



PER:  ADORRA ESTATES INC
CHIEF BUILDING OFFICIAL

BUILDER: GREENPARK HOMES

MHP 23038

TYPE: LLA 1

DATE: Jul-23

GFA: 2925

LO# 101813

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 51,966 TOTAL HEAT GAIN 34,712
AIR FLOW RATE CFM 21.76 AIR FLOW RATE CFM 32.58

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

plenum pressure s/a 0.18
max s/a dif press. loss 0.02
min adjusted pressure s/a 0.16

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

#GOODMAN
GMEC960603BNA 60
FAN SPEED
LOW
MEDLOW
MEDIUM 928
MEDIUM HIGH 1017
HIGH 1131

AFUE = 96 %
INPUT (BTU/H) = 60,000
OUTPUT (BTU/H) = **57,600**

DESIGN CFM = **1131**
CFM @ .6" E.S.P.

TEMPERATURE RISE 47 °F

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	MBR	ENS	WIC	BED-2	BED-3	BED-4	S-ENS	FLEX	BED-3	MBR	ENS-4	BED-4	DN/LV	KT/BF	KT/BF	FAM	LAUN	FAM	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.45	1.16	0.49	1.22	1.70	1.18	0.82	2.96	1.70	1.45	0.55	1.18	1.68	2.05	2.05	1.66	0.64	1.66	4.24	1.62	3.53	3.53	3.53	3.53
CFM PER RUN HEAT	32	25	11	27	37	26	18	64	37	32	12	26	36	45	45	36	14	36	92	35	77	77	77	77
RM GAIN MBH.	1.96	0.91	0.12	1.91	1.94	1.68	0.31	2.77	1.94	1.96	0.12	1.68	1.29	2.44	2.44	1.73	1.27	1.73	2.15	0.23	0.38	0.38	0.38	0.38
CFM PER RUN COOLING	64	30	4	62	63	55	10	90	63	64	4	55	42	79	79	56	41	56	70	7	13	13	13	13
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.17	0.17	0.17
ACTUAL DUCT LGH.	40	36	33	30	35	30	26	35	37	36	32	31	26	28	36	27	22	31	22	23	37	34	24	17
EQUIVALENT LENGTH	170	120	130	140	110	140	160	160	120	150	160	140	130	130	140	150	130	100	90	120	150	160	90	120
TOTAL EFFECTIVE LENGTH	210	156	163	170	145	170	186	195	157	186	192	171	156	158	176	177	152	131	112	143	187	194	114	137
ADJUSTED PRESSURE	0.08	0.11	0.11	0.1	0.12	0.1	0.09	0.08	0.11	0.09	0.09	0.1	0.11	0.11	0.1	0.1	0.11	0.13	0.14	0.12	0.09	0.09	0.15	0.13
ROUND DUCT SIZE	5	4	4	6	5	5	4	6	5	5	4	5	4	5	5	5	4	5	6	4	5	5	5	5
HEATING VELOCITY (ft/min)	235	287	126	138	272	191	207	326	272	235	138	191	413	330	330	264	161	264	469	402	565	565	565	565
COOLING VELOCITY (ft/min)	470	344	46	316	463	404	115	459	463	470	46	404	482	580	580	411	470	411	357	80	95	95	95	95
OUTLET GRILL SIZE	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10
TRUNK	B	A	C	C	E	C	E	D	E	A	B	E	B	A	A	A	C	B	D	C	A	A	B	E

RUN #	25	26	27
ROOM NAME	BAS	ENS	DN/LV
RM LOSS MBH.	3.53	1.16	1.68
CFM PER RUN HEAT	77	25	36
RM GAIN MBH.	0.38	0.91	1.29
CFM PER RUN COOLING	13	30	42
ADJUSTED PRESSURE	0.17	0.17	0.17
ACTUAL DUCT LGH.	18	41	20
EQUIVALENT LENGTH	100	160	130
TOTAL EFFECTIVE LENGTH	118	201	150
ADJUSTED PRESSURE	0.15	0.09	0.11
ROUND DUCT SIZE	5	4	4
HEATING VELOCITY (ft/min)	565	287	413
COOLING VELOCITY (ft/min)	95	344	482
OUTLET GRILL SIZE	3X10	3X10	3X10
TRUNK	D	B	E

