

SITE NAME: LECCO RIDGE

WUP

DATE: Feb-17

WINTER NATURAL AIR CHANGE RATE 0.307

HEAT LOSS AT °F. 72

CSA-F280-12

BUILDER: GREENPARK HOMES

TYPE: JUNIPER 6

GFA: 3119

LO# 72384

SUMMER NATURAL AIR CHANGE RATE 0.105

HEAT GAIN AT °F. 14

ENERGYSTAR

ROOM USE	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	ENS-2				
EXP. WALL	36	22	8	12	15	14	23	7				
CLG. HT.	10	9	9	9	10	9	9	9				
FACTORS												
GRS.WALL AREA	360	198	72	108	150	126	207	63				
GLAZING	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN				
NORTH	17.9 15.8	0 0 0	9 161 143	0 0 0	18 321 285	5 89 79	0 0 0	0 0 0				
EAST	17.9 41.4	0 0 0	0 0 0	0 0 0	0 0 0	38 678 1574	0 0 0	16 286 663				
SOUTH	17.9 24.8	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	15 268 372	0 0 0				
WEST	17.9 41.4	34 607 1408	13 232 538	7 125 290	0 0 0	0 0 0	0 0 0	0 0 0				
SKYLT.	30.6 101.2	0 0 0	0 0 0	0 0 0	0 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 0	0 0 0	0 0 0	0 0 0				
NET EXPOSED WALL	2.6 0.5	326 853 165	176 461 89	65 170 33	90 235 46	107 280 54	111 290 56	191 500 97				
NET EXPOSED BSMT WALL ABOVE GR	3.3 0.6	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0				
EXPOSED CLG	1.4 0.7	320 441 219	117 161 80	104 143 71	204 281 140	168 231 115	210 289 144	119 164 82				
NO ATTIC EXPOSED CLG	2.2 1.1	0 0 0	0 0 0	0 0 0	0 0 0	36 81 40	0 0 0	0 0 0				
EXPOSED FLOOR	2.2 0.4	0 0 0	0 0 0	0 0 0	0 0 0	156 342 66	0 0 0	105 230 45				
BASEMENT/CRAWL HEAT LOSS		0	0	0	0	0	0	0				
SLAB ON GRADE HEAT LOSS		0	0	0	0	0	0	0				
SUBTOTAL HT LOSS		1901	1014	438	838	1702	848	1180				
SUB TOTAL HT GAIN		1792	850	394	470	1929	572	885				
LEVEL FACTOR / MULTIPLIER	0.20 0.38		0.20 0.38	0.20 0.38	0.20 0.38	0.20 0.38	0.20 0.38	0.20 0.38				
AIR CHANGE HEAT LOSS	725		387	167	319	649	323	450				
AIR CHANGE HEAT GAIN		149	71	33	39	160	47	74				
DUCT LOSS		0	0	0	0	235	0	163				
DUCT GAIN		0	0	0	0	280	0	143				
HEAT GAIN PEOPLE	240	2	480	0	0	1	240	0				
HEAT GAIN APPLIANCES/LIGHTS		467	467	0	467	467	467	467				
TOTAL HT LOSS BTU/H		2625	1401	605	1157	2586	1171	1792				
TOTAL HT GAIN x 1.3 BTU/H		3755	1804	555	1581	3998	1724	2039				

