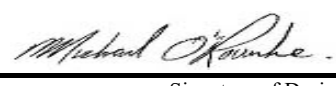


## Schedule 1: Designer Information

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<br><input type="checkbox"/> Small Buildings<br><input type="checkbox"/> Large Buildings<br><input type="checkbox"/> Complex Buildings <input checked="" type="checkbox"/> HVAC – House<br><input type="checkbox"/> Building Services<br><input type="checkbox"/> Detection, Lighting and Power<br><input type="checkbox"/> Fire Protection <input type="checkbox"/> Building Structural<br><input type="checkbox"/> Plumbing – House<br><input type="checkbox"/> Plumbing – All Buildings<br><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> 5009<br><br>LOT 26<br><br><b>Project:</b> PINE VALLEY & TESTON                                  |                                      |
| <b>D. Declaration of Designer</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                     |                                                                                                               |                                      |
| I, <u><b>MICHAEL O'ROURKE</b></u><br>(print name)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                     | declare that (choose one as appropriate):                                                                     |                                      |
| <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><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><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.                                                                                                                                                                                                                                                                                                                                                                                                      |                                     |                                                                                                               |                                      |
| July 11, 2022                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                     | <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 |           |          |         | LOT 26     |      | GFA: 3956 |       | DATE: Jul-22 |       | WINTER NATURAL AIR CHANGE RATE 0.407 |       | HEAT LOSS ΔT °F. 76 |  | CSA-F280-12      |  |
|---------------------------------|-----------|----------|---------|------------|------|-----------|-------|--------------|-------|--------------------------------------|-------|---------------------|--|------------------|--|
| BUILDER: GOLD PARK HOMES        |           |          |         | TYPE: 5009 |      |           |       | LO# 98029    |       | SUMMER NATURAL AIR CHANGE RATE 0.137 |       | HEAT GAIN ΔT °F. 13 |  | SB-12 PACKAGE A1 |  |
| ROOM USE                        | EXP. WALL | CLG. HT. | FACTORS | MBR        | ENS  | BED-2     | BED-3 | BED-4        | ENS-2 | ENS-3                                | ENS-4 |                     |  |                  |  |
|                                 |           |          |         | 47         | 30   | 33        | 32    | 14           | 11    | 6                                    | 8     |                     |  |                  |  |
|                                 |           |          |         | 9          | 9    | 9         | 9     | 9            | 9     | 9                                    | 9     |                     |  |                  |  |
| GRS.WALL AREA                   | LOSS      | GAIN     |         | 423        | 270  | 297       | 288   | 126          | 99    | 54                                   | 72    |                     |  |                  |  |
| GLAZING                         | LOSS      | GAIN     |         | LOSS       | GAIN | LOSS      | GAIN  | LOSS         | GAIN  | LOSS                                 | GAIN  |                     |  |                  |  |
| NORTH                           | 21.3      | 13.9     |         | 0          | 0    | 0         | 0     | 0            | 0     | 0                                    | 0     |                     |  |                  |  |
| EAST                            | 21.3      | 35.2     |         | 0          | 0    | 0         | 0     | 0            | 0     | 0                                    | 0     |                     |  |                  |  |
| SOUTH                           | 21.3      | 21.3     |         | 0          | 0    | 0         | 7     | 149          | 149   | 7                                    | 149   |                     |  |                  |  |
| WEST                            | 21.3      | 35.2     |         | 56         | 1192 | 1973      | 28    | 596          | 986   | 0                                    | 0     |                     |  |                  |  |
| SKYLT.                          | 37.2      | 57.1     |         | 4          | 149  | 228       | 0     | 0            | 0     | 0                                    | 0     |                     |  |                  |  |
| DOORS                           | 25.2      | 4.3      |         | 0          | 0    | 0         | 0     | 0            | 0     | 0                                    | 0     |                     |  |                  |  |
| NET EXPOSED WALL                | 4.5       | 0.8      |         | 367        | 1638 | 276       | 235   | 1049         | 177   | 47                                   | 210   |                     |  |                  |  |
| NET EXPOSED BSMT WALL ABOVE GR  | 3.6       | 0.6      |         | 0          | 0    | 0         | 0     | 0            | 0     | 0                                    | 0     |                     |  |                  |  |
| EXPOSED CLG                     | 1.3       | 0.6      |         | 548        | 703  | 322       | 224   | 287          | 132   | 60                                   | 77    |                     |  |                  |  |
| NO ATTIC EXPOSED CLG            | 2.7       | 1.3      |         | 0          | 0    | 0         | 0     | 0            | 0     | 0                                    | 0     |                     |  |                  |  |
| EXPOSED FLOOR                   | 2.6       | 0.4      |         | 68         | 173  | 29        | 0     | 0            | 0     | 0                                    | 0     |                     |  |                  |  |
| BASEMENT/CRAWL HEAT LOSS        |           |          |         | 0          | 0    | 0         | 0     | 0            | 0     | 0                                    | 0     |                     |  |                  |  |
| SLAB ON GRADE HEAT LOSS         |           |          |         | 0          | 0    | 0         | 0     | 0            | 0     | 0                                    | 0     |                     |  |                  |  |
| SUBTOTAL HT LOSS                |           |          |         | 3855       | 2081 | 2852      | 3597  | 1891         | 881   | 436                                  | 511   |                     |  |                  |  |
| SUB TOTAL HT GAIN               |           |          |         | 2828       | 1444 | 829       | 3650  | 1392         | 269   | 220                                  | 231   |                     |  |                  |  |
| LEVEL FACTOR / MULTIPLIER       | 0.20      | 0.38     |         | 0.20       | 0.38 | 0.20      | 0.38  | 0.20         | 0.38  | 0.20                                 | 0.38  |                     |  |                  |  |
| AIR CHANGE HEAT LOSS            |           |          |         | 1483       | 800  | 1097      | 1383  | 727          | 339   | 168                                  | 196   |                     |  |                  |  |
| AIR CHANGE HEAT GAIN            |           |          |         | 219        | 112  | 64        | 282   | 108          | 21    | 17                                   | 18    |                     |  |                  |  |
| DUCT LOSS                       |           |          |         | 534        | 0    | 395       | 0     | 0            | 122   | 0                                    | 0     |                     |  |                  |  |
| DUCT GAIN                       |           |          |         | 413        | 0    | 174       | 0     | 0            | 90    | 0                                    | 0     |                     |  |                  |  |
| HEAT GAIN PEOPLE                | 240       | 2        |         | 480        | 0    | 1         | 240   | 1            | 240   | 0                                    | 0     |                     |  |                  |  |
| HEAT GAIN APPLIANCES/LIGHTS     |           |          |         | 607        | 0    | 607       | 607   | 607          | 607   | 607                                  | 607   |                     |  |                  |  |
| TOTAL HT LOSS BTU/H             |           |          |         | 5872       | 2881 | 4343      | 4980  | 2618         | 1341  | 603                                  | 707   |                     |  |                  |  |
| TOTAL HT GAIN x 1.3 BTU/H       |           |          |         | 5911       | 2022 | 2488      | 6213  | 3050         | 1283  | 1097                                 | 1113  |                     |  |                  |  |