SUPPLY AIR TRUNK SIZE										RETURN 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	337	0.09	9.1	10	x	8	607			TRUNK G	0	0.00	0	0	x	8	0		
TRUNK B	555	0.08	11.2	14	x	8	714			TRUNK H	0	0.00	0	0	x	8	0		
TRUNK C	668	0.08	12.1	18	x	8	668			TRUNK I	0	0.00	0	0	x	8	0		
TRUNK D	233	0.08	8.1	8	x	8	524			TRUNK J	0	0.00	0	0	x	8	0		
TRUNK E	464	0.08	10.5	14	x	8	597			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 #	1	2	3	4	5	6	7	BR											
AIR VOLUME	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	38	31	39	31	31	31	16	1	1	1	1	1	1	1	1	1	1	14	14
EQUIVALENT LENGTH	145	175	140	135	135	150	215	0	0	0	0	0	0	0	0	0	0	220	220
TOTAL EFFECTIVE LH	183	206	179	166	166	181	231	1	1	1	1	1	1	1	1	1	1	234	234
ADJUSTED PRESSURE	0.08	0.07	0.08	0.09	0.09	0.08	0.06	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.06	0.06
ROUND DUCT SIZE	6	5.8	5.6	5.9	5.8	9.6	6	0	0	0	0	0	0	0	0	0	0	8	8
INLET GRILL SIZE	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0	0	0	8	8
	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	14	30	14	0	0	0	0	0	0	0	0	0	0	24	24



Dec 06 2023

PER:

CHIEF BUILDING OFFICIAL

VILLA 11

ZADORRA ESTATES INC

MHP 23038

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	79.5 cfm
Required Supplemental Capacity	90.1 cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE V150H	Location: BSMT
79.5 cfm	☒ HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
79.5 CFM	74 F	1.08	0.25

SUPPLEMENTAL FANS	BY INSTALLING CONTRACTOR			
Location	Model	cfm	HVI	Sones
ENS	BY INSTALLING CONTRACTOR	50	☒	3.5
S-ENS	BY INSTALLING CONTRACTOR	50	☒	3.5
ENS-4	BY INSTALLING CONTRACTOR	50	☒	3.5

HEAT RECOVERY VENTILATOR	9.32.3.11.
Model: VANEE V150H	
150 cfm high	35 cfm low
75 % Sensible Efficiency	☒ HVI Approved
@ 32 deg F (0 deg C)	

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

BUILDER:	GREENPARK 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:	July-23



MHP 23038

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																													
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																													
LO#: 101813		Model: VILLA 11		Builder: GREENPARK HOMES			Date: 2023-07-17																																																						
Volume Calculation					Air Change & Delta T Data																																																								
House Volume					<table border="1" style="width: 100%;"><tr><td>WINTER NATURAL AIR CHANGE RATE</td><td>0.342</td></tr><tr><td>SUMMER NATURAL AIR CHANGE RATE</td><td>0.094</td></tr></table>					WINTER NATURAL AIR CHANGE RATE	0.342	SUMMER NATURAL AIR CHANGE RATE	0.094																																																
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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 311.97 x 41 °C x 1.2 = 5280 W = 18015 Btu/h					$HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ = 0.094 x 311.97 x 6 °C x 1.2 = 215 W = 734 Btu/h																																																								
5.2.3.2 Heat Loss due to Mechanical Ventilation					6.2.7 Sensible heat Gain due to Ventilation																																																								
$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 80 CFM x 74 °F x 1.08 x 0.25 = 1593 Btu/h					$HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 80 CFM x 11 °F x 1.08 x 0.25 = 236 Btu/h																																																								
5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)																																																													
$HL_{airr} = Level\ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agcleve} + HL_{bgcleve})\}$																																																													
<table border="1" style="width: 100%;"><thead><tr><th>Level</th><th>Level Factor (LF)</th><th>HL_{airve} Air Leakage + Ventilation Heat Loss (Btu/h)</th><th>Level Conductive Heat Loss: (HL_{cleve})</th><th>Air Leakage Heat Loss Multiplier (LF x HL_{airbv} / HL_{level})</th></tr></thead><tbody><tr><td>1</td><td>0.5</td><td rowspan="5">18,015</td><td>8,642</td><td>1.042</td></tr><tr><td>2</td><td>0.3</td><td>11,873</td><td>0.455</td></tr><tr><td>3</td><td>0.2</td><td>13,052</td><td>0.276</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>										Level	Level Factor (LF)	HL _{airve} Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{cleve})	Air Leakage Heat Loss Multiplier (LF x HL _{airbv} / HL _{level})	1	0.5	18,015	8,642	1.042	2	0.3	11,873	0.455	3	0.2	13,052	0.276	4	0	0	0.000	5	0	0	0.000																										
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4	0		0	0.000																																																									
5	0		0	0.000																																																									
*HL_{airbv} = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HL_{airve} = 0																																																													
								Michael O'Rourke BCIN# 19669 																																																					



