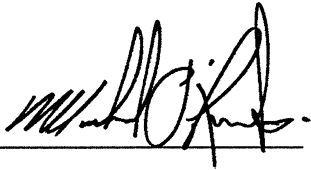


Schedule 1: Designer Information

Use one form for each individual who reviews and takes responsibility for design activities with respect to the project.

A. Project Information				
Building number, street name			Unit no.	Lot/con.
Municipality VAUGHAN	Postal code	Plan number/ other description		
B. Individual who reviews and takes responsibility for design activities				
Name MICHAEL O'ROURKE		Firm HVAC DESIGNS LTD.		
Street address 375 FINLEY AVE			Unit no. 202	Lot/con. N/A
Municipality AJAX	Postal code L1S 2E2	Province ONTARIO	E-mail info@hvacdsgns.ca	
Telephone number (905) 619-2300	Fax number (905) 619-2375	Cell number ()		
C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]				
☐ House ☐ Small Buildings ☐ Large Buildings ☐ Complex Buildings ☒ HVAC – House ☐ Building Services ☐ Detection, Lighting and Power ☐ Fire Protection ☐ Building Structural ☐ Plumbing – House ☐ Plumbing – All Buildings ☐ On-site Sewage Systems				
Description of designer's work HEAT LOSS / GAIN CALCULATIONS DUCT SIZING RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY RESIDENTIAL SYSTEM DESIGN per CSA-F280-12			Model: 25-6	
			Project: KLEINBURG GLEN	
D. Declaration of Designer				
I <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate):				
(print name)				
☐ I review and take responsibility for the design work on behalf of a firm registered under subsection 3.2.4. of Division C, of the Building Code. I am qualified, and the firm is registered, in the appropriate classes/categories. Individual BCIN: _____ Firm BCIN: _____				
☒ I review and take responsibility for the design and am qualified in the appropriate category as an "other designer" under subsection 3.2.5. of Division C, of the Building Code. Individual BCIN: <u>19669</u> Basis for exemption from registration and qualification: <u>O.B.C SENTENCE 3.2.4.1 (4)</u>				
☐ The design work is exempt from the registration and qualification requirements of the Building Code. Basis for exemption from registration and qualification: _____				
I certify that:				
1. The information contained in this schedule is true to the best of my knowledge.				
2. I have submitted this application with the knowledge and consent of the firm.				
<u>January 19, 2016</u>				
Date		Signature of Designer		

NOTE:

- For the purposes of this form, "individual" means the "person" referred to in Clause 3.2.4.7(1) d) of Division C, Article 3.2.5.1. of Division C, and all other persons who are exempt from qualification under Subsections 3.2.4. and 3.2.5. of Division C.
- Schedule 1 is not required to be completed by a holder of a license, temporary license, or a certificate of authorization, issued by the Ontario Association of Architects. Schedule 1 is also not required to be completed by a holder of a license to practise, a limited license to practise, or a certificate of authorization, issued by the Association of Professional Engineers of Ontario.

