

## Schedule 1: Designer Information

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

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                     |                                                                                                               |                                      |          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------|--------------------------------------|----------|
| <b>A. Project Information</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                     |                                                                                                               |                                      |          |
| Building number, street name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                     |                                                                                                               | Unit no.                             | Lot/con. |
| Municipality<br>VAUGHAN (WOODBIDGE)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Postal code                         | Plan number/ other description                                                                                |                                      |          |
| <b>B. Individual who reviews and takes responsibility for design activities</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                     |                                                                                                               |                                      |          |
| Name<br><b>MICHAEL O'ROURKE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                     | Firm<br><b>HVAC DESIGNS LTD.</b>                                                                              |                                      |          |
| Street address<br><b>375 FINLEY AVE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                     | Unit no.<br><b>202</b>                                                                                        | Lot/con.<br><b>N/A</b>               |          |
| Municipality<br><b>AJAX</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Postal code<br><b>L1S 2E2</b>       | Province<br><b>ONTARIO</b>                                                                                    | E-mail<br><b>info@hvacdesigns.ca</b> |          |
| Telephone number<br><b>(905) 619-2300</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Fax number<br><b>(905) 619-2375</b> | Cell number<br>( )                                                                                            |                                      |          |
| <b>C. Design activities undertaken by individual identified in Section B. [Building Code Table 3.5.2.1 OF Division C]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                     |                                                                                                               |                                      |          |
| <input type="checkbox"/> House <input checked="" type="checkbox"/> HVAC – House <input type="checkbox"/> Building Structural<br><input type="checkbox"/> Small Buildings <input type="checkbox"/> Building Services <input type="checkbox"/> Plumbing – House<br><input type="checkbox"/> Large Buildings <input type="checkbox"/> Detection, Lighting and Power <input type="checkbox"/> Plumbing – All Buildings<br><input type="checkbox"/> Complex Buildings <input type="checkbox"/> Fire Protection <input type="checkbox"/> On-site Sewage Systems |                                     |                                                                                                               |                                      |          |
| Description of designer's work<br><b>HEAT LOSS / GAIN CALCULATIONS<br/>DUCT SIZING<br/>RESIDENTIAL MECHANICAL VENTILATION DESIGN SUMMARY<br/>RESIDENTIAL SYSTEM DESIGN per CSA-F280-12</b>                                                                                                                                                                                                                                                                                                                                                                |                                     | <b>Model:</b> 5004 THE BEAUMONT<br>OPT. ELEVATOR<br><b>Project:</b> PINE VALLEY & TESTON                      |                                      |          |
| <b>D. Declaration of Designer</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                     |                                                                                                               |                                      |          |
| I <u>MICHAEL O'ROURKE</u> declare that (choose one as appropriate):<br>(print name)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                     |                                                                                                               |                                      |          |
| <input type="checkbox"/> 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.<br>Individual BCIN: _____<br>Firm BCIN: _____                                                                                                                                                                                                                                                |                                     |                                                                                                               |                                      |          |
| <input checked="" type="checkbox"/> 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.<br>Individual BCIN: <u>19669</u><br>Basis for exemption from registration and qualification: <u>O.B.C SENTENCE 3.2.4.1 (4)</u>                                                                                                                                                                                                       |                                     |                                                                                                               |                                      |          |
| <input type="checkbox"/> The design work is exempt from the registration and qualification requirements of the Building Code.<br>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.<br>2. I have submitted this application with the knowledge and consent of the firm.                                                                                                                                                                                                                                                                                                                                                                                    |                                     |                                                                                                               |                                      |          |
| January 24, 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                     | <br>Signature of Designer |                                      |          |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                     |                                                                                                               |                                      |          |

**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.

Application for a Permit Construct or Demolish – Effective January 1, 2015

SITE NAME: PINE VALLEY & TESTON  
BUILDER: GOLD PARK HOMES  
TYPE: 5004 THE BEAUMONT  
DATE: Jan-18  
LO# 77479  
WINTER NATURAL AIR CHANGE RATE 0.340  
SUMMER NATURAL AIR CHANGE RATE 0.124  
HEAT LOSS AT °F. 76  
HEAT GAIN AT °F. 16  
CSA-F280-12  
SB-12 PACKAGE A1

| ROOM USE                       | EXP. WALL | CLG. HT. | MBR  | ENS  | DRESS | BED-2 | BED-3 | BED-4 | ENS-2 | HALL | ENS-3 |
|--------------------------------|-----------|----------|------|------|-------|-------|-------|-------|-------|------|-------|
| GRS.WALL AREA                  | 190       |          | 190  | 342  | 108   | 99    | 162   | 430   | 0     | 117  | 162   |
| GLAZING                        |           |          |      |      |       |       |       |       |       |      |       |
| NORTH                          | 21.3      | 16.8     | 0    | 0    | 0     | 18    | 383   | 303   | 0     | 0    | 0     |
| EAST                           | 21.3      | 42.4     | 0    | 0    | 0     | 0     | 0     | 0     | 0     | 0    | 0     |
| SOUTH                          | 21.3      | 25.7     | 0    | 0    | 0     | 0     | 0     | 0     | 0     | 0    | 0     |
| WEST                           | 21.3      | 42.4     | 42   | 894  | 1780  | 28    | 596   | 1187  | 0     | 0    | 0     |
| SKYLT.                         | 37.2      | 103.0    | 0    | 0    | 0     | 0     | 0     | 0     | 0     | 0    | 0     |
| DOORS                          | 25.2      | 5.2      | 0    | 0    | 0     | 0     | 0     | 0     | 0     | 0    | 0     |
| NET EXPOSED WALL               | 4.5       | 0.9      | 148  | 560  | 137   | 305   | 1361  | 283   | 81    | 361  | 1611  |
| NET EXPOSED BSMT WALL ABOVE GR | 3.6       | 0.7      | 0    | 0    | 0     | 0     | 0     | 0     | 0     | 0    | 0     |
| EXPOSED CLG                    | 1.3       | 0.6      | 468  | 601  | 239   | 312   | 400   | 199   | 228   | 293  | 146   |
| NO ATTIC EXPOSED CLG           | 2.7       | 1.4      | 0    | 0    | 0     | 0     | 0     | 0     | 0     | 0    | 0     |
| BASEMENT/CRAWL HEAT LOSS       | 2.6       | 0.5      | 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               | 2155      |          | 2155 | 2549 | 842   | 1367  | 2622  | 3885  | 184   | 622  | 1237  |
| SUB TOTAL HT GAIN              | 0.20      | 0.38     | 2216 | 0.20 | 0.38  | 0.20  | 0.38  | 0.20  | 0.38  | 0.20 | 0.38  |
| LEVEL FACTOR / MULTIPLIER      | 812       |          | 812  | 960  | 317   | 515   | 988   | 1463  | 69    | 234  | 486   |
| AIR CHANGE HEAT LOSS           | 214       |          | 214  | 183  | 33    | 56    | 292   | 337   | 7     | 15   | 76    |
| DUCT LOSS                      | 0         |          | 0    | 0    | 0     | 188   | 361   | 535   | 25    | 0    | 170   |
| HEAT GAIN PEOPLE               | 240       |          | 0    | 0    | 0     | 177   | 446   | 497   | 8     | 0    | 86    |
| HEAT GAIN APPLIANCES/LIGHTS    | 896       |          | 480  | 0    | 0     | 240   | 240   | 240   | 0     | 0    | 0     |
| TOTAL HT LOSS BTU/H            | 2967      |          | 2967 | 3509 | 1159  | 2070  | 3970  | 5884  | 279   | 857  | 1873  |
| TOTAL HT GAIN x 1.3 BTU/H      | 4947      |          | 2709 | 2528 | 1555  | 6383  | 7105  | 109   | 226   | 1222 |       |

