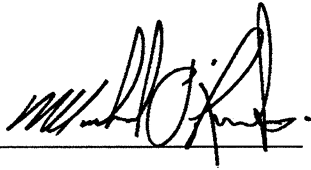


Schedule 1: Designer Information

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@hvacdesigns.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 ☒ HVAC – House ☐ Building Structural ☐ Small Buildings ☐ Building Services ☐ Plumbing – House ☐ Large Buildings ☐ Detection, Lighting and Power ☐ Plumbing – All Buildings ☐ Complex Buildings ☐ Fire Protection ☐ 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: 42-5 – OPT 2ND 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>February 1, 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 TYPE: 2ND OPT 2ND DATE: Feb-16 WINTER NATURAL AIR CHANGE RATE 0.322 HEAT LOSS AT °F. 76 DEN
GFA: 3562 LO# 66893 SUMMER NATURAL AIR CHANGE RATE 0.098 HEAT GAIN AT °F. 16 SB-12 PACKAGE J CSA-F280-12

ROOM USE EXP. WALL CLG. HT.	MBR	ENS	WIC	BED-3	BED-4	BED-5	BATH	BED-2	ENS-2	DEN
GRS.WALL AREA GLAZING	360	270	81	117	330	117	63	108	63	200
FACTORS	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN
NORTH	0	0	0	0	0	0	0	0	0	0
EAST	32	7	0	0	0	0	0	0	0	0
SOUTH	0	0	0	0	0	0	0	0	0	0
WEST	0	0	0	0	0	0	0	0	0	0
SKYLT.	0	0	0	0	0	0	0	0	0	0
DOORS	25.2	6.0	0	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.7	0	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
EXPOSED CLG	1.5	0.7	0	0	0	0	0	0	0	0
NO A TIC EXPOSED CLG	2.5	1.2	0	0	0	0	0	0	0	0
EXPOSED FLOOR	2.5	0.5	0	0	0	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
SUB TOTAL HT LOSS	2372	1851	485	1002	3122	1061	754	951	522	1021
SUB TOTAL HT GAIN	1819	990	155	565	2413	499	279	555	283	543
LEVEL FACTOR / MUL TIPLIER	0.20	0.33	0.20	0.33	0.20	0.33	0.20	0.33	0.20	0.33
AIR CHANGE HEAT LOSS	785	613	161	332	1033	351	249	315	173	408
AIR CHANGE HEAT GAIN	107	58	9	33	142	29	16	33	17	32
DUCT LOSS	0	0	0	133	416	141	100	0	0	0
DUCT GAIN	0	0	0	160	345	143	29	0	0	0
HEAT GAIN PEOPLE	2	480	0	1	240	1	0	1	0	0
HEAT GAIN APPLIANCES/LIGHTS	659	0	0	659	659	659	0	659	0	659
TOTAL HT LOSS BTU/H	3158	2464	646	1467	4571	1554	1103	1266	695	1429
TOTAL HT GAIN x 1.3 BTU/H	3985	1363	214	2141	4940	2041	422	1933	390	1604

