

MHP 23031

DATE: Jul-23

WINTER NATURAL AIR CHANGE RATE 0.312

HEAT LOSS ΔT °F. 74

CSA-F280-12

LO# 101743

SUMMER NATURAL AIR CHANGE RATE 0.086

HEAT GAIN ΔT °F. 11

SB-12 PACKAGE A1

BUILDER: GREENPARK HOMES

TYPE: ROSE 10

GFA: 3542

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	BED-2	BED-3	BED-4	ENS-2	ENS-3	ENS-4		
			36	31	37	39	28	12	6	0		
			9	9	9	9	9	9	9	9		
FACTORS												
GRS.WALL AREA	LOSS	GAIN	324	279	333	351	252	108	54	0		
GLAZING	LOSS	GAIN										
NORTH	20.8	15.5	0	0	0	0	0	0	0	0	0	0
EAST	20.8	41.0	40	831	1642	0	0	0	0	0	0	0
SOUTH	20.8	24.4	0	0	0	35	727	854	41	852	1000	0
WEST	20.8	41.0	0	0	0	0	0	0	52	1080	2134	0
SKYLT.	36.4	100.7	0	0	0	0	0	0	0	0	0	0
DOORS	19.6	2.9	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.4	0.6	284	1237	183	203	884	131	272	1185	176	258
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.3	0.6	447	560	249	173	217	96	392	491	218	360
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	26	70	31	0	0	0	0
EXPOSED FLOOR	2.5	0.4	0	0	0	196	488	72	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			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
SUBTOTAL HT LOSS			2629	3238	2944	3507	2324	703	514	60		
SUB TOTAL HT GAIN			2074	2172	2315	3502	2425	305	589	27		
LEVEL FACTOR / MULTIPLIER	0.20	0.25	0.20	0.25	0.20	0.25	0.20	0.25	0.20	0.25		
AIR CHANGE HEAT LOSS			666	820	746	889	589	178	130	15		
AIR CHANGE HEAT GAIN			80	84	90	136	94	12	23	1		
DUCT LOSS			0	406	0	0	291	0	0	0		
DUCT GAIN			0	226	0	0	342	0	0	0		
HEAT GAIN PEOPLE	240	2	480	0	1	240	1	240	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			663	0	663	663	663	0	0	0		
TOTAL HT LOSS BTU/H			3294	4464	3689	4396	3204	882	644	75		
TOTAL HT GAIN x 1.3 BTU/H			4288	3226	4301	5903	4895	412	795	36		

ROOM USE	EXP. WALL	CLG. HT.	LIB	LV/DN	BF/KT	FAM	LAUN	FOY	MUD				BAS
			39	44	26	40	16	6	14				180
			10	10	10	10	10	10	10				9
FACTORS													
GRS.WALL AREA	LOSS	GAIN	390	440	260	400	160	60	140				1080
GLAZING	LOSS	GAIN											
NORTH	20.8	15.5	0	0	0	0	0	0	0	0	0	0	0
EAST	20.8	41.0	0	0	0	59	1226	2422	58	1205	2381	0	0
SOUTH	20.8	24.4	43	893	1049	0	0	0	14	291	342	17	353
WEST	20.8	41.0	52	1080	2134	0	0	0	0	0	0	0	0
SKYLT.	36.4	100.7	0	0	0	0	0	0	0	0	0	0	0
DOORS	19.6	2.9	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	4.4	0.6	295	1285	191	388	1691	251	187	815	121	325	1416
NET EXPOSED BSMT WALL ABOVE GR	3.5	0.5	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	0	0
NO ATTIC EXPOSED CLG	2.7	1.2	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.4	0	0	0	0	0	0	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS			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
SUBTOTAL HT LOSS			3259	2771	2331	2974	861	973	1061				8625
SUB TOTAL HT GAIN			3374	2385	2884	3005	252	979	256				791
LEVEL FACTOR / MULTIPLIER	0.30	0.43	0.30	0.43	0.30	0.43	0.30	0.43	0.30	0.43			0.50
AIR CHANGE HEAT LOSS			1385	1178	991	1264	366	413	451				10082
AIR CHANGE HEAT GAIN			131	92	112	116	10	38	10				31
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	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS			663	663	663	663	663	0	0				663
TOTAL HT LOSS BTU/H			4644	3949	3322	4239	1227	1386	1512				18707
TOTAL HT GAIN x 1.3 BTU/H			5418	4083	4757	4921	1202	1323	346				1931

