

MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL

Housetype 40-5 Corner George

File # 3077A

Builder	Esquire
Address	
City	
Phone	

Principal Ventilation Capacity			
Master Bed	1	31.8 cfm	31.8
Other Bed	3	15.9 cfm	47.7
Total cfm			79.5

Combustion Appliances	
☒ a) Direct Vent (sealed combust) including fireplaces	
☐ b) Positive venting induced draft (exclude fireplace)	
☐ c) Natural Draft, B vent or induced draft fireplaces	
☐ d) Solid Fuel	
☐ e) No Combustion Appliances	

Total Ventilation Capacity			
Bsmt & Master	2	21.2 cfm	42.4
Other Bed	3	10.6 cfm	31.8
Bath & Kitchen	4	10.6 cfm	42.4
Other Rooms	5	10.6 cfm	53
Room Count cfm			169.6
Air Change TVC= HouseVol.X0.3/60			142.2

Heating System	
☒ Forced Air	
☐ Non Forced Air	
☐ Electric Space Heat	

Principal Exhaust Fan Capacity		
Make	Model	Location
Broan or Equivalent	684N	Bath
90cfm/2.5 Sones/ HVI listed		

Housetype	
☒ I - Type a or b appliances only, no solid fuel	
☐ II - Type I with solid fuel (including fireplace)	
☐ III - Type C appliance	
☐ IV - Type I or II with electric space heat	
☐ Other - Type I,II,or IV no forced air	

Supplemental Ventilation Capacity	
TVC room or air change (which larger)	170
Less Principal Exhaust Capacity	90
Required Supp.Vent Capacity	CFM 80

System Design Option	
☒ Exhaust Only/Forced air system	
☒ HRV Simplified Connection to Forced Air System	
☐ HRV with ducting to forced air system	
☐ HRV fully ducted/ not coupled with forced air sys.	
☐ Part 6 design CSA F326-M91	
☒ Part 9.9.32.3.1	

Supplemental Fans			
Location	cfm	Model	Sones
Ens	50	Broan 650	2.5
Pwd	50	Broan 650	2.5
all fans HVI listed			

Heat Recovery Ventilator	
Model	
Venmar Vanee 60H	
Cfm High	150 Cfm Low 36
Sensible effective @ 0 C	72 %
HRV is HVI listed	

Designer Certification	
I have reviewed and take responsibility for this design and am qualified as an "other designer" as required by the OBC 3.2.5 as it relates to residential HVAC design	
Alexis Dearie-Vonk	<i>Alexis Dearie-Vonk</i>
BCIN# 27098	HRAI# 3986

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Customer	Esquire
Housetype	40-5 Corner George
File #	3077A
Date	Dec-14
Township	Clarington

Total Structure Heat Loss	44348
Ventilation Loss	13554
TOTAL HEAT LOSS BTU	57902

Total Structure Heat Loss
Ventilation Loss

TOTAL HEAT LOSS BTU

9 Hurontario street
Orangeville Ont
L9W 1Y8
416-320-5870

Heat Gain ΔT	11	Bsm ΔT	22
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as it relates to residential HVAC design.

Customer	Esquire
Housetype	40-5 Corner George
File #	3077A
Date	Dec-14
Township	Clarington

[illegible]

People @240	1200	& kitchen	1504	& Laundry	1195	3999
Latent Multiplier (.)3	9054		Air Leakage	3347	X	11
Ventilation Gain					2619	1878
			TVC * 1.08 * 1.3 * HG^T		ALHGM	14262
						0.13

Ventilation

Total Heat Gain BTU

NEWRES HVAC DESIGN

9 Hurontario street
Orangeville Ont
L9W 1Y8
416-320-5870

Duct Calculation

I have reviewed and take responsibility for this design & am qualified as an "other designer" as required by the OBC 9.2.5 as it relates to residential HVAC design.