TOWN OF MILTON
PLANNING AND DEVELOPMENT
JUNIPER 6 MODEL

BUILDING: REVIEWED
SCOTT SHERRIFFS APR 7, 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 6
BUILDING DIVISION

ROOM USE	LV/DN	OFF	KT/FM	LAUN	FOY	MUD			WUP	BAS
EXP. WALL	24	22	72	0	98	8			17	180
CLG. HT.	10	11	10	9	10	11			10	10
FACTORS										
GRS.WALL AREA	240	242	720	0	980	88			162	1170
GLAZING	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN			LOSS GAIN	LOSS GAIN
NORTH	17.9 15.8	0 0 0	18 321 285	0 0 0	28 500 444	0 0 0			0 0 0	9 161 143
EAST	17.9 41.4	0 0 0	0 0 0	0 0 0	74 1321 3065	0 0 0			0 0 0	0 0 0
SOUTH	17.9 24.8	38 678 941	0 0 0	0 0 0	12 214 297	0 0 0			0 0 0	0 0 0
WEST	17.9 41.4	0 0 0	0 0 0	103 1839 4266	0 0 0	0 0 0			0 0 0	0 0 0
SKYLT.	30.6 101.2	0 0 0	0 0 0	0 0 0	0 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	20 481 93	20 481 93			20 481 93	20 481 93
NET EXPOSED WALL	2.6 0.5	202 529 102	224 586 113	617 1614 312	846 2214 428	68 178 34			142 370 72	0 0 0
NET EXPOSED BSMT WALL ABOVE GR	3.3 0.6	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0			0 0 0	540 1802 349
EXPOSED CLG	1.4 0.7	0 0 0	0 0 0	6 8 4	134 185 92	0 0 0			0 0 0	0 0 0
NO ATTIC EXPOSED CLG	2.2 1.1	0 0 0	0 0 0	0 0 0	0 0 0	24 54 27			0 0 0	0 0 0
EXPOSED FLOOR	2.2 0.4	0 0 0	0 0 0	0 0 0	65 143 28	0 0 0			0 0 0	0 0 0
BASEMENT/CRAWL HEAT LOSS		0	0	0	0	0			0	6044
SLAB ON GRADE HEAT LOSS		0	0	0	0	0			0	
SUBTOTAL HT LOSS		1207	907	3461	327	5067			851	8488
SUB TOTAL HT GAIN		1043	398	4583	119	4495			165	584
LEVEL FACTOR / MULTIPLIER	0.30 0.44		0.30 0.44	0.30 0.44	0.20 0.38	0.30 0.44			0.50 0.89	
AIR CHANGE HEAT LOSS	532		400	1525	125	2232				8299
AIR CHANGE HEAT GAIN		87	33	381	10	373				62
DUCT LOSS		0	0	0	45	0				0
DUCT GAIN		0	0	0	60	0				0
HEAT GAIN PEOPLE	240	0	0	0	0	0			0	0
HEAT GAIN APPLIANCES/LIGHTS		467	467	467	467	467			0	0
TOTAL HT LOSS BTU/H		1739	1307	4986	497	7300			851	16787
TOTAL HT GAIN x 1.3 BTU/H		2076	1168	7059	852	6328			214	840

TOTAL HEAT GAIN BTU/H: 36281

TONS: 3.02

LOSS DUE TO VENTILATION LOAD BTU/H: 2354

STRUCTURAL HEAT LOSS: 46390

TOTAL COMBINED HEAT LOSS BTU/H: 48743

SITE NAME: LECCO RIDGE
BUILDER: GREENPARK HOMES

WUP
TYPE: JUNIPER 6

DATE: Feb-17

GFA: 3119 LO# 72384

HEATING CFM 1131 COOLING CFM 1131
TOTAL HEAT LOSS 46,390 TOTAL HEAT GAIN 35,825
AIR FLOW RATE CFM 24.38 AIR FLOW RATE CFM 31.57

