

SITE NAME: LECCO RIDGE

BUILDER: GREENPARK HOMES

TYPE: JUNIPER 8

GFA: 3320

DATE: Dec-16

LO# 71353

WINTER NATURAL AIR CHANGE RATE 0.307

SUMMER NATURAL AIR CHANGE RATE 0.105

HEAT LOSS ΔT °F. 72

HEAT GAIN ΔT °F. 14

CSA-F280-12

ENERGYSTAR

ROOM USE	EXP. WALL	CLG. HT.	MBR	ENS	BED-2	BED-3	BED-4	BATH	BED-5	ENS-2/3			
			34	30	12	30	20	21	16	8			
			10	9	9	10	10	9	9	9			
GRS.WALL AREA	LOSS	GAIN	340	270	108	300	200	189	144	72			
GLAZING	LOSS	GAIN											
NORTH	17.9	15.8	0	0	0	0	0	0	0	0	7	125	111
EAST	17.9	41.4	0	0	0	0	0	0	0	0	0	0	0
SOUTH	17.9	24.8	0	0	0	0	0	0	0	0	0	0	0
WEST	17.9	41.4	34	607	1408	15	268	621	0	0	0	0	0
SKYLT.	30.6	101.2	0	0	0	0	0	0	0	0	0	0	0
DOORS	24.1	4.7	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	2.6	0.5	306	801	155	247	646	125	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	3.3	0.6	0	0	0	0	0	0	0	0	65	170	33
EXPOSED CLG	1.4	0.7	289	398	198	200	276	137	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.2	1.1	0	0	0	0	0	0	0	0	84	116	58
EXPOSED FLOOR	2.2	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	36	79	15
SLAB ON GRADE HEAT LOSS			0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS			1806	1332	842	2308	1527	1103	892	490			
SUB TOTAL HT GAIN			1761	1010	449	2004	1611	1398	579	217			
LEVEL FACTOR / MULTIPLIER	0.20	0.32			0.20	0.32	0.20	0.32	0.20	0.32	0.20	0.32	
AIR CHANGE HEAT LOSS			583	430	272	745	493	366	288	158			
AIR CHANGE HEAT GAIN			151	87	39	172	138	120	60	18			
DUCT LOSS			0	0	0	305	202	0	0	65			
DUCT GAIN			0	0	0	316	274	0	0	24			
HEAT GAIN PEOPLE	240		2	480	1	240	1	240	0	1	240	0	0
HEAT GAIN APPLIANCES/LIGHTS				746		746		746		746	0	0	0
TOTAL HT LOSS BTU/H			2389	1763	1114	3358	2222	1459	1180	713			
TOTAL HT GAIN x 1.3 BTU/H			4079	1738	1916	4522	3911	1974	2099	336			

**TOWN OF MILTON**  
**PLANNING AND DEVELOPMENT**  
**JUNIPER 8 MODEL**

**BUILDING: REVIEWED**  
**SCOTT SHERRIFFS** APR 11, 2017  
**PLANS EXAMINER** DATE

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

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**TOWN OF MILTON**  
**MAR 29, 2017**  
**JUNIPER 8**  
**BUILDING DIVISION**

ROOM USE	EXP. WALL	CLG. HT.	LV/DN	KT/FM	DEN	LAUN	WIR	FOY	MUD			WOD	BAS
			46	72	21	9	9	25	6			37	180
			10	10	10	9	10	10	11			10	10
GRS.WALL AREA	LOSS	GAIN	450	720	210	81	90	250	66			352	1281
GLAZING	LOSS	GAIN											
NORTH	17.9	15.8	0	0	0	0	0	0	0	0	0	0	0
EAST	17.9	41.4	47	839	1947	0	0	0	0	0	0	9	161
SOUTH	17.9	24.8	30	536	743	0	0	0	0	0	0	0	0
WEST	17.9	41.4	0	0	0	19	339	471	0	0	0	0	0
SKYLT.	30.6	101.2	0	0	0	0	0	0	0	0	0	0	0
DOORS	24.1	4.7	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	2.6	0.5	373	976	189	617	1614	312	195	510	99	62	162
NET EXPOSED BSMT WALL ABOVE GR	3.3	0.6	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.4	0.7	0	0	0	6	8	4	0	0	0	219	302
NO ATTIC EXPOSED CLG	2.2	1.1	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.2	0.4	0	0	0	0	0	0	0	0	0	24	53
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			2351	3461	778	856	235	1509	601			0	
SUB TOTAL HT GAIN			2878	4583	336	662	46	1355	116			741	8206
LEVEL FACTOR / MULTIPLIER	0.30	0.60		0.30	0.60	0.20	0.32	0.30	0.60	0.30	0.60	0.50	1.01
AIR CHANGE HEAT LOSS			1422	2094	471	276	142	913	364				9009
AIR CHANGE HEAT GAIN			247	393	29	57	4	116	10				56
DUCT LOSS			0	0	0	113	0	0	0				0
DUCT GAIN			0	0	0	170	0	0	0				0
HEAT GAIN PEOPLE	240		0	0	0	240	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS				746		746		746		746	0	0	0
TOTAL HT LOSS BTU/H			3772	5555	1249	1245	378	2422	965			741	17215
TOTAL HT GAIN x 1.3 BTU/H			5033	7750	1444	2438	64	1913	164			186	739