SITE NAME: KLEINBURG GLEN BUILDING: GOLD PARK HOMES										DATE: Jan-16 LO# 66896		WINTER NATURAL AIR CHANGE RATE 0.373 SUMMER NATURAL AIR CHANGE RATE 0.180		HEAT LOSS AT °F. 76 HEAT GAIN AT °F. 16		CSA-F280-12 SB-12 PACKAGE J	
ROOM USE EXP. WALL CLG. HT.	MBR	ENS	WIC	BED-2	BED-3	BED-4	BATH	WIR-2	ENS-2	WIR-2	ENS-2	WIR-2	ENS-2	WIR-2	ENS-2	WIR-2	ENS-2
GRS.WALL AREA	340	207	63	216	281	423	45	884	81	884	81	884	81	884	81	884	81
GLAZING	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NORTH	24.1 17.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EAST	24.1 43.0	25 602 1076	18 434 775	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOUTH	24.1 26.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WEST	24.1 43.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SKYL.T.	24.1 88.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DOORS	25.2 6.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5 0.7	315 1088 229	189 553 137	63 218 46	200 691 145	245 846 178	381 1316 277	45 155 33	74 256 54	864 2983 628	0	0	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	6.3 1.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.5 0.8	264 401 201	120 182 91	56 85 43	190 289 144	280 426 213	231 351 176	85 99 49	63 96 48	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.5 1.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5 0.5	0	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	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBTOTAL HT LOSS	2092	1269	303	1385	1657	2679	254	3488	520	3488	520	3488	520	3488	520	3488	520
SUB TOTAL HT GAIN	1506	1003	88	712	813	2250	82	734	286	734	286	734	286	734	286	734	286
LEVEL FACTOR / MULTIPLIER	0.10 0.17	0.10 0.17	0.10 0.17	0.10 0.17	0.10 0.17	0.10 0.17	0.10 0.17	0.30 0.69	0.10 0.17	0.30 0.69	0.10 0.17	0.30 0.69	0.10 0.17	0.30 0.69	0.10 0.17	0.30 0.69	0.10 0.17
AIR CHANGE HEAT LOSS	345	209	50	225	273	442	42	2396	86	2396	86	2396	86	2396	86	2396	86
AIR CHANGE HEAT GAIN	138	92	8	65	75	208	0	68	0	68	0	68	0	68	0	68	0
DUCT LOSS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DUCT GAIN	0	0	0	0	0	0	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	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	522	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	2437	1478	353	1590	1931	3121	296	5884	606	5884	606	5884	606	5884	606	5884	606
TOTAL HT GAIN x 1.3 BTU/H	3439	1424	125	2001	2144	4199	117	1042	407	1042	407	1042	407	1042	407	1042	407

ROOM USE EXP. WALL CLG. HT.	DEN	DIN	KIT/FM	LAUN	WIR	FOY	GRT	BAS	LOSS	GAIN
GRS.WALL AREA	224	241	679	69	0	485	722	1066	12	289
GLAZING	0	0	0	0	0	0	0	0	0	0
NORTH	24.1 17.5	0	0	0	0	0	0	0	0	0
EAST	24.1 43.0	0	0	0	0	0	0	0	0	0
SOUTH	24.1 26.4	0	0	0	0	0	0	0	0	0
WEST	24.1 43.0	0	0	0	0	0	0	0	0	0
SKYL.T.	24.1 88.1	0	0	0	0	0	0	0	0	0
DOORS	25.2 6.3	0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5 0.7	184 634 134	204 704 148	69 238 50	0	58 1464 308	20 505 106	361 2285 481	0	0
NET EXPOSED BSMT WALL ABOVE GR	6.3 1.3	0	0	0	0	0	0	0	0	0
EXPOSED CLG	1.5 0.8	0	0	0	0	0	0	0	0	0
NO ATTIC EXPOSED CLG	2.5 1.2	14 34 17	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5 0.5	132 324 68	99 243 51	63 154 33	54 132 28	0	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	1956	1838	4870	392	132	3097	3818	8523	0.40	0.79
SUB TOTAL HT GAIN	1940	1176	3862	83	28	788	2436	691	0.40	0.79
LEVEL FACTOR / MULTIPLIER	0.20 0.27	0.20 0.27	0.20 0.27	0.20 0.27	0.20 0.27	0.20 0.27	0.30 0.69	0.40 0.79	0.40	0.79
AIR CHANGE HEAT LOSS	533	501	1326	107	36	844	2623	6692	0.40	0.79
AIR CHANGE HEAT GAIN	178	108	355	8	3	72	224	63	0.40	0.79
DUCT LOSS	249	234	620	50	17	0	0	0	0	0
DUCT GAIN	264	181	474	61	3	0	0	0	0	0
HEAT GAIN PEOPLE	240	0	0	0	0	0	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	522	0	0	0	0	0	0	0	0	0
TOTAL HT LOSS BTU/H	2737	2573	6816	549	185	3941	6440	15215	0.40	0.79
TOTAL HT GAIN x 1.3 BTU/H	3776	2582	6775	875	44	5119	4136	980	0.40	0.79

