

SITE NAME: SECONDO BUILDERS: GREENPARK HOMES TYPE: GLENWAY 12A DATE: Nov-17 LO# 77004 WINTER NATURAL AIR CHANGE RATE 0.227 SUMMER NATURAL AIR CHANGE RATE 0.070 HEAT LOSS AT °F. 81 HEAT GAIN AT °F. 14 CSA-F280-12 ENERGY STAR

ROOM USE	EXP. WALL CLG. HT.	FACTORS	LOSS GAIN	ENS	WIC	BED-2	BED-3	BED-4	FOY	MUD	BATH	ALC	ENS-4	HEAT LOSS AT °F. 81	HEAT GAIN AT °F. 14	CSA-F280-12 ENERGY STAR
GRS WALL AREA			297	198	81	135	230	135	207	207	207	207	108			
GLAZING			0	0	0	0	0	0	0	0	0	0	0			
NORTH	20.4	15.9	0	0	0	0	0	0	0	0	0	0	0			
EAST	20.4	41.5	0	0	0	0	0	0	0	0	0	0	0			
SOUTH	20.4	24.8	0	0	0	0	0	0	0	0	0	0	0			
WEST	20.4	41.5	36	733	1493	14	285	581	14	285	581	21	427	521		
SKYLIT.	34.2	101.2	0	0	0	0	0	0	0	0	0	0	0			
DOORS	27.0	4.7	0	0	0	0	0	0	0	0	0	0	0			
NET EXPOSED WALL	5.4	0.9	261	1405	242	166	894	154	67	361	62	125	673	116	197	1061
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.7	0	0	0	0	0	0	0	0	0	0	0			
EXPOSED CLG	1.6	0.7	334	536	237	142	228	101	54	87	38	240	385	170	90	144
NO ATTIC EXPOSED CLG	4.0	1.8	0	0	0	0	0	0	0	0	0	0	0			
EXPOSED FLOOR	3.3	0.6	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			
SUB TOTAL HT LOSS			2674	1773	1282	1295	2984	1271	1707	712	1707	1736	1055	672		
LEVEL FACTOR / MULTIPLE			0.20	0.18	0.20	0.18	0.20	0.18	0.20	0.18	0.20	0.18	0.20	0.18		
AIR CHANGE HEAT LOSS			487	323	133	236	544	232	311	41	311	316	192	39		
AIR CHANGE HEAT GAIN			113	74	39	26	117	42	202	75	202	205	0	0		
DUCT LOSS			0	0	0	153	353	0	0	0	0	0	0	0		
DUCT GAIN			2	0	0	1	240	1	0	0	0	0	0	0		
HEAT GAIN PEOPLE	240		480	0	0	1	240	1	240	0	0	0	0	0		
HEAT GAIN APPLIANCES/LIGHTS			572	0	0	572	572	572	572	0	2220	572	0	0		
TOTAL HT LOSS BTU/H			3161	2096	866	1684	3880	1502	2057	1077	2220	2258	1247	924		
TOTAL HT GAIN x 1.3 BTU/H			4078	1762	936	1843	4244	2057	641	255	1077	2059	924			

ROOM USE	EXP. WALL CLG. HT.	FACTORS	LOSS GAIN	LVIDN	KTI/FM	OFF	LAUN	FOY	MUD	WOD	BAS	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN
GRS WALL AREA			300	300	700	456	198	180	120	387	1422	0	0	0	0	0	0
GLAZING			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	20.4	15.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	20.4	41.5	9	183	373	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	20.4	24.8	77	1567	1911	30	611	744	33	672	819	0	0	0	0	0	0
WEST	20.4	41.5	9	183	373	96	1964	3981	0	0	0	0	0	0	0	0	0
SKYLIT.	34.2	101.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	27.0	4.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	5.4	0.9	205	1104	190	674	3091	532	363	1955	336	134	722	124	100	538	93
NET EXPOSED BSMT WALL ABOVE GR	3.9	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.6	0.7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	4.0	1.8	20	79	36	10	40	18	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	3.3	0.6	0	0	0	0	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	0	0	0	0
SUB TOTAL HT LOSS			3116	2882	5695	4117	1126	2255	1079	1093	9037	416	573				
LEVEL FACTOR / MULTIPLE			0.30	0.24	0.30	0.24	0.30	0.24	0.30	0.24	0.50	0.68	573				
AIR CHANGE HEAT LOSS			746	165	1363	985	269	540	258	6937	0	0	0				
AIR CHANGE HEAT GAIN			0	0	0	0	0	0	0	0	0	0	0				
DUCT LOSS			0	0	0	0	0	0	0	0	0	0	0				
DUCT GAIN			0	0	0	0	0	0	0	0	0	0	0				
HEAT GAIN PEOPLE	240		0	0	0	0	0	0	0	0	0	0	0				
HEAT GAIN APPLIANCES/LIGHTS			572	0	0	572	572	572	572	0	0	0	0				
TOTAL HT LOSS BTU/H			3862	4705	7058	5102	1395	2795	1338	1093	15974	541	572				
TOTAL HT GAIN x 1.3 BTU/H			4705	1762	7594	5915	1032	641	255	541	15974	541	1562				