Customer
House type
File #
Date
Township

Esquire
40-5 Corner George
3077A
Dec-14
Clarington

BCIN# 27098 HRAI# 3986
Alexis Dearie-Vonk

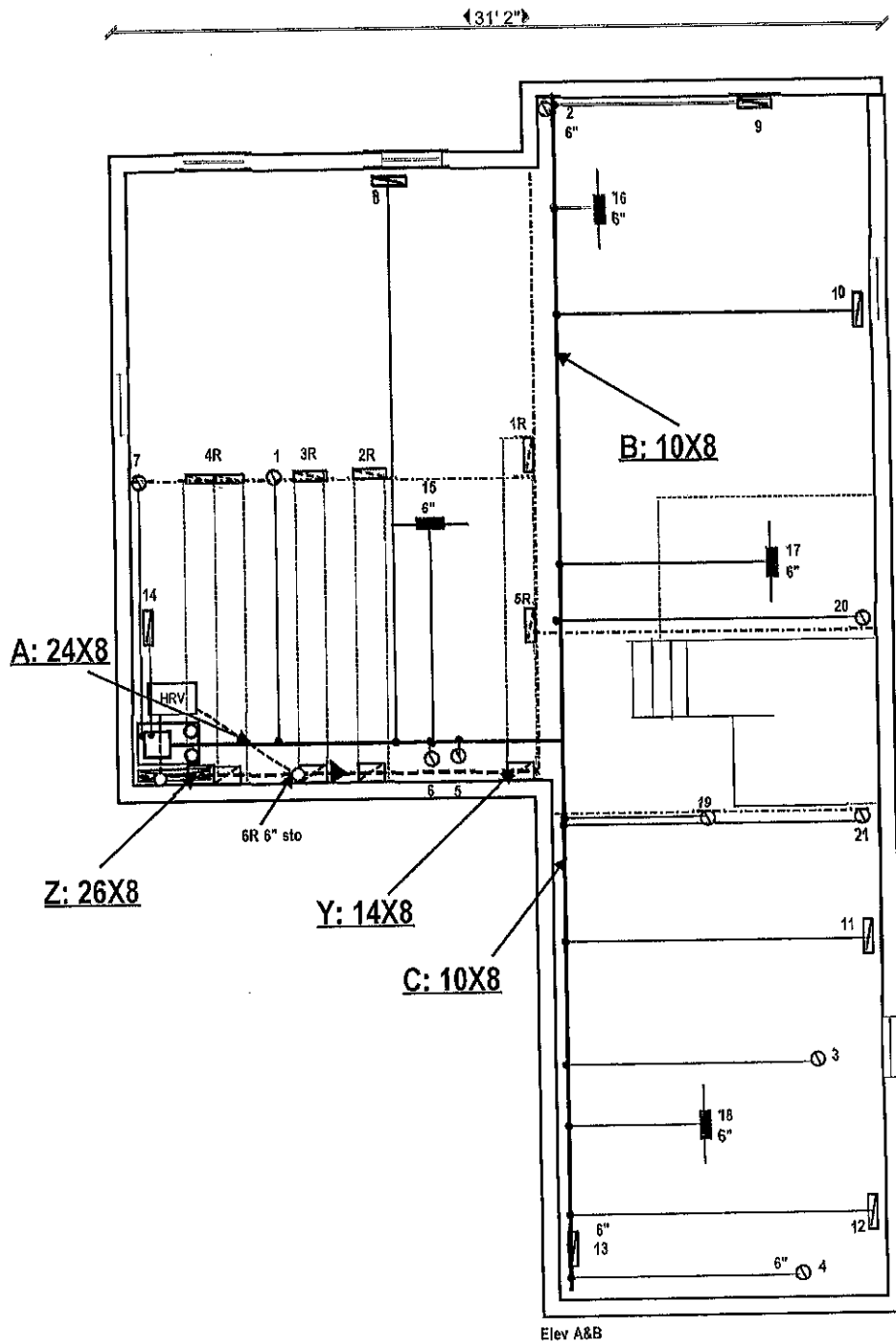
Trunk	C	13	12	18	3	11	21	19	9	B	2	16	10	17	A	6	15	8	1	D	E
Outlet #	4																				
Outlet Loc	Br2	Foy	Pwd	Bsm	Laun	Den	S.Ent	Hall	Kit	Kit	Mas	Bsm	Kit	Bsm	W/C	Bath	Br3	Fam	Ens	Br4	Din
BTU/RM	2542	3427	909	13044	636	2201	1083	992	3352	3352	2480	13044	3352	13044	624	908	4190	2250	2144	1507	2058
# Out/Rm	1	1	1	4	1	1	1	1	2	2	1	4	2	4	1	1	4	1	1	1	1
CFM/Outlet	52	70	19	67	13	45	22	20	94	94	51	67	34	67	13	19	86	67	46	31	42
Act&Eff Len	155	150	160	165	185	190	200	205	170	170	185	190	200	180	180	175	195	175	210	145	190
Adj. Press	0.08	0.08	0.08	0.08	0.07	0.07	0.07	0.06	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.07	0.06	0.09	0.10
Pipe Size	5	6	5	6	5	5	5	5	5	5	5	6	5	6	5	5	6	6	5	5	5
Tr. Fl. Rate								309							266				837		
Trunk Width								10							10				24		
Tr. Height								8							8				8		
Velocity								556							479				628		