TOTAL HEAT GAIN BTU/H: 35744

TONS: 2.98

LOSS DUE TO VENTILATION LOAD BTU/H: 2651

STRUCTURAL HEAT LOSS: 56154

TOTAL COMBINED HEAT LOSS BTU/H: 58805

SITE NAME: KLEINBURG GLEN
BUILDER: GOLD PARK HOMES

TYPE: 25-6
DATE: Jan-16
GFA: 3019 LO# 68896

HEATING CFM	1100	COOLING CFM	1100	LENNOX	EL195UH070XE36B	70	AFUE = 95.0 %
TOTAL HEAT LOSS	56,154	TOTAL HEAT GAIN	35,185		FAN SPEED	LOW	INPUT (BTU/H) = 66,000
AIR FLOW RATE CFM	19.59	AIR FLOW RATE CFM	31.26			MEDIUM	OUTPUT (BTU/H) = 63,000
RUN COUNT	4th	3rd	2nd	1st		HIGH	DESIGN CFM = 1100
S/A	0	9	8	4			CFM @ 5" E.S.P.
R/A	0	4	3	1			
All S/A diffusers 4"x10" unless noted otherwise on layout.							
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 diff press. loss				0.03			
min adjusted pressure s/a				0.15			
r/a grille press. loss				0.17			
adjusted pressure r/a				0.02			
adjusted pressure r/a				0.15			
TEMPERATURE RISE				53			° F

All S/A diffusers 4"x10" unless noted otherwise on layout.

All S/A runs 5'Ø unless noted otherwise on layout.

ROOM #	1	2	3	4	5	6	7	8	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	BED-4	ENS-2	DEN	DIN	KT/FM	KT/FM	KT/FM	LAUN	W/R	FOY	GRT	BAS	BAS	BAS	GRT
RM LOSS MBH	2.44	1.48	0.35	1.59	1.93	1.56	0.30	1.56	0.61	2.74	2.57	2.27	2.27	2.27	0.55	0.19	3.94	3.22	5.07	5.07	5.07	3.22
CFM PER RUN HEAT	48	29	7	31	38	31	6	31	12	54	50	45	45	45	11	4	77	63	99	99	99	63
RM GAIN MBH	3.44	1.42	0.13	2.00	2.14	2.10	0.12	2.10	0.41	3.78	2.58	2.26	2.26	2.26	0.87	0.04	1.12	2.07	0.33	0.33	0.33	2.07
CFM PER RUN COOLING	108	45	4	63	67	66	4	66	13	118	81	71	71	71	27	1	35	65	10	10	10	65
ADJUSTED PRESSURE	0.15	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.15	0.16	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16	0.17
ACTUAL DUCT LGH	53	51	64	53	73	86	62	86	71	70	45	40	41	52	59	47	68	17	13	21	44	27
EQUIVALENT LENGTH	160	180	200	230	210	220	180	240	230	120	170	170	150	160	200	190	170	90	100	130	110	100
TOTAL EFFECTIVE LENGTH	213	231	264	283	283	306	242	326	301	190	215	210	191	212	259	237	238	107	113	151	154	127
ADJUSTED PRESSURE	0.07	0.07	0.07	0.06	0.06	0.06	0.07	0.05	0.06	0.08	0.08	0.08	0.09	0.09	0.07	0.07	0.07	0.16	0.14	0.11	0.11	0.14
ROUND DUCT SIZE	6	5	4	5	5	5	4	6	4	6	5	5	5	5	4	4	6	4	5	5	5	4
HEATING VELOCITY (ft/min)	245	213	80	228	279	228	69	158	138	275	367	330	330	330	126	46	393	723	727	727	727	723
COOLING VELOCITY (ft/min)	551	330	46	463	492	485	46	337	149	602	595	521	521	521	310	11	178	746	73	73	73	746
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10
TRUNK	C	C	C	B	B	A	B	A	A	A	B	C	C	C	A	B	A	E	E	F	F	E

ROOM NAME	W/R-2	W/R-2
RM LOSS MBH	2.94	2.94
CFM PER RUN HEAT	58	58
RM GAIN MBH	0.52	0.52
CFM PER RUN COOLING	16	16
ADJUSTED PRESSURE	0.17	0.17
ACTUAL DUCT LGH	37	18
EQUIVALENT LENGTH	120	140
TOTAL EFFECTIVE LENGTH	157	158
ADJUSTED PRESSURE	0.11	0.11
ROUND DUCT SIZE	4	4
HEATING VELOCITY (ft/min)	665	665
COOLING VELOCITY (ft/min)	184	184
OUTLET GRILL SIZE	3X10	3X10
TRUNK	F	F