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HEAT LOSS AND GAIN SUMMARY SHEET

MHP 23038

MODEL: VILLA 11

SFQT: 2925

LO# 101813

BUILDER: GREENPARK HOMES

SITE: ZADORRA ESTATES INC

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-2	OUTDOOR DESIGN TEMP.	86
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):	39662.1	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.50	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	5.5 ft
LENGTH: 51.0 ft	WIDTH: 35.0 ft	EXPOSED PERIMETER:	172.0 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	96%	-
HRV/ERV Minimum Efficiency	75%	-
Domestic Hot Water Heater Minimum EF	0.8	-

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

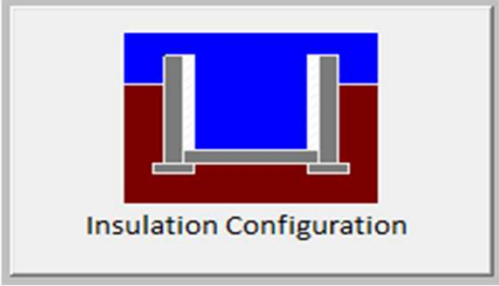


HVAC Designs Ltd.
375 Finley Ave, Suite 202
Ajax ON, L1S 2E2
905-619-2300

MHP 23038

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Oshawa	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	15.5	 Insulation Configuration
Floor Width (m):	10.7	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.6	
Depth Below Grade (m):	1.68	
Window Area (m ²):	0.8	
Door Area (m ²):	2.0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1693 [✓]

TYPE: VILLA 11
LO# 101813

Michael O'Rourke BCIN #19669



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

MHP 23038

Air Infiltration Residential Load Calculator

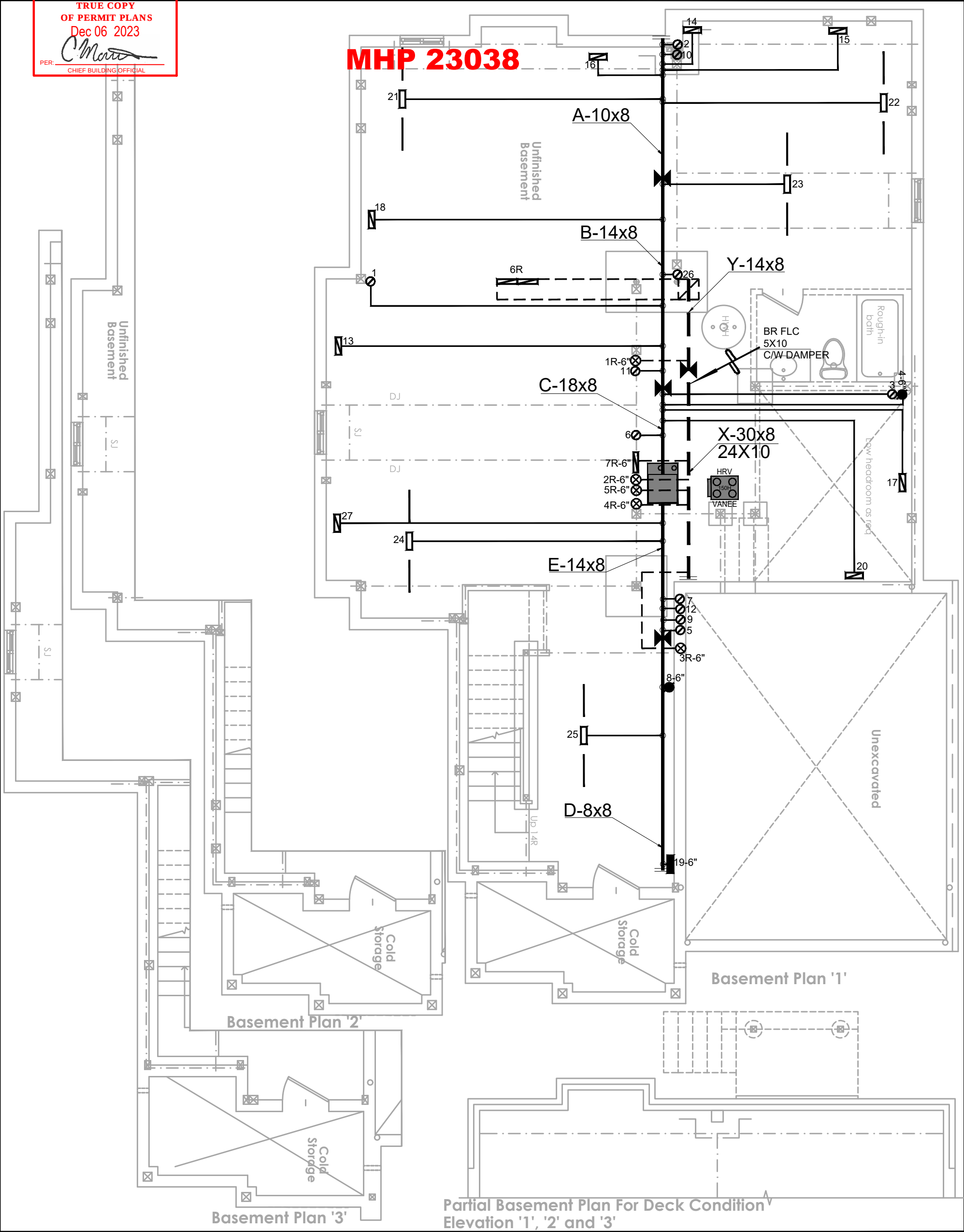
Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Oshawa			
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):	7.68			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1123.1			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1497.1 cm ²		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	37.5	37.5		
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):	0.094 ✓			