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

#AMANA
AMEC960603BNA
FAN SPEED 60

AFUE = 96.0 %
INPUT (BTU/H) = 60,000
OUTPUT (BTU/H) = 57,600

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	10	8	4
R/A	0	0	4	2	1

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

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	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	MBR	ENS-2	LV/DN	OFF	KT/FM	KT/FM	KT/FM	LAUN	MUD	FOY	FOY	BAS	BAS	BAS	BAS
RM LOSS MBH	1.31	1.40	0.61	1.16	2.59	1.17	1.79	1.31	0.64	1.74	1.31	1.66	1.66	1.66	0.50	0.95	3.65	3.65	4.41	4.41	4.41	4.41
CFM PER RUN HEAT	32	34	15	28	63	29	44	32	16	42	32	41	41	41	12	23	89	89	108	108	108	108
RM GAIN MBH	1.88	1.80	0.55	1.58	4.00	1.72	2.04	1.88	1.05	2.08	1.17	2.35	2.35	2.35	0.85	0.79	3.16	3.16	0.26	0.26	0.26	0.26
CFM PER RUN COOLING	59	57	18	50	126	54	64	59	33	66	37	74	74	74	27	25	100	100	8	8	8	8
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.15	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	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	41	50	44	42	52	52	53	34	20	8	35	45	28	34	38	24	29	55	23	14	25	25
EQUIVALENT LENGTH	120	180	140	160	150	170	180	180	190	120	120	120	90	150	160	110	110	120	170	130	100	110
TOTAL EFFECTIVE LENGTH	161	230	184	202	202	222	233	214	210	128	155	165	118	184	198	134	139	149	225	153	114	135
ADJUSTED PRESSURE	0.11	0.07	0.09	0.09	0.08	0.08	0.07	0.08	0.08	0.13	0.11	0.1	0.15	0.09	0.09	0.13	0.12	0.11	0.07	0.1	0.13	0.11
ROUND DUCT SIZE	4	5	4	4	6	5	5	5	4	5	4	5	5	5	4	4	5	5	6	6	6	6
HEATING VELOCITY (ft/min)	367	250	172	321	321	213	323	235	184	308	367	301	301	301	138	264	653	653	551	551	551	551
COOLING VELOCITY (ft/min)	677	419	207	574	642	396	470	433	379	485	424	543	543	543	310	287	734	734	41	41	41	41
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	C	C	C	B	A	A	A	B	B	B	B	C	C	C	A	B	A	A	C	C	B	A

RUN #	1	2	3	4	5	6	7	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	MBR	ENS-2	LV/DN	OFF	KT/FM	KT/FM	KT/FM	LAUN	MUD	FOY	FOY	BAS	BAS	BAS	BAS
RM LOSS MBH	1.31	1.40	0.61	1.16	2.59	1.17	1.79	1.31	0.64	1.74	1.31	1.66	1.66	1.66	0.50	0.95	3.65	3.65	4.41	4.41	4.41	4.41
CFM PER RUN HEAT	32	34	15	28	63	29	44	32	16	42	32	41	41	41	12	23	89	89	108	108	108	108
RM GAIN MBH	1.88	1.80	0.55	1.58	4.00	1.72	2.04	1.88	1.05	2.08	1.17	2.35	2.35	2.35	0.85	0.79	3.16	3.16	0.26	0.26	0.26	0.26
CFM PER RUN COOLING	59	57	18	50	126	54	64	59	33	66	37	74	74	74	27	25	100	100	8	8	8	8
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.15	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	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	41	50	44	42	52	52	53	34	20	8	35	45	28	34	38	24	29	55	23	14	25	25
EQUIVALENT LENGTH	120	180	140	160	150	170	180	180	190	120	120	120	90	150	160	110	110	120	170	130	100	110
TOTAL EFFECTIVE LENGTH	161	230	184	202	202	222	233	214	210	128	155	165	118	184	198	134	139	149	225	153	114	135
ADJUSTED PRESSURE	0.11	0.07	0.09	0.09	0.08	0.08	0.07	0.08	0.08	0.13	0.11	0.1	0.15	0.09	0.09	0.13	0.12	0.11	0.07	0.1	0.13	0.11
ROUND DUCT SIZE	4	5	4	4	6	5	5	5	4	5	4	5	5	5	4	4	5	5	6	6	6	6
HEATING VELOCITY (ft/min)	367	250	172	321	321	213	323	235	184	308	367	301	301	301	138	264	653	653	551	551	551	551
COOLING VELOCITY (ft/min)	677	419	207	574	642	396	470	433	379	485	424	543	543	543	310	287	734	734	41	41	41	41
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	4X10	4X10	4X10
TRUNK	C	C	C	B	A	A	A	B	B	B	B	C	C	C	A	B	A	A	C	C	B	A