TOTAL HEAT GAIN BTU/H: 42209 TONS: 3.52 LOSS DUE TO VENTILATION LOAD BTU/H: 3407 STRUCTURAL HEAT LOSS: 57532 TOTAL COMBINED HEAT LOSS BTU/H: 60938

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

SITE NAME: SECOND
BUILDER: GREENPARK HOMES

TYPE: GLENWAY 12A DATE: Nov-17

GFA: 2869 LO# 77004

HEATING CFM 1504 COOLING CFM 1504
TOTAL HEAT LOSS 57,532 TOTAL HEAT GAIN 41,623
AIR FLOW RATE CFM 26.14 AIR FLOW RATE CFM 36.13

#GOODMAN
GMEC960804CNA 80
FAN SPEED LOW
MEDIUM HIGH
DESIGN CFM = 1504
CFM @ 0.5" E.S.P. 1504

AFUE = 96 %
INPUT (BTU/H) = 80,000
OUTPUT (BTU/H) = 76,800

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	11	11	5
R/A	0	0	5	3	1

plenum pressure s/a 0.18
max s/a dif press. loss 0.03
min adjusted pressure s/a 0.15
r/a grille press. loss 0.02
adjusted pressure r/a 0.15
r/a pressure 0.17

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	BATH	ALC	BED-3	MBR	ENS-4	LV/DN	KT/FM	KT/FM	KT/FM	OFF	LAUN	MUD	FOY	KT/FM	BAS	BAS	BAS	BAS
RM LOSS MBH	1.58	2.10	0.87	1.68	1.94	1.50	2.22	2.26	1.94	1.58	1.25	1.93	1.76	1.76	1.76	2.55	1.40	1.34	2.79	1.76	3.41	3.41	3.41	3.41
CFM PER RUN HEAT	41	55	23	44	51	39	58	59	51	41	33	50	46	46	46	67	36	35	73	46	89	89	89	89
RM GAIN MBH	2.04	1.76	0.94	1.84	2.12	2.06	1.08	2.06	2.12	2.04	0.92	2.35	2.00	2.00	2.00	2.96	1.03	0.26	0.64	2.00	0.42	0.42	0.42	0.42
CFM PER RUN COOLING	74	64	34	67	77	74	39	74	77	74	33	85	72	72	72	107	37	9	23	72	15	15	15	15
ADJUSTED PRESSURE	0.17	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	0.15	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH	27	34	50	57	50	40	57	44	53	33	48	24	30	21	16	53	24	14	43	26	23	19	29	47
EQUIVALENT LENGTH	120	130	140	150	140	200	180	130	150	160	200	190	130	120	110	120	110	100	150	140	130	120	170	120
TOTAL EFFECTIVE LENGTH	147	164	190	207	190	240	237	174	203	193	248	214	160	141	126	173	134	114	193	166	153	139	199	167
ADJUSTED PRESSURE	0.12	0.1	0.09	0.08	0.09	0.07	0.07	0.1	0.08	0.09	0.07	0.08	0.11	0.12	0.14	0.09	0.13	0.15	0.09	0.11	0.11	0.12	0.08	0.1
ROUND DUCT SIZE	5	5	4	5	5	5	5	5	5	5	5	6	5	5	5	6	4	4	4	5	5	5	6	5
HEATING VELOCITY (ft/min)	301	404	264	323	374	286	426	433	374	301	379	255	338	338	338	342	413	402	536	338	653	653	454	653
COOLING VELOCITY (ft/min)	543	470	390	492	565	543	286	543	565	543	379	433	529	529	529	546	424	103	169	529	110	110	76	110
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10
TRUNK	A	B	B	B	E	F	E	E	E	A	E	F	B	B	A	D	C	C	D	A	B	A	F	D