ROOM USE EXP. WALL CLG. HT.	LVDN	KTGR	LAUN	WIR	FOY	MUD	BA S
GRS.WALL AREA GLAZING	240	730	81	88	850	308	1188
FACTORS	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN	LOSS GAIN
NORTH	33	795	0	0	0	8	18
EAST	0	0	0	0	0	0	0
SOUTH	33	795	6	0	0	0	0
WEST	0	0	0	0	0	0	0
SKYLT.	0	0	0	0	0	0	0
DOORS	0	0	0	0	0	0	0
NET EXPOSED WALL	3.5	0.7	0	0	0	0	0
NET EXPOSED BSMT WALL ABOVE GR	6.3	1.3	0	0	0	0	0
EXPOSED CLG	1.5	0.7	0	0	0	0	0
NO A TIC EXPOSED CLG	2.5	1.2	0	0	0	0	0
EXPOSED FLOOR	2.5	0.5	0	0	0	0	0
BASEMENT/CRAWL HEAT LOSS	0	0	0	0	0	0	0
SLAB ON GRADE HEAT LOSS	0	0	0	0	0	0	0
SUB TOTAL HT LOSS	2191	5699	695	304	5056	1665	13182
SUB TOTAL HT GAIN	1545	6492	332	60	3533	428	1151
LEVEL FACTOR / MUL TIPLIER	0.30	0.40	0.20	0.30	0.30	0.30	0.50
AIR CHANGE HEAT LOSS	875	2276	230	121	2019	665	10607
AIR CHANGE HEAT GAIN	91	382	20	4	208	25	68
DUCT LOSS	0	0	93	0	0	0	0
DUCT GAIN	0	0	101	0	0	0	0
HEAT GAIN PEOPLE	0	0	659	0	0	0	0
HEAT GAIN APPLIANCES/LIGHTS	669	7975	659	0	0	659	0
TOTAL HT LOSS BTU/H	3066	9794	1018	425	7075	2330	23789
TOTAL HT GAIN x 1.3 BTU/H	2984	9794	1446	83	4863	1446	1594

TOTAL HEAT GAIN BTU/H: 4187 TONS: 3.48 LOSS DUE TO VENTILATION LOAD BTU/H: 2815 STRUCTURAL HEAT LOSS: 6403 TOTAL COMBINED HEAT LOSS BTU/H: 66846

Michael O'Rourke

SITE NAME: KLEINBURG GLEN
BUILDING: GOLD PARK HOMES

TYPE: 42-5 OPT 2ND

DATE: Feb-16

GFA: 3552 LO# 66893

HEATING CFM 1255 COOLING CFM 1255
TOTAL HEAT LOSS 64,030
AIR FLOW RATE CFM 30.44

EL195UH090XE48C
FAN SPEED
LOW 0
MEDLOW 0
MEDIUM 1105
HIGH 1255

LENNOX

INPUT (BTU/H) = 88,000
OUTPUT (BTU/H) = 84,000
AFUE = 95.0 %
DESIGN CFM = 1255
CFM @ 6" E.S.P.

RUN COUNT	4th	3rd	2nd	1st	Bas
S/A	0	0	13	10	5
R/A	0	0	5	3	1

plenum pressure s/a
max s/a diff press. loss
min adjusted pressure s/a

r/a grille press. loss
adjusted pressure r/a

TEMPERATURE RISE 62 °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-3	BED-4	BED-5	BATH	ENS	BED-4	MBR	ENS-2	LV/DN	LV/DN	KT/GR	KT/GR	KT/GR	LAUN	W/R	FOY	MUD	BAS	BAS	BAS	BAS
RM LOSS MBH.	1.58	1.23	0.65	1.47	2.29	1.55	1.10	1.23	2.29	1.58	0.70	1.53	1.53	2.66	2.66	2.66	1.02	0.43	3.54	2.33	4.76	4.76	4.76	4.76
CFM PER RUN HEAT	31	24	13	29	45	30	22	24	45	31	14	30	30	52	52	52	20	8	69	46	93	93	93	93
RM GAIN MBH.	1.99	0.68	0.21	2.14	2.47	2.04	0.42	0.68	2.47	1.99	0.39	1.49	1.49	3.26	3.26	3.26	1.45	0.08	2.43	1.45	0.32	0.32	0.32	0.32
CFM PER RUN COOLING	61	21	7	65	75	62	13	21	75	61	12	45	45	99	99	99	44	3	74	44	10	10	10	10
ADJUSTED PRESSURE	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.17	0.17	0.17	0.17	0.16	0.16	0.16	0.16
ACTUAL DUCT LGH.	41	45	37	43	45	30	37	47	41	49	39	19	21	36	28	41	32	32	37	22	35	27	16	23
EQUIVALENT LENGTH	150	190	180	150	120	130	140	190	120	180	150	100	110	130	100	190	160	120	120	160	100	110	90	90
TOTAL EFFECTIVE LENGTH	191	235	217	193	165	160	177	237	161	229	189	119	131	166	128	231	192	152	157	182	135	137	106	113
ADJUSTED PRESSURE	0.09	0.07	0.08	0.09	0.1	0.11	0.1	0.07	0.11	0.08	0.09	0.14	0.13	0.1	0.13	0.07	0.09	0.11	0.11	0.09	0.12	0.12	0.15	0.14
ROUND DUCT SIZE	5	4	4	5	5	5	4	4	5	5	4	4	4	6	5	6	4	4	5	4	5	5	5	5
HEATING VELOCITY (ft/min)	228	275	149	213	330	220	252	275	330	228	161	344	344	265	382	265	229	92	507	528	683	683	683	683
COOLING VELOCITY (ft/min)	448	241	80	477	551	455	149	241	551	448	138	516	516	505	727	505	505	34	543	505	73	73	73	73
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	4X10	3X10	4X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10	3X10
TRUNK	A	B	B	D	E	C	E	A	E	A	B	C	C	A	A	A	D	D	D	E	B	B	C	F