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JUNIPER 6
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SUPPLY AIR TRUNK SIZE												RETURN AIR TRUNK SIZE											
TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC	ROUND	RECT	VELOCITY		TRUNK	STATIC	ROUND	RECT	VELOCITY	
CFM	PRESS.	DUCT	DUCT	(ft/min)	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)	(ft/min)	CFM	PRESS.	DUCT	DUCT	(ft/min)	(ft/min)
TRUNK A	434	0.07	10.6	14	X 8 558	TRUNK G	0	0.00	0	0	X 8 0	TRUNK O	0	0.06	0	0	X 8 0	TRUNK O	0	0.06	0	0	X 8 0
TRUNK B	715	0.07	12.8	20	X 8 644	TRUNK H	0	0.00	0	0	X 8 0	TRUNK P	0	0.06	0	0	X 8 0	TRUNK P	0	0.06	0	0	X 8 0
TRUNK C	420	0.07	10.5	14	X 8 540	TRUNK I	0	0.00	0	0	X 8 0	TRUNK Q	0	0.06	0	0	X 8 0	TRUNK Q	0	0.06	0	0	X 8 0
TRUNK D	0	0.00	0	0	X 8 0	TRUNK J	0	0.00	0	0	X 8 0	TRUNK R	0	0.06	0	0	X 8 0	TRUNK R	0	0.06	0	0	X 8 0
TRUNK E	0	0.00	0	0	X 8 0	TRUNK K	0	0.00	0	0	X 8 0	TRUNK S	0	0.06	0	0	X 8 0	TRUNK S	0	0.06	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	TRUNK T	0	0.06	0	0	X 8 0	TRUNK T	0	0.06	0	0	X 8 0
												TRUNK U	0	0.06	0	0	X 8 0	TRUNK U	0	0.06	0	0	X 8 0
												TRUNK V	0	0.06	0	0	X 8 0	TRUNK V	0	0.06	0	0	X 8 0
												TRUNK W	0	0.06	0	0	X 8 0	TRUNK W	0	0.06	0	0	X 8 0
RETURN AIR #	1	2	3	4	5	6	0	0	0	0	0	TRUNK X	976	0.06	14.9	26	X 8 676	TRUNK X	976	0.06	14.9	26	X 8 676
AIR VOLUME	155	155	140	85	155	270	0	0	0	0	0	TRUNK Y	495	0.06	11.6	16	X 8 557	TRUNK Y	495	0.06	11.6	16	X 8 557
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	TRUNK Z	0	0.06	0	0	X 8 0	TRUNK Z	0	0.06	0	0	X 8 0
ACTUAL DUCT LGH.	36	46	55	57	29	30	1	1	1	1	1	DROP	1131	0.06	15.8	24	X 10 679	DROP	1131	0.06	15.8	24	X 10 679
EQUIVALENT LENGTH	145	145	145	185	150	170	0	0	0	0	0												
TOTAL EFFECTIVE LH	181	191	200	242	179	200	1	1	1	1	1												
ADJUSTED PRESSURE	0.08	0.08	0.07	0.06	0.08	0.07	14.80	14.80	14.80	14.80	14.80												
ROUND DUCT SIZE	7	7	6.9	6	7	8.9	0	0	0	0	0												
INLET GRILL SIZE	8	8	8	8	8	8	0	0	0	0	0												
	X	X	X	X	X	X	X	X	X	X	X												
INLET GRILL SIZE	14	14	14	14	14	30	0	0	0	0	0												

TYPE: JUNIPER 6
SITE NAME: LECCO RIDGE

LO # 72384
WUP

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	6 @ 10.6 cfm	63.6 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	79.5 cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	190.8	cfm
Less Principal Ventil. Capacity	86	cfm
Required Supplemental Capacity	104.8	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANE 40H+	Location: BSMT
86.0 cfm	3.0 sones
☒	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION	
CFM	ΔT °F
86.0 CFM	72 F
X	X
FACTOR	% LOSS
1.08	0.35

SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
ENS-2	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANE 40H+		
86 cfm high	37 cfm low	
65 % Sensible Efficiency	☒	HVI Approved
@ 32 deg F (0 deg C)		

LOCATION OF INSTALLATION	
Lot:	
Township	
Address	
Roll #	

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 6
BUILDING DIVISION

BUILDER:	
Name:	
Address:	
City:	
Telephone #:	

TOWN OF MILTON
PLANNING AND DEVELOPMENT
JUNIPER 6 MODEL
BUILDING: REVIEWED
SCOTT SHERRIFFS **APR 7, 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

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:	February-17

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: JUNIPER 6	WUP	BUILDER: GREENPARK HOMES
SFQT: 3119	LO# 72384	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):	41790.0	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:	6.5 ft
LENGTH: 52.0 ft	WIDTH: 38.0 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