| ROOM USE                       | EXP. WALL | CLG. HT. | FACTORS | GRT/BF | KIT  | LIV/DIN | LAUND | W/R  | FOY  | MUD  | BAS   |
|--------------------------------|-----------|----------|---------|--------|------|---------|-------|------|------|------|-------|
|                                |           |          |         | 78     | 21   | 41      | 0     | 19   | 43   | 7    | 200   |
|                                |           |          |         | 11     | 11   | 11      | 9     | 11   | 11   | 11   | 10    |
| GRS.WALL AREA                  | LOSS      | GAIN     |         | 858    | 231  | 451     | 0     | 209  | 473  | 77   | 1400  |
| GLAZING                        | LOSS      | GAIN     |         | LOSS   | GAIN | LOSS    | GAIN  | LOSS | GAIN | LOSS | GAIN  |
| NORTH                          | 21.3      | 13.9     |         | 0      | 0    | 0       | 0     | 0    | 0    | 0    | 0     |
| EAST                           | 21.3      | 35.2     |         | 0      | 0    | 0       | 72    | 1532 | 2536 | 0    | 0     |
| SOUTH                          | 21.3      | 21.3     |         | 44     | 936  | 939     | 10    | 213  | 213  | 34   | 724   |
| WEST                           | 21.3      | 35.2     |         | 172    | 3660 | 6059    | 0     | 0    | 0    | 0    | 0     |
| SKYLT.                         | 37.2      | 57.1     |         | 0      | 0    | 0       | 0     | 0    | 0    | 0    | 0     |
| DOORS                          | 25.2      | 4.3      |         | 25     | 631  | 106     | 0     | 0    | 0    | 0    | 0     |
| NET EXPOSED WALL               | 4.5       | 0.8      |         | 617    | 2753 | 464     | 221   | 986  | 166  | 345  | 1540  |
| NET EXPOSED BSMT WALL ABOVE GR | 3.6       | 0.6      |         | 0      | 0    | 0       | 0     | 0    | 0    | 0    | 0     |
| EXPOSED CLG                    | 1.3       | 0.6      |         | 0      | 0    | 0       | 0     | 0    | 0    | 148  | 190   |
| NO ATTIC EXPOSED CLG           | 2.7       | 1.3      |         | 0      | 0    | 0       | 0     | 0    | 0    | 0    | 0     |
| EXPOSED FLOOR                  | 2.6       | 0.4      |         | 0      | 0    | 0       | 0     | 0    | 0    | 37   | 94    |
| BASEMENT/CRAWL HEAT LOSS       |           |          |         | 0      | 0    | 0       | 0     | 0    | 0    | 0    | 0     |
| SLAB ON GRADE HEAT LOSS        |           |          |         | 0      | 0    | 0       | 0     | 0    | 0    | 0    | 0     |
| SUBTOTAL HT LOSS               |           |          |         | 7981   | 1199 | 3795    | 284   | 933  | 4213 | 759  | 9886  |
| SUB TOTAL HT GAIN              |           |          |         | 7568   | 380  | 3521    | 103   | 157  | 3005 | 128  | 852   |
| LEVEL FACTOR / MULTIPLIER      | 0.30      | 0.50     |         | 0.30   | 0.50 | 0.30    | 0.50  | 0.30 | 0.50 | 0.30 | 0.50  |
| AIR CHANGE HEAT LOSS           |           |          |         | 3996   | 600  | 1900    | 109   | 467  | 2109 | 380  | 15755 |
| AIR CHANGE HEAT GAIN           |           |          |         | 585    | 29   | 272     | 8     | 12   | 232  | 10   | 66    |
| DUCT LOSS                      |           |          |         | 0      | 0    | 0       | 39    | 0    | 0    | 0    | 0     |
| DUCT GAIN                      |           |          |         | 0      | 0    | 0       | 72    | 0    | 0    | 0    | 0     |
| HEAT GAIN PEOPLE               | 240       | 0        |         | 0      | 0    | 0       | 0     | 0    | 0    | 0    | 0     |
| HEAT GAIN APPLIANCES/LIGHTS    |           |          |         | 607    | 607  | 607     | 607   | 607  | 607  | 607  | 607   |
| TOTAL HT LOSS BTU/H            |           |          |         | 11977  | 1799 | 5695    | 433   | 1400 | 6323 | 1140 | 25641 |
| TOTAL HT GAIN x 1.3 BTU/H      |           |          |         | 11388  | 1321 | 5721    | 1026  | 220  | 4209 | 179  | 1983  |