RUN #	25	26	27	28
ROOM NAME	BAS	FOY	DEN	BED-2
RM LOSS MBH	4.76	3.54	1.43	1.27
CFM PER RUN HEAT	93	69	28	25
RM GAIN MBH	0.32	2.43	1.60	1.93
CFM PER RUN COOLING	10	74	49	59
ADJUSTED PRESSURE	0.16	0.17	0.17	0.17
EQUIVALENT LENGTH	110	110	130	160
TOTAL EFFECTIVE LENGTH	145	153	200	200
ADJUSTED PRESSURE	0.11	0.11	0.11	0.09
ROUND DUCT SIZE	5	5	4	5
HEATING VELOCITY (ft/min)	683	507	321	184
COOLING VELOCITY (ft/min)	73	543	562	433
OUTLET GRILL SIZE	3X10	3X10	3X10	3X10
TRUNK	D	D	E	B

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	242	0.07	8.5	8	545	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK B	504	0.07	11.2	14	648	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK C	687	0.07	12.6	18	687	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK D	288	0.09	8.5	8	648	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK E	567	0.09	11	14	729	0	0.00	0	0	0	0	0.05	0	0	8
TRUNK F	0	0.00	0	0	0	0	0.00	0	0	0	0	0.05	0	0	8

RETURN AIR #	1	2	3	4	5	6	7	8
AIR VOLUME	80	150	145	75	175	175	175	75
PLENUM PRESSURE	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
ACTUAL DUCT LGH.	45	36	37	44	22	23	19	60
EQUIVALENT LENGTH	185	175	225	230	145	145	135	190
TOTAL EFFECTIVE LENGTH	230	211	262	274	167	168	154	250
ADJUSTED PRESSURE	0.06	0.07	0.06	0.05	0.09	0.09	0.10	0.06
ROUND DUCT SIZE	5.9	7.1	7.3	6	7.1	7.1	6.9	5.7
INLET GRILL SIZE	8	8	8	8	8	8	8	8
INLET GRILL SIZE	14	14	14	14	14	14	14	14

TYPE: 42-5
SITE NAME: KLEINBURG GLEN

LO # 66893
OPT 2ND

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>4</u> @ 10.6 cfm	<u>42.4</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>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>95.4</u> cfm

SUPPLEMENTAL VENTILATION CAPACITY		9.32.3.5.
Total Ventilation Capacity	<u>201.4</u>	cfm
Less Principal Ventil. Capacity	<u>98</u>	cfm
Required Supplemental Capacity	<u>103.4</u>	cfm

PRINCIPAL EXHAUST FAN CAPACITY	
Model:	VANEE 60H
Location:	BSMT
<u>98.0</u> cfm	<u>3.0</u> sones
☒	HVI Approved