Trunk	Y	5R	2R	Z	4R	6R	3R
Inlet #	1R	150	150	150	150	150	150
CFM	14X8	14X8	14X8	14X8	14X8	14X8	14X8
Inlet Size	240	185	205	205	170	160	160
Act&Eff Len	0.05	0.06	0.05	0.05	0.06	0.06	0.06
Adj. Press.							
Tr. Fl. Rate			450			910	
Tr. Width			14			26	
Tr. Height			8			8	
Velocity			579			630	

Equipment	Manufacturer	Carrier
Furnace	59SC060	
Output	58000	
AirFlow	910	
AC Size	2.5	

Supply Air Pres	0.15
S. Air Plenum Pres	0.14
Diffuser Loss	0.01
System Static	0.5

Return Air Pres	0.15
R. Air Plenum Pres	0.11
Diffuser Loss	0.04



2490 SF

(Or Equivalent Furnace)

All runs 5" unless otherwise specified

UNIT DATA			
Make	Carrier	Model	59SC060
Input	60000 BTU	Output	58000 BTU
Cooling	2.5 Tons	Fan	910 Cfm
No. of Runs	S/A	R/A	
2nd Floor	9	3	
1st Floor	8	2	
Basement	4	1	

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Alexis Dearie-Vonk
 Alexis Dearie-Vonk 27098 3966
 BCIN HRAI

