27	276	1231	207	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		
EXPOSED CLG			1.3	0.6	440	565	259	304	390	179	52	67	31	165	212	97	285	366	167	43	55	25	65	83	38	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		
EXPOSED FLOOR			2.6	0.4	0	0	0	0	0	0	0	0	55	140	24	218	556	94	43	110	18	65	166	28	296	755	127	65	166	28
BASEMENT/CRAWL HEAT LOSS					0		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		0			
SUBTOTAL HT LOSS					2157		2282		67		352		1827		165		604		4163		165		604							
SUB TOTAL HT GAIN					2197		1560		31		121		661		44		237		3844		44		237							
LEVEL FACTOR / MULTIPLIER			0.20	0.44			0.20	0.44	0.20	0.44	0.20	0.44	0.20	0.44	0.20	0.44	0.20	0.44	0.20	0.44	0.20	0.44	0.20	0.44	0.20	0.44	0.20	0.44		
AIR CHANGE HEAT LOSS					949		1004		29		155		803		72		265		1830		72		265							
AIR CHANGE HEAT GAIN					164		117		2		9		49		3		18		287		3		18							
DUCT LOSS					0		0		0		51		263		24		87		599		24		87							
DUCT GAIN					0		0		0		13		232		5		26		574		5		26							
HEAT GAIN PEOPLE			240		2	480	0	0	0	0	0	1	240	0	0	0	0	1	240	0	0	0	0	0	0	0	0	0		
HEAT GAIN APPLIANCES/LIGHTS					1371		0		0		0		1371		0		0		1371		0		0							
TOTAL HT LOSS BTU/H					3106		3286		96		557		2893		261		956		6592		261		956							
TOTAL HT GAIN x 1.3 BTU/H					5477		2180		43		185		3320		67		365		8212		67		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	362	465	213	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			1369			536								
SUB TOTAL HT GAIN					3141			284			394			791			311								
LEVEL FACTOR / MULTIPLIER			0.20	0.44		0.20	0.44		0.20	0.44		0.20	0.44		0.20	0.44									
AIR CHANGE HEAT LOSS					1236			187			316			602			236								
AIR CHANGE HEAT GAIN					235			21			30			59			23								
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					4048			614			1034			1972			771								
TOTAL HT GAIN x 1.3 BTU/H					6483			397			2334			3200			435								

TOTAL HEAT GAIN BTU/H: 73478

TONS: 6.12

LOSS DUE TO VENTILATION LOAD BTU/H: 6156

STRUCTURAL HEAT LOSS: 96986

TOTAL COMBINED HEAT LOSS BTU/H: 103142

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

TYPE: 6002 - KINGSVIEW

DATE: Apr-22

GFA: 5526 LO# 96139

FURNACE 1

HEATING CFM 1340 COOLING CFM 1340
TOTAL HEAT LOSS 69,583 TOTAL HEAT GAIN 39,829
AIR FLOW RATE CFM 19.26 AIR FLOW RATE CFM 33.64

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

**FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 72661 BTUH**
\$*LENNOX
ML196UH090XE48C 90
FAN SPEED LOW 0
MEDLOW 1080
MEDIUM 1190
MEDIUM HIGH 1340
HIGH 1575

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

DESIGN CFM = **1340**
CFM @ .6" E.S.P.

TEMPERATURE RISE 59 °F

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

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

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

RUN #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
ROOM NAME	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.	2.71	2.71	2.71	2.00	2.00	1.96	1.96	3.16	3.16	3.16	1.76	1.76	1.76	1.76	2.05	1.84	0.81	4.62	4.62	4.62	4.62	4.62	4.62	4.62
CFM PER RUN HEAT	52	52	52	39	39	38	38	61	61	61	34	34	34	34	39	35	16	89	89	89	89	89	89	89
RM GAIN MBH.	2.26	2.26	2.26	2.99	2.99	2.23	2.23	3.07	3.07	3.07	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	76	76	76	101	101	75	75	103	103	103	78	78	78	78	36	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	0.16	0.16	0.16	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	0.1	0.11	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	6	6	6	6	6	6	6	4	4	4	6	6	6	6	6	6	6
HEATING VELOCITY (ft/min)	265	265	382	199	199	279	279	311	311	311	173	173	173	173	447	402	184	454	454	454	454	454	454	454
COOLING VELOCITY (ft/min)	388	388	558	515	515	551	551	525	525	525	398	398	398	398	413	195	46	61	61	61	61	61	61	61
OUTLET GRILL SIZE	4X10	4X10	3X10	4X10	4X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	3X10	4X10	4X10	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
1	FOY	2.71	52	2.26	76	0.17	58	150	208	0.08	6	265	388	4X10	A
2	FOY	2.71	52	2.26	76	0.17	60	180	240	0.07	6	265	388	4X10	A
3	FOY	2.71	52	2.26	76	0.17	52	150	202	0.09	5	382	558	3X10	A
4	OFFCE	2.00	39	2.99	101	0.16	51	160	211	0.08	6	199	515	4X10	A
5	OFFCE	2.00	39	2.99	101	0.16	58	190	248	0.07	6	199	515	4X10	A
6	FM/DN	1.96	38	2.23	75	0.17	37	110	147	0.12	5	279	551	3X10	B
7	FM/DN	1.96	38	2.23	75	0.17	27	170	197	0.09	5	279	551	3X10	B
8	GRT	3.16	61	3.07	103	0.16	45	120	165	0.1	6	311	525	4X10	C
9	GRT	3.16	61	3.07	103	0.16	45	110	155	0.1	6	311	525	4X10	C
10	GRT	3.16	61	3.07	103	0.16	36	110	146	0.11	6	311	525	4X10	C
11	KIT	1.76	34	2.32	78	0.17	31	190	221	0.08	6	173	398	4X10	E
12	KIT	1.76	34	2.32	78	0.17	32	140	172	0.1	6	173	398	4X10	E
13	KIT	1.76	34	2.32	78	0.17	32	130	162	0.11	6	173	398	4X10	E
14	KIT	1.76	34	2.32	78	0.17	42	110	152	0.11	6	173	398	4X10	E
15	CATER	2.05	39	1.07	36	0.17	49	120	169	0.1	4	447	413	3X10	E
16	MUD	1.84	35	0.50	17	0.17	36	120	156	0.11	4	402	195	3X10	E
17	PWD	0.81	16	0.13	4	0.17	32	120	152	0.11	4	184	46	3X10	B
18	BAS	4.62	89	0.35	12	0.16	36	120	156	0.1	6	454	61	4X10	E
19	BAS	4.62	89	0.35	12	0.16	24	150	174	0.09	6	454	61	4X10	E
20	BAS	4.62	89	0.35	12	0.16	41	110	151	0.11	6	454	61	4X10	C
21	BAS	4.62	89	0.35	12	0.16	28	130	158	0.1	6	454	61	4X10	C
22	BAS	4.62	89	0.35	12	0.16	28	130	158	0.1	6	454	61	4X10	B
23	BAS	4.62	89	0.35	12	0.16	52	160	212	0.08	6	454	61	4X10	A
24	BAS	4.62	89	0.35	12	0.16	41	110	151	0.11	6	454	61	4X10	B