TOTAL HEAT GAIN BTU/H:

40801

TONS: 3.40

LOSS DUE TO VENTILATION LOAD BTU/H: 2552

STRUCTURAL HEAT LOSS: 47742

TOTAL COMBINED HEAT LOSS BTU/H: 50294

SITE NAME: LECCO RIDGE  
BUILDER: GREENPARK HOMES

TYPE: JUNIPER 8

DATE: Dec-16

GFA: 3320 LO# 71353

HEATING CFM 1316 COOLING CFM 1316  
TOTAL HEAT LOSS 47,742 TOTAL HEAT GAIN 40,307  
AIR FLOW RATE CFM 27.56 AIR FLOW RATE CFM 32.65

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

~\*AMANA  
AMVC960804CNA 80  
FAN SPEED LOW 1316  
MEDLOW 0  
MEDIUM 1389  
MEDIUM HIGH 0  
HIGH 1396

AFUE = 96.0 %  
INPUT (BTU/H) = 80,000  
OUTPUT (BTU/H) = 76,800

DESIGN CFM = 1316  
CFM @ .6" E.S.P.

TEMPERATURE RISE 54 °F

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	12	9	5
R/A	0	0	5	3	1

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	BED-5	BED-2	BED-3	BED-4	BATH	BED-3	BED-4	MBR	ENS-2/3	LV/DN	LV/DN	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	MUD	DEN	BAS	BAS	BAS
RM LOSS MBH.	1.19	1.76	1.18	1.11	1.68	1.11	1.46	1.68	1.11	1.19	0.71	1.89	1.89	1.85	1.85	1.85	1.25	0.38	2.42	0.97	1.25	3.59	3.59	3.59
CFM PER RUN HEAT	33	49	33	31	46	31	40	46	31	33	20	52	52	51	51	51	34	10	67	27	34	99	99	99
RM GAIN MBH.	2.04	1.74	2.10	1.92	2.26	1.96	1.97	2.26	1.96	2.04	0.34	2.52	2.52	2.58	2.58	2.58	2.44	0.06	1.91	0.16	1.44	0.19	0.19	0.19
CFM PER RUN COOLING	67	57	69	63	74	64	64	74	64	67	11	82	82	84	84	84	80	2	62	5	47	6	6	6
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	0.16	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16
ACTUAL DUCT LGH.	43	31	57	23	41	45	64	43	60	51	26	53	38	23	27	33	31	18	45	7	10	26	32	28
EQUIVALENT LENGTH	140	120	120	110	120	140	130	130	120	120	150	140	100	100	120	100	180	120	120	150	100	130	90	110
TOTAL EFFECTIVE LENGTH	183	151	177	133	161	185	194	173	180	171	176	193	138	123	147	133	211	138	165	157	110	156	122	138
ADJUSTED PRESSURE	0.09	0.11	0.1	0.13	0.11	0.09	0.09	0.1	0.1	0.1	0.1	0.08	0.12	0.13	0.11	0.12	0.08	0.12	0.1	0.11	0.16	0.1	0.13	0.12
ROUND DUCT SIZE	5	4	5	4	5	5	5	5	5	5	4	5	5	5	5	5	5	4	5	4	4	6	5	5
HEATING VELOCITY (ft/min)	242	562	242	356	338	228	294	338	228	242	229	382	382	374	374	374	250	115	492	310	390	505	727	727
COOLING VELOCITY (ft/min)	492	654	507	723	543	470	470	543	470	492	126	602	602	617	617	617	587	23	455	57	539	31	44	44
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10
TRUNK	B	A	F	A	D	D	E	D	E	B	D	E	F	A	B	B	D	F	E	F	D	B	B	F