RUN#	25	26	27
ROOM NAME	OFF	LV/DN	BAS
RM LOSS MBH	2.55	1.93	3.41
CFM PER RUN HEAT	67	50	89
RM GAIN MBH	2.96	2.35	0.42
CFM PER RUN COOLING	107	85	15
ADJUSTED PRESSURE	0.15	0.16	0.16
ACTUAL DUCT LGH	45	27	20
EQUIVALENT LENGTH	120	170	180
TOTAL EFFECTIVE LENGTH	165	197	200
ADJUSTED PRESSURE	0.09	0.08	0.08
ROUND DUCT SIZE	6	6	6
HEATING VELOCITY (ft/min)	342	255	454
COOLING VELOCITY (ft/min)	546	433	76
OUTLET GRILL SIZE	4X10	4X10	4X10
TRUNK	D	F	C

SUPPLY 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)	RETURN AIR TRUNK SIZE	TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT	VELOCITY (ft/min)
TRUNK A	263	0.09	8.3	8	592	0	0.00	0	0	0	TRUNK O	0	0.05	0	0	8
TRUNK B	259	0.09	8.2	8	583	0	0.00	0	0	0	TRUNK P	0	0.05	0	0	8
TRUNK C	682	0.08	12.1	18	682	0	0.00	0	0	0	TRUNK Q	0	0.05	0	0	8
TRUNK D	296	0.09	8.6	8	666	0	0.00	0	0	0	TRUNK R	0	0.05	0	0	8
TRUNK E	548	0.07	11.6	16	617	0	0.00	0	0	0	TRUNK S	0	0.05	0	0	8
TRUNK F	776	0.07	13.2	20	698	0	0.00	0	0	0	TRUNK T	0	0.05	0	0	8
RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AIR VOLUME	115	115	115	130	335	265	135	115	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	40	70	63	66	28	29	53	64	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	165	255	255	255	205	210	220	255	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	205	325	318	261	233	239	273	319	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.07	0.05	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
ROUND DUCT SIZE	6.5	7	7	7	10	9.2	7.5	7	0	0	0	0	0	0	0	0
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	30	30	14	14	0	0	0	0	0	0	0	0

RETURN AIR #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
AIR VOLUME	115	115	115	130	335	265	135	115	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	40	70	63	66	28	29	53	64	1	1	1	1	1	1	1	1
EQUIVALENT LENGTH	165	255	255	255	205	210	220	255	0	0	0	0	0	0	0	0
TOTAL EFFECTIVE LH	205	325	318	261	233	239	273	319	1	1	1	1	1	1	1	1
ADJUSTED PRESSURE	0.07	0.05	0.05	0.06	0.06	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
ROUND DUCT SIZE	6.5	7	7	7	10	9.2	7.5	7	0	0	0	0	0	0	0	0
INLET GRILL SIZE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INLET GRILL SIZE	14	14	14	14	30	30	14	14	0	0	0	0	0	0	0	0

TYPE: GLENWAY 12A
SITE NAME: SECONDO

LO # 77004

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>3</u> @ 10.6 cfm	<u>31.8</u> cfm
Kitchen & Bathrooms	<u>5</u> @ 10.6 cfm	<u>53</u> cfm
Other Rooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Table 9.32.3.A.	TOTAL	<u>190.8</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		<u>79.5</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>190.8</u>	cfm
Less Principal Ventil. Capacity	<u>155</u>	cfm
Required Supplemental Capacity	<u>35.8</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 65H	Location: BSMT
<u>155.0</u> cfm	<u>3.0</u> sones
☒ HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION				
CFM	ΔT °F	FACTOR	% LOSS	
155.0 CFM	X 81 F	X 1.08	X	0.25

SUPPLEMENTAL FANS		NUTONE		
Location	Model	cfm	HVI	Sones
ENS	QTXEN050C	50	☒	0.3
BATH	QTXEN050C	50	☒	0.3
ENS-4	QTXEN050C	50	☒	0.3
LAUN	QTXEN050C	50	☒	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 65H		
<u>155</u>	cfm high	<u>64</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: 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:	November-17