SUPPLY AIR TRUNK SIZE														RETURN 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 CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)				
TRUNK A	323	0.07	9.5	14	x	8	415	TRUNK G	0	0.00	0	0	x	8	0	TRUNK O	0	0.06	0	0	x	8	0				
TRUNK B	593	0.07	11.9	18	x	8	593	TRUNK H	0	0.00	0	0	x	8	0	TRUNK P	0	0.06	0	0	x	8	0				
TRUNK C	361	0.10	9.1	10	x	8	650	TRUNK I	0	0.00	0	0	x	8	0	TRUNK Q	0	0.06	0	0	x	8	0				
TRUNK D	954	0.07	14.2	24	x	8	716	TRUNK J	0	0.00	0	0	x	8	0	TRUNK R	0	0.06	0	0	x	8	0				
TRUNK E	388	0.08	9.8	12	x	8	582	TRUNK K	0	0.00	0	0	x	8	0	TRUNK S	0	0.06	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	TRUNK T	0	0.06	0	0	x	8	0				

RETURN AIR #	1	2	3	4												BR
AIR VOLUME	130	340	420	185	0	0	0	0	0	0	0	0	0	0	0	265
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	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	7	10.1	10.1	7.5	0	0	0	0	0	0	0	0	0	0	0	8.1
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	24

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

TYPE: 6002 - KINGSVIEW

DATE: Apr-22

GFA: 5526 LO# 96139

FURNACE 2

HEATING CFM 1110 COOLING CFM 1110
TOTAL HEAT LOSS 27,403 TOTAL HEAT GAIN 33,130
AIR FLOW RATE CFM 40.51 AIR FLOW RATE CFM 33.5

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

**FURNACE HEAT LOSS +
HRV / ERV HEAT LOSS
= 30481 BTUH**
**\$LENNOX
ML196UH045XE36B
FAN SPEED 45
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 #	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	PWIC-1	PWIC-2	BED-2	BED-2	ENS-2	WIC-2	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.	1.55	1.55	1.23	2.05	0.10	0.56	1.45	1.45	0.96	0.26	0.26	0.96	2.20	2.20	2.20	1.35	1.35	1.35	0.61	1.03	1.97	0.77
CFM PER RUN HEAT	63	63	50	83	4	23	59	59	39	11	11	39	89	89	89	55	55	55	25	42	80	31
RM GAIN MBH.	2.74	2.74	0.82	1.36	0.04	0.19	1.66	1.66	0.36	0.07	0.07	0.36	2.74	2.74	2.74	2.16	2.16	2.16	0.40	2.33	3.20	0.43
CFM PER RUN COOLING	92	92	27	46	1	6	56	56	12	2	2	12	92	92	92	72	72	72	13	78	107	15
ADJUSTED PRESSURE	0.16	0.16	0.17	0.16	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	0.15	0.17
ACTUAL DUCT LGH.	55	67	61	57	29	26	40	42	43	31	40	47	57	53	50	59	79	72	60	49	47	55
EQUIVALENT LENGTH	200	170	170	160	170	180	190	200	110	130	140	120	160	170	180	150	190	170	160	160	170	200
TOTAL EFFECTIVE LENGTH	255	237	231	217	199	206	230	242	153	161	180	167	217	223	230	209	269	242	220	209	217	255
ADJUSTED PRESSURE	0.06	0.07	0.07	0.07	0.09	0.08	0.07	0.07	0.11	0.11	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	4	4	5	5	4	4	4	4	6	6	6	6	6	6	4	5	6	4
HEATING VELOCITY (ft/min)	321	321	367	423	46	264	433	433	447	126	126	447	454	454	454	280	280	280	287	308	408	356
COOLING VELOCITY (ft/min)	469	469	198	235	11	69	411	411	138	23	23	138	469	469	469	367	367	367	149	573	546	172
OUTLET GRILL SIZE	4X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10	4X10	4X10	3X10	3X10	4X10	3X10
TRUNK	B	B	B	B	B	B	B	B	C	C	C	C	C	C	C	A	A	A	A	A	A	B

SUPPLY AIR TRUNK SIZE

	TRUNK	STATIC	ROUND	RECT			VELOCITY		TRUNK	STATIC	ROUND	RECT			VELOCITY
	CFM	PRESS.	DUCT	DUCT			(ft/min)		CFM	PRESS.	DUCT	DUCT			(ft/min)
TRUNK A	312	0.06	9.7	14	x	8	401	TRUNK G	0	0.00	0	0	x	8	0
TRUNK B	435	0.06	11	14	x	8	559	TRUNK H	0	0.00	0	0	x	8	0
TRUNK C	802	0.06	13.9	22	x	8	656	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
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.	90	31	48	78	91	75	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
TOTAL EFFECTIVE LH	200	166	223	278	241	270	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
ROUND DUCT SIZE	8.9	6.8	6.8	6.9	7	10.2	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
	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

TYPE: 6002 - KINGSVIEW
SITE NAME: PINE VALLEY PH 2

LO # 96139

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	<u>2</u> @ 21.2 cfm	<u>42.4</u> cfm
Other Bedrooms	<u>4</u> @ 10.6 cfm	<u>42.4</u> cfm
Kitchen & Bathrooms	<u>7</u> @ 10.6 cfm	<u>74.2</u> cfm
Other Rooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Table 9.32.3.A.	TOTAL	<u>222.6</u> 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	<u>222.6</u>	cfm
Less Principal Ventil. Capacity	<u>150</u>	cfm
Required Supplemental Capacity	<u>72.6</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE V150H	Location: BSMT
<u>150.0</u> 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	
<u>150</u> cfm high	<u>35</u> cfm low	
<u>75</u> % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Concession
Township	Plan:
Address	
Roll #	Building Permit #

BUILDER: GOLD PARK HOMES	
Name:	
Address:	
City:	
Telephone #:	Fax #:

INSTALLING CONTRACTOR	
Name:	
Address:	
City:	
Telephone #:	Fax #:

DESIGNER CERTIFICATION	
I hereby certify that this ventilation system has been designed in accordance with the Ontario Building Code.	
Name:	HVAC Designs Ltd.
Signature:	<i>Michael O'Rourke</i>
HRAI #	001820
Date:	April-22

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

Michael O'Rourke

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																												
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																												
LO#: 96139	Model: 6002 - KINGSVIEW	Builder: GOLD PARK HOMES	Date: 2022-04-14																																																									
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House Volume <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> </thead> <tbody> <tr> <td>Bsmt</td> <td>2602</td> <td>10</td> <td>26280.2</td> </tr> <tr> <td>First</td> <td>2602</td> <td>11</td> <td>28882.2</td> </tr> <tr> <td>Second</td> <td>3415</td> <td>9</td> <td>31076.5</td> </tr> <tr> <td>Third</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td>Fourth</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>86,238.9 ft³</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>2442.0 m³</td> </tr> </tbody> </table>			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	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">WINTER NATURAL AIR CHANGE RATE</td> <td style="width: 20%;">0.342</td> </tr> <tr> <td>SUMMER NATURAL AIR CHANGE RATE</td> <td>0.115</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th></th> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> <th>ΔT °F</th> </tr> </thead> <tbody> <tr> <td>Winter DTDh</td> <td>22</td> <td>-20</td> <td>42</td> <td>76</td> </tr> <tr> <td>Summer DTDc</td> <td>24</td> <td>31</td> <td>7</td> <td>13</td> </tr> </tbody> </table>		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
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5.2.3.1 Heat Loss due to Air Leakage			6.2.6 Sensible Gain due to Air Leakage																																																									
$HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ 0.342 x 678.34 x 42 °C x 1.2 = 11757 W = 40114 Btu/h			$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ = 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			6.2.7 Sensible heat Gain due to Ventilation																																																									
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E) \times 2 \text{ HRV / ERV's}$ 300 CFM x 76 °F x 1.08 x 0.25 = 6156 Btu/h			$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 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)																																																												
$HL_{airr} = Level \ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$ <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Level Factor (LF)</th> <th>HLairve Air Leakage + Ventilation Heat Loss (Btu/h)</th> <th>Level Conductive Heat Loss: (HL_{clevel})</th> <th>Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.5</td> <td rowspan="5" style="text-align: center;">40,114</td> <td>12,289</td> <td>1.632</td> </tr> <tr> <td>2</td> <td>0.3</td> <td>25,204</td> <td>0.477</td> </tr> <tr> <td>3</td> <td>0.2</td> <td>18,246</td> <td>0.440</td> </tr> <tr> <td>4</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> <tr> <td>5</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> </tbody> </table> *HLairbv = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HLairve = 0					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	25,204	0.477	3	0.2	18,246	0.440	4	0	0	0.000	5	0	0	0.000																														
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				Michael O'Rourke BCIN# 19669 																																																								