TOTAL HEAT GAIN BTU/H:

49499

TONS: 4.12

LOSS DUE TO VENTILATION LOAD BTU/H: 1631

STRUCTURAL HEAT LOSS: 77754

TOTAL COMBINED HEAT LOSS BTU/H: 79385



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

LOT 26  
TYPE: 5009

DATE: Jul-22

GFA: 3956 LO# 98029

HEATING CFM 1575 COOLING CFM 1575  
TOTAL HEAT LOSS 77,754 TOTAL HEAT GAIN 49,224  
AIR FLOW RATE CFM 20.26 AIR FLOW RATE CFM 32

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

**LENNOX**  
**EL196UH090XE48C**  
**90**

AFUE = 96 %  
INPUT (BTU/H) = 88,000  
OUTPUT (BTU/H) = **85,600**

| RUN COUNT | 4th | 3rd | 2nd | 1st | Bas |
|-----------|-----|-----|-----|-----|-----|
| S/A       | 0   | 0   | 14  | 13  | 6   |
| R/A       | 0   | 0   | 5   | 2   | 1   |

plenium pressure s/a 0.18  
max s/a dif press. loss 0.02  
min adjusted pressure s/a 0.16  
r/a pressure 0.17  
r/a grille press. Loss 0.02  
adjusted pressure r/a 0.15

FAN SPEED  
LOW 0  
MEDLOW 1080  
MEDIUM 1190  
MEDIUM HIGH 1340  
HIGH 1575

DESIGN CFM = **1575**  
CFM @ .6" E.S.P.

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

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

| RUN #                     | 1    | 2    | 3    | 4     | 5     | 6     | 7     | 8     | 9     | 10   | 11    | 12     | 13     | 14   | 15     | 16      | 17    | 18   | 19   | 20   | 21   | 22   | 23   | 24   |
|---------------------------|------|------|------|-------|-------|-------|-------|-------|-------|------|-------|--------|--------|------|--------|---------|-------|------|------|------|------|------|------|------|
| ROOM NAME                 | MBR  | ENS  | ENS  | BED-2 | BED-3 | BED-4 | ENS-2 | BED-2 | ENS-3 | MBR  | ENS-4 | GRT/BF | GRT/BF | KIT  | GRT/BF | LIV/DIN | LAUND | W/R  | FOY  | MUD  | BAS  | BAS  | BAS  | BAS  |
| RM LOSS MBH.              | 1.96 | 1.44 | 1.44 | 2.17  | 2.49  | 2.62  | 1.34  | 2.17  | 0.60  | 1.96 | 0.71  | 2.40   | 2.40   | 1.80 | 2.40   | 1.90    | 0.43  | 1.40 | 3.16 | 1.14 | 4.27 | 4.27 | 4.27 | 4.27 |
| CFM PER RUN HEAT          | 40   | 29   | 29   | 44    | 50    | 53    | 27    | 44    | 12    | 40   | 14    | 49     | 49     | 36   | 49     | 38      | 9     | 28   | 64   | 23   | 87   | 87   | 87   | 87   |
| RM GAIN MBH.              | 1.97 | 1.01 | 1.01 | 1.24  | 3.11  | 3.05  | 1.28  | 1.24  | 1.10  | 1.97 | 1.11  | 2.28   | 2.28   | 1.32 | 2.28   | 1.91    | 1.03  | 0.22 | 2.10 | 0.18 | 0.33 | 0.33 | 0.33 | 0.33 |
| CFM PER RUN COOLING       | 63   | 32   | 32   | 40    | 99    | 98    | 41    | 40    | 35    | 63   | 36    | 73     | 73     | 42   | 73     | 61      | 33    | 7    | 67   | 6    | 11   | 11   | 11   | 11   |
| ADJUSTED PRESSURE         | 0.17 | 0.17 | 0.17 | 0.17  | 0.16  | 0.16  | 0.17  | 0.17  | 0.17  | 0.17 | 0.17  | 0.17   | 0.17   | 0.17 | 0.17   | 0.17    | 0.17  | 0.17 | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
| ACTUAL DUCT LGH.          | 71   | 54   | 34   | 29    | 35    | 23    | 57    | 54    | 15    | 87   | 22    | 55     | 43     | 20   | 49     | 17      | 50    | 60   | 37   | 55   | 50   | 43   | 33   | 37   |
| EQUIVALENT LENGTH         | 160  | 160  | 160  | 190   | 120   | 180   | 190   | 150   | 180   | 150  | 200   | 130    | 160    | 190  | 130    | 90      | 180   | 110  | 150  | 150  | 130  | 140  | 170  | 150  |
| TOTAL EFFECTIVE LENGTH    | 231  | 214  | 194  | 219   | 155   | 203   | 247   | 204   | 195   | 237  | 222   | 185    | 203    | 210  | 179    | 107     | 230   | 170  | 187  | 205  | 180  | 183  | 203  | 187  |
| ADJUSTED PRESSURE         | 0.07 | 0.08 | 0.09 | 0.08  | 0.1   | 0.08  | 0.07  | 0.08  | 0.09  | 0.07 | 0.08  | 0.09   | 0.08   | 0.08 | 0.1    | 0.16    | 0.07  | 0.1  | 0.09 | 0.08 | 0.09 | 0.09 | 0.08 | 0.09 |
| ROUND DUCT SIZE           | 6    | 4    | 4    | 5     | 6     | 6     | 5     | 5     | 4     | 6    | 4     | 5      | 5      | 4    | 5      | 4       | 4     | 4    | 5    | 4    | 6    | 6    | 6    | 6    |
| HEATING VELOCITY (ft/min) | 204  | 333  | 333  | 323   | 255   | 270   | 198   | 323   | 138   | 204  | 161   | 360    | 360    | 413  | 360    | 436     | 103   | 321  | 470  | 264  | 444  | 444  | 444  | 444  |
| COOLING VELOCITY (ft/min) | 321  | 367  | 367  | 294   | 505   | 500   | 301   | 294   | 402   | 321  | 413   | 536    | 536    | 482  | 536    | 700     | 379   | 80   | 492  | 69   | 56   | 56   | 56   | 56   |
| OUTLET GRILL SIZE         | 4X10 | 3X10 | 3X10 | 3X10  | 4X10  | 4X10  | 3X10  | 3X10  | 3X10  | 4X10 | 3X10  | 3X10   | 3X10   | 3X10 | 3X10   | 3X10    | 3X10  | 3X10 | 3X10 | 3X10 | 4X10 | 4X10 | 4X10 | 4X10 |
| TRUNK                     | A    | C    | C    | E     | D     | C     | E     | E     | E     | A    | C     | C      | B      | C    | B      | E       | E     | B    | D    | A    | A    | B    | B    | B    |