| ROOM USE                       | EXP. WALL | CLG. HT. | LIBR | DIN   | KIT   | GREAT | LAUN | ENS-4 | FOY  | MUD  | BAS   |
|--------------------------------|-----------|----------|------|-------|-------|-------|------|-------|------|------|-------|
| GRS.WALL AREA                  | 237       |          | 237  | 187   | 1067  | 896   | 0    | 54    | 407  | 468  | 1610  |
| GLAZING                        |           |          |      |       |       |       |      |       |      |      |       |
| NORTH                          | 21.3      | 16.8     | 0    | 0     | 0     | 26    | 553  | 437   | 0    | 0    | 17    |
| EAST                           | 21.3      | 42.4     | 41   | 872   | 1738  | 0     | 0    | 0     | 0    | 0    | 362   |
| SOUTH                          | 21.3      | 25.7     | 12   | 255   | 309   | 24    | 511  | 618   | 10   | 213  | 0     |
| WEST                           | 21.3      | 42.4     | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0     |
| SKYLT.                         | 37.2      | 103.0    | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0     |
| DOORS                          | 25.2      | 5.2      | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0     |
| NET EXPOSED WALL               | 4.5       | 0.9      | 244  | 1089  | 226   | 163   | 727  | 151   | 907  | 4048 | 841   |
| NET EXPOSED BSMT WALL ABOVE GR | 3.6       | 0.7      | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0     |
| EXPOSED CLG                    | 1.3       | 0.6      | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0     |
| NO ATTIC EXPOSED CLG           | 2.7       | 1.4      | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0     |
| BASEMENT/CRAWL HEAT LOSS       | 2.6       | 0.5      | 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               | 2217      |          | 1238 | 769   | 6583  | 6772  | 184  | 453   | 2821 | 2920 | 11471 |
| SUB TOTAL HT GAIN              | 0.30      | 0.38     | 2273 | 0.30  | 0.38  | 0.30  | 0.38 | 0.20  | 0.38 | 0.30 | 0.38  |
| LEVEL FACTOR / MULTIPLIER      | 852       |          | 852  | 476   | 2959  | 2603  | 69   | 170   | 1084 | 1122 | 15160 |
| AIR CHANGE HEAT LOSS           | 219       |          | 219  | 74    | 634   | 455   | 9    | 28    | 184  | 58   | 87    |
| DUCT LOSS                      | 0         |          | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0     |
| HEAT GAIN PEOPLE               | 240       |          | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0     |
| HEAT GAIN APPLIANCES/LIGHTS    | 896       |          | 0    | 0     | 0     | 0     | 0    | 0     | 0    | 0    | 0     |
| TOTAL HT LOSS BTU/H            | 3069      |          | 3069 | 1714  | 10658 | 9374  | 253  | 623   | 3905 | 4042 | 26631 |
| TOTAL HT GAIN x 1.3 BTU/H      | 4404      |          | 2280 | 10546 | 10546 | 7892  | 1294 | 409   | 2730 | 2030 | 1293  |

TOTAL HEAT GAIN BTU/H: 60404 TONS: 5.03 LOSS DUE TO VENTILATION LOAD BTU/H: 3181 STRUCTURAL HEAT LOSS: 82836 TOTAL COMBINED HEAT LOSS BTU/H: 86017

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.

*Michael O'Rourke*

INDIVIDUAL BCIN: 19669

MICHAEL O'ROURKE

SITE NAME: PINE VALLEY & TESTON  
BUILDER: GOLD PARK HOMES

OPT. ELEVATOR  
TYPE: 5004 THE BEAUMONT

GFA: 4330 LO# 77479

DATE: Jan-18

HEATING CFM 1955  
TOTAL HEAT LOSS 82,836  
AIR FLOW RATE CFM 23.6

COOLING CFM 1955  
TOTAL HEAT GAIN 59,742  
AIR FLOW RATE CFM 32.72

AFUE = 96 %  
INPUT (BTU/H) = 110,000  
OUTPUT (BTU/H) = 106,000

| RUN COUNT | 4th | 3rd | 2nd | 1st | Bas |
|-----------|-----|-----|-----|-----|-----|
| S/A       | 0   | 0   | 18  | 13  | 8   |
| R/A       | 0   | 0   | 5   | 4   | 1   |

All S/A diffusers 4"x10" unless noted otherwise on layout.  
All S/A fans 5"Ø unless noted otherwise on layout.