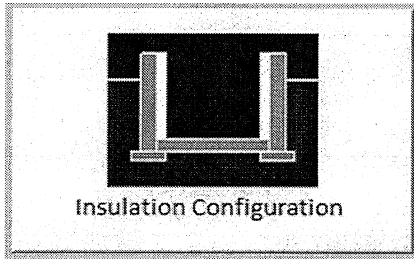
RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 6
BUILDING DIVISION

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):	15.8	 Insulation Configuration
Floor Width (m):	11.6	
Exposed Perimeter (m):	0.0	
Wall Height (m):	2.9	
Depth Below Grade (m):	2.0	
Window Area (m ²):	0.8	
Door Area (m ²):	3.7	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):		1771

TYPE: JUNIPER 6
LO# 72384

WUP

RECEIVED
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MAR 29, 2017
JUNIPER 6
BUILDING DIVISION

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 ³):	1183.4		
Air Leakage/Ventilation			
Air Tightness Type:	Present (1961-) (3.57 ACH)		
Custom BDT Data:	ELA @ 10 Pa.	1577.5 cm ²	
	3.57	ACH @ 50 Pa	
Mechanical Ventilation (L/s):	Total Supply	Total Exhaust	
	40.6	40.6	
Flue Size			
Flue #:	#1	#2	#3
Diameter (mm):	0	0	0
	#4	0	
Natural Infiltration Rates			
Heating Air Leakage Rate (ACH/H):	0.307		
Cooling Air Leakage Rate (ACH/H):	0.105		

TYPE: JUNIPER 6
LO# 72384

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MAR 29, 2017
JUNIPER 6
BUILDING DIVISION

RESIDENTIAL HVAC (New Construction)

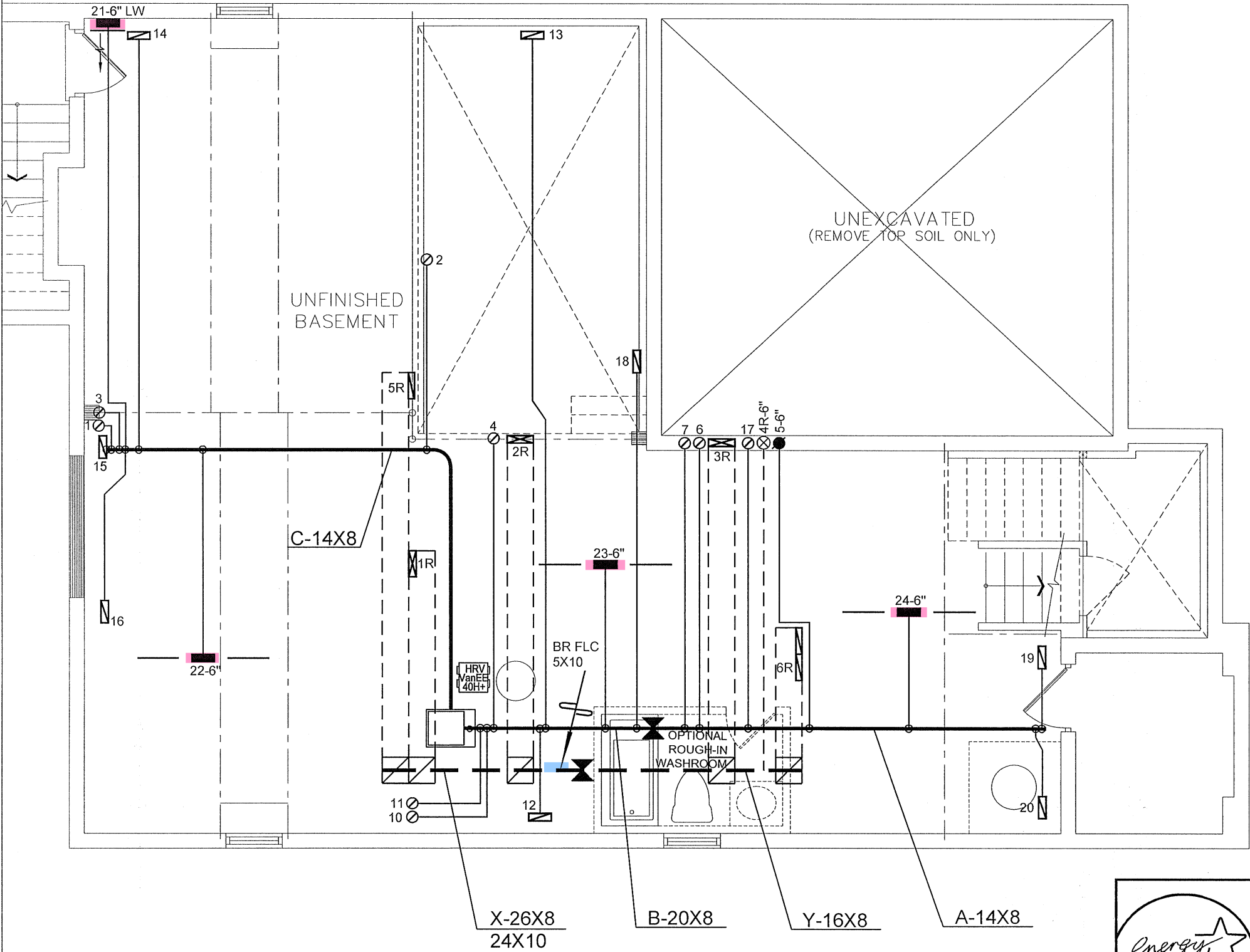
- 1) All HVAC work shall comply with Part 6 and 9.32/9.33.
- 2) Supply or return air ducts not protected by an insulated exterior wall shall be insulated to a minimum 2.1 RSI (R-12)
- 3) Exhaust ducts (principle, supplemental & other exhaust fans) passing through unheated space shall be insulated to 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 to 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