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 6002 - KINGSVIEW	BUILDER: GOLD PARK HOMES
SFQT: 5526	SITE: PINE VALLEY PH 2
LO# 96139	

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 (ft³):	86238.9	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	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	-

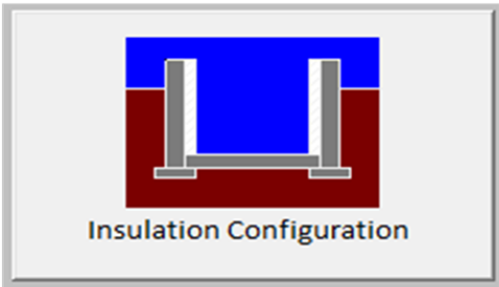
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Vaughan (Woodbridge)	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	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

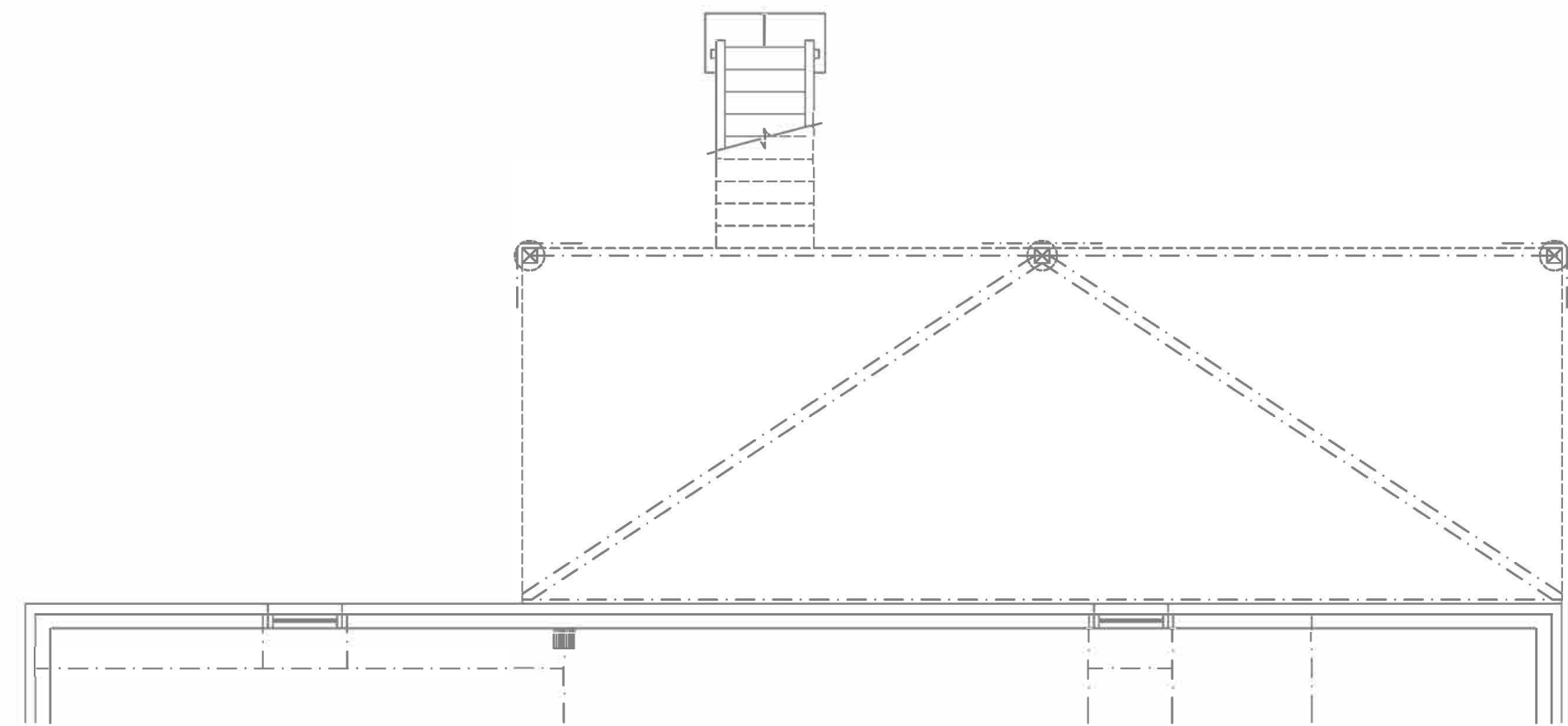
TYPE: 6002 - KINGSVIEW
LO# 96139

Air Infiltration Residential Load Calculator

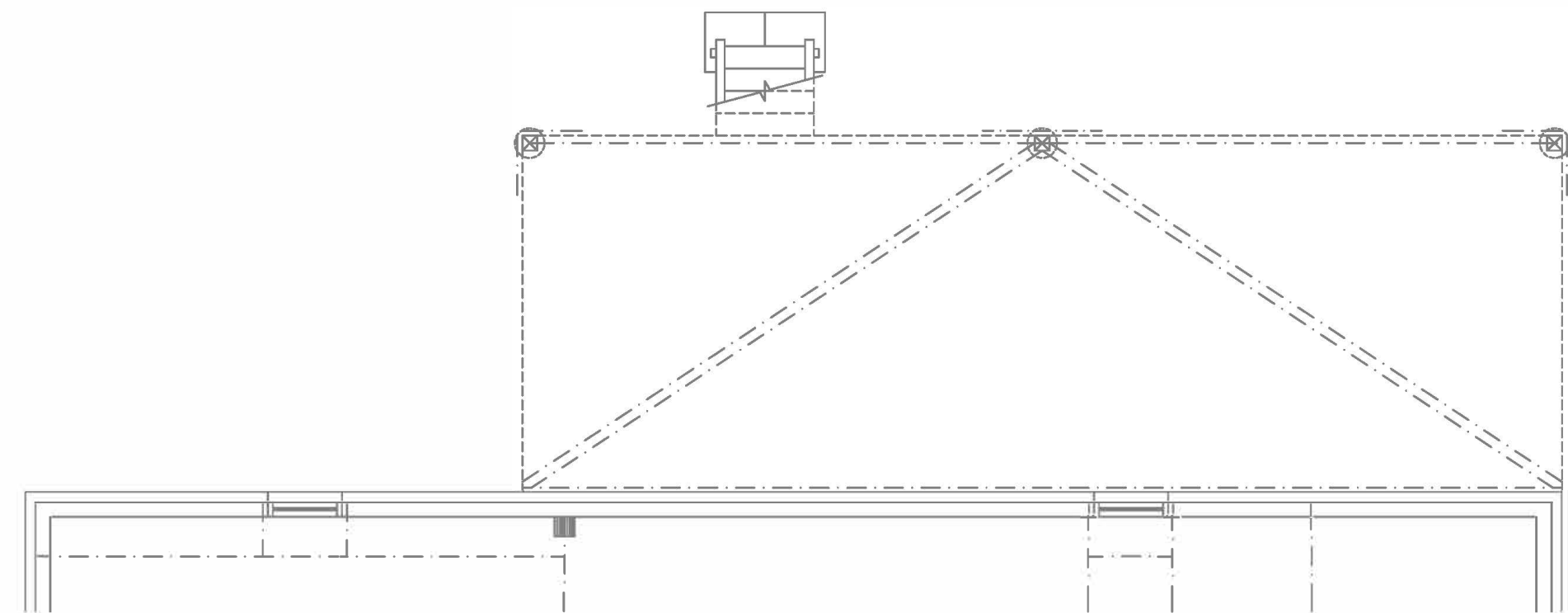
Supplemental tool for CAN/CSA-F280

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	Total Exhaust		
	70.8	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			