RUN #	25	26
ROOM NAME	BAS	BAS
RM LOSS MBH.	3.59	3.59
CFM PER RUN HEAT	99	99
RM GAIN MBH.	0.19	0.19
CFM PER RUN COOLING	6	6
ADJUSTED PRESSURE	0.16	0.16
ACTUAL DUCT LGH.	45	22
EQUIVALENT LENGTH	130	130
TOTAL EFFECTIVE LENGTH	175	152
ADJUSTED PRESSURE	0.09	0.11
ROUND DUCT SIZE	6	5
HEATING VELOCITY (ft/min)	505	727
COOLING VELOCITY (ft/min)	31	44
OUTLET GRILL SIZE	4X10	3X10
TRUNK	E	A

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SUPPLY AIR TRUNK SIZE																RETURN 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)		TRUNK CFM	STATIC PRESS.	ROUND DUCT	RECT DUCT			VELOCITY (ft/min)	
TRUNK A	230	0.11	7.5	6	x	8	690		TRUNK G	0	0.00	0	0	x	8	0	TRUNK O	0	0.05	0	0	x	8	0
TRUNK B	366	0.09	9.3	10	x	8	659		TRUNK H	0	0.00	0	0	x	8	0	TRUNK P	0	0.05	0	0	x	8	0
TRUNK C	596	0.09	11.2	16	x	8	671		TRUNK I	0	0.00	0	0	x	8	0	TRUNK Q	0	0.05	0	0	x	8	0
TRUNK D	211	0.08	7.8	8	x	8	475		TRUNK J	0	0.00	0	0	x	8	0	TRUNK R	0	0.05	0	0	x	8	0
TRUNK E	289	0.08	8.8	10	x	8	520		TRUNK K	0	0.00	0	0	x	8	0	TRUNK S	0	0.05	0	0	x	8	0
TRUNK F	510	0.08	10.9	14	x	8	656		TRUNK L	0	0.00	0	0	x	8	0	TRUNK T	0	0.05	0	0	x	8	0
																	TRUNK U	0	0.05	0	0	x	8	0
																	TRUNK V	0	0.05	0	0	x	8	0
																	TRUNK W	755	0.05	14.2	24	x	8	566
																	TRUNK X	1316	0.05	17.5	28	x	10	677
																	TRUNK Y	425	0.05	11.5	16	x	8	478
																	TRUNK Z	270	0.05	9.7	12	x	8	405
																	DROP	1316	0.05	17.5	24	x	12	658

RETURN AIR #	1	2	3	4	5	6	7	8	BR														
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
AIR VOLUME	155	135	115	115	155	175	135	115	0	0	0	0	0	0	0	0							216
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
ACTUAL DUCT LGH.	56	83	49	51	28	26	56	50	1	1	1	1	1	1	1	1							18
EQUIVALENT LENGTH	195	230	185	190	205	185	225	185	0	0	0	0	0	0	0	0							165
TOTAL EFFECTIVE LH	251	313	234	241	233	211	281	235	1	1	1	1	1	1	1	1							183
ADJUSTED PRESSURE	0.06	0.05	0.06	0.06	0.06	0.07	0.05	0.06	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80							0.08
ROUND DUCT SIZE	7.5	7.5	6.7	6.7	7.5	7.5	6.7	6.7	0	0	0	0	0	0	0	0							7.9
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	0	0	0	0	0	0	0							8
	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	14	14	14	0	0	0	0	0	0	0	0							24

TYPE: JUNIPER 8  
SITE NAME: LECCO RIDGE

LO # 71353

**RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY**

COMBUSTION APPLIANCES		9.32.3.1(1)
a)	<input checked="" type="checkbox"/> Direct vent (sealed combustion) only	
b)	<input type="checkbox"/> Positive venting induced draft (except fireplaces)	
c)	<input type="checkbox"/> Natural draft, B-vent or induced draft gas fireplace	
d)	<input type="checkbox"/> Solid Fuel (including fireplaces)	
e)	<input type="checkbox"/> No Combustion Appliances	

HEATING SYSTEM	
<input checked="" type="checkbox"/> Forced Air	<input type="checkbox"/> Non Forced Air
<input type="checkbox"/> Electric Space Heat	

HOUSE TYPE		9.32.1(2)
<input checked="" type="checkbox"/> I	Type a) or b) appliance only, no solid fuel	
<input type="checkbox"/> II	Type I except with solid fuel (including fireplaces)	
<input type="checkbox"/> III	Any Type c) appliance	
<input type="checkbox"/> IV	Type I, or II with electric space heat	
<input type="checkbox"/>	Other: Type I, II or IV no forced air	