| ROOM NAME                 | 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                 | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   |
| RM LOSS MBH               | 1.48 | 1.67 | 1.16 | 2.07 | 1.32 | 1.96 | 0.28 | 0.86 | 0.62 | 1.48 | 1.87 | 1.53 | 1.71 | 2.66 | 2.66 | 3.12 | 0.25 | 2.66 | 3.90 | 2.02 | 3.33 | 3.33 | 3.33 | 3.33 |
| CFM PER RUN HEAT          | 35   | 39   | 27   | 49   | 31   | 46   | 7    | 20   | 15   | 35   | 44   | 36   | 40   | 63   | 63   | 74   | 6    | 63   | 92   | 48   | 79   | 79   | 79   | 79   |
| RM GAIN MBH               | 2.47 | 1.30 | 1.66 | 2.53 | 2.13 | 2.37 | 0.11 | 0.23 | 0.41 | 2.47 | 1.22 | 2.20 | 2.26 | 2.64 | 2.64 | 2.63 | 1.29 | 2.64 | 2.73 | 1.01 | 0.16 | 0.16 | 0.16 | 0.16 |
| CFM PER RUN COOLING       | 81   | 43   | 54   | 83   | 70   | 77   | 4    | 7    | 13   | 81   | 40   | 72   | 74   | 86   | 86   | 86   | 42   | 86   | 89   | 33   | 5    | 5    | 5    | 5    |
| ADJUSTED PRESSURE         | 0.16 | 0.17 | 0.17 | 0.16 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.16 | 0.17 | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 | 0.17 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 |
| ACTUAL DUCT LGH           | 46   | 62   | 29   | 34   | 38   | 50   | 28   | 31   | 43   | 54   | 41   | 41   | 27   | 40   | 32   | 49   | 26   | 36   | 24   | 16   | 50   | 50   | 39   | 30   |
| EQUIVALENT LENGTH         | 190  | 140  | 180  | 180  | 120  | 150  | 160  | 180  | 190  | 180  | 160  | 180  | 80   | 140  | 150  | 130  | 140  | 150  | 130  | 130  | 140  | 100  | 100  | 102  |
| TOTAL EFFECTIVE LENGTH    | 236  | 202  | 209  | 214  | 158  | 200  | 188  | 211  | 233  | 234  | 201  | 221  | 107  | 180  | 182  | 179  | 176  | 176  | 174  | 146  | 180  | 190  | 139  | 132  |
| ADJUSTED PRESSURE         | 0.07 | 0.09 | 0.08 | 0.08 | 0.11 | 0.09 | 0.09 | 0.08 | 0.07 | 0.07 | 0.09 | 0.08 | 0.16 | 0.09 | 0.09 | 0.09 | 0.1  | 0.09 | 0.09 | 0.12 | 0.1  | 0.09 | 0.12 | 0.13 |
| ROUND DUCT SIZE           | 6    | 4    | 5    | 5    | 5    | 5    | 4    | 4    | 4    | 6    | 4    | 5    | 5    | 5    | 5    | 5    | 4    | 5    | 6    | 4    | 5    | 5    | 5    | 5    |
| HEATING VELOCITY (ft/min) | 178  | 447  | 198  | 250  | 228  | 338  | 80   | 229  | 172  | 178  | 505  | 264  | 294  | 463  | 463  | 543  | 69   | 463  | 469  | 551  | 580  | 580  | 580  | 580  |
| COOLING VELOCITY (ft/min) | 413  | 493  | 396  | 423  | 514  | 565  | 46   | 80   | 149  | 413  | 459  | 529  | 543  | 631  | 631  | 631  | 482  | 631  | 454  | 379  | 37   | 37   | 37   | 37   |
| OUTLET GRILL SIZE         | 4X10 | 3X10 | 3X10 | 4X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 4X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 4X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 |
| TRUNK                     | B    | C    | D    | F    | F    | E    | F    | D    | E    | B    | F    | E    | F    | C    | C    | A    | D    | B    | E    | D    | A    | A    | C    | C    |

| ROOM NAME                 | 25   | 26   | 27   | 28   | 29   | 30   | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38   | 39   |
|---------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| ROOM NAME                 | 25   | 26   | 27   | 28   | 29   | 30   | 31   | 32   | 33   | 34   | 35   | 36   | 37   | 38   | 39   |
| RM LOSS MBH               | 3.33 | 3.33 | 3.33 | 3.33 | 1.67 | 1.67 | 1.32 | 1.32 | 1.96 | 1.96 | 1.53 | 2.66 | 3.12 | 3.12 | 2.02 |
| CFM PER RUN HEAT          | 79   | 79   | 79   | 79   | 39   | 4    | 31   | 31   | 46   | 46   | 36   | 63   | 74   | 74   | 48   |
| RM GAIN MBH               | 0.16 | 0.16 | 0.16 | 0.16 | 1.30 | 0.10 | 2.13 | 2.13 | 2.37 | 2.37 | 2.20 | 2.64 | 2.63 | 2.63 | 1.01 |
| CFM PER RUN COOLING       | 5    | 5    | 5    | 5    | 43   | 3    | 70   | 70   | 77   | 77   | 72   | 86   | 86   | 86   | 33   |
| 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 | 0.17 |
| ACTUAL DUCT LGH           | 37   | 23   | 17   | 31   | 34   | 33   | 42   | 46   | 47   | 40   | 35   | 28   | 39   | 64   | 35   |
| EQUIVALENT LENGTH         | 120  | 120  | 150  | 140  | 140  | 140  | 130  | 140  | 150  | 130  | 140  | 150  | 150  | 150  | 90   |
| TOTAL EFFECTIVE LENGTH    | 157  | 103  | 137  | 181  | 174  | 173  | 172  | 186  | 197  | 170  | 175  | 178  | 189  | 214  | 125  |
| ADJUSTED PRESSURE         | 0.11 | 0.17 | 0.13 | 0.1  | 0.1  | 0.1  | 0.1  | 0.09 | 0.09 | 0.1  | 0.1  | 0.09 | 0.09 | 0.08 | 0.14 |
| ROUND DUCT SIZE           | 5    | 5    | 5    | 4    | 4    | 4    | 5    | 5    | 5    | 5    | 5    | 5    | 5    | 6    | 4    |
| HEATING VELOCITY (ft/min) | 580  | 580  | 580  | 580  | 447  | 46   | 228  | 228  | 338  | 338  | 264  | 463  | 543  | 377  | 551  |
| COOLING VELOCITY (ft/min) | 37   | 37   | 37   | 37   | 493  | 34   | 514  | 514  | 565  | 565  | 529  | 631  | 631  | 438  | 379  |
| OUTLET GRILL SIZE         | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 4X10 | 3X10 |
| TRUNK                     | B    | D    | F    | E    | D    | D    | F    | F    | E    | E    | E    | B    | A    | A    | D    |