| RUN #                     | 25   | 26   | 27   | 28    | 29     | 30     | 31      | 32      | 33   |
|---------------------------|------|------|------|-------|--------|--------|---------|---------|------|
| ROOM NAME                 | BAS  | BAS  | MBR  | BED-3 | GRT/BF | GRT/BF | LIV/DIN | LIV/DIN | FOY  |
| RM LOSS MBH.              | 4.27 | 4.27 | 1.96 | 2.49  | 2.40   | 2.40   | 1.90    | 1.90    | 3.16 |
| CFM PER RUN HEAT          | 87   | 87   | 40   | 50    | 49     | 49     | 38      | 38      | 64   |
| RM GAIN MBH.              | 0.33 | 0.33 | 1.97 | 3.11  | 2.28   | 2.28   | 1.91    | 1.91    | 2.10 |
| CFM PER RUN COOLING       | 11   | 11   | 63   | 99    | 73     | 73     | 61      | 61      | 67   |
| ADJUSTED PRESSURE         | 0.16 | 0.16 | 0.17 | 0.16  | 0.17   | 0.17   | 0.17    | 0.17    | 0.17 |
| ACTUAL DUCT LGH.          | 52   | 25   | 62   | 44    | 58     | 63     | 25      | 31      | 31   |
| EQUIVALENT LENGTH         | 140  | 100  | 150  | 160   | 160    | 140    | 110     | 120     | 150  |
| TOTAL EFFECTIVE LENGTH    | 192  | 125  | 212  | 204   | 218    | 203    | 135     | 151     | 181  |
| ADJUSTED PRESSURE         | 0.08 | 0.13 | 0.08 | 0.08  | 0.08   | 0.08   | 0.13    | 0.11    | 0.1  |
| ROUND DUCT SIZE           | 6    | 6    | 5    | 6     | 6      | 6      | 5       | 5       | 5    |
| HEATING VELOCITY (ft/min) | 444  | 444  | 294  | 255   | 250    | 250    | 279     | 279     | 470  |
| COOLING VELOCITY (ft/min) | 56   | 56   | 463  | 505   | 372    | 372    | 448     | 448     | 492  |
| OUTLET GRILL SIZE         | 4X10 | 4X10 | 3X10 | 4X10  | 4X10   | 4X10   | 3X10    | 3X10    | 3X10 |
| TRUNK                     | B    | E    | C    | D     | A      | A      | D       | D       | D    |