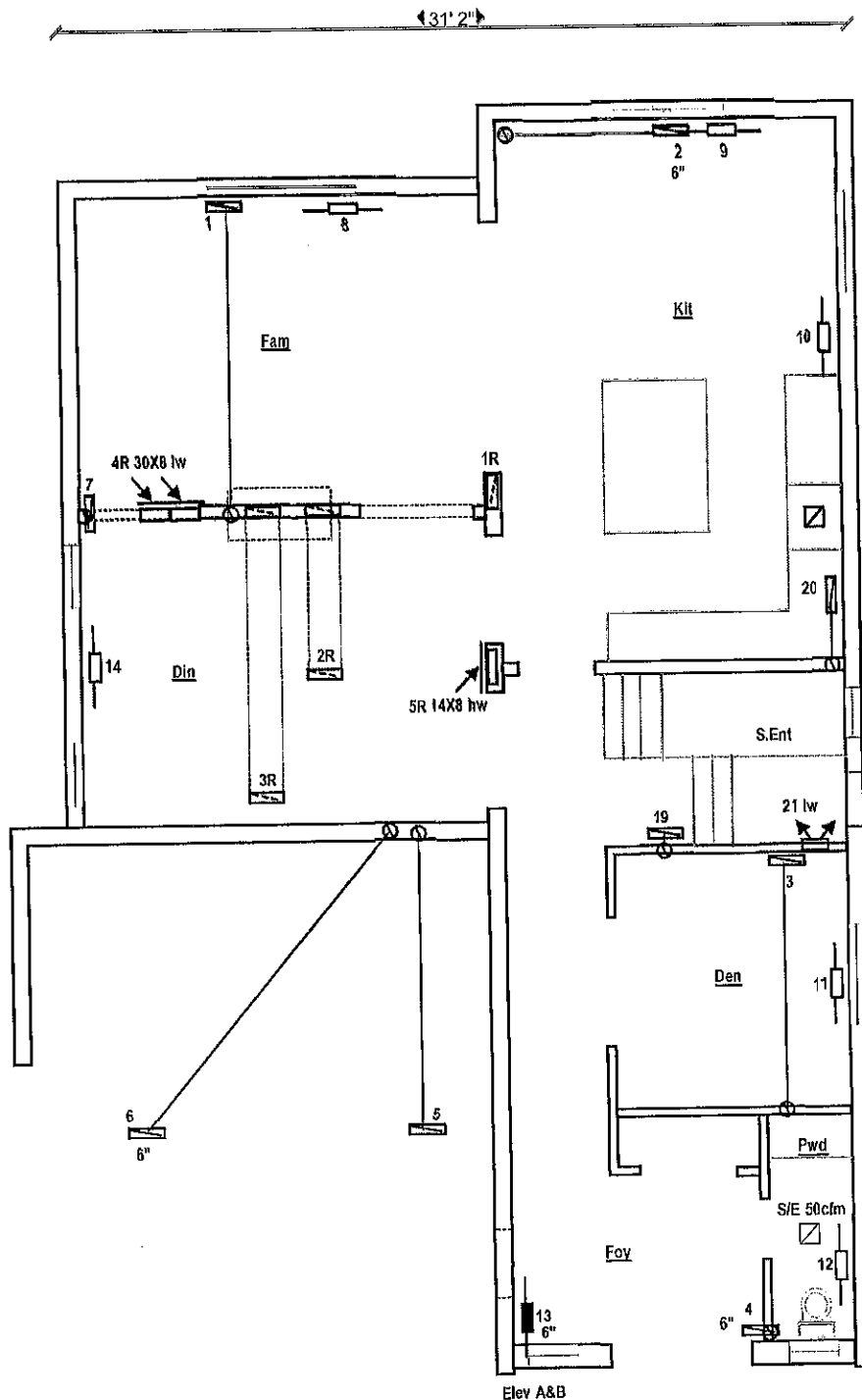
J Package

Cell.w Attic	R50	Heated Slab	R10
Cell.w/o Attic	R31	Windows	R3.13
Exp. Floor	R31	Skyllights	U2.8
Walls	R22	Furn Eff	94%
B.G. Slab	R10	HRV Eff	72%