| TRUNK                  | 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                | 0.08          | 9.8        | 12        | 380               | 0         | 0.08          | 9.8        | 12        | 380               | 0         | 0.08          | 9.8        | 12        | 380               |
| TRUNK B                | 0.07          | 12.4       | 18        | 655               | 0         | 0.07          | 12.4       | 18        | 655               | 0         | 0.07          | 12.4       | 18        | 655               |
| TRUNK C                | 0.09          | 8.9        | 10        | 323               | 0         | 0.09          | 8.9        | 10        | 323               | 0         | 0.09          | 8.9        | 10        | 323               |
| TRUNK D                | 0.07          | 15.8       | 28        | 803               | 0         | 0.07          | 15.8       | 28        | 803               | 0         | 0.07          | 15.8       | 28        | 803               |
| TRUNK E                | 0.07          | 10.2       | 12        | 396               | 0         | 0.07          | 10.2       | 12        | 396               | 0         | 0.07          | 10.2       | 12        | 396               |
| TRUNK F                | 0.07          | 12.7       | 18        | 708               | 0         | 0.07          | 12.7       | 18        | 708               | 0         | 0.07          | 12.7       | 18        | 708               |
| RETURN AIR #           | 1             | 2          | 3         | 4                 | 5         | 6             | 7          | 8         | 9                 | 10        | 11            | 12         | 13        | 14                |
| AIR VOLUME             | 120           | 120        | 120       | 120               | 120       | 120           | 120        | 120       | 120               | 120       | 120           | 120        | 120       | 120               |
| 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              |
| ACTUAL DUCT LGH        | 38            | 37         | 37        | 45                | 39        | 59            | 27         | 25        | 34                | 1         | 1             | 1          | 1         | 1                 |
| EQUIVALENT LENGTH      | 195           | 185        | 165       | 205               | 145       | 175           | 190        | 185       | 150               | 0         | 0             | 0          | 0         | 0                 |
| TOTAL EFFECTIVE LENGTH | 233           | 222        | 202       | 250               | 188       | 234           | 217        | 210       | 184               | 1         | 1             | 1          | 1         | 1                 |
| ADJUSTED PRESSURE      | 0.06          | 0.07       | 0.07      | 0.06              | 0.06      | 0.06          | 0.06       | 0.06      | 0.06              | 0.06      | 0.06          | 0.06       | 0.06      | 0.06              |
| ROUND DUCT SIZE        | 6.8           | 6.6        | 6.6       | 6.8               | 6         | 6             | 9.2        | 9.2       | 7.5               | 0         | 0             | 0          | 0         | 0                 |
| INLET GRILL SIZE       | X             | X          | X         | X                 | X         | X             | X          | X         | X                 | X         | X             | X          | X         | X                 |
| INLET GRILL SIZE       | 14            | 14         | 14        | 14                | 14        | 14            | 30         | 30        | 14                | 0         | 0             | 0          | 0         | 0                 |

*Michael O'Rourke*

TYPE: 5004 THE BEAUMONT  
SITE NAME: PINE VALLEY & TESTON

LO # 77479  
OPT. ELEVATOR

**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             | 3 @ 10.6 cfm | 31.8 cfm    |
| Kitchen & Bathrooms        | 6 @ 10.6 cfm | 63.6 cfm    |
| Other Rooms                | 6 @ 10.6 cfm | 63.6 cfm    |
| Table 9.32.3.A.            | TOTAL        | 201.4 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                                   | 79.5 | cfm          |

| SUPPLEMENTAL VENTILATION CAPACITY |       | 9.32.3.5. |
|-----------------------------------|-------|-----------|
| Total Ventilation Capacity        | 201.4 | cfm       |
| Less Principal Ventil. Capacity   | 155   | cfm       |
| Required Supplemental Capacity    | 46.4  | cfm       |

| PRINCIPAL EXHAUST FAN CAPACITY      |                |
|-------------------------------------|----------------|
| Model: VANEE 65H                    | Location: BSMT |
| 155.0 cfm                           | 3.0 sones      |
| <input checked="" type="checkbox"/> | HVI Approved   |

| PRINCIPAL EXHAUST HEAT LOSS CALCULATION |               |
|-----------------------------------------|---------------|
| CFM                                     | $\Delta T$ °F |
| 155.0 CFM                               | 76 F          |
| X                                       | X             |
| FACTOR                                  | % LOSS        |
| 1.08                                    | 0.25          |

| SUPPLEMENTAL FANS |           | NUTONE |                                     |
|-------------------|-----------|--------|-------------------------------------|
| Location          | Model     | cfm    | HVI                                 |
| ENS               | QTXEN050C | 50     | <input checked="" type="checkbox"/> |
| ENS-2             | QTXEN050C | 50     | <input checked="" type="checkbox"/> |
| ENS-3             | QTXEN050C | 50     | <input checked="" type="checkbox"/> |
| ENS-4             | QTXEN050C | 50     | <input checked="" type="checkbox"/> |

| HEAT RECOVERY VENTILATOR |                                     | 9.32.3.11.   |
|--------------------------|-------------------------------------|--------------|
| Model: VANEE 65H         |                                     |              |
| 155 cfm high             | 64 cfm low                          |              |
| 75 % Sensible Efficiency | <input checked="" type="checkbox"/> | 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:                                                                                                    | <i>Michael O'Rourke</i> |
| HRAI #                                                                                                        | 001820                  |
| Date:                                                                                                         | January-18              |