**SUPPLY AIR TRUNK SIZE**

| TRUNK A |              |                  |               |              |   |                      | TRUNK G |              |                  |               |              |   |                      |   |   |
|---------|--------------|------------------|---------------|--------------|---|----------------------|---------|--------------|------------------|---------------|--------------|---|----------------------|---|---|
|         | TRUNK<br>CFM | STATIC<br>PRESS. | ROUND<br>DUCT | RECT<br>DUCT |   | VELOCITY<br>(ft/min) |         | TRUNK<br>CFM | STATIC<br>PRESS. | ROUND<br>DUCT | RECT<br>DUCT |   | VELOCITY<br>(ft/min) |   |   |
| TRUNK A | 288          | 0.07             | 9.1           | 10           | x | 8                    | 518     | TRUNK G      | 0                | 0.00          | 0            | 0 | x                    | 8 | 0 |
| TRUNK B | 762          | 0.07             | 13.1          | 20           | x | 8                    | 686     | TRUNK H      | 0                | 0.00          | 0            | 0 | x                    | 8 | 0 |
| TRUNK C | 1012         | 0.07             | 14.6          | 24           | x | 8                    | 759     | TRUNK I      | 0                | 0.00          | 0            | 0 | x                    | 8 | 0 |
| TRUNK D | 304          | 0.08             | 9             | 10           | x | 8                    | 547     | TRUNK J      | 0                | 0.00          | 0            | 0 | x                    | 8 | 0 |
| TRUNK E | 565          | 0.07             | 11.7          | 16           | x | 8                    | 636     | TRUNK K      | 0                | 0.00          | 0            | 0 | x                    | 8 | 0 |
| TRUNK F | 0            | 0.00             | 0             | 0            | x | 8                    | 0       | TRUNK L      | 0                | 0.00          | 0            | 0 | x                    | 8 | 0 |

**RETURN AIR TRUNK SIZE**

|         | TRUNK<br>CFM | STATIC<br>PRESS. | ROUND<br>DUCT | RECT<br>DUCT |   | VELOCITY<br>(ft/min) |     |
|---------|--------------|------------------|---------------|--------------|---|----------------------|-----|
| TRUNK O | 0            | 0.05             | 0             | 0            | x | 8                    | 0   |
| TRUNK P | 0            | 0.05             | 0             | 0            | x | 8                    | 0   |
| TRUNK Q | 0            | 0.05             | 0             | 0            | x | 8                    | 0   |
| TRUNK R | 0            | 0.05             | 0             | 0            | x | 8                    | 0   |
| TRUNK S | 0            | 0.05             | 0             | 0            | x | 8                    | 0   |
| TRUNK T | 0            | 0.05             | 0             | 0            | x | 8                    | 0   |
| TRUNK U | 0            | 0.05             | 0             | 0            | x | 8                    | 0   |
| TRUNK V | 0            | 0.05             | 0             | 0            | x | 8                    | 0   |
| TRUNK W | 0            | 0.05             | 0             | 0            | x | 8                    | 0   |
| TRUNK X | 1150         | 0.05             | 16.6          | 32           | x | 8                    | 647 |
| TRUNK Y | 425          | 0.05             | 11.5          | 16           | x | 8                    | 478 |
| TRUNK Z | 455          | 0.05             | 11.7          | 16           | x | 8                    | 512 |
| DROP    | 1575         | 0.05             | 18.7          | 24           | x | 14                   | 675 |

| RETURN AIR #       | 1    | 2    | 3    | 4    | 5    | 6    | 7    |       |       |       |       |       |       |       |       | BR   |
|--------------------|------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| AIR VOLUME         | 75   | 85   | 190  | 75   | 85   | 380  | 425  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 260  |
| PLENUM PRESSURE    | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15 |
| ACTUAL DUCT LGH.   | 90   | 59   | 42   | 53   | 37   | 60   | 26   | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 16   |
| EQUIVALENT LENGTH  | 225  | 175  | 165  | 245  | 195  | 200  | 120  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 145  |
| TOTAL EFFECTIVE LH | 315  | 234  | 207  | 298  | 232  | 260  | 146  | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 161  |
| ADJUSTED PRESSURE  | 0.05 | 0.06 | 0.07 | 0.05 | 0.06 | 0.06 | 0.10 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 0.09 |
| ROUND DUCT SIZE    | 6    | 6    | 7.8  | 6    | 6    | 10.5 | 9.6  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 8.2  |
| INLET GRILL SIZE   | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 8    |
|                    | X    | X    | X    | X    | X    | X    | X    | X     | X     | X     | X     | X     | X     | X     | X     | X    |
| INLET GRILL SIZE   | 14   | 14   | 24   | 14   | 14   | 30   | 30   | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 24   |

TYPE: 5009  
SITE NAME: PINE VALLEY & TESTON

LO # 98029  
LOT 26

**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  | <u>2</u> @ 21.2 cfm | <u>42.4</u> cfm  |
| Other Bedrooms             | <u>3</u> @ 10.6 cfm | <u>31.8</u> cfm  |
| Kitchen & Bathrooms        | <u>6</u> @ 10.6 cfm | <u>63.6</u> cfm  |
| Other Rooms                | <u>5</u> @ 10.6 cfm | <u>53.0</u> cfm  |
| Table 9.32.3.A.            | TOTAL               | <u>190.8</u> cfm |

| PRINCIPAL VENTILATION CAPACITY REQUIRED |      | 9.32.3.4.(1)    |
|-----------------------------------------|------|-----------------|
| 1 Bedroom                               | 31.8 | cfm             |
| 2 Bedroom                               | 47.7 | cfm             |
| 3 Bedroom                               | 63.6 | cfm             |
| 4 Bedroom                               | 79.5 | cfm             |
| 5 Bedroom                               | 95.4 | cfm             |
| TOTAL                                   |      | <u>79.5</u> cfm |

| SUPPLEMENTAL VENTILATION CAPACITY |              | 9.32.3.5. |
|-----------------------------------|--------------|-----------|
| Total Ventilation Capacity        | <u>190.8</u> | cfm       |
| Less Principal Ventil. Capacity   | <u>79.5</u>  | cfm       |
| Required Supplemental Capacity    | <u>111.3</u> | cfm       |