PRINCIPAL EXHAUST HEAT LOSS CALCULATION			
CFM	ΔT °F	FACTOR	% LOSS
98.0 CFM	X 76 F	X 1.08	X 0.35

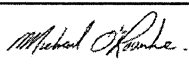
SUPPLEMENTAL FANS		NUTONE	
Location	Model	cfm	HVI
ENS	QTXEN050C	50	☒
BATH	QTXEN050C	50	☒
ENS-2	QTXEN050C	50	☒
W/R	QTXEN050C	50	☒

HEAT RECOVERY VENTILATOR		9.32.3.11.
Model:	VANEE 60H	
<u>98</u> cfm high	<u>50</u> cfm low	
<u>65</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:	February-16

HEAT LOSS AND GAIN SUMMARY SHEET

MODEL: 42-5	OPT 2ND	BUILDER: GOLD PARK HOMES
SFQT: 3552	LO# 66893	SITE: KLEINBURG GLEN

DESIGN ASSUMPTIONS

HEATING	°F	COOLING	°F
OUTDOOR DESIGN TEMP.	-4	OUTDOOR DESIGN TEMP.	88
INDOOR DESIGN TEMP.	72	INDOOR DESIGN TEMP. (MAX 75°F)	73

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):	48448.0	ASSUMED (Y/N):	Y
INTERNAL SHADING:	BLINDS/CURTAINS	ASSUMED OCCUPANTS:	6
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: 65.0 ft	WIDTH: 34.0 ft	EXPOSED PERIMETER:	198.0 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

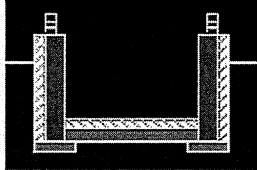
INDIVIDUAL BCIN: 19669

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):	19.8	 Insulation Configuration
Floor Width (m):	10.4	
Exposed Perimeter (m):	0	
Wall Height (m):	2.7	
Depth Below Grade (m):	1.8	
Window Area (m ²):	1.7	
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):	2485	

