

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		
INNISFIL				
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 ☐ 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

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.

SITE NAME: ALCONA			WOB		DATE: Jun-17		WINTER NATURAL AIR CHANGE RATE 0.391		HEAT LOSS AT °F. 83		CSA-F280-12
BUILDER: BAYVIEW WELLINGTON			TYPE: 45-1		LO# 74594		SUMMER NATURAL AIR CHANGE RATE 0.102		HEAT GAIN AT °F. 12		SB-12 PACKAGE A1
ROOM USE	EXP. WALL CLG. HT.	MBR	ENS	BED-2	BED-3	BED-4	ENS-3/4	HALL	ENS-2		
FACTORS											
GRS.WALL AREA	LOSS GAIN	470	261	304	124	117	219	72	108		
GLAZING	LOSS GAIN		LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN		
NORTH		0	0	0	0	17	395	269	0	0	0
EAST		34	792	1407	9	210	372	0	0	0	0
SOUTH		23.3	24.7	0	0	21	489	519	0	0	0
WEST		23.3	41.4	0	0	0	0	0	17	396	420
SKYLT.		40.8	101.3	0	0	0	0	0	0	0	0
DOORS		27.6	4.1	0	0	0	0	0	0	0	0
NET EXPOSED WALL		4.9	0.7	436	2130	312	231	1129	165	0	0
NET EXPOSED BEAM WALL ABOVE GR		3.9	0.6	0	0	0	0	0	0	0	0
EXPOSED CLG		1.4	0.6	429	603	248	204	287	118	55	269
NO ATTIC EXPOSED CLG		3.0	1.2	30	90	37	0	0	0	99	484
EXPOSED FLOOR		2.8	0.4	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS										136	191
SLAB ON GRADE HEAT LOSS										79	167
SUBTOTAL HT LOSS										119	67
SUB TOTAL HT GAIN										332	49
LEVEL FACTOR / MULTIPLIER										0	0
AIR CHANGE HEAT LOSS										0	0
AIR CHANGE HEAT GAIN										0	0
DUCT LOSS										0	0
DUCT GAIN										0	0
HEAT GAIN PEOPLE										0	0
HEAT GAIN APPLIANCES/LIGHTS										0	0
TOTAL HT LOSS BTU/H										1107	1697
TOTAL HT GAIN x 1.3 BTU/H										748	857

ROOM USE	EXP. WALL CLG. HT.	LVIDN	KTIFM	LAUN	PWD	FOY	MUD	WOB	BAS
GRS.WALL AREA		570	820	72	144	242	192	513	774
FACTORS		LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN
GLAZING		25	0	0	0	0	0	0	0
NORTH	23.3 15.8	592	395	0	0	12	0	0	0
EAST	23.3 41.4	0	0	0	0	0	0	0	0
SOUTH	23.3 24.7	0	0	0	0	0	0	0	0
WEST	23.3 41.4	38	885	0	0	0	0	0	0
SKYLT.	40.8 101.3	0	0	0	0	0	0	0	0
DOORS	27.6 4.1	507	2477	0	0	45	1244	0	20
NET EXPOSED WALL	4.9 0.7	507	2477	64	655	185	904	428	2081
NET EXPOSED BEAM WALL ABOVE GR	3.9 0.6	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	1.4 0.6	20	60	136	191	56	169	0	0
EXPOSED FLOOR	3.0 1.2	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	2.8 0.4	0	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS		4005	6516	1070	888	2596	1393	870	2876
LEVEL FACTOR / MULTIPLIER		0.30	0.46	0.20	0.30	0.30	0.30	0.30	0.30
AIR CHANGE HEAT LOSS		1826	2971	314	406	1183	635	4941	5024
AIR CHANGE HEAT GAIN		0	0	0	0	0	0	0	0
DUCT LOSS		0	0	0	0	0	0	0	0
DUCT GAIN		0	0	0	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS		739	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H		5830	9489	1522	1282	3779	2028	5610	16723
TOTAL HT GAIN x 1.3 BTU/H		4233	8263	1635	477	797	284	2145	635

TOTAL HEAT GAIN BTU/H: 36941

TONS: 3.08

LOSS DUE TO VENTILATION LOAD BTU/H: 3122

STRUCTURAL HEAT LOSS: 6566

TOTAL COMBINED HEAT LOSS BTU/H: 89389

SITE NAME: ALCONA									
BUILDER: BAYVIEW WELLINGTON									
HEATING CFM 1105		COOLING CFM 1105		WOB TYPE: 45-1		DATE: Jun-17		GFA: 2941 LO# 74594	
TOTAL HEAT LOSS 66,266		TOTAL HEAT GAIN 36,483		furnace pressure 0.6		ALENNOX 90		AFUE = 96 %	
AIR FLOW RATE CFM 16.68		AIR FLOW RATE CFM 30.29		a/c coil pressure 0.2		EL296UH090XE48C		INPUT (BTU/H) = 88,000	
				available pressure for s/a & r/a 0.35		FAN SPEED LOW 0		OUTPUT (BTU/H) = 85,000	
RUN COUNT		4th	3rd	2nd	1st	plenum pressure s/a 0.17		DESIGN CFM = 1105	
S/A		0	0	12	8	max s/a dif press. loss 0.02		MEDIUM HIGH 1255	
R/A		0	0	4	2	min adjusted pressure s/a 0.16		CFM @ 8" S.P.	
								HIGH 1525	
								TEMPERATURE RISE 71	