| PRINCIPAL EXHAUST FAN CAPACITY                   |                  |
|--------------------------------------------------|------------------|
| Model:                                           | VANEE 65H        |
| Location:                                        | BSMT             |
| <u>79.5</u> cfm                                  | <u>3.0</u> sones |
| <input checked="" type="checkbox"/> HVI Approved |                  |

| PRINCIPAL EXHAUST HEAT LOSS CALCULATION |   |       |   |        |        |
|-----------------------------------------|---|-------|---|--------|--------|
| CFM                                     |   | ΔT °F |   | FACTOR | % LOSS |
| 79.5 CFM                                | X | 76 F  | X | 1.08   | X      |
|                                         |   |       |   |        | 0.25   |

| SUPPLEMENTAL FANS |             | PANASONIC |                                     |       |
|-------------------|-------------|-----------|-------------------------------------|-------|
| Location          | Model       | cfm       | HVI                                 | Sones |
| ENS               | FV-05-11VK1 | 50        | <input checked="" type="checkbox"/> | 0.3   |
| ENS-2             | FV-05-11VK1 | 50        | <input checked="" type="checkbox"/> | 0.3   |
| ENS-4             | FV-05-11VK1 | 50        | <input checked="" type="checkbox"/> | 0.3   |
| W/R               | FV-05-11VK1 | 50        | <input checked="" type="checkbox"/> | 0.3   |

| HEAT RECOVERY VENTILATOR        |                                                  | 9.32.3.11. |
|---------------------------------|--------------------------------------------------|------------|
| Model:                          | VANEE 65H                                        |            |
| <u>155</u> cfm high             | <u>64</u> cfm low                                |            |
| <u>75</u> % 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:                                                                                                         | July-22                 |

| CSA F280-12 Residential Heat Loss and Heat Gain Calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                                                     |                                                                                                                                         |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------|--------------|------|------|----|-------|-------|------|----|-------|--------|------|---|-------|-------|---|---|---|--------|---|---|---|--|--|--------|--------------|--|--|--------|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------|-------|--------------------------------|-------|-------------------------------|--|--|--|--|--|--------|---------|-------|-------|-------------|----|-----|----|----|-------------|----|----|---|----|
| Formula Sheet (For Air Leakage / Ventilation Calculation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   |                                                     |                                                                                                                                         |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| LO#: 98029                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Model: 5009       | Builder: GOLD PARK HOMES                            | Date: 2022-07-11                                                                                                                        |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| <b>Volume Calculation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                   |                                                     | <b>Air Change &amp; Delta T Data</b>                                                                                                    |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| <b>House Volume</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Floor Area (ft²)</th> <th>Floor Height (ft)</th> <th>Volume (ft³)</th> </tr> </thead> <tbody> <tr> <td>Bsmt</td> <td>1779</td> <td>10</td> <td>17790</td> </tr> <tr> <td>First</td> <td>1779</td> <td>11</td> <td>19569</td> </tr> <tr> <td>Second</td> <td>2177</td> <td>9</td> <td>19593</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 colspan="2"></td> <td>Total:</td> <td>56,952.0 ft³</td> </tr> <tr> <td colspan="2"></td> <td>Total:</td> <td>1612.7 m³</td> </tr> </tbody> </table> |                   |                                                     | Level                                                                                                                                   | Floor Area (ft²)                                          | Floor Height (ft) | Volume (ft³) | Bsmt | 1779 | 10 | 17790 | First | 1779 | 11 | 19569 | Second | 2177 | 9 | 19593 | Third | 0 | 9 | 0 | Fourth | 0 | 9 | 0 |  |  | Total: | 56,952.0 ft³ |  |  | Total: | 1612.7 m³ | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">WINTER NATURAL AIR CHANGE RATE</td> <td style="width: 20%;">0.407</td> </tr> <tr> <td>SUMMER NATURAL AIR CHANGE RATE</td> <td>0.137</td> </tr> </table><br><table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="5" style="text-align: center;">Design Temperature Difference</th> </tr> <tr> <th></th> <th>Tin °C</th> <th>Tout °C</th> <th>ΔT °C</th> <th>ΔT °F</th> </tr> <tr> <td>Winter DTDh</td> <td>22</td> <td>-20</td> <td>42</td> <td>76</td> </tr> <tr> <td>Summer DTDc</td> <td>24</td> <td>31</td> <td>7</td> <td>13</td> </tr> </table> |  | WINTER NATURAL AIR CHANGE RATE | 0.407 | SUMMER NATURAL AIR CHANGE RATE | 0.137 | Design Temperature Difference |  |  |  |  |  | Tin °C | Tout °C | ΔT °C | ΔT °F | Winter DTDh | 22 | -20 | 42 | 76 | Summer DTDc | 24 | 31 | 7 | 13 |
| Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Floor Area (ft²)  | Floor Height (ft)                                   | Volume (ft³)                                                                                                                            |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| Bsmt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1779              | 10                                                  | 17790                                                                                                                                   |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| First                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1779              | 11                                                  | 19569                                                                                                                                   |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| Second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 2177              | 9                                                   | 19593                                                                                                                                   |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| Third                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0                 | 9                                                   | 0                                                                                                                                       |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| Fourth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                 | 9                                                   | 0                                                                                                                                       |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                   | Total:                                              | 56,952.0 ft³                                                                                                                            |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                   | Total:                                              | 1612.7 m³                                                                                                                               |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| WINTER NATURAL AIR CHANGE RATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.407             |                                                     |                                                                                                                                         |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| SUMMER NATURAL AIR CHANGE RATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.137             |                                                     |                                                                                                                                         |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| Design Temperature Difference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                   |                                                     |                                                                                                                                         |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Tin °C            | Tout °C                                             | ΔT °C                                                                                                                                   | ΔT °F                                                     |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| Winter DTDh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 22                | -20                                                 | 42                                                                                                                                      | 76                                                        |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| Summer DTDc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 24                | 31                                                  | 7                                                                                                                                       | 13                                                        |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| <b>5.2.3.1 Heat Loss due to Air Leakage</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                                                     | <b>6.2.6 Sensible Gain due to Air Leakage</b>                                                                                           |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| $HL_{airb} = LR_{airh} \times \frac{V_b}{3.6} \times DTD_h \times 1.2$ <p>0.407 x 447.97 x 42 °C x 1.2 = 9235 W</p> <p>= 31510 Btu/h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                                                     | $HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ <p>= 0.137 x 447.97 x 7 °C x 1.2 = 522 W</p> <p>= 1780 Btu/h</p> |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| <b>5.2.3.2 Heat Loss due to Mechanical Ventilation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                   |                                                     | <b>6.2.7 Sensible heat Gain due to Ventilation</b>                                                                                      |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| $HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ <p>80 CFM x 76 °F x 1.08 x 0.25 = 1631 Btu/h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                                                     | $HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ <p>80 CFM x 13 °F x 1.08 x 0.25 = 275 Btu/h</p>                              |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| <b>5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                                                     |                                                                                                                                         |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| $HL_{airr} = Level\ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                                     |                                                                                                                                         |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Level Factor (LF) | HLairve 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               | 31,510                                              | 9,886                                                                                                                                   | 1.594                                                     |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.3               |                                                     | 18,881                                                                                                                                  | 0.501                                                     |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0.2               |                                                     | 16,387                                                                                                                                  | 0.385                                                     |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                 |                                                     | 0                                                                                                                                       | 0.000                                                     |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0                 |                                                     | 0                                                                                                                                       | 0.000                                                     |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |
| <p>*HLairbv = Air leakage heat loss + ventilation heat loss</p> <p>*For a balanced or supply only ventilation system HLairve = 0</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                   |                                                     |                                                                                                                                         |                                                           |                   |              |      |      |    |       |       |      |    |       |        |      |   |       |       |   |   |   |        |   |   |   |  |  |        |              |  |  |        |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |    |