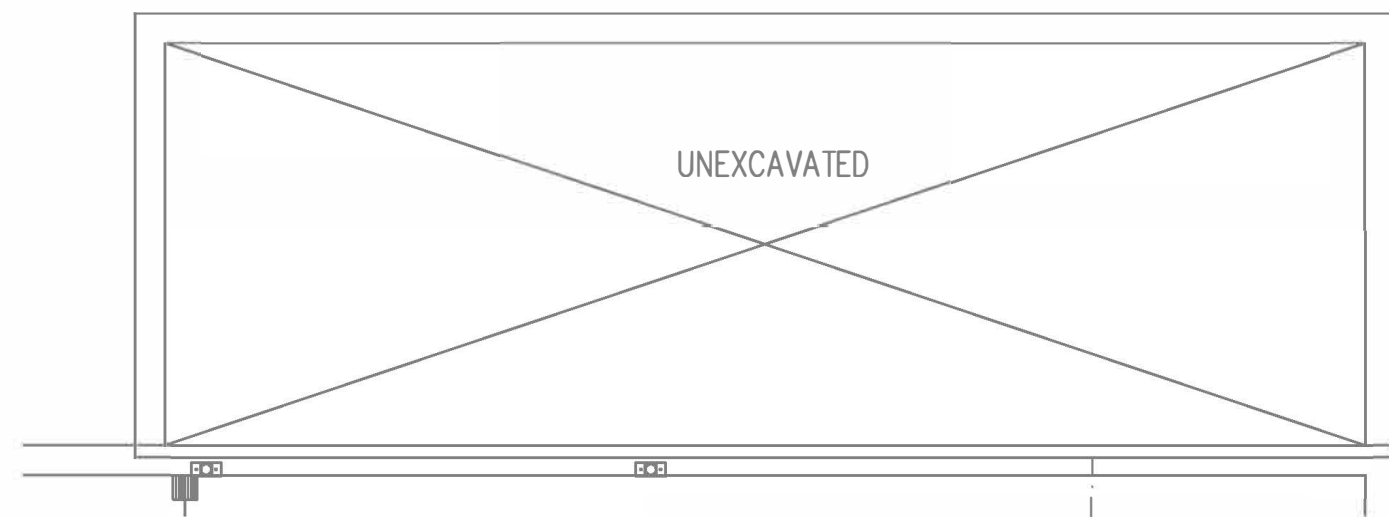
TYPE: 6002 - KINGSVIEW
LO# 96139



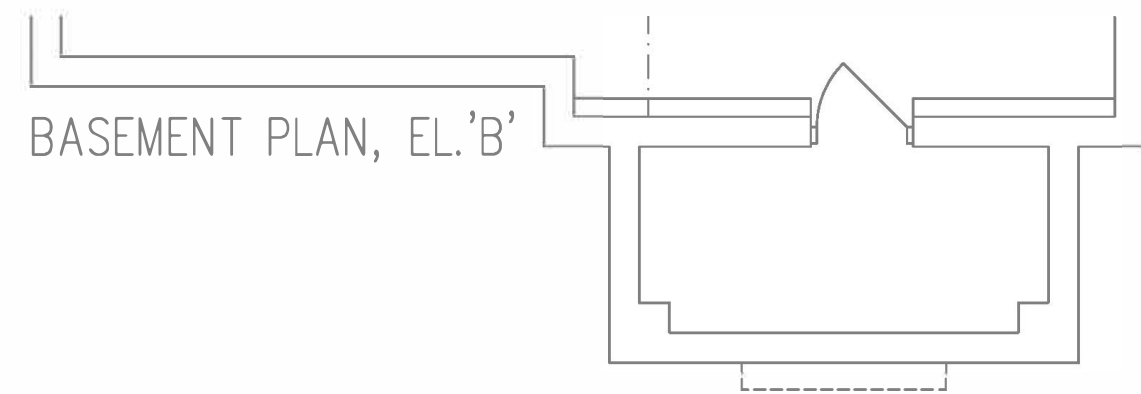
BASEMENT PLAN ELEV. 'A', 'B' & 'C' - L.O.D. COND.



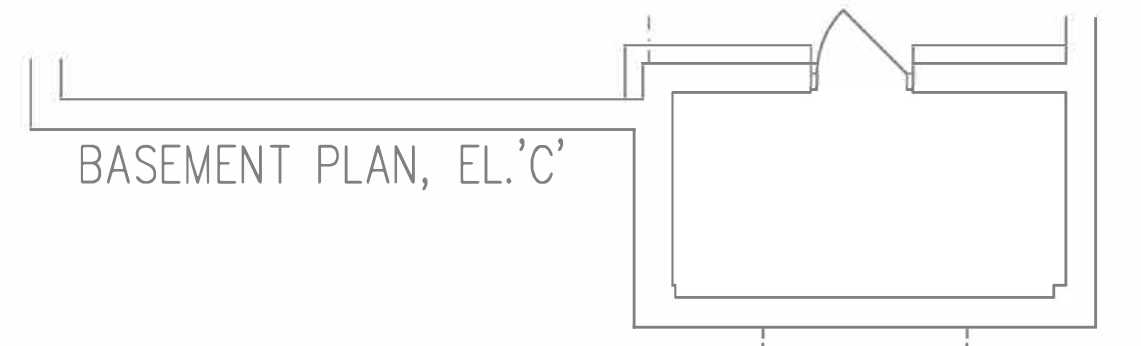
BASEMENT PLAN ELEV. 'A', 'B' & 'C' - W.O.D. COND.