TOTAL HEAT GAIN BTU/H:

48072

TONS: 4.01

LOSS DUE TO VENTILATION LOAD BTU/H: 1593

STRUCTURAL HEAT LOSS: 59635

TOTAL COMBINED HEAT LOSS BTU/H: 61228

MICHAEL O'ROURKE

MHP 23031

TYPE: ROSE 10
 SITE NAME: ZADORRA ESTATES INC

LO # 101743

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	6	@ 10.6 cfm	63.6	cfm
Other Rooms	5	@ 10.6 cfm	53.0	cfm
Table 9.32.3.A.	TOTAL		190.8	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	190.8	cfm
Less Principal Ventil. Capacity	79.5	cfm
Required Supplemental Capacity	111.3	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
ENS-2	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:

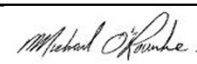
City:

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: 

HRAI # 001820

Date: July-23

MHP 23031

CSA F280-12 Residential Heat Loss and Heat Gain Calculations																																																																			
Formula Sheet (For Air Leakage / Ventilation Calculation)																																																																			
LO#: 101743		Model: ROSE 10		Builder: GREENPARK HOMES			Date: 2023-07-06																																																												
Volume Calculation					Air Change & Delta T Data																																																														
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>1682</td><td>9</td><td>15138</td></tr> <tr><td>First</td><td>1682</td><td>10</td><td>16820</td></tr> <tr><td>Second</td><td>1860</td><td>9</td><td>16740</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"></td><td>Total:</td><td>48,698.0 ft³</td></tr> <tr><td colspan="2"></td><td>Total:</td><td>1379.0 m³</td></tr> </tbody> </table>					Level	Floor Area (ft ²)	Floor Height (ft)	Volume (ft ³)	Bsmt	1682	9	15138	First	1682	10	16820	Second	1860	9	16740	Third	0	9	0	Fourth	0	9	0			Total:	48,698.0 ft ³			Total:	1379.0 m ³	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">WINTER NATURAL AIR CHANGE RATE</td> <td>0.312</td> </tr> <tr> <td colspan="2">SUMMER NATURAL AIR CHANGE RATE</td> <td>0.086</td> </tr> </table> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="5">Design Temperature Difference</th> </tr> <tr> <th></th> <th>T_{in} °C</th> <th>T_{out} °C</th> <th>ΔT °C</th> <th>ΔT °F</th> </tr> <tr> <td>Winter DTD_h</td> <td>22</td> <td>-19</td> <td>41</td> <td>74</td> </tr> <tr> <td>Summer DTD_c</td> <td>24</td> <td>30</td> <td>6</td> <td>11</td> </tr> </table>					WINTER NATURAL AIR CHANGE RATE		0.312	SUMMER NATURAL AIR CHANGE RATE		0.086	Design Temperature Difference						T _{in} °C	T _{out} °C	ΔT °C	ΔT °F	Winter DTD _h	22	-19	41	74	Summer DTD _c	24	30	6	11
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5.2.3.1 Heat Loss due to Air Leakage $HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ 0.312 x 383.05 x 41 °C x 1.2 = 5910 W = 20164 Btu/h					6.2.6 Sensible Gain due to Air Leakage $HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ = 0.086 x 383.05 x 6 °C x 1.2 = 241 W = 822 Btu/h																																																														
5.2.3.2 Heat Loss due to Mechanical 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					6.2.7 Sensible heat Gain due to Ventilation $HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ 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)																																																																			
$HL_{airr} = Level\ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$ <table border="1" style="width: 100%; border-collapse: collapse;"> <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_{clevel})</th> <th>Air Leakage Heat Loss Multiplier (LF x HL_{airbv} / HL_{clevel})</th> </tr> </thead> <tbody> <tr><td>1</td><td>0.5</td><td rowspan="5">20,164</td><td>8,625</td><td>1.169</td></tr> <tr><td>2</td><td>0.3</td><td>14,231</td><td>0.425</td></tr> <tr><td>3</td><td>0.2</td><td>15,919</td><td>0.253</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> *HL_{airbv} = Air leakage heat loss + ventilation heat loss *For a balanced or supply only ventilation system HL_{airve} = 0										Level	Level Factor (LF)	HL _{airve} Air Leakage + Ventilation Heat Loss (Btu/h)	Level Conductive Heat Loss: (HL _{clevel})	Air Leakage Heat Loss Multiplier (LF x HL _{airbv} / HL _{clevel})	1	0.5	20,164	8,625	1.169	2	0.3	14,231	0.425	3	0.2	15,919	0.253	4	0	0	0.000	5	0	0	0.000																																
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MHP 23031