TOWN OF MILTON
PLANNING AND DEVELOPMENT
JUNIPER 6 MODEL

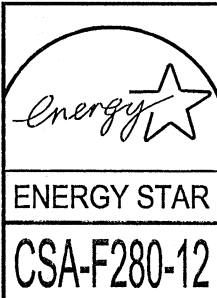
BUILDING: REVIEWED
SCOTT SHERRIFFS
PLANS EXAMINER
APR 7, 2017
DATE

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 on Ontario, By-laws of the Region of Halton and Town of Milton



I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C. 3.2.3 OF THE BUILDING CODE.
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

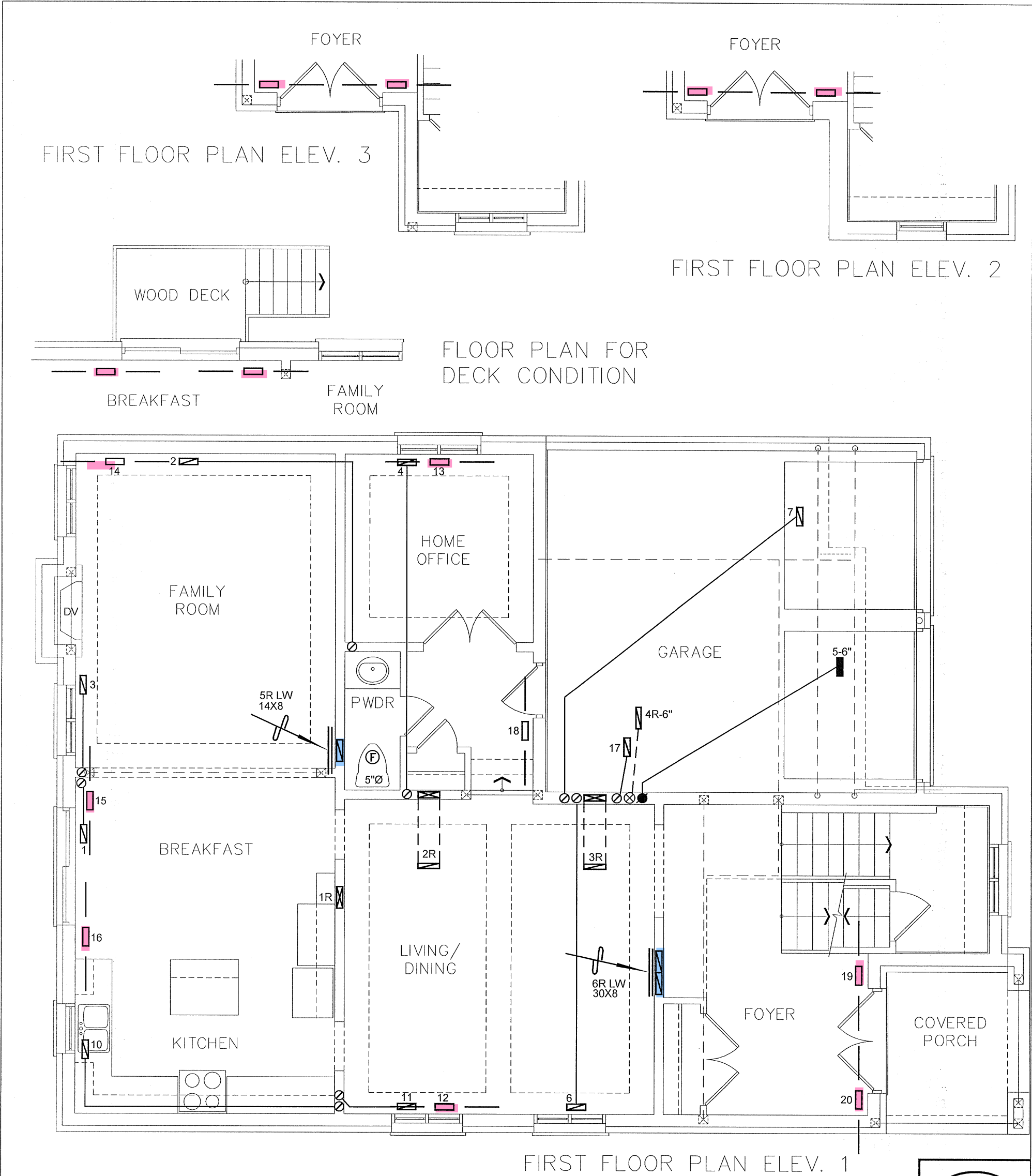
RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 6
BUILDING DIVISION



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
	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	Date	
							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 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	HEAT LOSS 48743 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title BASEMENT HEATING LAYOUT	
Project Name LECCO RIDGE MILTON, ONTARIO			MAKE AMANA	3RD FLOOR					
			MODEL AMEC960603BNA	2ND FLOOR		10	4	4	
			INPUT 60 MBTU/H	1ST FLOOR		8	2	2	
			OUTPUT 57.6 MBTU/H	BASEMENT		4	1	0	
JUNIPER 6 WUP 3119 sqft		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						Date FEB/2017
		FAN SPEED 1131 cfm @ 0.5" w.c.							Scale 3/16" = 1'-0"
		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.		BCIN# 19669					
		LO# 72384							

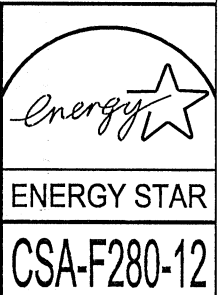


I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C. 3.2.5 OF THE BUILDING CODE.

Michael O'Rourke

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

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 6
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

Project Name

LECCO RIDGE
MILTON, ONTARIO

JUNIPER 6 WUP 3119 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.