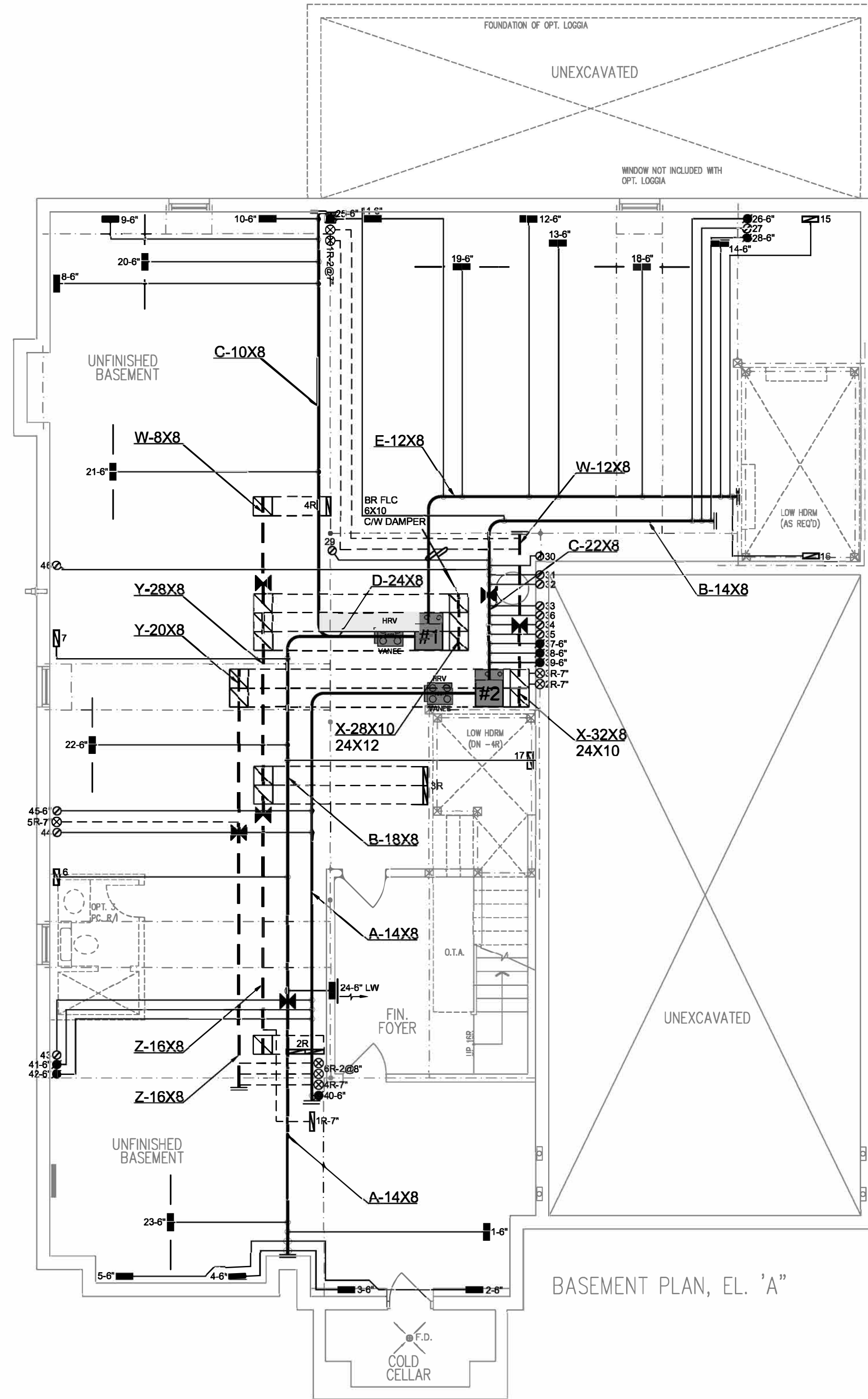
BASEMENT PLAN ELEV. 'A', 'B' & 'C' (OPT. COVERED LOGGIA)



BASEMENT PLAN, EL. 'B'



BASEMENT PLAN, EL. 'C'



FURNACE 1
LENNOX ML196UH090XE48C
85,600 BTU/H OUTPUT
3.5 TONS A/C @ 1340 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 - 4' BOOT
	FLEX DUCT
	H-V SUPPLY AIR STACK
	1400 RETURN AIR GRILLE
	3000 RETURN AIR GRILLE
	FLOOR RETURN AIR GRILLE
	RETURN STACK ABOVE
	RETURN AIR STACK
	REDUCER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	LINT TRAP by REVERSOMATIC
	EXHAUST FAN
	DRYER BOOSTER FAN PHOTO ACCESS PANEL, see Trap
	DIRECT VENT
	LOW WALL
	HIGH WALL
	CEILING
	MOTORIZED ZONE DAMPER
	EXHAUST PIPE
	CONCENTRIC VENT KIT
	CONCENTRIC Hrv or LOW VENT KIT
	SINGLE WALL BOX by REVERSOMATIC
	DOUBLE WALL BOX by REVERSOMATIC
	TRIPLE WALL BOX by REVERSOMATIC
	CONCENTRIC Hrv VENT by REVERSOMATIC

NOTES: 1. OWNER SHALL REVIEW AND ACCEPT RESPONSIBILITY FOR THE DESIGN WORK AND ANY DISCREPANCIES THEREBY. 2. ALL OF THE BUILDING CODES.

Michael G. Givens, P.Eng. 1969
HVAC DESIGNER, LTD.

2	ISSUED FOR PERMIT	APRIL 2022	AK
1	Revision	Date	By

SB-12 PACKAGE

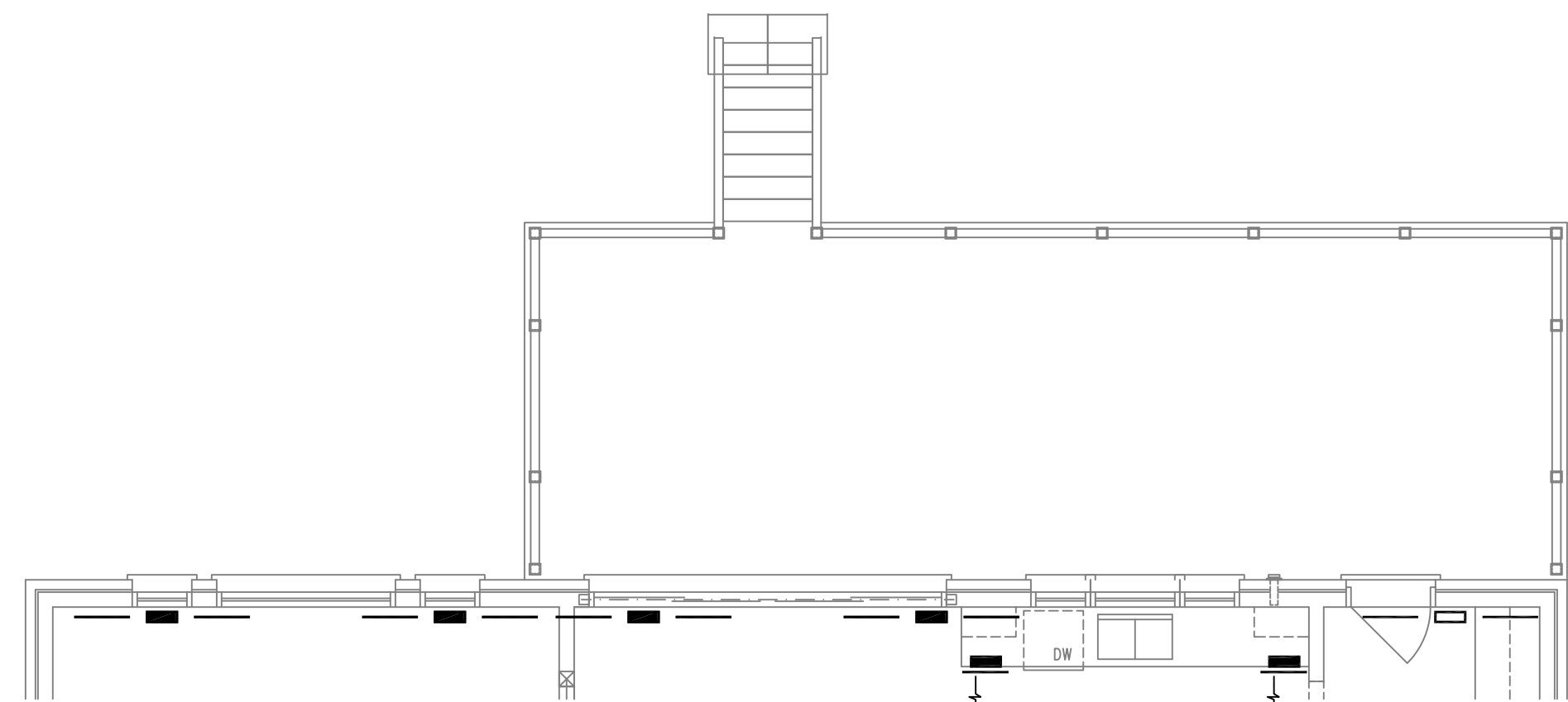
A1

HVACDESIGNS Ltd.
375 Finley Ave - Unit 202 - Ajax, Ontario L1S 2E2
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Email: info@hvacdsgns.ca
Web: www.hvacdsgns.ca
Specializing in Residential Mechanical Design Services