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:** ROSE 10**SFQT:** 3542**LO#** 101743**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:	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 (ft ³):	48698.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft ²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 42.0 ft	WIDTH: 48.0 ft	EXPOSED PERIMETER:	180.0 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





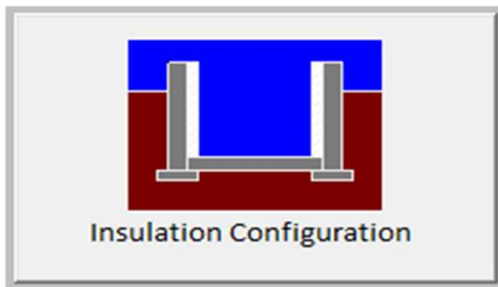
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MHP 23031

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

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):	12.8	 Insulation Configuration
Floor Width (m):	14.6	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	1.4	
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):		1759

TYPE: ROSE 10
LO# 101743

Michael O'Rourke BCIN #19669



MHP 23031

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:	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):	6.71			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m ³):	1379.0			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1838.2 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):	0.312			
Cooling Air Leakage Rate (ACH/H):	0.086			

TYPE: ROSE 10
LO# 101743

Michael O'Rourke BCIN# 19669

SUPPLEMENTAL EXHAUST FAN (MINIMUM 100 CFM) DISCHARGING DIRECTLY TO THE EXTERIOR WILL BE PROVIDED IN THE KITCHEN. EXHAUST DUCTS SERVING THE KITCHEN SHALL NOT BE SMALLER THAN RECOMMENDED BY THE MANUFACTURER OF THE FANS AND MUST AT LEAST MEET O.B.C. STATED MINIMUMS.