HEAT LOSS AND GAIN SUMMARY SHEET**MODEL:** GLENWAY 12A
SFQT: 2969**LO#** 77004**BUILDER:** GREENPARK HOMES
SITE: SECONDO**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-9	OUTDOOR DESIGN TEMP.	86
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

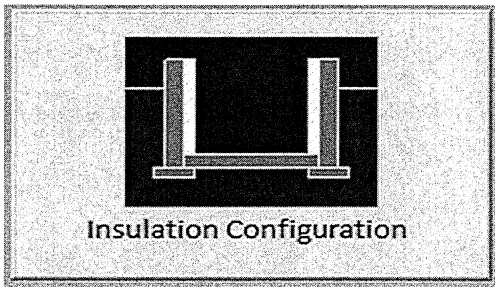
ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	3
FRONT FACES:	EAST	ASSUMED (Y/N):	Y
AIR CHANGES PER HOUR:	2.50	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	TIGHT	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	41998.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	5
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.27	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.0 ft
LENGTH: 59.0 ft	WIDTH: 38.0 ft	EXPOSED PERIMETER:	194.0 ft

2012 OBC - COMPLIANCE PACKAGE		
Component	Compliance Package	
	ENERGYSTAR	
	Nominal	Min. Eff.
Ceiling with Attic Space Minimum RSI (R)-Value	50	50.72