TOWN OF MILTON
PLANNING AND DEVELOPMENT
JUNIPER 6 MODEL

BUILDING: REVIEWED
SCOTT SHERRIFFS APR 7, 2017
PLANS EXAMINER DATE

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Sheet Title

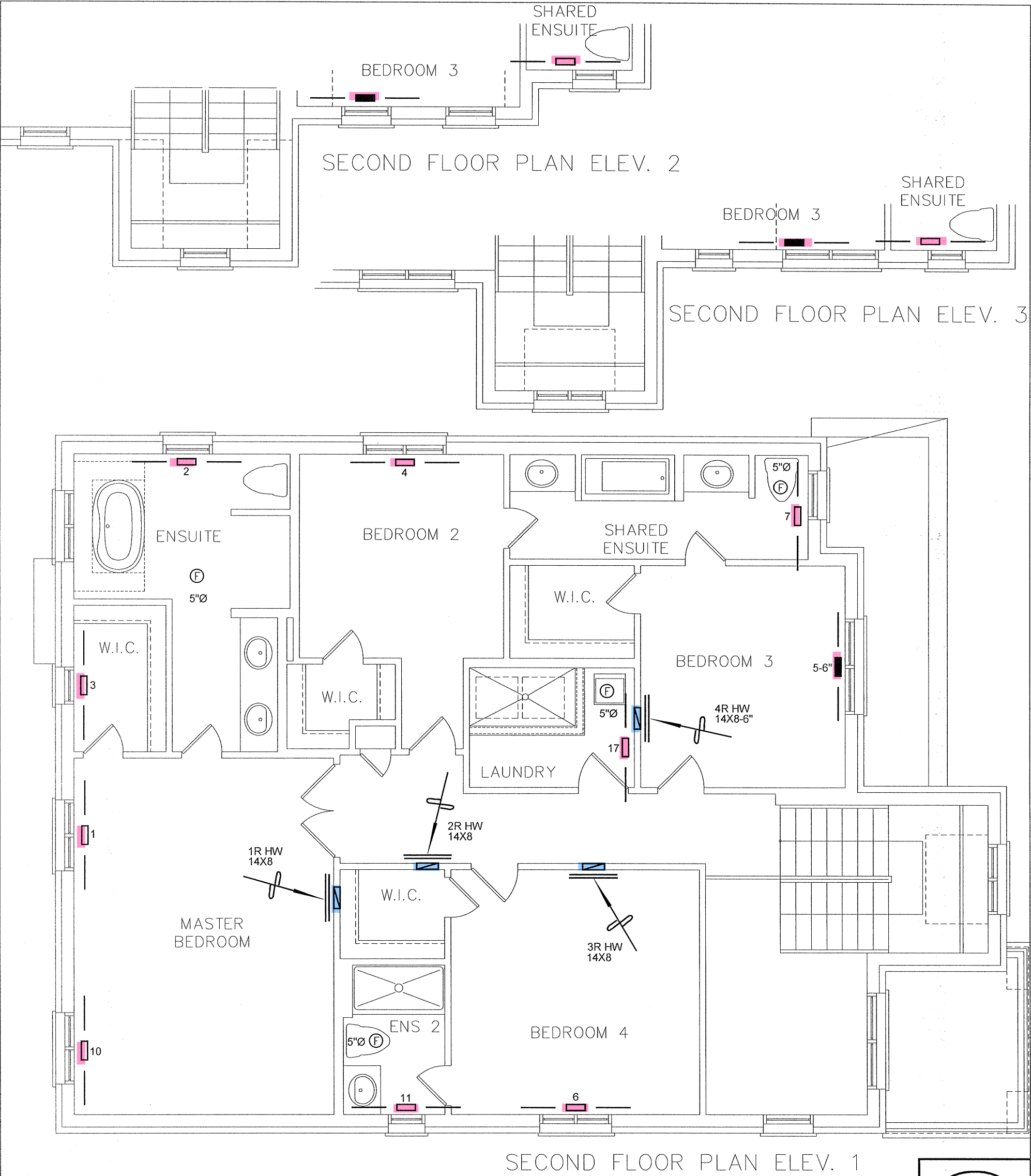
FIRST FLOOR
HEATING
LAYOUT

Date FEB/2017

Scale 3/16" = 1'-0"

BCIN# 19669

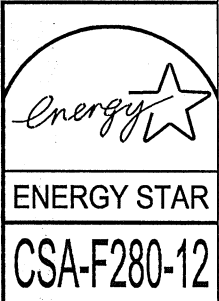
LO# 72384



I MICHAEL O'Rourke HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C. 3.2.3 OF THE BUILDING CODE.

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

RECEIVED
TOWN OF MILTON
MAR 29, 2017
JUNIPER 6
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.	
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							REVISIONS		

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Project Name LECCO RIDGE MILTON, ONTARIO				Date FEB/2017	Scale 3/16" = 1'-0"
JUNIPER 6 WUP 3119 sqft		BCIN# 19669		LO# 72384	
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.					