2			
1	ISSUED FOR PERMIT	JULY/23	KA
No.	Revision	Date	By

A1

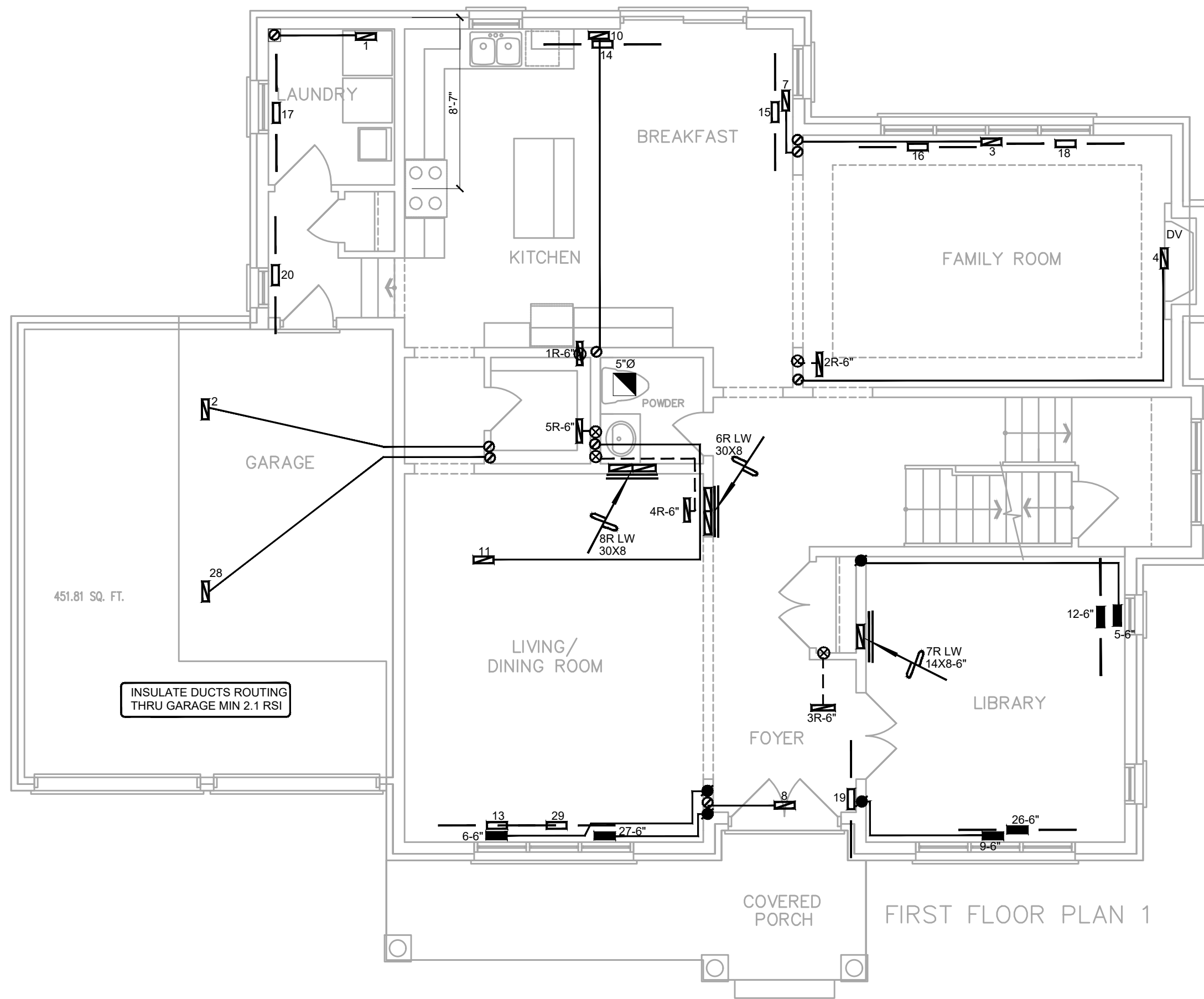
10.11.10	3
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HEAT LOSS 61228 BTU/H		OF RUNS				S/A	R/A	FANS
UNIT DATA		3RD FLOOR						
MAKE	GOODMAN		2ND FLOOR		13	5	5	
MODEL	GMCE960804CNA		1ST FLOOR		11	3	2	
INPUT	80.0 MBTU/H		BASEMENT		5	1	0	
OUTPUT	76.8 MBTU/H		ALL S/A DIFFUSERS 4" x10" UNLESS NOTED OTHERWISE					
COOLING	4.0 TONS		ON LAYOUT. ALL S/A RUNS 5'0"					
FAN SPEED	1504 cfm @ 0.6" w.c.		ON LAYOUT. UNLESS NOTED OTHERWISE					
			DOORS 1' min. FOR R/A					