Ceiling Without Attic Space Minimum RSI (R)-Value	31	20.54
Exposed Floor Minimum RSI (R)-Value	31	24.58
Walls Above Grade Minimum RSI (R)-Value	20 + 5	15.12
Basement Walls Minimum RSI (R)-Value	20	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	ZONE 2	-
Skylights Maximum U-Value	ZONE 2	-
Space Heating Equipment Minimum AFUE	0.95	-
HRV Minimum Efficiency	65%	-
Domestic Hot Water Heater Minimum EF	90% TE	-

INDIVIDUAL BCIN: 19669
MICHAEL O'ROURKE

Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Bradford	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	18.0	 Insulation Configuration
Floor Width (m):	11.6	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.83	
Window Area (m ²):	1.3	
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):		2076

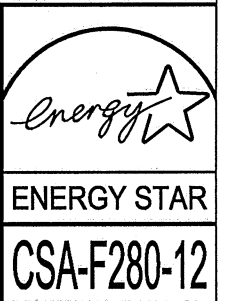
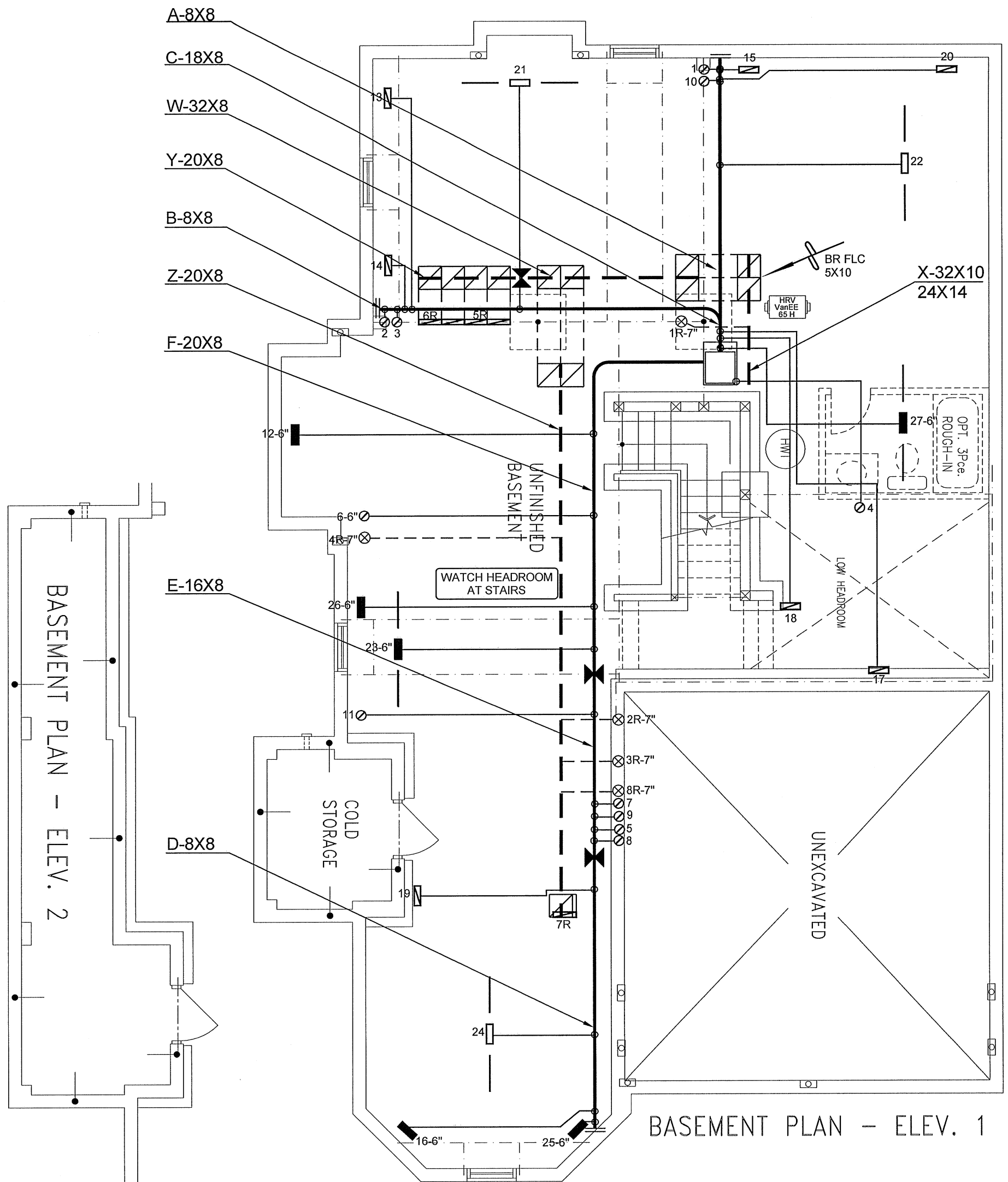
TYPE: GLENWAY 12A
LO# 77004