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	216	0.05	8.9	10	X	8	389	0	0.00	0	X	8	0	0.05	0	0	8	
	TRUNK B	345	0.05	10.6	14	X	8	444	0	0.00	0	X	8	0	0.05	0	0	8	
	TRUNK C	219	0.07	8.2	8	X	8	493	0	0.00	0	X	8	0	0.05	0	0	8	
	TRUNK D	564	0.05	12.7	16	X	10	508	0	0.00	0	X	8	0	0.05	0	0	8	
	TRUNK E	225	0.14	7	6	X	8	675	0	0.00	0	X	8	0	0.05	0	0	8	
	TRUNK F	314	0.11	8.4	8	X	8	707	0	0.00	0	X	8	0	0.05	0	0	8	
RETURN AIR #	1	2	3	4	5	6	7	8										BR	
AIR VOLUME	85	75	75	75	110	155	110	270	0	0	0	0	0	0	0	0	0	145	
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	
ACTUAL DUCT LGH.	67	69	72	75	46	41	65	27	1	1	1	1	1	1	1	1	1	14	
EQUIVALENT LENGTH	185	235	240	250	185	195	260	185	0	0	0	0	0	0	0	0	0	145	
TOTAL EFFECTIVE LH	252	304	312	325	231	236	325	212	1	1	1	1	1	1	1	1	1	159	
ADJUSTED PRESSURE	0.06	0.05	0.05	0.05	0.06	0.06	0.05	0.07	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	14.80	0.09	
ROUND DUCT SIZE	6	6	6	6	6.6	7.5	6.9	8.9	0	0	0	0	0	0	0	0	0	6.6	
INLET GRILL SIZE	8	8	8	8	8	8	8	8	0	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	X	
INLET GRILL SIZE	14	14	14	14	14	14	14	30	0	0	0	0	0	0	0	0	0	14	

TYPE: 25-6
SITE NAME: KLEINBURG GLEN

LO # 66896

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>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Other Rooms	<u>6</u> @ 10.6 cfm	<u>63.6</u> cfm
Table 9.32.3.A.	TOTAL	<u>201.4</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	
More than 5 - Part 6	TOTAL	<u>79.5</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>201.4</u>	cfm
Less Principal Ventil. Capacity	<u>95</u>	cfm
Required Supplemental Capacity	<u>106.4</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model: VANEE 50H	Location: BSMT
<u>95.0</u> cfm	<u>3.0</u> sones
☒ HVI Approved	

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
95.0 CFM	X 76 F	X 1.08	X 0.34

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

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model: VANEE 50H		
<u>95</u> cfm high	<u>48</u> cfm low	
<u>66</u> % Sensible Efficiency	☒ HVI Approved	
@ 32 deg F (0 deg C)		

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

BUILDER:		GOLD PARK 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:	January-16

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 25-6	BUILDER: GOLD PARK HOMES
SFQT: 3019	SITE: KLEINBURG GLEN
LO# 66896	

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	72

BUILDING DATA

ATTACHMENT:	DETACHED	# OF STORIES (+BASEMENT):	4
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 (ft³):	32986.4	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: 63.0 ft	WIDTH: 19.0 ft	EXPOSED PERIMETER:	164.0 ft

2012 OBC - COMPLIANCE PACKAGE

Component	Compliance Package
	J
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	22
Basement Walls Minimum RSI (R)-Value	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
Heated Slab or Slab ≤ 600 mm below grade Minimum RSI (R)-Value	10
Windows and Sliding Glass Doors Maximum U-Value	1.8
Skylights Maximum U-Value	2.8
Space Heating Equipment Minimum AFUE	0.94
HRV Minimum Efficiency	60%
Domestic Hot Water Heater Minimum EF	0.67