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HRV: Venmar Vanee 60H

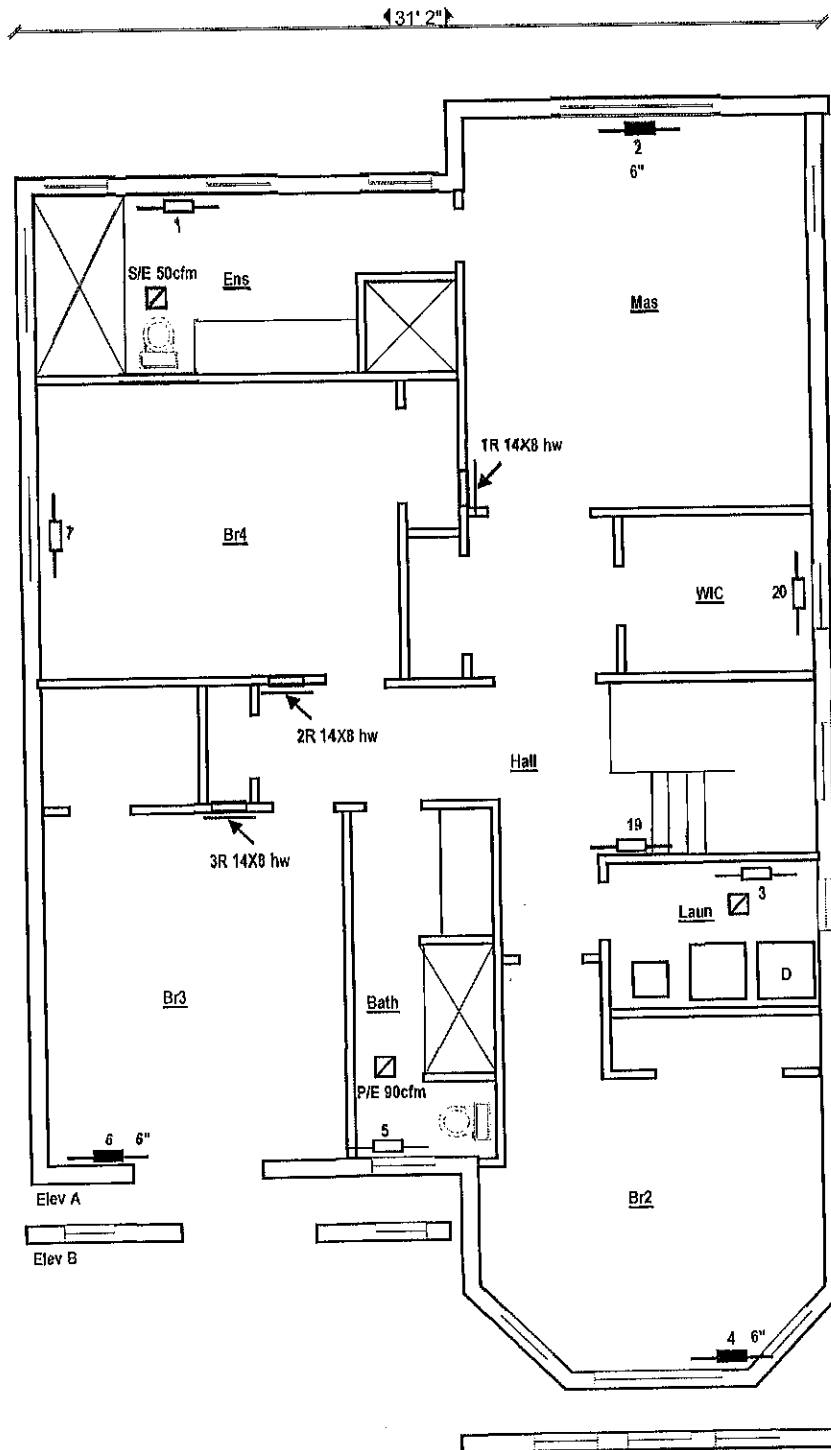
Type	40-5 George Corner	NewRes HVAC Design 9 Hurontario st Orangeville On L9W 1Y8 Phone (416) 320-5870
Floor	Basement	
Scale	3/16"=1'0"	
Date	Aug-13	
Revised	Dec-14	Client Esquire
		LO# 3077A



All runs 5" unless otherwise specified

Northglen-Clarington

UNIT DATA		I have reviewed and take responsibility for this design and am qualified as an "other designer" as described by the OBC Div.C, Part 3, ss 3.2.5 in relation to HVAC design. <i>Alexis Dearie-Vonk</i> Alexis Dearie-Vonk 27098 3986 BCIN HRAI		Type 40-5 George Corner		NewRes HVAC Design			
Make	Model			Floor	First	9 Hurontario st Orangeville On L9W 1Y8 Phone (416) 320-5870			
Input	Output			Scale	3/16"=1'0"				
BTU	BTU			Date	Aug-13			Client	Esquire
Cooling	Fan			Cfm	Revised		Dec-14	LO#	3077A
Tons									
No. of Runs	S/A			R/A					
2nd Floor									
1st Floor									
Basement									



All runs 5" unless otherwise specified

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Make		UNIT DATA Model		I have reviewed and take responsibility for this design and am qualified as an "other designer" as described by the OBC Div.C, Part 3, ss 3.2.5 in relation to HVAC design. <u>Alexis-Vonk</u> Alexis Dearie-Vonk 27098 3986 BCIN HRAI	Type	40-5 George Corner	NewRes HVAC Design 9 Hurontario st Orangeville On L9W 1Y8 Phone (416) 320-5870	
Input		Output			Floor	Second		
Cooling		Fan			Scale	3/16"=1'0"		
Tons		Cfm			Date	Aug-13	Client	Esquire
No. of Runs		S/A			R/A		LO#	3077A
2nd Floor								
1st Floor								
Basement								