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Bradford			
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):	1189.3			
Air Leakage/Ventilation				
Air Tightness Type:	Energy Star Detached (2.5 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1110.2 cm ²		
	2.50	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	73.2	73.2		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.227			
Cooling Air Leakage Rate (ACH/H):	0.070			

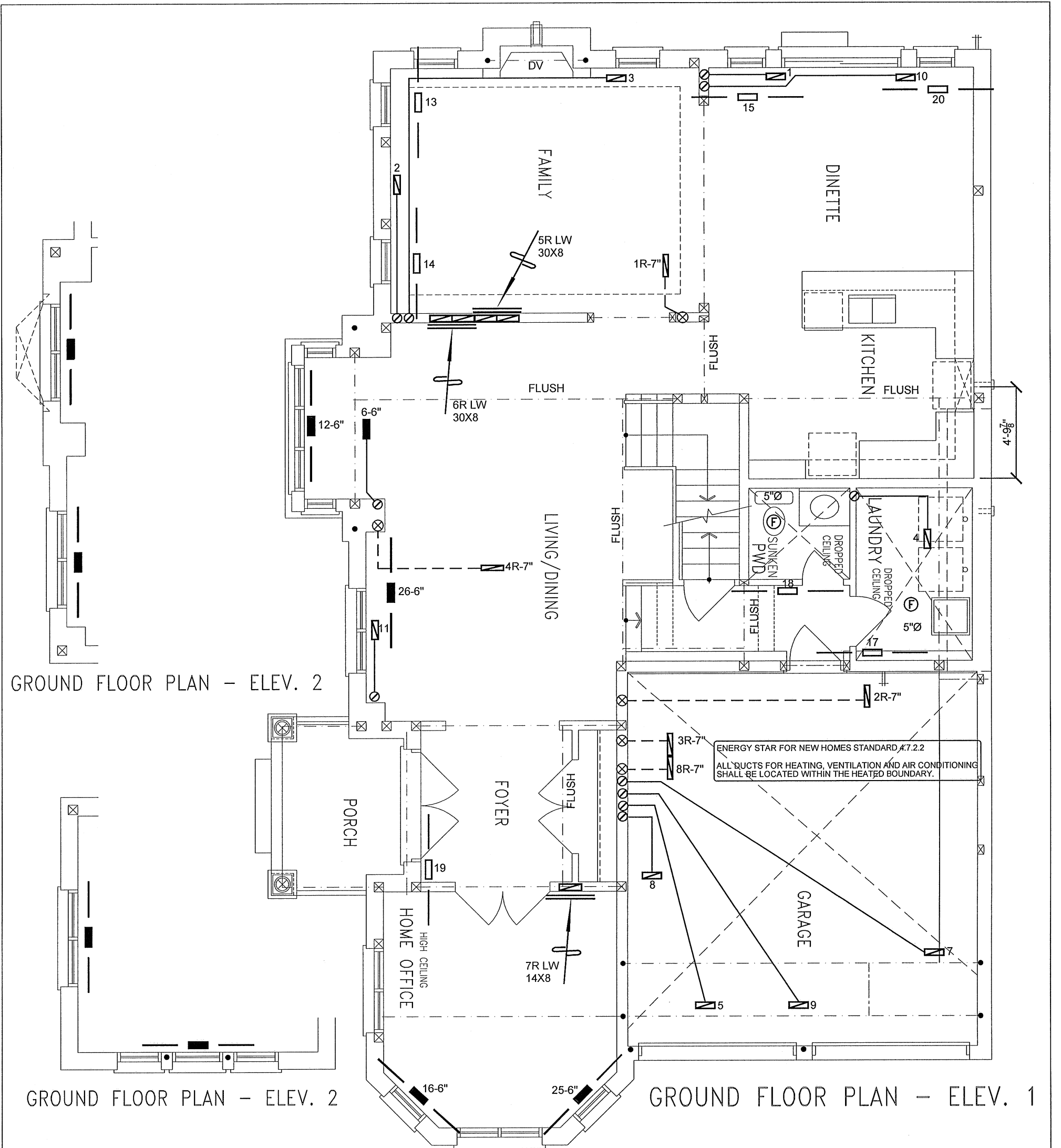
TYPE: GLENWAY 12A
LO# 77004



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HEAT LOSS 60938 BTU/H			# OF RUNS S/A R/A FANS				Sheet Title BASEMENT HEATING LAYOUT	
UNIT DATA			3RD FLOOR					
MAKE	GOODMAN		2ND FLOOR					
MODEL			11 5 3					
GMEC960804CNA			1ST FLOOR					
INPUT	80	MBTU/H	BASEMENT				Date	NOV/2017
OUTPUT	76.8	MBTU/H	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"
COOLING	3.5	TONS					BCIN# 19669	
FAN SPEED	1504	cfm @ 0.6" w.c.					LO#	



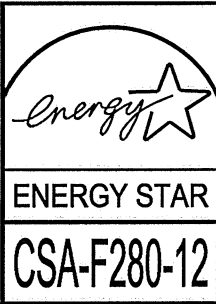
GROUND FLOOR PLAN – ELEV. 2

GROUND FLOOR PLAN – ELEV. 2

GROUND FLOOR PLAN – ELEV. 1

I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C.32.5 OF THE BUILDING CODE.