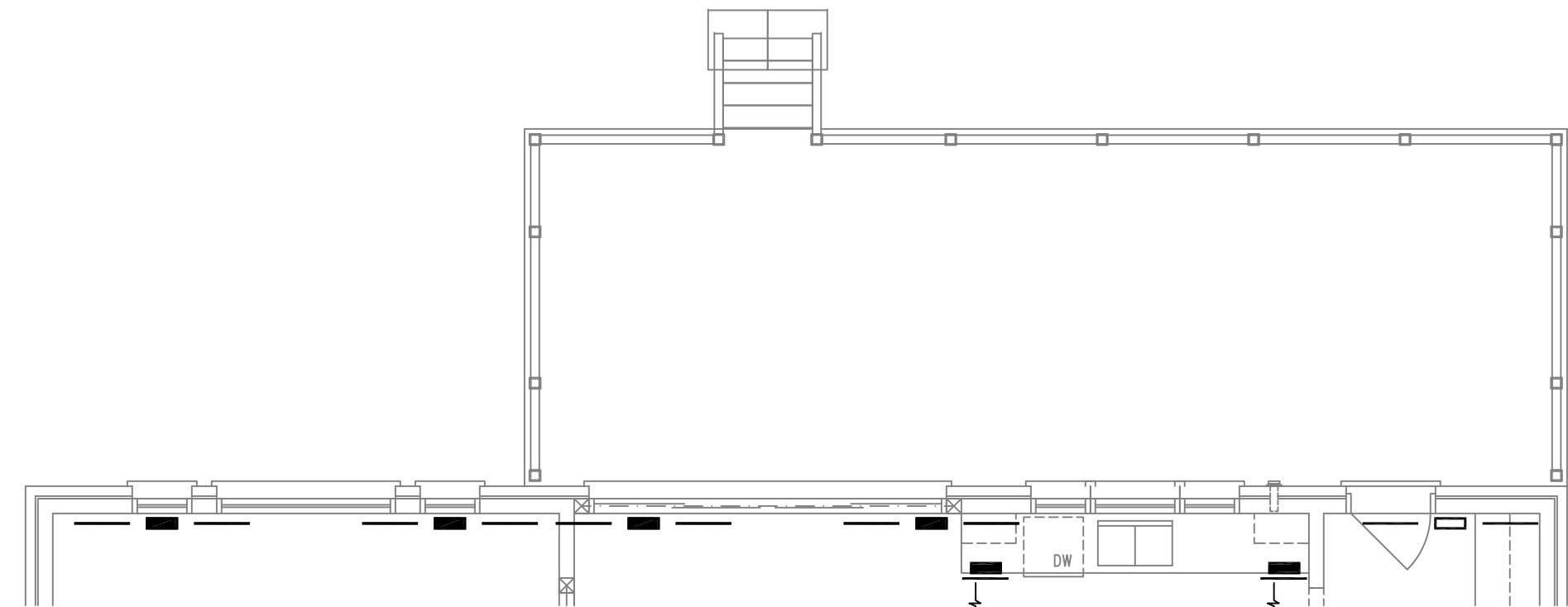
Client: GOLDPARK HOMES
Project Name: PINE VALLEY PH2
VAUGHAN, ONTARIO
6002 - KINGSVIEW
5526 SQFT

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Sheet Title	BASEMENT HVAC LAYOUT		
Drawn By	AK	Checked By	MD
Scale	3/16"=1'-0"		
Date	APRIL 2022		
LO #	96139		

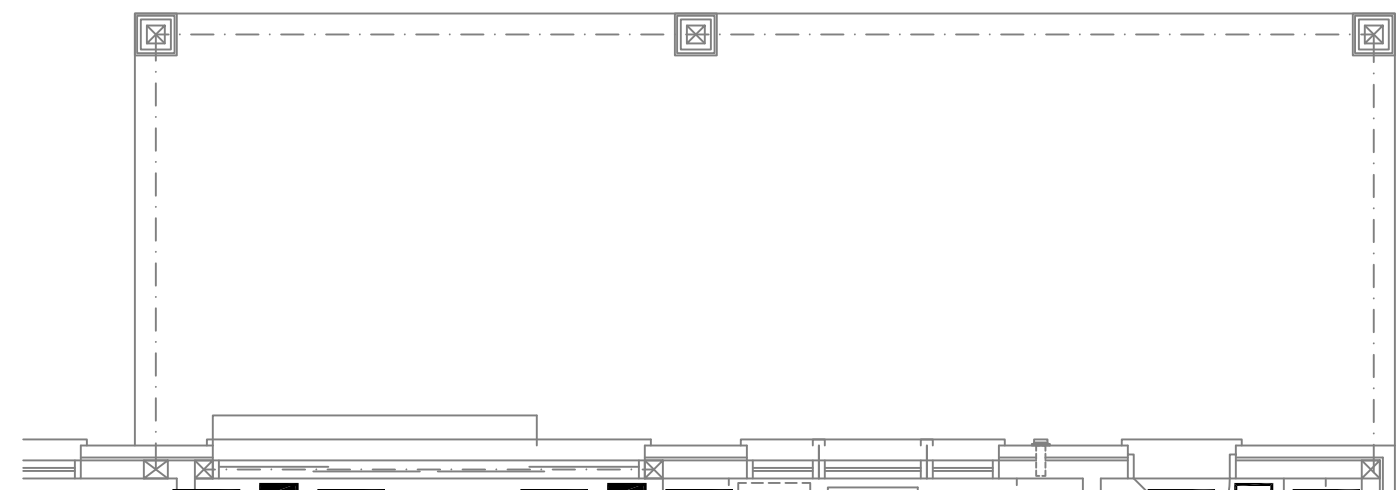
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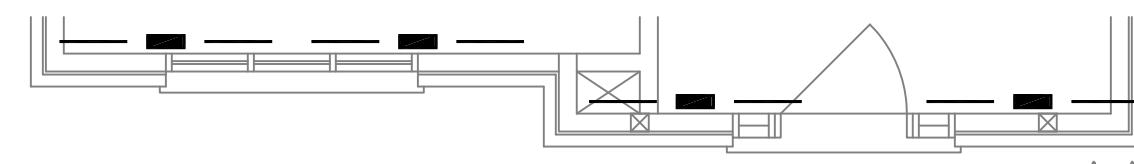
GROUND PLAN ELEV. 'A', 'B' & 'C' - W.O.D. COND.



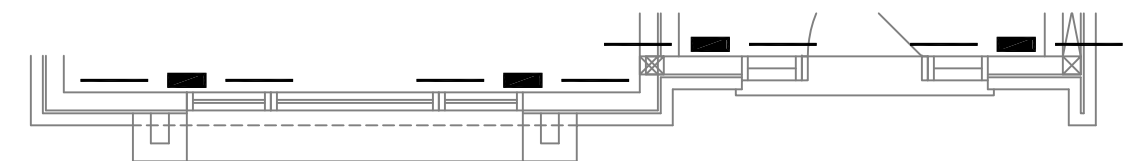
GROUND PLAN ELEV. 'A', 'B' & 'C' - W.O.D. COND.