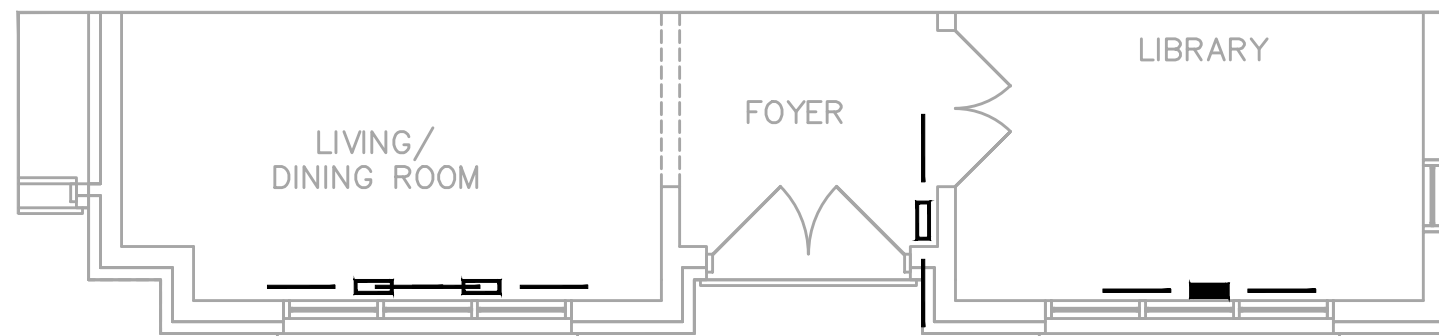
INSTALLATION TO COMPLY WITH THE LATEST
ONTARIO BUILDING CODE. ALL SUPPLY
BRANCH OUTLETS SHALL BE EQUIPPED WITH
MANUAL BALANCING DAMPER. DUCTWORK
WHICH PASSES THROUGH THE GARAGE OR
UNHEATED SPACES SHALL BE ADEQUATELY
INSULATED AND GAS-PROOFED

ALL S/A DIFFUSERS "4x10"
UNLESS NOTED OTHERWISE
ON LAYOUT. ALL S/A RUNS 5"Ø
UNLESS NOTED OTHERWISE
ON LAYOUT. UNDERCUT
DOORS 1" min. FOR R/A

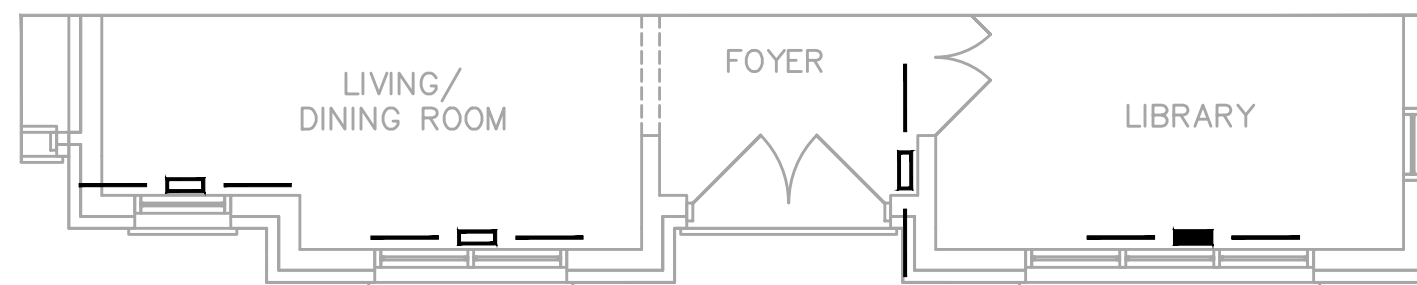
SUPPLEMENTAL EXHAUST FAN (MINIMUM
100 CFM) DISCHARGING DIRECTLY TO
THE EXTERIOR WILL BE PROVIDED IN
THE KITCHEN. EXHAUST DUCTS
SERVING THE KITCHEN SHALL NOT BE
SMALLER THAN RECOMMENDED BY THE
MANUFACTURER OF THE FANS AND
MUST AT LEAST MEET O.B.C. STATED
MINIMUMS.



FIRST FLOOR PLAN 1



FIRST FLOOR PLAN 2



FIRST FLOOR PLAN 3

HVAC LEGEND	
	SUPPLY AIR GRILLE
	SUPPLY AIR GRILLE 6" BOOT
	LINEAR BAR or LINEAR SLOT GRILLE
	SUPPLY AIR BOOT ABOVE
	6" SUPPLY AIR BOOT ABOVE
	SUPPLY AIR STACK
	6" 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
	FLEX DUCT
	EXHAUST FAN
	LINT TRAP by REVERSOMATIC
	DIRECT VENT
	LOW WALL
	HIGH WALL
	CEILING
	Z.D. MOTORIZED ZONE DAMPER
	M.D. MOTORIZED 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
	DRYER BOOSTER FAN

2			
1	ISSUED FOR PERMIT	JULY/23	KA
No.	Revision	Date	By
SB-12 PACKAGE		A1	
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.	