SYSTEM DESIGN OPTIONS		O.N.H.W.P.
<input type="checkbox"/>	1 Exhaust only/Forced Air System	
<input type="checkbox"/>	2 HRV with Ducting/Forced Air System	
<input checked="" type="checkbox"/>	3 HRV Simplified/connected to forced air system	
<input type="checkbox"/>	4 HRV with Ducting/non forced air system	
<input type="checkbox"/>	Part 6 Design	

TOTAL VENTILATION CAPACITY		9.32.3.3(1)
Basement + Master Bedroom	2 @ 21.2 cfm	42.4 cfm
Other Bedrooms	4 @ 10.6 cfm	42.4 cfm
Kitchen & Bathrooms	5 @ 10.6 cfm	53 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
More than 5 - Part 6	TOTAL	95.4 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	190.8	cfm
Less Principal Ventil. Capacity	96	cfm
Required Supplemental Capacity	94.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 50H
Location:	BSMT
96.0 cfm	3.0 sones
<input checked="" type="checkbox"/>	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
96.0 CFM	72 F	1.08	0.34

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	Sones
ENS	QTXEN050C	50	0.3
BATH	QTXEN050C	50	0.3
ENS-2/3	QTXEN050C	50	0.3
W/R	QTXEN050C	50	0.3

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 50H	
96 cfm high	47 cfm low	
66 % Sensible Efficiency	<input checked="" type="checkbox"/> HVI Approved	
@ 32 deg F ( 0 deg C)		

LOCATION OF INSTALLATION	
Lot:	Col
Township	Pla
Address	
Roll #	

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**MAR 29, 2017**  
**JUNIPER 8**  
**BUILDING DIVISION**

BUILDER:		TOWN OF MILTON	
Name:	GR	PLANNING AND DEVELOPMENT	
Address:		JUNIPER 8 MODEL	
City:		BUILDING: REVIEWED	
Telephone #:		SCOTT SHERRIFFS	
		APR 11, 2017	
		PLANS EXAMINER	
		DATE	

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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:	December-16

**HEAT LOSS AND GAIN SUMMARY SHEET**

MODEL: JUNIPER 8

BUILDER: GREENPARK HOMES

SFQT: 3320

LO# 71353

SITE: LECCO RIDGE

**DESIGN ASSUMPTIONS**

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	0	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:	3.57	ASSUMED (Y/N):	Y
AIR TIGHTNESS CATEGORY:	AVERAGE	ASSUMED (Y/N):	Y
WIND EXPOSURE:	SHELTERED	ASSUMED (Y/N):	Y
HOUSE VOLUME (ft³):	45367.5	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
INTERIOR LIGHTING LOAD (Btu/h/ft²):	1.40	DC BRUSHLESS MOTOR (Y/N):	Y
FOUNDATION CONFIGURATION	BCIN_1	DEPTH BELOW GRADE:	6.5 ft
LENGTH: 53.0 ft	WIDTH: 37.0 ft	EXPOSED PERIMETER:	180.0 ft

**2012 OBC - COMPLIANCE PACKAGE**

Component	Compliance Package ENERGYSTAR
Ceiling with Attic Space Minimum RSI (R)-Value	50
Ceiling Without Attic Space Minimum RSI (R)-Value	31
Exposed Floor Minimum RSI (R)-Value	31
Walls Above Grade Minimum RSI (R)-Value	20 + 5
Basement Walls Minimum RSI (R)-Value	20
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
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10
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

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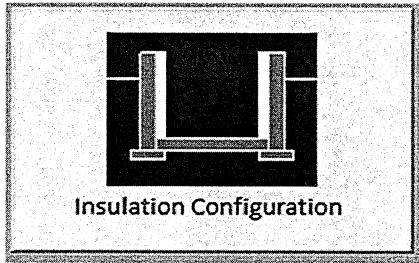
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



## Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	
Region:	Milton	
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	
Water Table:	Normal (7-10 m, 23-33 ft)	
Foundation Dimensions		
Floor Length (m):	16.2	 Insulation Configuration
Floor Width (m):	11.3	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.9	
Depth Below Grade (m):	2.0	
Window Area (m <sup>2</sup> ):	0.8	
Door Area (m <sup>2</sup> ):	1.9	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):	1797	

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# Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