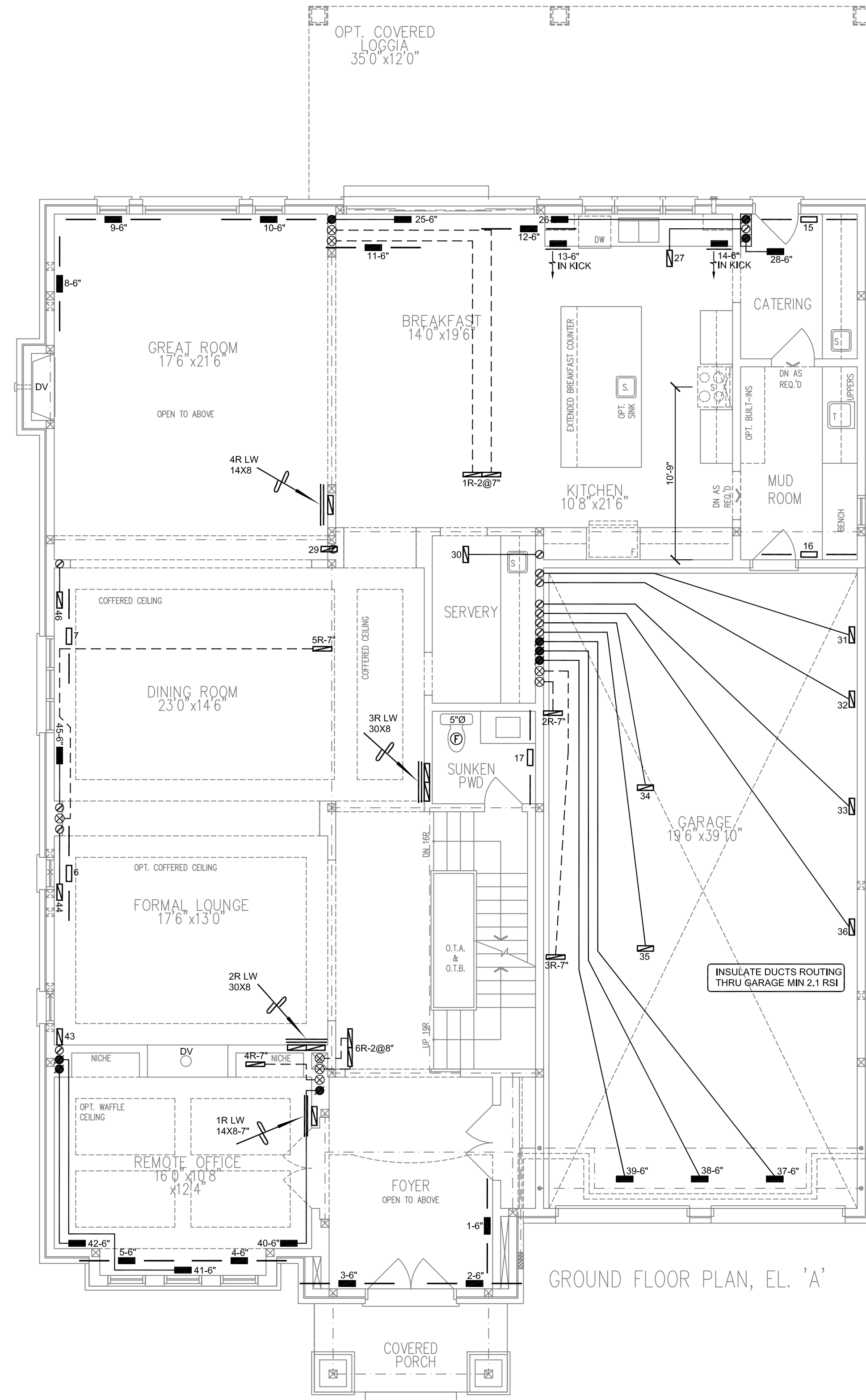
GROUND FLOOR PLAN ELEV. 'A', 'B' & 'C' (OPT. COVERED LOGGIA)



GROUND FLOOR PLAN, EL. 'B'



GROUND FLOOR PLAN, EL. 'C'



GROUND FLOOR PLAN, EL. 'A'

HVAC LEGEND	
	OUTLET BY AIRMAX
	4x10' SUPPLY GRILLE - 1' BOOT
	4x10' SUPPLY GRILLE - 4' BOOT
	FLEX DUCT
	1400 SUPPLY AIR STACK
	1400 RETURN AIR GRILLE
	3000 RETURN AIR GRILLE
	FLOOR RETURN AIR GRILLE
	RETURN STACK ABOVE
	RETURN AIR STACK
	REDUCER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	LINT TRAP by REVERSOMATIC
	EXHAUST FAN
	DRIVER BOOSTER FAN
	DIRECT VENT
	LOW WALL
	HIGH WALL
	CEILING
	MOTORIZED ZONE DAMPER
	EXHAUST PIPE
	CONCENTRIC VENT KIT
	CONCENTRIC HRV or SRV VENT KIT
	SINGLE WALL BOX by REVERSOMATIC
	DOUBLE WALL BOX by REVERSOMATIC
	TRIPLE WALL BOX by REVERSOMATIC
	CONCENTRIC HRV VENT by REVERSOMATIC

I HEREBY CERTIFY THAT I HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED TO SIGN DRAWINGS TO THE BEST OF MY KNOWLEDGE.
Signed: [Signature]
Date: [Date]
Title: [Title]