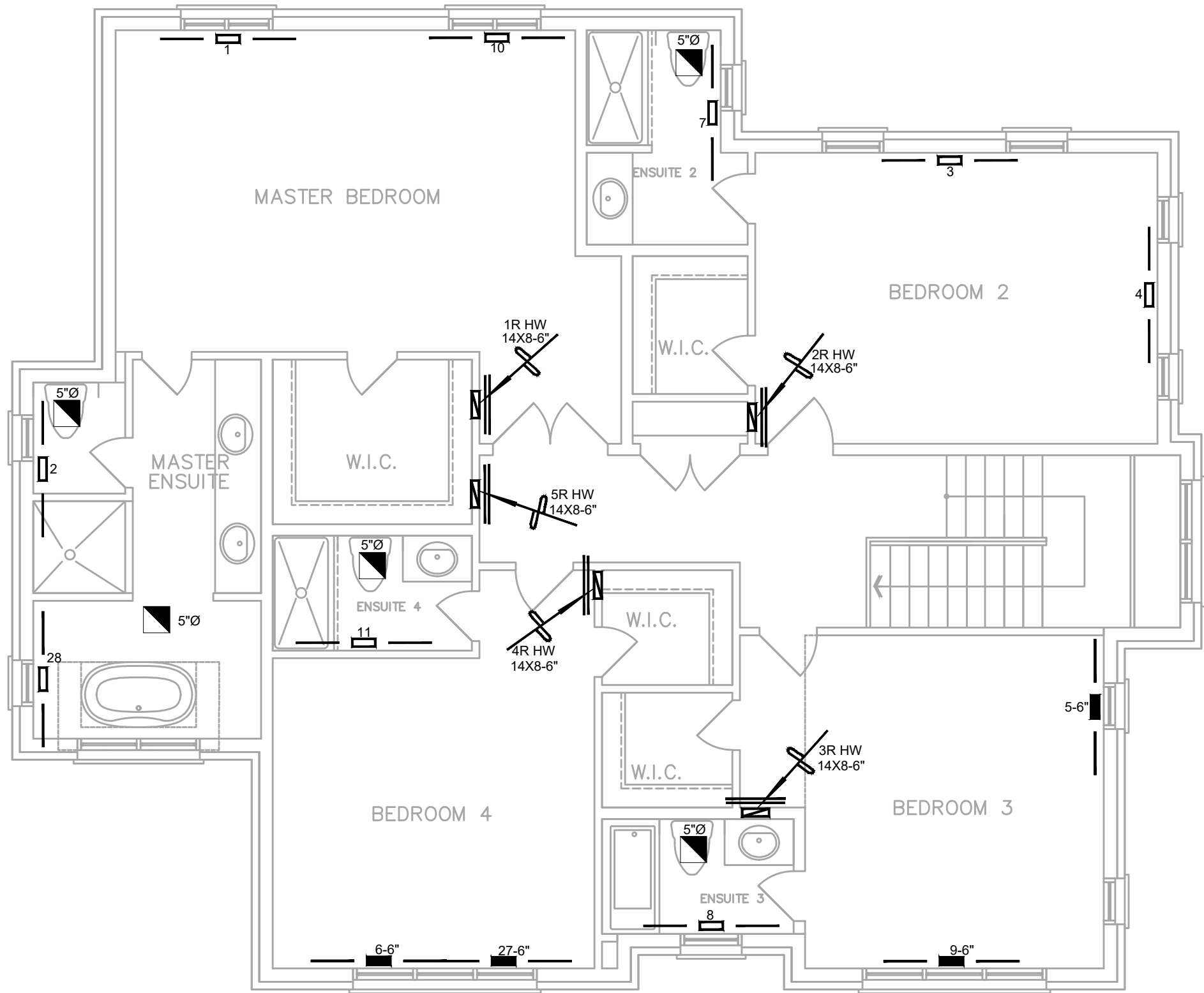
HVAC DESIGNS LTD.
375 Finley Ave - Unit 202 - Ajax, Ontario L1S 2E2
Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
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Specializing in Residential Mechanical Design Services