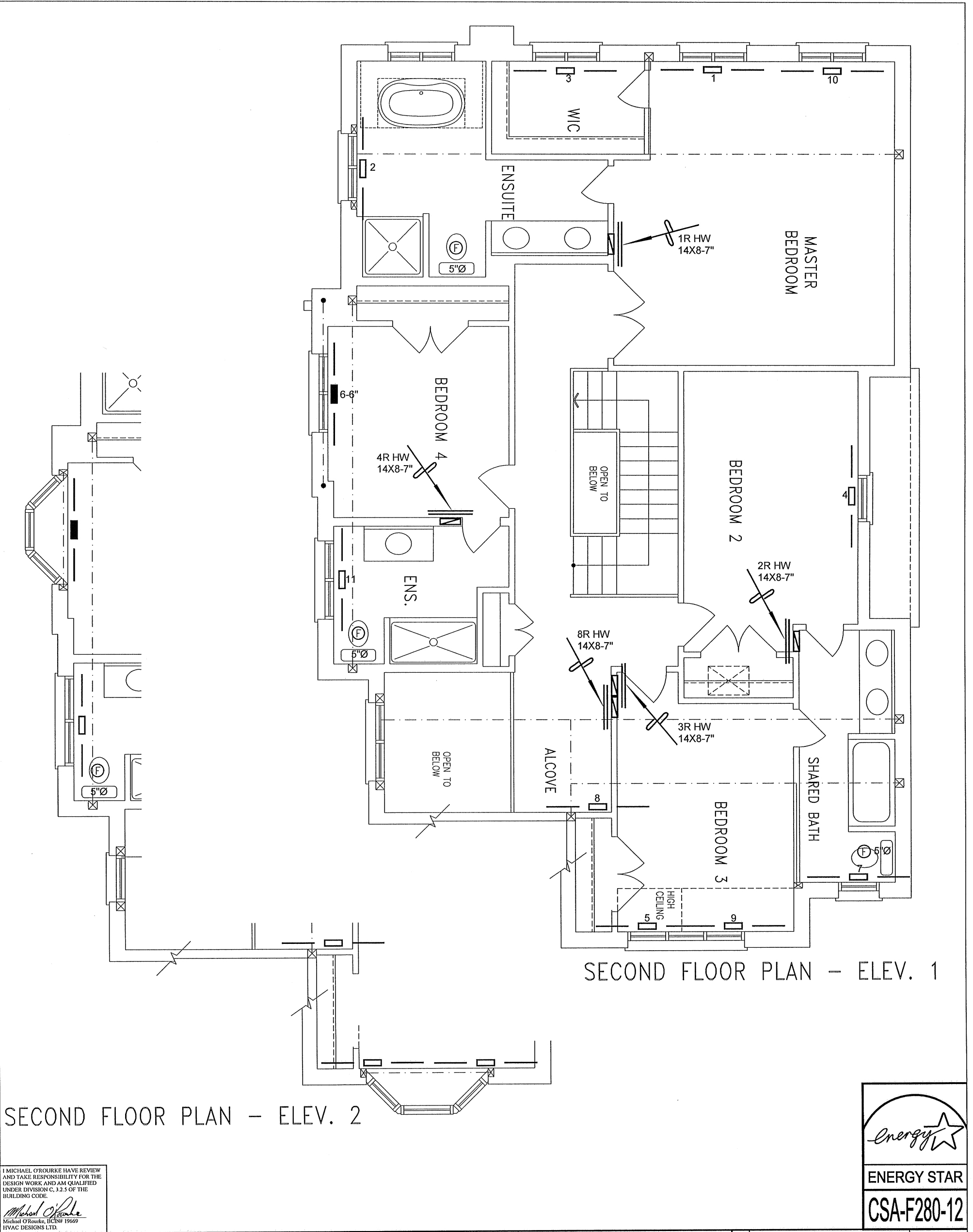
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.



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

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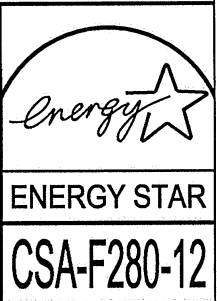
Client GREENPARK HOMES		 375 Finley Ave. Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name SECONDO EAST GWILLIMBURY, ONTARIO			Date NOV/2017	Scale 3/16" = 1'-0"
GLENWAY 12A 2969 sqft		BCIN# 19669		
		LO#	77004	



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			
ALL DRAWINGS, CALCULATIONS AND SPECIFICATIONS ARE THE PROPERTY OF HVAC DESIGNS LTD.© AND MAY NOT BE REPRODUCED, MODIFIED OR ALTERED WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND USE OF THESE DRAWINGS AFTER ONE YEAR FROM THE DATED NOTED IS NOT AUTHORIZED. CONTRACTOR SHALL CHECK ALL CONDITIONS BEFORE PROCEEDING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE USED DURING INSTALLATION OF HEATING SYSTEM. HVAC DESIGNS LTD. IS NOT LIABLE FOR ANY CLAIMS ARISING FROM UNAUTHORIZED USE OF THE DRAWINGS OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE ONTARIO BUILDING CODE.											
Client		 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.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.								Sheet Title	
GREENPARK HOMES										SECOND FLOOR HEATING LAYOUT	
Project Name							Date				
SECONDO EAST GWILLIMBURY, ONTARIO							NOV/2017				
GLENWAY 12A 2969 sqft							Scale				
							3/16" = 1'-0"				
							BCIN# 19669				
							LO#				
							77004				

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

Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.



Client

GREENPARK HOMES

Project Name

SECONDO
EAST GWILLIMBURY, ONTARIO

GLENWAY 12A

2969 sqft

HVACDESIGNS LTD.

375 Finley Ave. Suite 202 - Ajax, Ontario
L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375
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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

NOV/2017

Scale

3/16" = 1'-0"

BCIN# 19669

LO#

77004