TYPE: 45-1
SITE NAME: ALCONA

LO # 74594
WOB

RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY

COMBUSTION APPLIANCES		9.32.3.1(1)
a)	☒ Direct vent (sealed combustion) only	
b)	☐ Positive venting induced draft (except fireplaces)	
c)	☐ Natural draft, B-vent or induced draft gas fireplace	
d)	☐ Solid Fuel (including fireplaces)	
e)	☐ No Combustion Appliances	

HEATING SYSTEM	
☒ Forced Air	☐ Non Forced Air
☐ Electric Space Heat	

HOUSE TYPE		9.32.1(2)
☒	I	Type a) or b) appliance only, no solid fuel
☐	II	Type I except with solid fuel (including fireplaces)
☐	III	Any Type c) appliance
☐	IV	Type I, or II with electric space heat
☐	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
☐	1	Exhaust only/Forced Air System
☐	2	HRV with Ducting/Forced Air System
☒	3	HRV Simplified/connected to forced air system
☐	4	HRV with Ducting/non forced air system
☐	Part 6 Design	

TOTAL VENTILATION CAPACITY		9.32.3.3(1)
Basement + Master Bedroom	2 @ 21.2 cfm	42.4 cfm
Other Bedrooms	3 @ 10.6 cfm	31.8 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 cfm
Other Rooms	4 @ 10.6 cfm	42.4 cfm
Table 9.32.3.A.	TOTAL	169.6 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		79.5 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	169.6	cfm
Less Principal Ventil. Capacity	139	cfm
Required Supplemental Capacity	30.6	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 60H-V+	Location: BSMT
139.0 cfm	3.0 sones
☒ HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
139.0 CFM	X 83 F	X 1.08	X 0.25

SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	☒	0.3
ENS-3/4	QTXEN050C	50	☒	0.3
ENS-2	QTXEN050C	50	☒	0.3
PWD	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 60H-V+		
139	cfm high	50 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: BAYVIEW WELLINGTON	
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:	
HRAI #	001820
Date:	June-17



375 Finley Ave. Suite 202 Ajax, ON L1S 2E2
Tel: 905.619.2300 Fax: 905.619.2375

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

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 45-1	WOB	BUILDER: BAYVIEW WELLINGTON
SFQT: 2941	LO# 74594	SITE: ALCONA

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-11	OUTDOOR DESIGN TEMP.	84
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	WEST	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):	40189.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.20	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 56.0 ft	WIDTH: 37.0 ft	EXPOSED PERIMETER:	129.0 ft
WOB INSULATION CONFIGURATION	SCB_9	WOB EXPOSED PERIMETER	57.0 ft

2012 OBC - COMPLIANCE PACKAGE

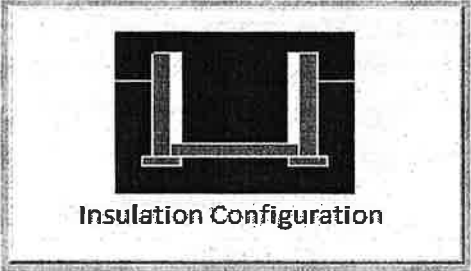
Component	Compliance Package	
	A1	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	60	59.22
Ceiling Without Attic Space Minimum RSI (R)-Value	31	27.65
Exposed Floor Minimum RSI (R)-Value	31	29.8
Walls Above Grade Minimum RSI (R)-Value	22	17.03
Basement Walls Minimum RSI (R)-Value	20 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

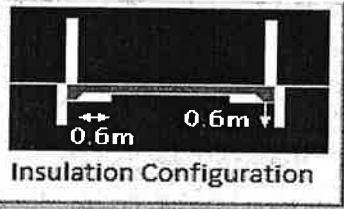
Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Barrie	
Site Description		
Soil Conductivity:	Normal conductivity: dry dand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	6.1	 Insulation Configuration
Floor Width (m):	11.3	
Exposed Perimeter (m):	39.3	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.59	
Window Area (m²):	0.3	
Door Area (m²):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		843

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Barrie	
Site Description		
Soil Conductivity:	Normal conductivity: dry dand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Length (m):	3.0	 Insulation Configuration
Width (m):	11.3	
Exposed Perimeter (m):	17.4	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Results		
Heating Load (Watts):		255

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Barrie			
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):	8.53			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m³):	1138.0			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1517.0 cm²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	65.6	65.6		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):		0.391		
Cooling Air Leakage Rate (ACH/H):		0.102		

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Michael O'Rourke
Michael O'Rourke, BCLN# 19669
INAC BUSINESS LTD.