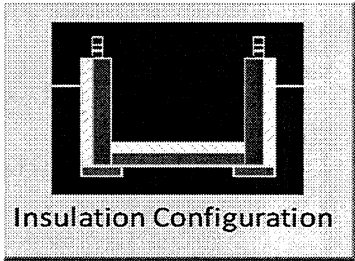
INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE



Residential Foundation Thermal Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description		
Province:	Ontario	▼
Region:	Vaughan (Woodbridge)	▼
Site Description		
Soil Conductivity:	Normal conductivity: dry sand, loam, clay	▼
Water Table:	Normal (7-10 m, 23-33 Ft)	▼
Foundation Dimensions		
Floor Length (m):	19.2	 Insulation Configuration
Floor Width (m):	5.8	
Exposed Perimeter (m):	0	
Wall Height (m):	2.7	
Depth Below Grade (m):	2.1	
Window Area (m ²):	1.1	
Door Area (m ²):	0	
Radiant Slab		
Heated Fraction of the Slab:	0	
Fluid Temperature (°C):	33	
Design Months		
Heating Month	1	
Foundation Loads		
Heating Load (Watts):	1743	

50

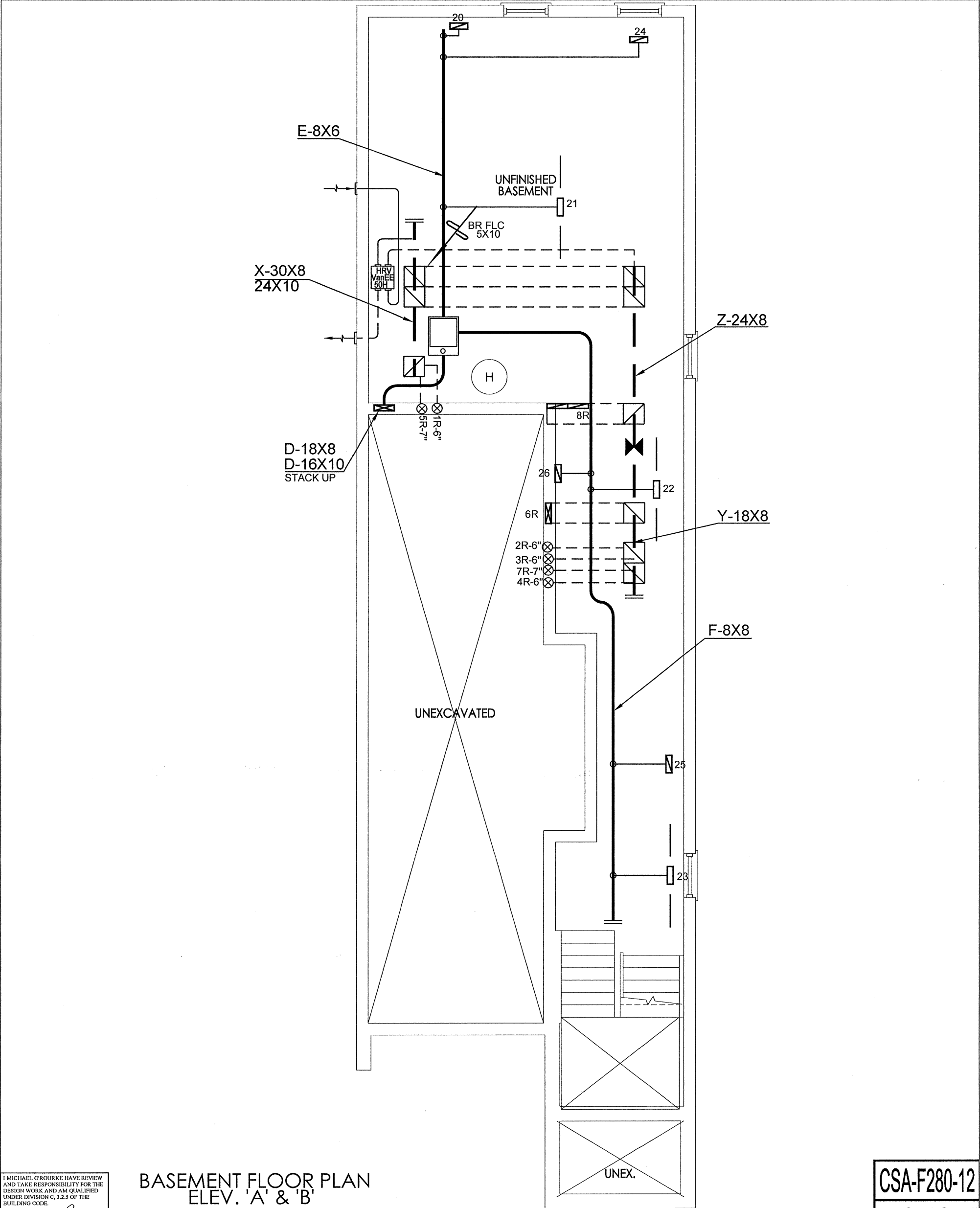
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135

Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

Weather Station Description				
Province:	Ontario			
Region:	Vaughan (Woodbridge)			
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):	9.05			
Building Configuration				
Type:	Detached			
Number of Stories:	Three			
Foundation:	Full			
House Volume (m ³):	938			
Air Leakage/Ventilation				
Air Tightness Type:	Present (1961-) (ACH=3.57)			
Custom BDT Data:	ELA @ 10 Pa. 716.42 cm ² 3.57 ACH @ 50 Pa			
Mechanical Ventilation (L/s):	Total Supply:		Total Exhaust:	
	0		0	
Flue Size				
Flue #:	#1	#2	#3	#4
Diameter (mm):	0	0	0	0
Natural Infiltration Rates				
Heating Air Change Rate (ACH/H):			0.373	
Cooling Air Change Rate (ACH/H):			0.118	



BASEMENT FLOOR PLAN
ELEV. 'A' & 'B'

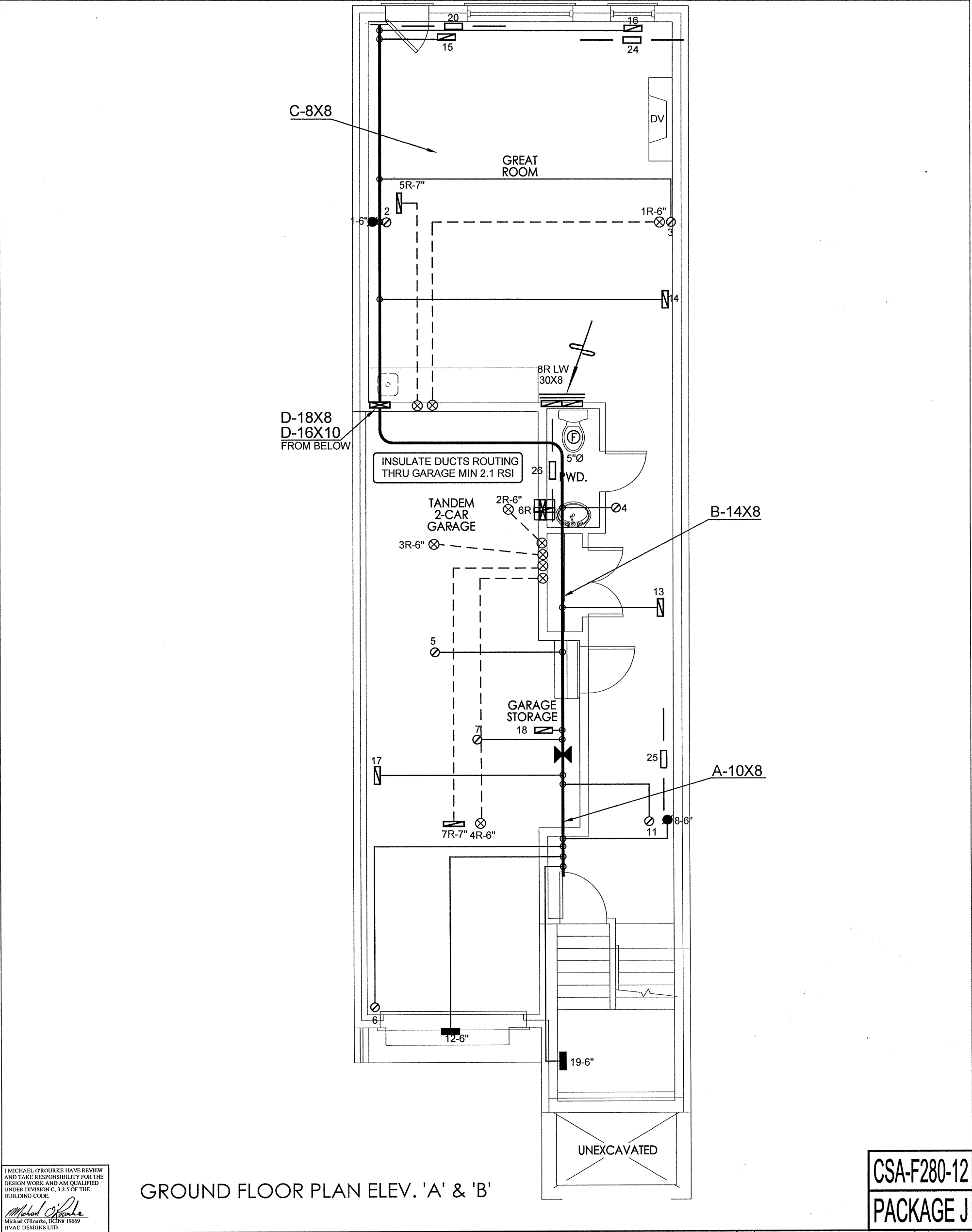
CSA-F280-12
PACKAGE J