60.4

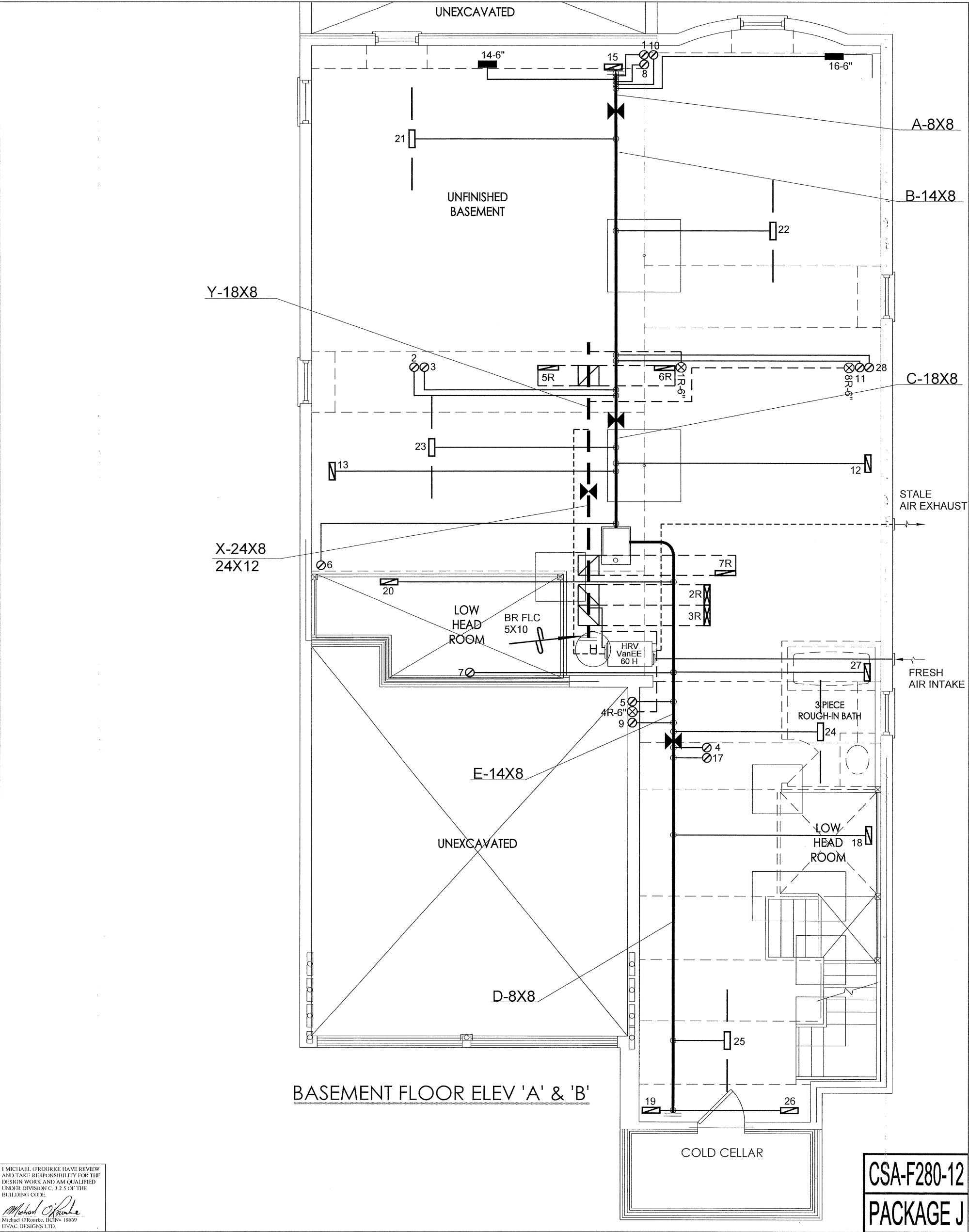
2.6 161.38

161.18

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):	6.71			
Building Configuration				
Type:	Detached ▼			
Number of Stories:	Two ▼			
Foundation:	Full ▼			
House Volume (m ³):	1371.9			
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):			0.322	
Cooling Air Change Rate (ACH/H):			0.098	



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.