TYPE: VILLA 11

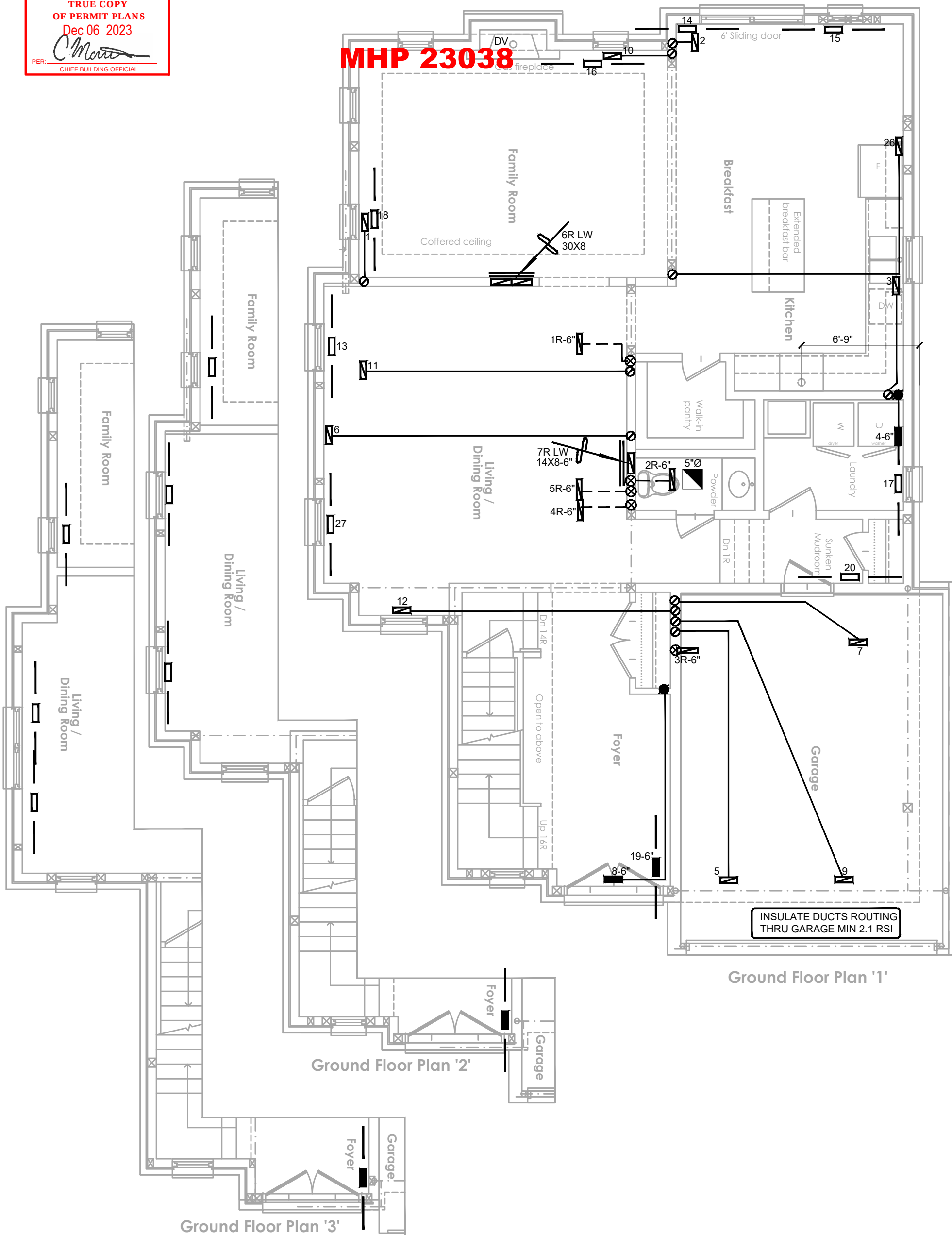
LO# 101813

Michael O'Rourke BCIN# 19669



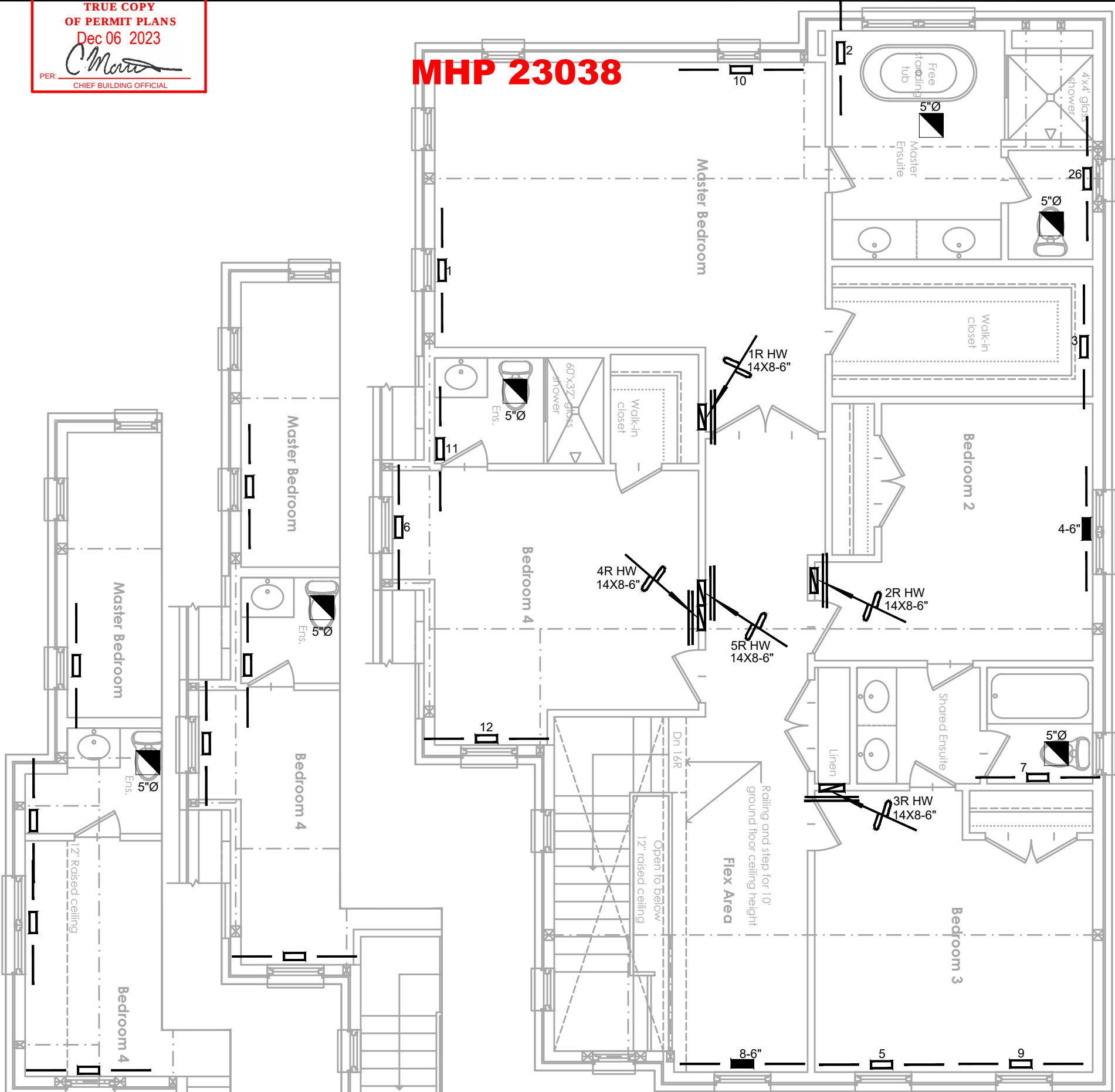
HVAC LEGEND								3.				
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.				
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.				
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date		
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS				
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Client		HVACDESIGNS LTD. 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.				HEAT LOSS 53559 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS		Sheet Title		
GREENPARK HOMES						MAKE	GOODMAN	3RD FLOOR			BASEMENT HEATING LAYOUT	
Project Name						MODEL	GMEC960603BNA	2ND FLOOR	13	5		4
ZADORRA						INPUT	60.0 MBTU/H	1ST FLOOR	9	2		2
OSHAWA, ONTARIO						OUTPUT	57.6 MBTU/H	BASEMENT	5	1	0	Date
		COOLING	3.0 TONS	ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A				Scale	3/16" = 1'-0"			
VILLA 11		FAN SPEED	1131 cfm @ 0.6" w.c.					BCIN# 19669				
2925 sqft								LO#	101813			