Client	GREENPARK HOMES		
Project Name	ZADORRA OSHAWA, ONTARIO ROSE 10 3542		
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Sheet Title	FIRST FLOOR		HEATING LAYOUT
Drawn By	KA	Checked By	MO
Scale	3/16"=1'-0"		Sheet No.
Date	JULY 2023		2
LO #	101743		3

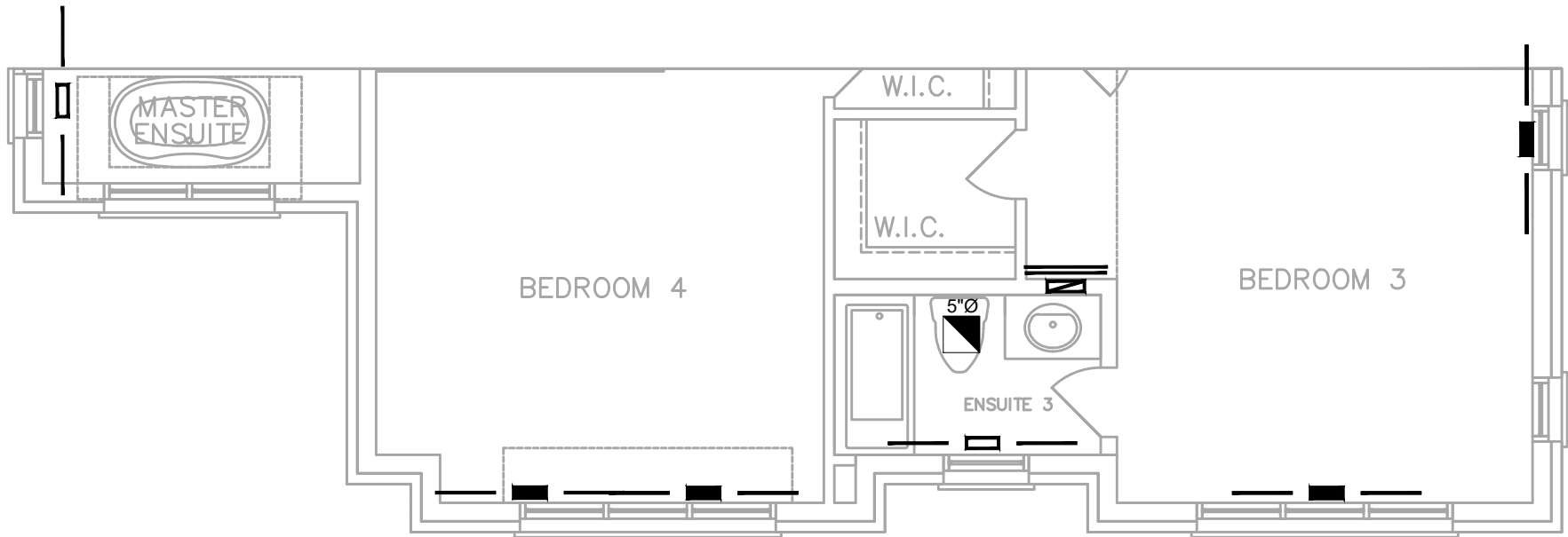
INSTALLATION TO COMPLY WITH THE LATEST ONTARIO BUILDING CODE. ALL SUPPLY BRANCH OUTLETS SHALL BE EQUIPPED WITH MANUAL BALANCING DAMPER. DUCTWORK WHICH PASSES THROUGH THE GARAGE OR UNHEATED SPACES SHALL BE ADEQUATELY INSULATED AND GAS-PROOFED