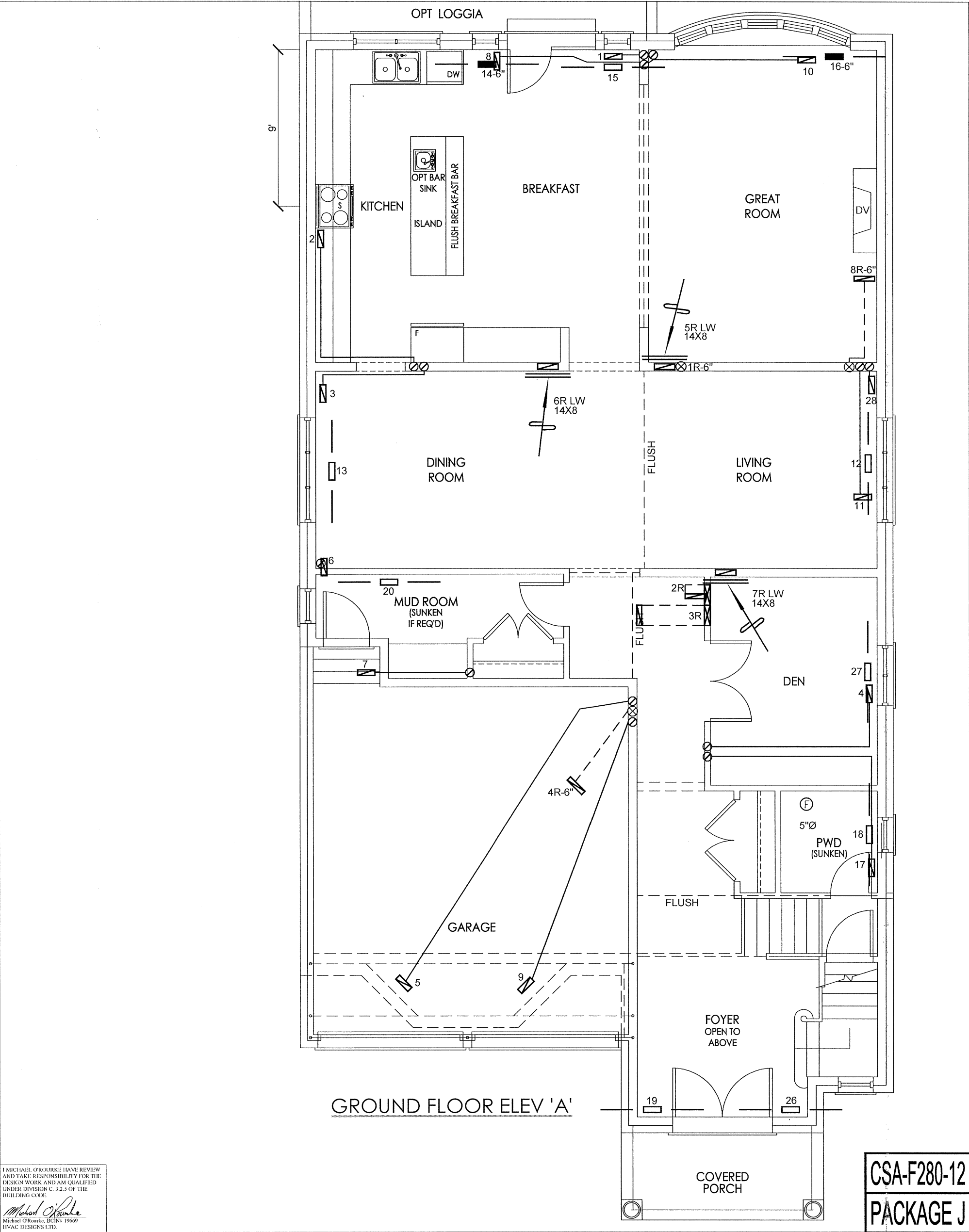
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE J

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	HVACDESIGNS LTD. 375 Finley Ave - Unit 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 66846 BTU/H UNIT DATA		# OF RUNS S/A R/A FANS			Sheet Title	
Project Name GOLD PARK HOMES KLEINBURG GLEN VAUGHAN, ONTARIO		MAKE LENNOX		3RD FLOOR				BASEMENT HEATING LAYOUT
		MODEL EL195UH090XE48C		2ND FLOOR	13	5	5	
		INPUT 88 MBTU/H		1ST FLOOR	10	3	2	
	OUTPUT 84 MBTU/H		BASEMENT	5	1	0	Date JAN/2016	
	COOLING 3.5 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				Scale 3/16" = 1'-0"	
	FAN SPEED 1255 cfm @ 0.5" w.c.						BCIN# 19669	
OPT 2ND 42-5	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.						LO#	66893
3552 sqft								



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.