| CSA F280-12 Residential Heat Loss and Heat Gain Calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                   |                                                     |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------|--------------------------------|-------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------|-------|-----|--------|--------|-------|----|-------|--------|-------|---|-------|--------|-------|---|---|-------|-------|---|---|--------|-------|-------------------------------------------------------------|---|--------|--|--|--------------|--------|--|--|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|-------------------------------|--|--|--|--|--------|---------|-------|-------------|----|-----|----|-------------|----|----|---|--|--|--|----|--|--|--|----|
| Formula Sheet (For Air Leakage / Ventilation Calculation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                   |                                                     |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| LO#: 77479                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   | Model: 5004 THE BEAUMONT                            |                                                     | Builder: GOLD PARK HOMES                                  |                                | Date: 1/24/2018   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Volume Calculation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   |                                                     |                                                     |                                                           | Air Change & Delta T Data      |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>House Volume</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> </thead> <tbody> <tr> <td>Level</td> <td>2153</td> <td>10</td> <td>21530</td> </tr> <tr> <td>Bsmt</td> <td>2153</td> <td>11</td> <td>23683</td> </tr> <tr> <td>First</td> <td>2262</td> <td>9</td> <td>20358</td> </tr> <tr> <td>Second</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Third</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td>Fourth</td> <td>0</td> <td>9</td> <td>0</td> </tr> <tr> <td>Total:</td> <td></td> <td></td> <td>65,571.0 ft³</td> </tr> <tr> <td>Total:</td> <td></td> <td></td> <td>1856.8 m³</td> </tr> </tbody> </table>                |                   |                                                     |                                                     |                                                           | House Volume                   | Floor Area (ft²)  | Floor Height (ft)                                   | Volume (ft³)                                        | Level                                                     | 2153  | 10  | 21530  | Bsmt   | 2153  | 11 | 23683 | First  | 2262  | 9 | 20358 | Second | 0     | 0 | 0 | Third | 0     | 9 | 0 | Fourth | 0     | 9                                                           | 0 | Total: |  |  | 65,571.0 ft³ | Total: |  |  | 1856.8 m³ | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">Design Temperature Difference</th> </tr> <tr> <th></th> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> </tr> </thead> <tbody> <tr> <td>Winter DTDh</td> <td>22</td> <td>-20</td> <td>42</td> </tr> <tr> <td>Summer DTDc</td> <td>22</td> <td>31</td> <td>9</td> </tr> <tr> <td></td> <td></td> <td></td> <td>76</td> </tr> <tr> <td></td> <td></td> <td></td> <td>16</td> </tr> </tbody> </table> |  |  |  |  | Design Temperature Difference |  |  |  |  | Tin °C | Tout °C | ΔT °C | Winter DTDh | 22 | -20 | 42 | Summer DTDc | 22 | 31 | 9 |  |  |  | 76 |  |  |  | 16 |
| House Volume                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Floor Area (ft²)  | Floor Height (ft)                                   | Volume (ft³)                                        |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2153              | 10                                                  | 21530                                               |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Bsmt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2153              | 11                                                  | 23683                                               |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| First                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2262              | 9                                                   | 20358                                               |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0                 | 0                                                   | 0                                                   |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Third                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0                 | 9                                                   | 0                                                   |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Fourth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0                 | 9                                                   | 0                                                   |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Total:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                                                     | 65,571.0 ft³                                        |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Total:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                                                     | 1856.8 m³                                           |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Design Temperature Difference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                     |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Tin °C            | Tout °C                                             | ΔT °C                                               |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Winter DTDh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 22                | -20                                                 | 42                                                  |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Summer DTDc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 22                | 31                                                  | 9                                                   |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                                                     | 76                                                  |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                                                     | 16                                                  |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">WINTER NATURAL AIR CHANGE RATE</th> <th>0.340</th> </tr> <tr> <th colspan="2">SUMMER NATURAL AIR CHANGE RATE</th> <th>0.124</th> </tr> </thead> </table>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                   |                                                     |                                                     |                                                           | WINTER NATURAL AIR CHANGE RATE |                   | 0.340                                               | SUMMER NATURAL AIR CHANGE RATE                      |                                                           | 0.124 |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| WINTER NATURAL AIR CHANGE RATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   | 0.340                                               |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| SUMMER NATURAL AIR CHANGE RATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   | 0.124                                               |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| <b>5.2.3.1 Heat Loss due to Air Leakage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                                     |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| $HL_{air-b} = LR_{air-b} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                   |                                                     |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| 0.340                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | x                 | 515.77                                              | x                                                   | 42 °C                                                     | x                              | 1.2               | =                                                   | 8886 W                                              |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                                                     |                                                     |                                                           |                                |                   | =                                                   | 30320 Btu/h                                         |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| <b>5.2.3.2 Heat Loss due to Mechanical Ventilation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                                                     |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| $HL_{vair-b} = PVC \times DTD_h \times 1.08 \times (1 - E)$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                                     |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| 155 CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | x                 | 76 °F                                               | x                                                   | 1.08                                                      | x                              | 0.25              | =                                                   | 3181 Btu/h                                          |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| <b>5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                   |                                                     |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| $HL_{air-r} = Level Factor \times HL_{air-bv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                                                     |                                                     |                                                           |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Level Factor (LF)</th> <th>HLairbv Air Leakage + Ventilation Heat Loss (Btu/h)</th> <th>Level Conductive Heat Loss: (HL<sub>clevel</sub>)</th> <th>Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.5</td> <td rowspan="5" style="text-align: center; vertical-align: middle;">30,320</td> <td>11,471</td> <td>1.322</td> </tr> <tr> <td>2</td> <td>0.3</td> <td>23,666</td> <td>0.384</td> </tr> <tr> <td>3</td> <td>0.2</td> <td>16,099</td> <td>0.377</td> </tr> <tr> <td>4</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> <tr> <td>5</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> </tbody> </table> |                   |                                                     |                                                     |                                                           | Level                          | Level Factor (LF) | HLairbv Air Leakage + Ventilation Heat Loss (Btu/h) | Level Conductive Heat Loss: (HL <sub>clevel</sub> ) | Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel) | 1     | 0.5 | 30,320 | 11,471 | 1.322 | 2  | 0.3   | 23,666 | 0.384 | 3 | 0.2   | 16,099 | 0.377 | 4 | 0 | 0     | 0.000 | 5 | 0 | 0      | 0.000 | $HL_{vair-b} = PVC \times DTD_h \times 1.08 \times (1 - E)$ |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Level Factor (LF) | HLairbv Air Leakage + Ventilation Heat Loss (Btu/h) | Level Conductive Heat Loss: (HL <sub>clevel</sub> ) | Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel) |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.5               | 30,320                                              | 11,471                                              | 1.322                                                     |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.3               |                                                     | 23,666                                              | 0.384                                                     |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.2               |                                                     | 16,099                                              | 0.377                                                     |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0                 |                                                     | 0                                                   | 0.000                                                     |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0                 |                                                     | 0                                                   | 0.000                                                     |                                |                   |                                                     |                                                     |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |
| 155 CFM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | x                 | 76 °F                                               | x                                                   | 1.08                                                      | x                              | 0.25              | =                                                   | 661 Btu/h                                           |                                                           |       |     |        |        |       |    |       |        |       |   |       |        |       |   |   |       |       |   |   |        |       |                                                             |   |        |  |  |              |        |  |  |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |  |  |  |                               |  |  |  |  |        |         |       |             |    |     |    |             |    |    |   |  |  |  |    |  |  |  |    |

\*HLairbv = Air leakage heat loss + ventilation heat loss

\*For a balanced or supply only ventilation system HLairve = 0

**HEAT LOSS AND GAIN SUMMARY SHEET**

|                                 |                      |                                   |
|---------------------------------|----------------------|-----------------------------------|
| <b>MODEL:</b> 5004 THE BEAUMONT | <b>OPT. ELEVATOR</b> | <b>BUILDER:</b> GOLD PARK HOMES   |
| <b>SFQT:</b> 4330               | <b>LO#</b> 77479     | <b>SITE:</b> PINE VALLEY & TESTON |