**HEAT LOSS AND GAIN SUMMARY SHEET**

|                    |                  |                                   |
|--------------------|------------------|-----------------------------------|
| <b>MODEL:</b> 5009 | <b>LOT 26</b>    | <b>BUILDER:</b> GOLD PARK HOMES   |
| <b>SFQT:</b> 3956  | <b>LO#</b> 98029 | <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) | 75 |

**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 (ft <sup>3</sup> ):                 | 56952.0         | ASSUMED (Y/N):            | Y        |
| INTERNAL SHADING:                                | BLINDS/CURTAINS | ASSUMED OCCUPANTS:        | 5        |
| INTERIOR LIGHTING LOAD (Btu/h/ft <sup>2</sup> ): | 1.27            | DC BRUSHLESS MOTOR (Y/N): | Y        |
| FOUNDATION CONFIGURATION                         | BCIN_1          | DEPTH BELOW GRADE:        | 7.0 ft   |
| LENGTH: 58.0 ft                                  | WIDTH: 42.0 ft  | EXPOSED PERIMETER:        | 200.0 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   | -     |

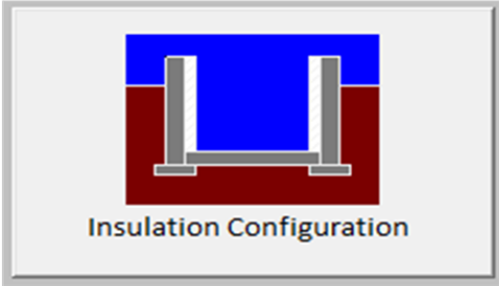
INDIVIDUAL BCIN: 19669

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):              | 17.7                                      |  |
| Floor Width (m):               | 12.8                                      |                                                                                     |
| Exposed Perimeter (m):         | 0.0                                       |                                                                                     |
| Wall Height (m):               | 3.0                                       |                                                                                     |
| Depth Below Grade (m):         | 2.13                                      |                                                                                     |
| Window Area (m <sup>2</sup> ): | 1.4                                       |                                                                                     |
| 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):          |                                           | 2023                                                                                |