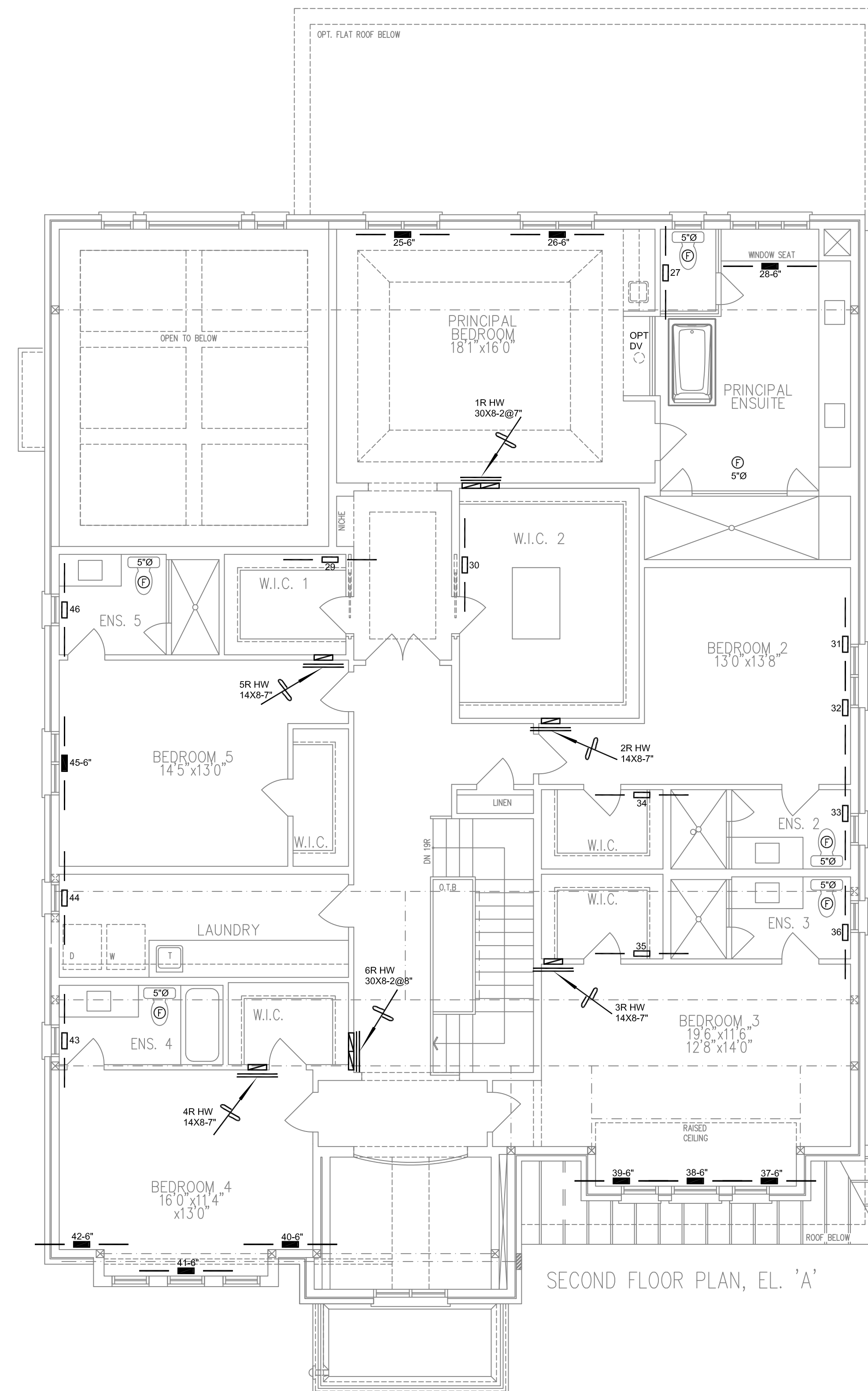
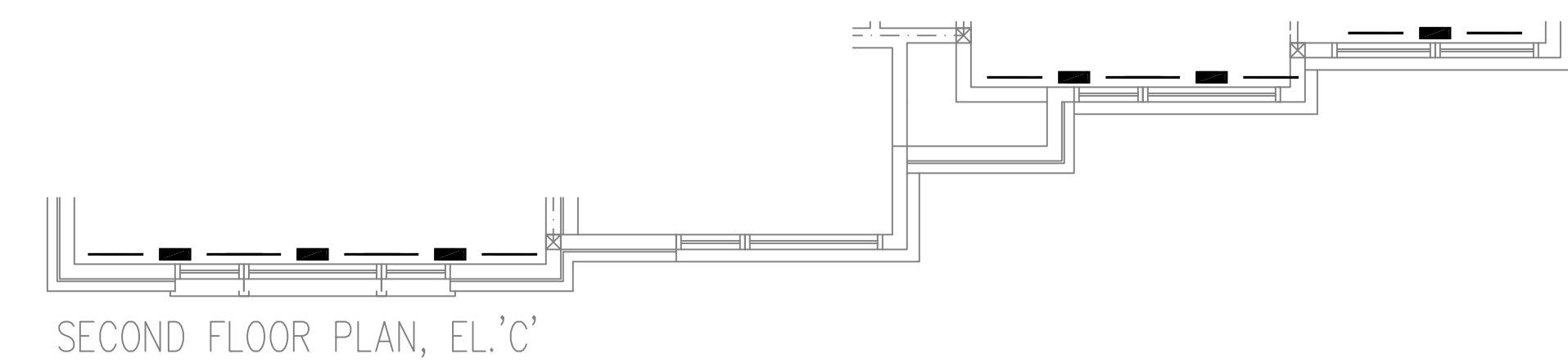
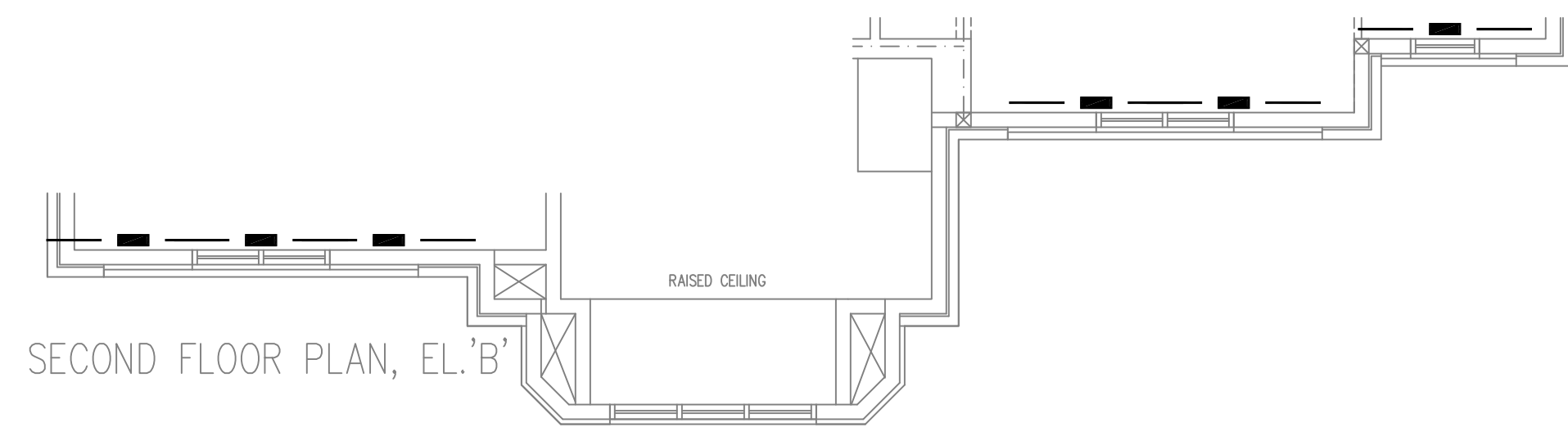
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No.	Revision	Date	By

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Web: www.hvacadesigns.ca
Specializing in Residential Mechanical Design Services

Client: GOLDPARK HOMES
Project Name: PINE VALLEY PH2
VAUGHAN, ONTARIO
6002 - KINGSVIEW
5526 SQFT

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Sheet Title:	FIRST FLOOR HVAC LAYOUT		
Drawn By:	AK	Checked By:	MO
Scale:	3/16"=1'-0"		
Date:	APRIL 2022		
LO #	96139		



HVAC LEGEND	
	OUTLET BY AIRMAX
	4"x10" SUPPLY GRILLE - 5' BOOT
	4"x10" SUPPLY GRILLE - 6' BOOT
	FLEX DUCT
	HV SUPPLY AIR STACK
	1400 RETURN AIR GRILLE
	3000 RETURN AIR GRILLE
	FLOOR RETURN AIR GRILLE
	RETURN STACK ABOVE
	RETURN AIR STACK
	REDUCER
	SUPPLY DUCTWORK
	RETURN DUCTWORK
	LIMP TRAP by REVEREOMATIC
	EXHAUST FAN
	DRYER BOOSTER FAN PROVIDE ACCESS PANEL, as Req'd
DV	DIRECT VENT
LW	LOW WALL
HW	HIGH WALL
CLG	CEILING
	MOTORIZED ZONE DAMPER
	EXHAUST PIPE
	CONCENTRIC VENT KIT
	CONCENTRIC HRV by ERV VENT KIT
	SINGLE WALL BOX by REVEREOMATIC
	DOUBLE WALL BOX by REVEREOMATIC
	TRIPLE WALL BOX by REVEREOMATIC
	CONCENTRIC HRV VENT by REVEREOMATIC

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

Michael O'Rourke, BCIN# 19609
HVAC DESIGNS LTD.



2			
1	ISSUED FOR PERMIT	APRIL 2022	A
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Specializing In Residential Mechanical Design Services			
Client: GOLDPARK HOMES			
Project Name: PINE VALLEY PH2 VAUGHAN, ONTARIO 6002 - KINGSVIEW 5526 ST			
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Sheet Title	SECOND FLOOR HVAC LAYOUT		
Drawn By	AK	Checked By	MO
Scale	3/16"=1'-0"		
Date	APRIL 2012		Sheet No.
LO#	96139		3