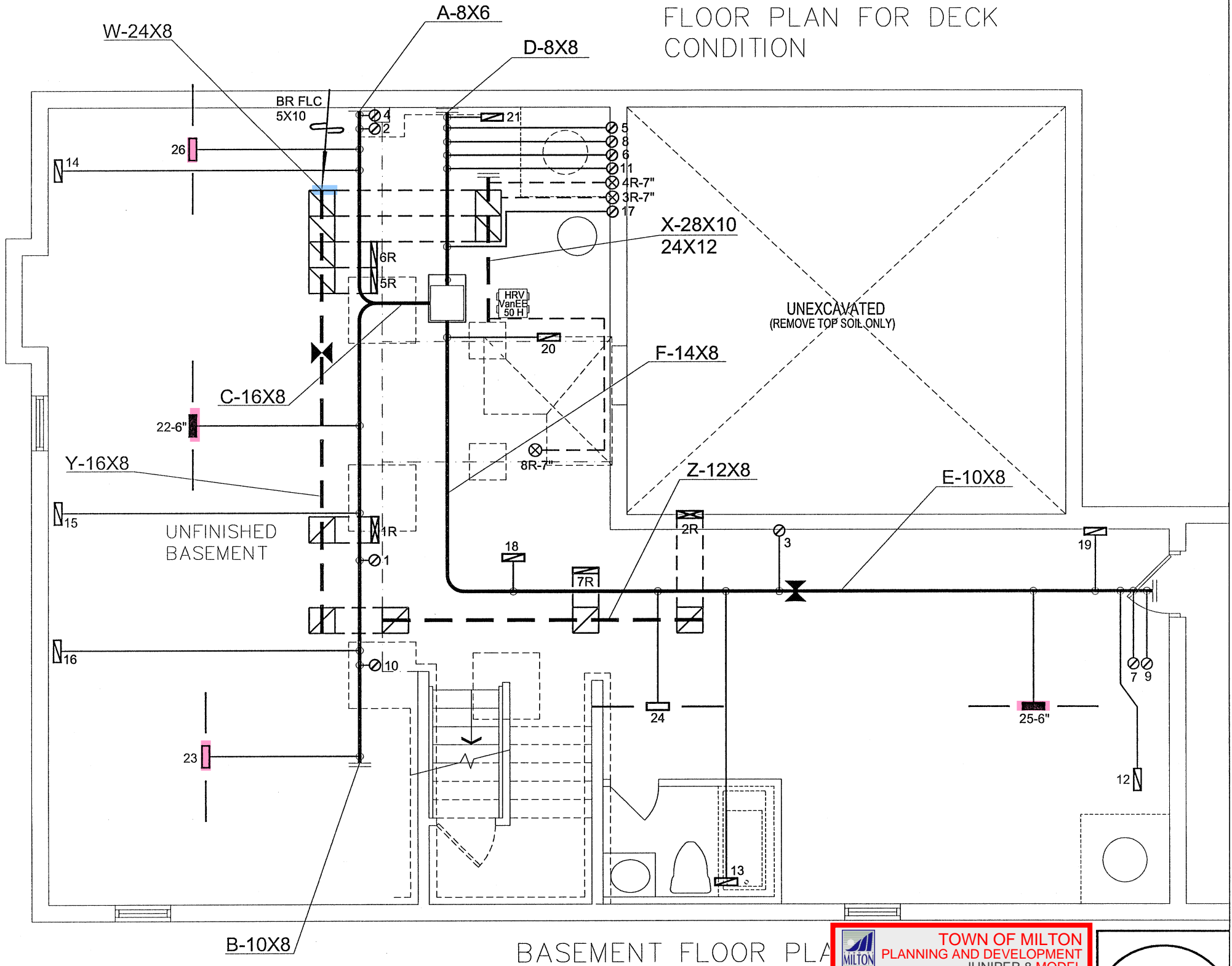
Weather Station Description				
Province:	Ontario			
Region:	Milton			
Weather Station Location:	Open flat terrain, grass			
Anemometer height (m):	10			
Local Shielding				
Building Site:	Suburban, forest			
Walls:	Heavy			
Flue:	Heavy			
Highest Ceiling Height (m):	6.71			
Building Configuration				
Type:	Detached			
Number of Stories:	Two			
Foundation:	Full			
House Volume (m <sup>3</sup> ):	1284.7			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (3.57 ACH)			
Custom BDT Data:	ELA @ 10 Pa.	1712.5 cm <sup>2</sup>		
	3.57	ACH @ 50 Pa		
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust		
	45.3	45.3		
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Leakage Rate (ACH/H):	0.307			
Cooling Air Leakage Rate (ACH/H):	0.105			

TYPE: JUNIPER 8  
LO# 71353RECEIVED  
TOWN OF MILTON  
MAR 29, 2017  
JUNIPER 8  
BUILDING DIVISION

BASEMENT FLOOR PLAN 3

BASEMENT FLOOR PLAN 2

FLOOR PLAN FOR DECK  
CONDITION



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

*Michael O'Brooke*  
Michael O'Brooke, BCIN# 19669  
HVAC DESIGNS LTD.