COLD CELLAR

WOB **PACKAGE A1**

☒	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER		REVISIONS
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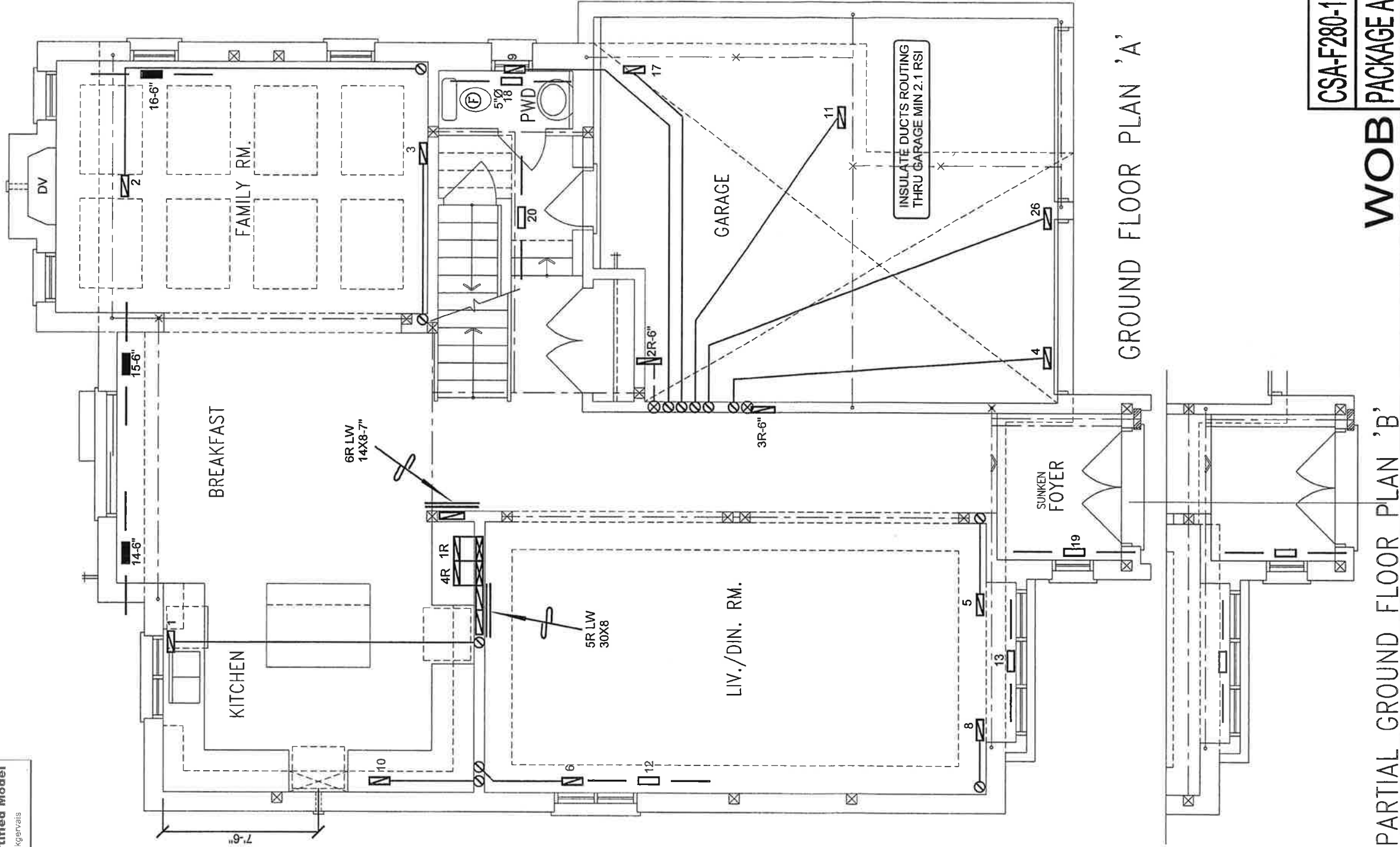
Project Name
ALCONA
INNISFIL, ONTARIO

Specializing in Residential Mechanical Design Services
web: www.11valuedesigns.ca

45-1 WOB 2941 sqft

LO#	74594
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Town of Innisfil Certified Model
03/01/2018 8:45:23 AM kgervais



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CSA-F280-12
WOB
PACKAGE A1

PARTIAL GROUND FLOOR PLAN 'B'

HVAC LEGEND				REVISIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	No.	Date
	SUPPLY AIR GRILLE		RETURN AIR STACK ABOVE	1.	
	SUPPLY AIR GRILLE 6" BOOT		RETURN AIR STACK 2nd FLOOR		
	SUPPLY AIR BOOT ABOVE		REDUCER		

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Client		Sheet Title	
BAYVIEW WELLINGTON		FIRST FLOOR HEATING LAYOUT	
Project Name		Date	
ALCONA		JUNE/2017	
INNISFIL, ONTARIO		Scale	
		3/16" = 1'-0"	
		BCIN# 19669	
45-1 WOB		LO#	
		74594	