**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**

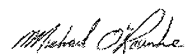
|                                     |                 |                           |          |
|-------------------------------------|-----------------|---------------------------|----------|
| ATTACHMENT:                         | DETACHED        | # OF STORIES (+BASEMENT): | 3        |
| FRONT FACES:                        | 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):                 | 65571.0         | ASSUMED (Y/N):            | Y        |
| INTERNAL SHADING:                   | BLINDS/CURTAINS | ASSUMED OCCUPANTS:        | 5        |
| INTERIOR LIGHTING LOAD (Btu/h/ft²): | 1.50            | DC BRUSHLESS MOTOR (Y/N): | Y        |
| FOUNDATION CONFIGURATION            | BCIN_1          | DEPTH BELOW GRADE:        | 7.0 ft   |
| LENGTH: 74.0 ft                     | WIDTH: 41.0 ft  | EXPOSED PERIMETER:        | 230.0 ft |

**2012 OBC - COMPLIANCE PACKAGE****Component****Compliance Package  
A1****Nominal Min. Eff.**

|                                                                            |       |       |
|----------------------------------------------------------------------------|-------|-------|
| Ceiling with Attic Space Minimum RSI (R)-Value                             | 60    | 59.22 |
| Ceiling Without Attic Space Minimum RSI (R)-Value                          | 31    | 27.65 |
| Exposed Floor Minimum RSI (R)-Value                                        | 31    | 29.80 |
| Walls Above Grade Minimum RSI (R)-Value                                    | 22    | 17.03 |
| Basement Walls Minimum RSI (R)-Value                                       | 20 ci | 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                            | 0.28  | -     |
| Skylights Maximum U-Value                                                  | 0.49  | -     |
| Space Heating Equipment Minimum AFUE                                       | 0.96  | -     |
| HRV Minimum Efficiency                                                     | 75%   | -     |
| Domestic Hot Water Heater Minimum EF                                       | 0.8   | -     |

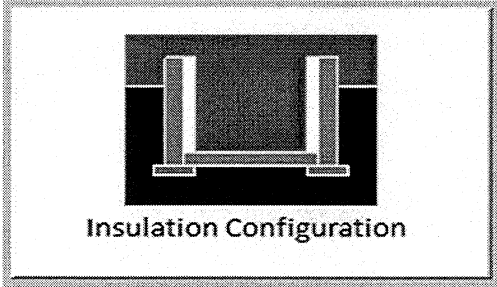
INDIVIDUAL BCIN: 19669

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):              | 22.6                                      | <br>Insulation Configuration |
| Floor Width (m):               | 12.5                                      |                                                                                                                 |
| Exposed Perimeter (m):         | 0.0                                       |                                                                                                                 |
| Wall Height (m):               | 3.0                                       |                                                                                                                 |
| Depth Below Grade (m):         | 2.13                                      |                                                                                                                 |
| Window Area (m <sup>2</sup> ): | 1.6                                       |                                                                                                                 |
| 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):          |                                           | 2380                                                                                                            |

TYPE: 5004 THE BEAUMONT  
LO# 77479

OPT. ELEVATOR

# Air Infiltration Residential Load Calculator

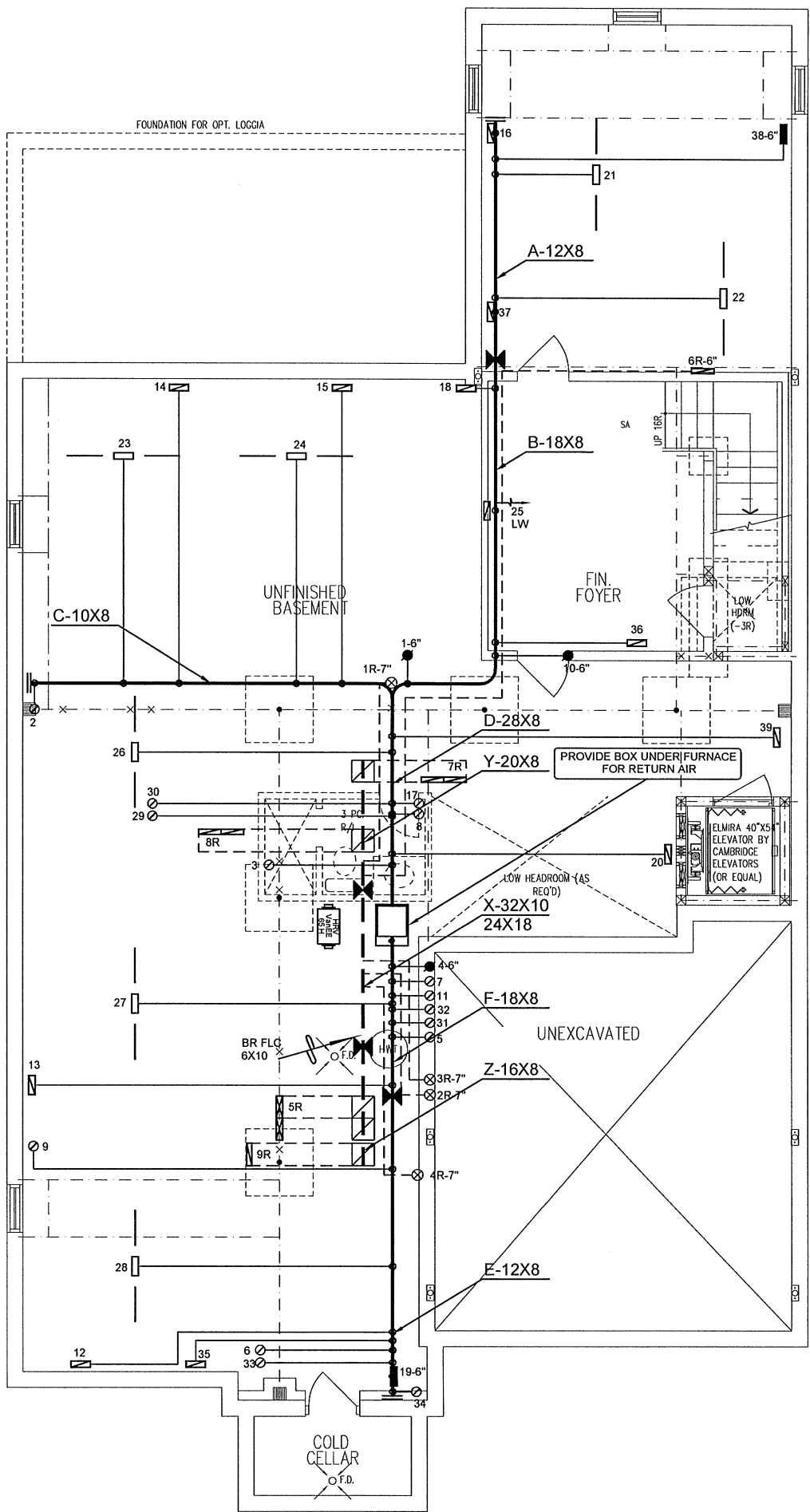
Supplemental tool for CAN/CSA-F280

| 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):       | 7.01                       |                        |    |    |
| Building Configuration            |                            |                        |    |    |
| Type:                             | Detached                   |                        |    |    |
| Number of Stories:                | Two                        |                        |    |    |
| Foundation:                       | Full                       |                        |    |    |
| House Volume (m <sup>3</sup> ):   | 1856.8                     |                        |    |    |
| Air Leakage/Ventilation           |                            |                        |    |    |
| Air Tightness Type:               | Present (1961-) (3.57 ACH) |                        |    |    |
| Custom BDT Data:                  | ELA @ 10 Pa.               | 2475.1 cm <sup>2</sup> |    |    |
|                                   | 3.57                       | 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): | 0.340                      |                        |    |    |
| Cooling Air Leakage Rate (ACH/H): | 0.124                      |                        |    |    |