RESIDENTIAL HVAC (New Construction)


- 1) All HVAC work shall comply with Part 6 and 9.32/9.33.
- 2) Supply or return air ducts not protected by an insulated exterior wall shall be insulated to a minimum 2.1 RSI (R-12)
- 3) Exhaust ducts (principle, supplemental & other exhaust fans) passing through unheated space shall be insulated to a minimum 0.5 RSI (R-3)
- 4) All supply/return air ducts located in unconditioned spaces shall be sealed to a SMACNA Class 'A' seal level and supply air ducts in conditioned spaces shall be sealed to a SMACNA Class 'C' seal level
- 5) Furnaces to be equipped with brushless DC motor (ECM) and controlled with a programmable thermostat (4 times periods/day, 2 day types/week)
- 6) HRVs to be installed in accordance with 9.32.3.11. and manufacturers' requirements (intake/exhaust separation, distance from R/A drop)
- 7) Bathrooms and washrooms to have a min. 50 CFM exhaust fan ducted directly outdoors with ductwork sized in accordance with Table 9.32.3.5.
- 8) Range hoods to exhaust directly to outdoors with non-combustible ducting
- 9) Changes to the HVAC equipment or duct layout requires a revision permit to be applied for and approved prior to booking any HVAC inspections

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**TOWN OF MILTON**  
**PLANNING AND DEVELOPMENT**  
**JUNIPER 8 MODEL**

**BUILDING: REVIEWED**  
**SCOTT SHERRIFFS** APR 11, 2017  
**PLANS EXAMINER** **DATE**

Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province of Ontario, By-laws of the Region of Halton and Town of Milton

*Energy* 

**ENERGY STAR**

**CSA-F280-12**

	3.		
	2.		
DESCRIPTION	1.		
IR STACK ABOVE	No.	Description	Date
IR STACK 2nd FLOOR			
IR			
REVISIONS			
WITHOUT EXPRESSED WRITTEN CONSENT. THE DRAWINGS ARE DATED AND ING WITH WORK. LATEST MUNICIPAL APPROVED DRAWINGS ONLY TO BE 3S OR FROM ANY CHANGES TO ACCEPTED STANDARDS AND/OR THE			

Client  
**GREENPARK HOMES**

Project Name  
**LECCO RIDGE  
MILTON, ONTARIO**

**JUNIPER 8**      **3320 sqft**

**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.

HEAT LOSS	50294 BTU/H	# OF RUNS	S/A	R/A	FANS
UNIT DATA		3RD FLOOR			
MAKE	AMANA	2ND FLOOR	12	5	4
MODEL	AMVC960804CNA	1ST FLOOR	9	3	2
INPUT	80 MBTU/H	BASEMENT	5	1	0
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			
COOLING	3.5 TONS				
FAN SPEED	1316 cfm @ 0.5" w.c.				