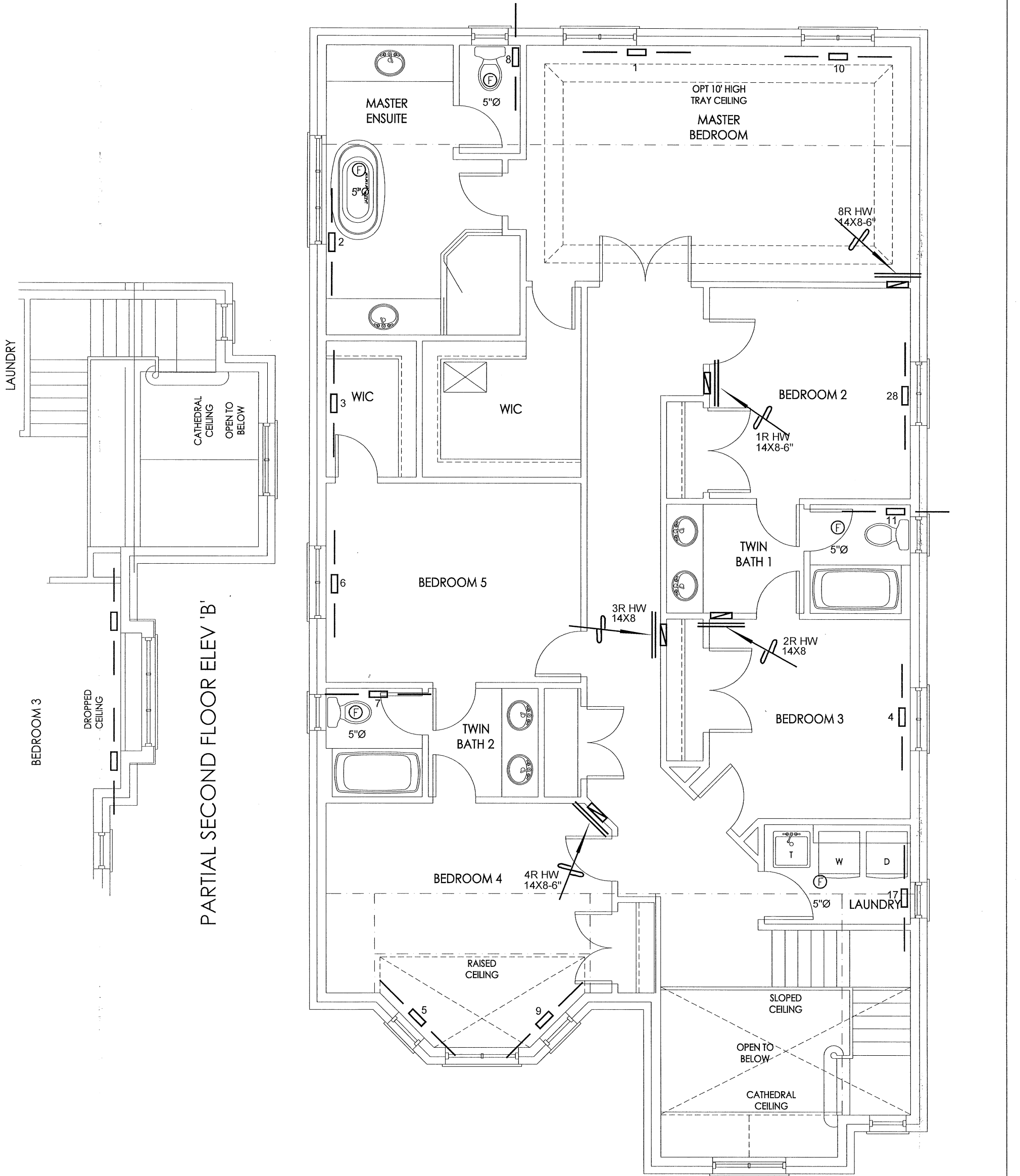
Michael O'Rourke
Michael O'Rourke, BCIN# 19669
HVAC DESIGNS LTD.

CSA-F280-12
PACKAGE J

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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GOLD PARK HOMES			FIRST FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2016
KLEINBURG GLEN VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
OPT 2ND 42-5			BCIN# 19669	
3552 sqft			LO#	66893



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Michael O'Rourke
Michael O'Rourke, BCIN# 19669
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PACKAGE J

HVAC LEGEND								3.		
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GOLD PARK HOMES			SECOND FLOOR HEATING LAYOUT	
Project Name			Date	JAN/2016
KLEINBURG GLEN VAUGHAN, ONTARIO			Scale	3/16" = 1'-0"
OPT 2ND 42-5			BCIN# 19669	
3552 sqft			LO#	66893