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.

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 GOLD PARK HOMES	 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	HEAT LOSS 58805 BTU/H UNIT DATA MAKE LENNOX MODEL EL195UHU070XE36B-70 INPUT 66 MBTU/H OUTPUT 63 MBTU/H COOLING 3.0 TONS FAN SPEED 1100 cfm @ 0.6" w.c.	# OF RUNS S/A R/A FANS 3RD FLOOR 9 4 3 2ND FLOOR 8 3 2 1ST FLOOR 4 1 1 BASEMENT 3 1 0	Sheet Title BASEMENT HEATING LAYOUT	
				Date	JAN/2016
Project Name KLEINBURG GLEN VAUGHAN, ONTARIO	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.		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"
				BCIN#	19669
25-6	3019 sqft			LO#	66896



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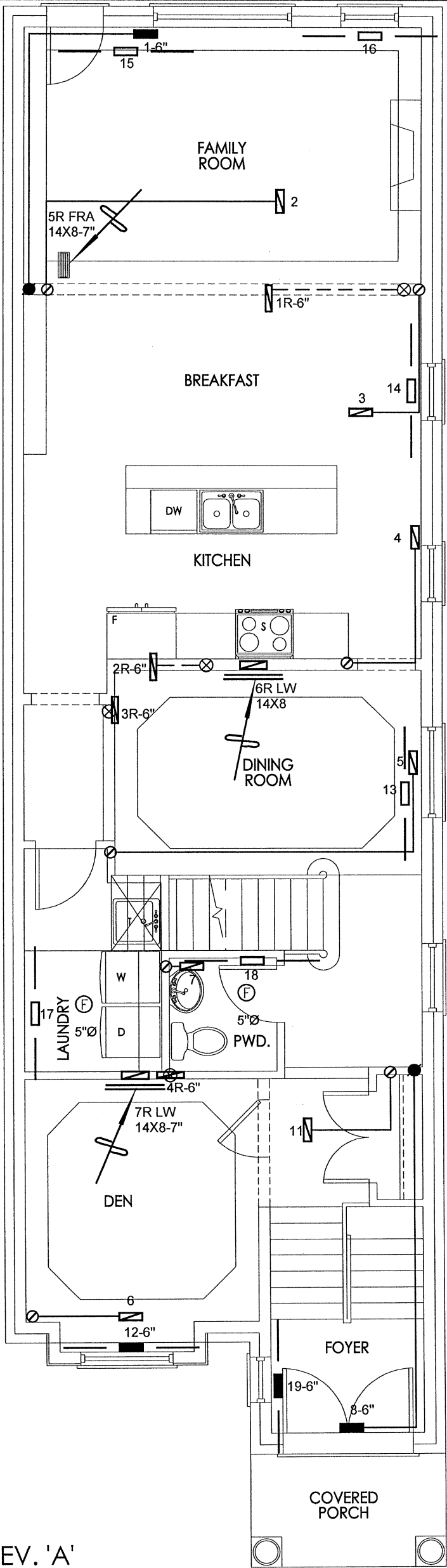
GROUND FLOOR PLAN ELEV. 'A' & 'B'