Sheet Title  
**BASEMENT  
HEATING  
LAYOUT**

Date  
**DEC/2016**

Scale  
**3/16" = 1'-0"**

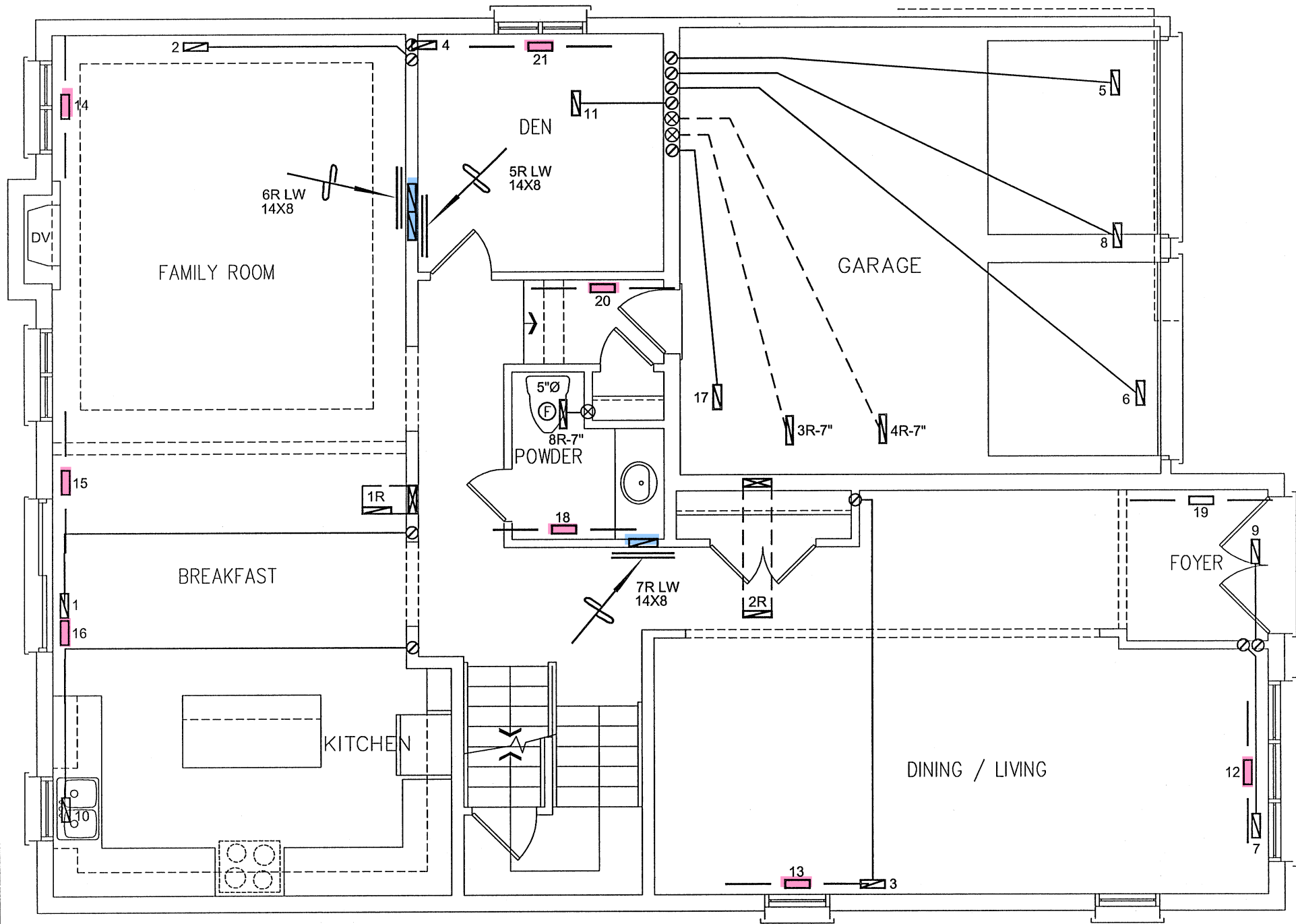
BCIN#  
**19669**

LO#  
**71353**

GROUND FLOOR PLAN 3

GROUND FLOOR PLAN 2

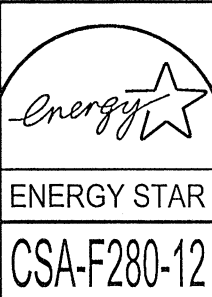
FLOOR PLAN FOR  
DECK CONDITION



GROUND FLOOR PLAN 1

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

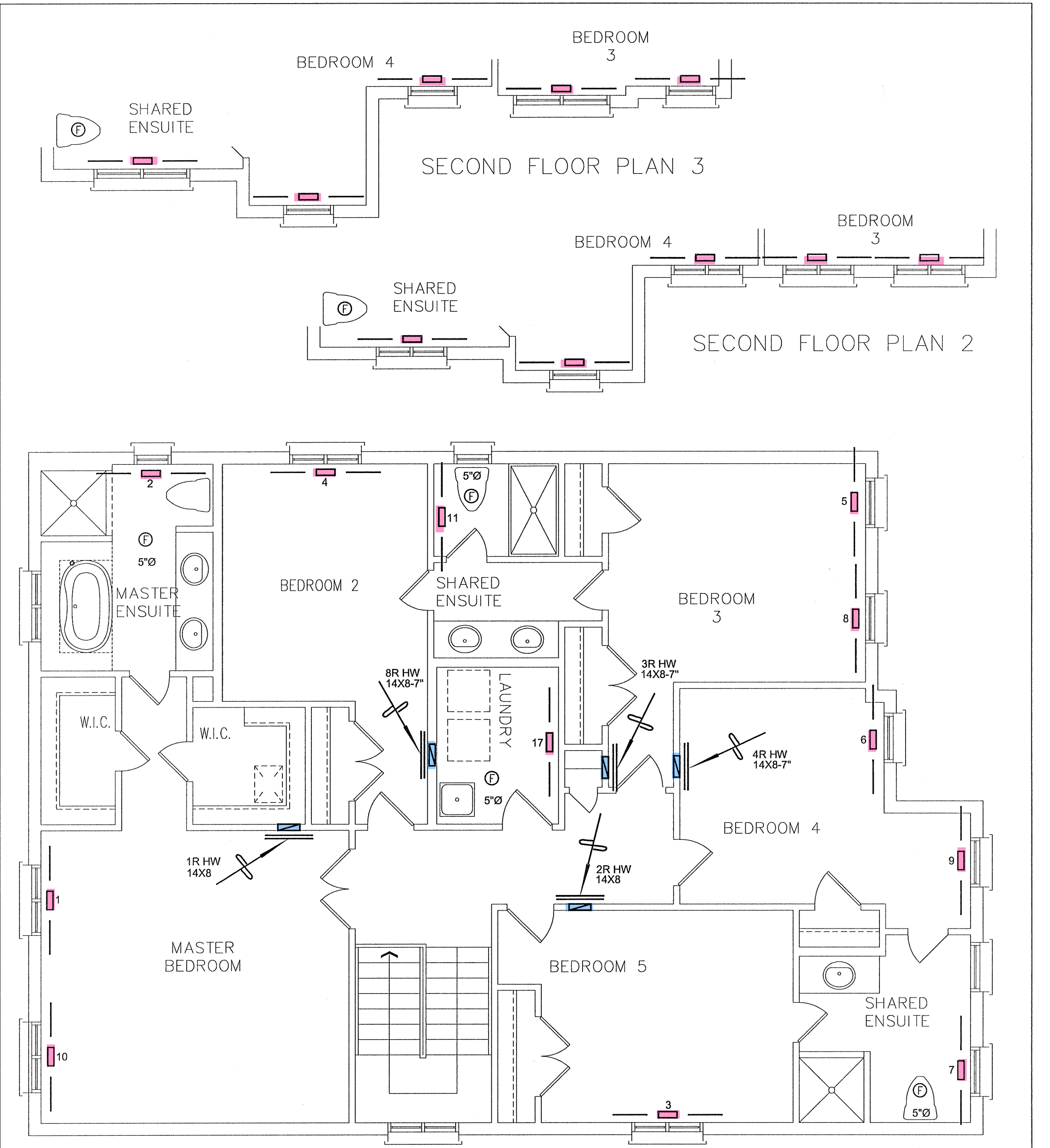
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MAR 29, 2017  
JUNIPER 8  
BUILDING DIVISION



HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
	FLOOR 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		

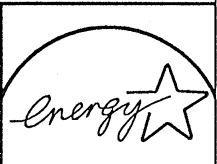
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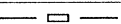
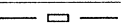

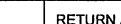


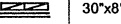

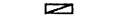
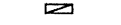


Client GREENPARK HOMES		 375 Finley Ave - Suite 202 - Ajax, Ontario L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375 Email: info@hvacdesigns.ca Web: www.hvacdesigns.ca Specializing in Residential Mechanical Design Services	 <div>TOWN OF MILTON PLANNING AND DEVELOPMENT JUNIPER 8 MODEL</div> <div>BUILDING: REVIEWED SCOTT SHERRIFFS      APR 11, 2017 PLANS