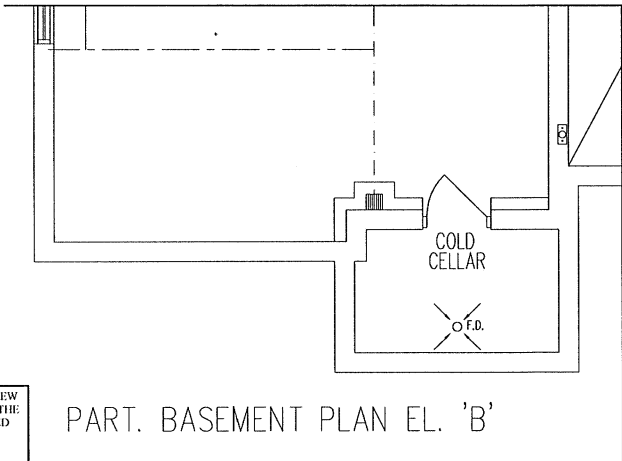
TYPE: 5004 THE BEAUMONT  
LO# 77479

OPT. ELEVATOR

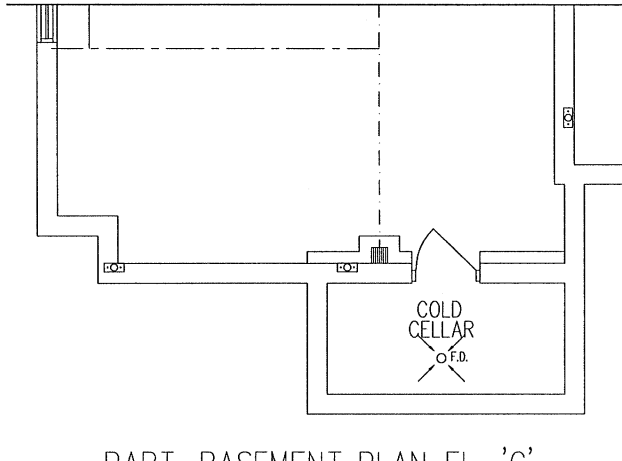




PART. BASEMENT PLAN EL. 'A' (OPT. ELEVATOR)



PART. BASEMENT PLAN EL. 'B'



PART. BASEMENT PLAN EL. 'C'

CSA-F280-12  
PACKAGE A1

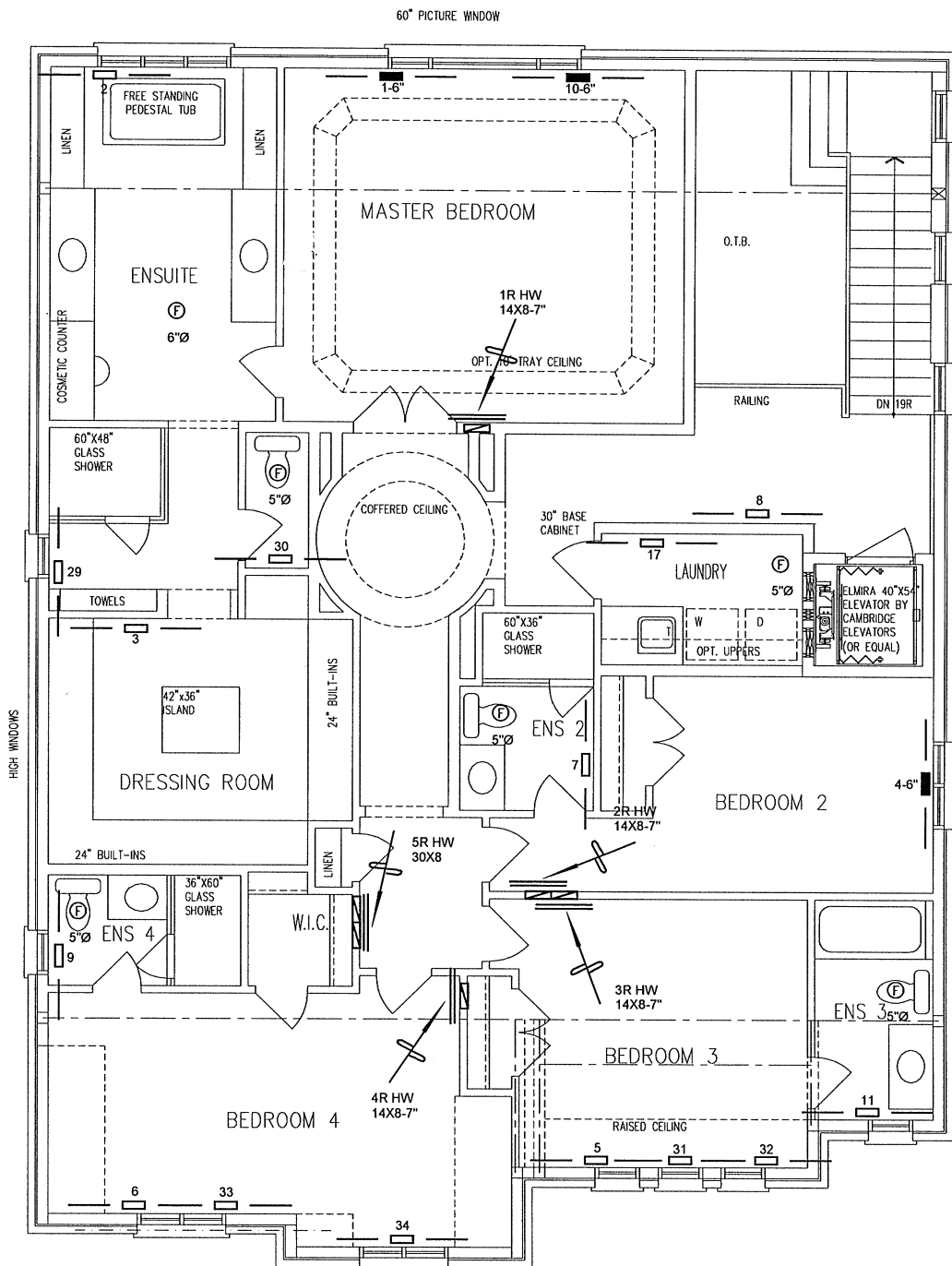
I MICHAEL O'ROURKE HAVE REVIEW  
AND TAKE RESPONSIBILITY FOR THE  
DESIGN WORK AND AM QUALIFIED  
UNDER DIVISION C. 3.2.5 OF THE  
BUILDING CODE.  
*Michael O'Rourke*  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