CSA-F280-12
PACKAGE J

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	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		

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GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name KLEINBURG GLEN VAUGHAN, ONTARIO			Date	JAN/2016
			Scale	3/16" = 1'-0"
			BCIN# 19669	
25-6	3019 sqft		LO#	66896



MAIN FLOOR PLAN ELEV. 'A'

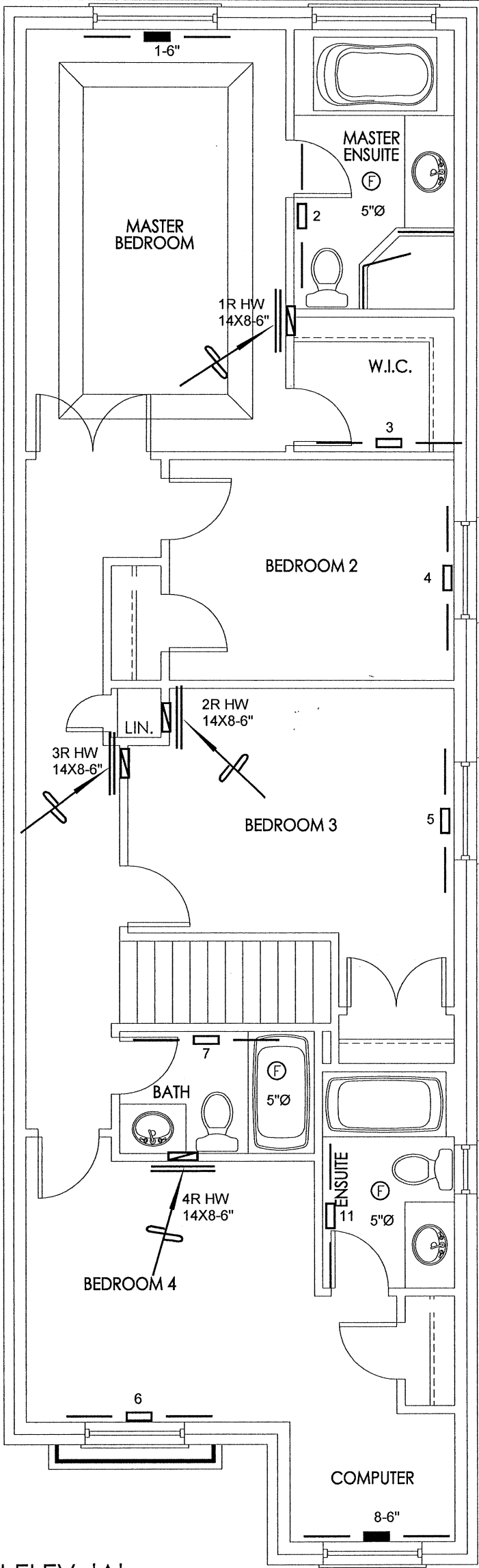
CSA-F280-12
PACKAGE J

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

HVAC LEGEND							3.		
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	2.	
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Project Name KLEINBURG GLEN VAUGHAN, ONTARIO			Date JAN/2016	
25-6			Scale 3/16" = 1'-0"	
3019 sqft			BCIN# 19669	
			LO#	66896



SECOND FLOOR PLAN ELEV. 'A'

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

CSA-F280-12
PACKAGE J

HVAC LEGEND								3.		
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	SUPPLY AIR BOOT ABOVE		6" SUPPLY AIR STACK 2nd FLOOR		FRA- FLOOR RETURN AIR GRILLE		REDUCER	REVISIONS		

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GOLD PARK HOMES			THIRD FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2016
KLEINBURG GLEN VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
			BCIN# 19669	
25-6	3019 sqft		LO#	66896