EXAMINER      DATE</div> <div>Neither the issuance of a permit nor carrying out of inspections by the Town of Milton relieves the owner from full responsibility for compliance with the provisions of the Ontario Building Code Act and the Ontario Building Code, both as amended, as well as other applicable statutes and regulations of the Province on Ontario, By-laws of the Region of Halton and Town of Milton</div>	Sheet Title FIRST FLOOR HEATING LAYOUT	
Project Name LECCO RIDGE MILTON, ONTARIO				Date DEC/2016	
JUNIPER 8      3320 sqft				Scale 3/16" = 1'-0"	
		BCIN# 19669			
		LO#		71353	



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

RECEIVED  
TOWN OF MILTON  
MAR 29, 2017  
JUNIPER 8  
BUILDING DIVISION

  
ENERGY STAR  
CSA-F280-12

HVAC LEGEND								3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.		
	FLOOR SUPPLY AIR GRILLE		6" SUPPLY AIR BOOT ABOVE		14"x8" RETURN AIR GRILLE		RETURN AIR STACK ABOVE	1.		
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Client

GREENPARK HOMES

Project Name

LECCO RIDGE  
MILTON, ONTARIO

JUNIPER 8

3320 sqft

  
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TOWN OF MILTON  
PLANNING AND DEVELOPMENT  
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Sheet Title

SECOND FLOOR  
HEATING  
LAYOUT

Date

DEC/2016

Scale

3/16" = 1'-0"

BCIN# 19669

LO#

71353