ALL S/A DIFFUSERS "4x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A

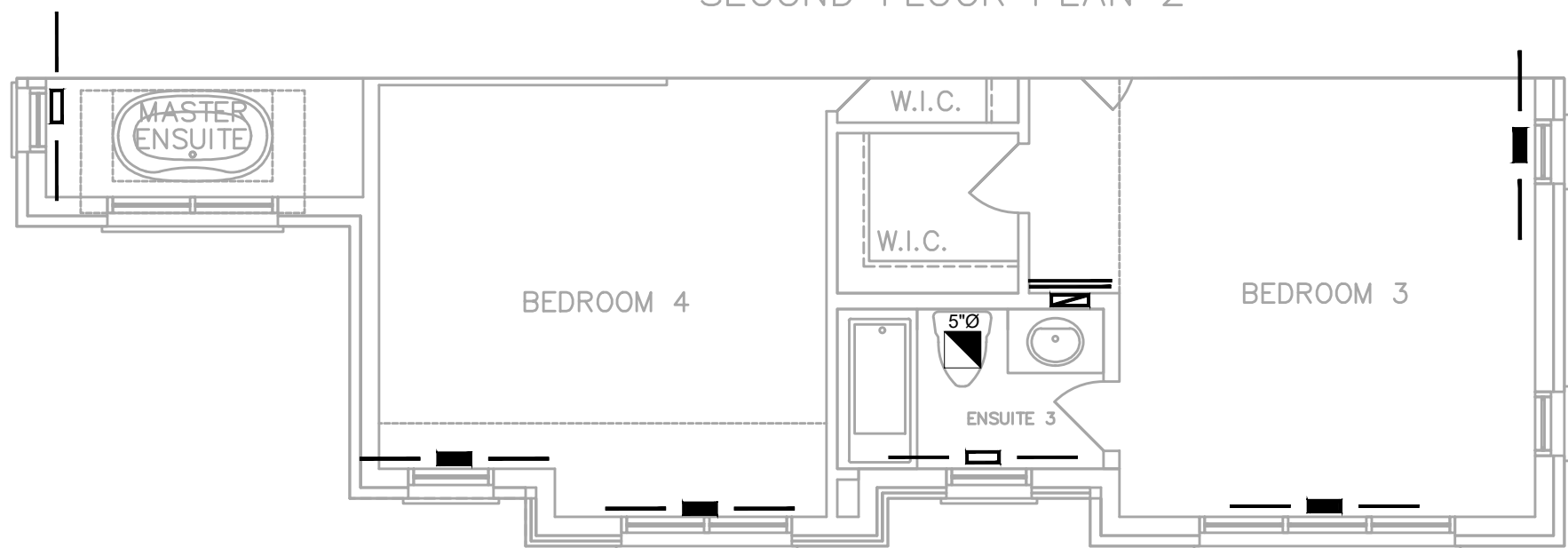
SUPPLEMENTAL EXHAUST FAN (MINIMUM 100 CFM) DISCHARGING DIRECTLY TO THE EXTERIOR WILL BE PROVIDED IN THE KITCHEN. EXHAUST DUCTS SERVING THE KITCHEN SHALL NOT BE SMALLER THAN RECOMMENDED BY THE MANUFACTURER OF THE FANS AND MUST AT LEAST MEET O.B.C. STATED MINIMUMS.



SECOND FLOOR PLAN 1



SECOND FLOOR PLAN 2



SECOND FLOOR PLAN 3

HVAC LEGEND	
	SUPPLY AIR GRILLE
	SUPPLY AIR GRILLE 6" BOOT
	LINEAR BAR or LINEAR SLOT GRILLE
	SUPPLY AIR BOOT ABOVE
	6" SUPPLY AIR BOOT ABOVE
	SUPPLY AIR STACK
	6" 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
	FLEX DUCT
	EXHAUST FAN
	LINT TRAP by REVERSOMATIC
	DIRECT VENT
	LOW WALL
	HIGH WALL
	CEILING
	MOTORIZED ZONE DAMPER
	MOTORIZED 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
	DRYER BOOSTER FAN

2

1

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No. Revision

JULY/23

Date

KA

By

SB-12 PACKAGE

A1

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Michael O'Rourke
Michael O'Rourke BCIN # 19669
HVAC Designs Ltd.

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

Client

GREENPARK HOMES

Project Name

ZADORRA
OSHAWA, ONTARIO
ROSE 10
3542

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Sheet Title

SECOND FLOOR HEATING LAYOUT

Drawn By

KA

Checked By

MO

Scale

3/16"=1'-0"

Sheet No.

3

Date

JULY 2023

LO #

101743

3