MHP 23038

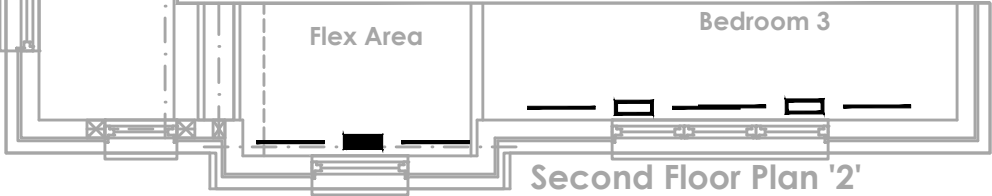


HVAC LEGEND							3.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		2.		
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		1.		
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		No.	Description	Date
							REVISIONS		
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Client GREENPARK HOMES							PACKAGE A1		
Project Name ZADORRA OSHAWA, ONTARIO							Sheet Title FIRST FLOOR HEATING LAYOUT		
VILLA 11							Date	JULY/2023	
2925 sqft							Scale	3/16" = 1'-0"	
							BCIN# 19669		
							LO#	101813	

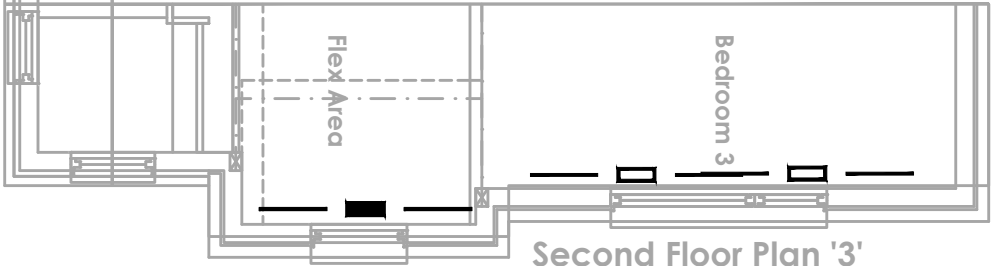
MHP 23038



Second Floor Plan '1'



Second Floor Plan '2'



Second Floor Plan '3'

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	SUPPLY AIR GRILLE 6" BOOT		SUPPLY AIR STACK FROM 2nd FLOOR		30"x8" RETURN AIR GRILLE		RETURN AIR STACK 2nd FLOOR	No.	Description	Date
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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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 # 19669
HVAC Designs Ltd.

PACKAGE A1

Client
GREENPARK HOMES

Project Name
**ZADORRA
OSHAWA, ONTARIO**

VILLA 11

HVACDESIGNS LTD.
375 Finley Ave. Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
Email: info@hvacdsgns.ca
Web: www.hvacdsgns.ca
Specializing in Residential Mechanical Design Services

Installation to comply with the latest Ontario Building Code. All supply branch outlets shall be equipped with a manual balancing damper. Ductwork which passes through the garage or unheated spaces shall be adequately insulated and be gas-proofed.

Sheet Title
**SECOND FLOOR
HEATING
LAYOUT**

Date
JULY/2023

Scale
3/16" = 1'-0"

BCIN# 19669

LO# **101813**