| 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 |                  |

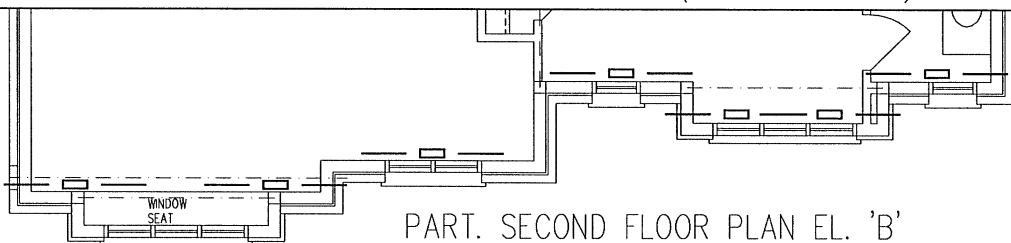
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|                                                                                                   |  |                                                                                                                                                                                                                                                                                                                                          |                                    |                                                                                                                                                              |                        |  |             |                               |          |
|---------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|--|-------------|-------------------------------|----------|
| Client                                                                                            |  | <div></div> <div>375 Finley Ave. Suite 202 - Ajax, Ontario<br/>L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375<br/>Email: info@hvacdesigns.ca<br/>Web: www.hvacdesigns.ca<br/>Specializing in Residential Mechanical Design Services</div> | HEAT LOSS 86017 BTU/H<br>UNIT DATA |                                                                                                                                                              | # OF RUNS S/A R/A FANS |  |             | Sheet Title                   |          |
| GOLD PARK HOMES                                                                                   |  |                                                                                                                                                                                                                                                                                                                                          | MAKE<br>LENNOX                     |                                                                                                                                                              | 3RD FLOOR              |  |             | BASEMENT<br>HEATING<br>LAYOUT |          |
| Project Name<br>PINE VALLEY & TESTON<br>VAUGHAN, ONTARIO<br>OPT. ELEVATOR<br>THE BEAUMONT<br>5004 |  |                                                                                                                                                                                                                                                                                                                                          | MODEL<br>EL296110XE60C             |                                                                                                                                                              | 2ND FLOOR              |  |             |                               |          |
|                                                                                                   |  |                                                                                                                                                                                                                                                                                                                                          | INPUT<br>110 MBTU/H                |                                                                                                                                                              | 1ST FLOOR              |  |             |                               |          |
|                                                                                                   |  |                                                                                                                                                                                                                                                                                                                                          | OUTPUT<br>106 MBTU/H               |                                                                                                                                                              | BASEMENT               |  |             | Date                          | JAN/2018 |
|                                                                                                   |  | COOLING<br>5.0 TONS                                                                                                                                                                                                                                                                                                                      |                                    | ALL S/A DIFFUSERS 4 "x10"<br>UNLESS NOTED OTHERWISE<br>ON LAYOUT. ALL S/A RUNS 5"Ø<br>UNLESS NOTED OTHERWISE<br>ON LAYOUT. UNDERCUT<br>DOORS 1" min. FOR R/A |                        |  | Scale       | 1/8" = 1'-0"                  |          |
|                                                                                                   |  | FAN SPEED<br>1955 cfm @<br>0.6" w.c.                                                                                                                                                                                                                                                                                                     |                                    |                                                                                                                                                              |                        |  | BCIN# 19669 |                               |          |
| 4330 sqft                                                                                         |  |                                                                                                                                                                                                                                                                                                                                          |                                    |                                                                                                                                                              |                        |  | LO#         | 77479                         |          |

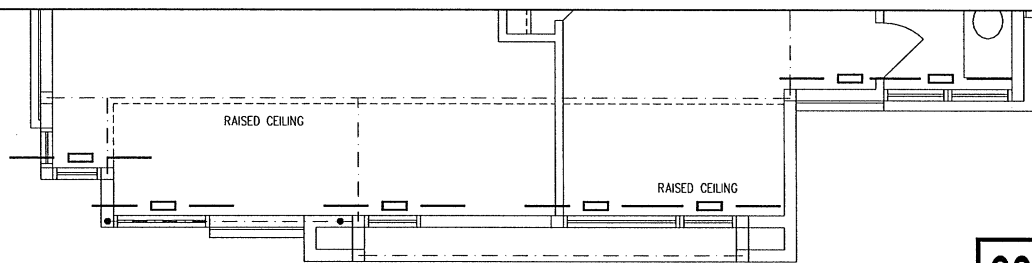




PART. SECOND FLOOR PLAN EL. 'A' (OPT. ELEVATOR)



PART. SECOND FLOOR PLAN EL. 'B'



PART. SECOND FLOOR PLAN EL. 'C'

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 A1

| 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 |
|             | SUPPLY AIR BOOT ABOVE     |        | 6" SUPPLY AIR STACK 2nd FLOOR   |        | FRA- FLOOR RETURN AIR GRILLE |        | REDUCER                    |     | Date        |

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|                                                                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                   |              |
|-----------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------|
| Client                                                                            |  | <div><p>375 Finley Ave. Suite 202 - Ajax, Ontario<br/>L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375<br/>Email: info@hvacdesigns.ca<br/>Web: www.hvacdesigns.ca<br/>Specializing in Residential Mechanical Design Services</p><p>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.</p></div> | Sheet Title                       |              |
| GOLD PARK HOMES                                                                   |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | SECOND FLOOR<br>HEATING<br>LAYOUT |              |
| Project Name                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Date                              | JAN/2018     |
| PINE VALLEY & TESTON<br>VAUGHAN, ONTARIO<br>OPT. ELEVATOR<br>THE BEAUMONT<br>5004 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Scale                             | 1/8" = 1'-0" |
| 4330 sqft                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | BCIN# 19669                       |              |
|                                                                                   |  | LO#                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 77479                             |              |