TYPE: 5009  
LO# 98029

LOT 26

# Air Infiltration Residential Load Calculator

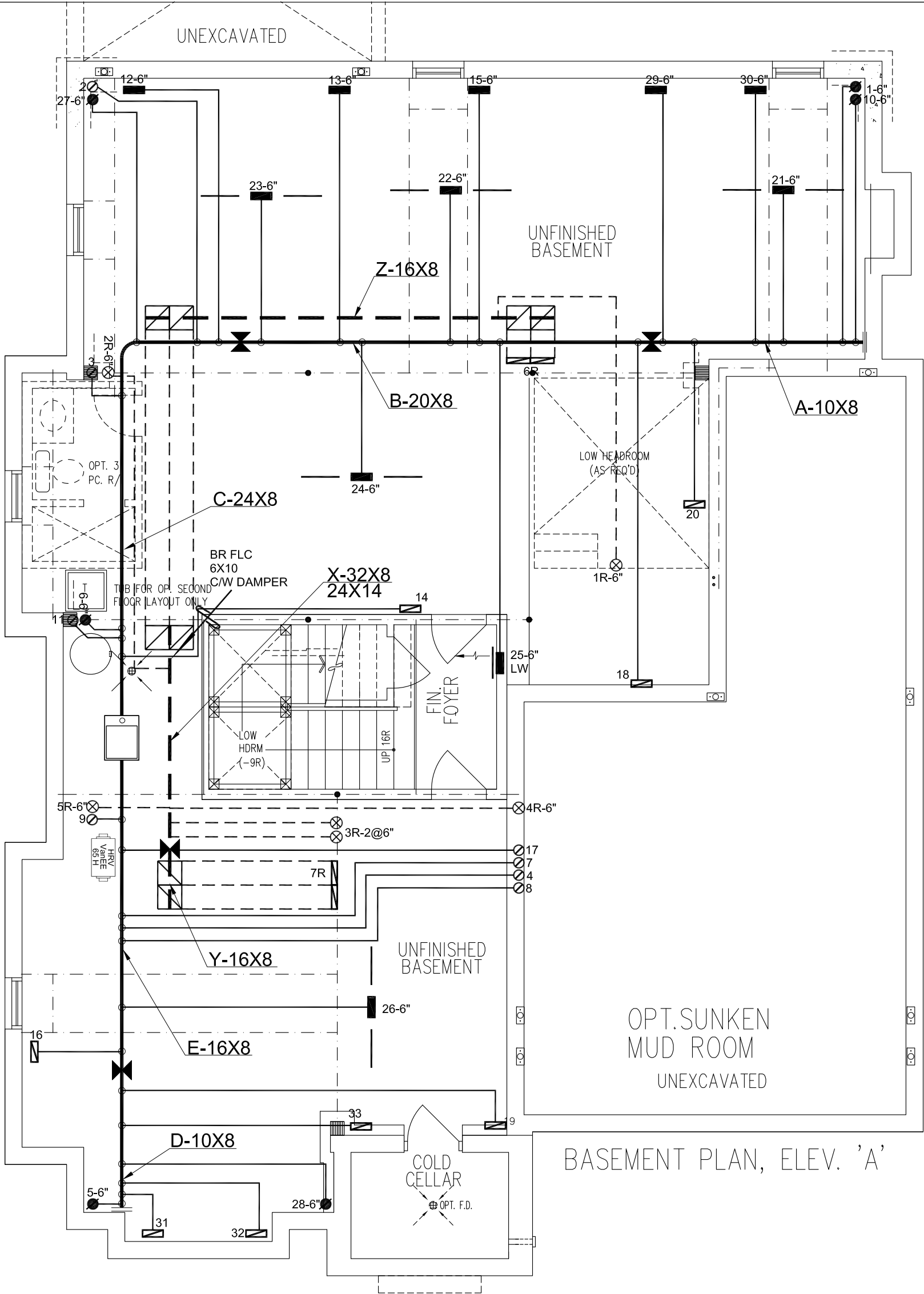
Supplemental tool for CAN/CSA-F280

| Weather Station Description       |                            |                        |    |    |
|-----------------------------------|----------------------------|------------------------|----|----|
| Province:                         | Ontario                    |                        |    |    |
| Region:                           | Vaughan (Woodbridge)       |                        |    |    |
| Weather Station Location:         | Open flat terrain, grass   |                        |    |    |
| Anemometer height (m):            | 10                         |                        |    |    |
| Local Shielding                   |                            |                        |    |    |
| Building Site:                    | Suburban, forest           |                        |    |    |
| Walls:                            | Heavy                      |                        |    |    |
| Flue:                             | Heavy                      |                        |    |    |
| Highest Ceiling Height (m):       | 9.14                       |                        |    |    |
| Building Configuration            |                            |                        |    |    |
| Type:                             | Detached                   |                        |    |    |
| Number of Stories:                | Two                        |                        |    |    |
| Foundation:                       | Full                       |                        |    |    |
| House Volume (m <sup>3</sup> ):   | 1612.7                     |                        |    |    |
| Air Leakage/Ventilation           |                            |                        |    |    |
| Air Tightness Type:               | Present (1961-) (3.57 ACH) |                        |    |    |
| Custom BDT Data:                  | ELA @ 10 Pa.               | 2149.8 cm <sup>2</sup> |    |    |
|                                   | 3.57                       | ACH @ 50 Pa            |    |    |
| Mechanical Ventilation (L/s):     | Total Supply               | Total Exhaust          |    |    |
|                                   | 37.5                       | 37.5                   |    |    |
| Flue Size                         |                            |                        |    |    |
| Flue #:                           | #1                         | #2                     | #3 | #4 |
| Diameter (mm):                    | 0                          | 0                      | 0  | 0  |
| Natural Infiltration Rates        |                            |                        |    |    |
| Heating Air Leakage Rate (ACH/H): | 0.407                      |                        |    |    |
| Cooling Air Leakage Rate (ACH/H): | 0.137                      |                        |    |    |

TYPE: 5009  
LO# 98029

LOT 26





BASEMENT PLAN, ELEV. 'A'

LOT 26  
CSA-F280-12  
PACKAGE A1

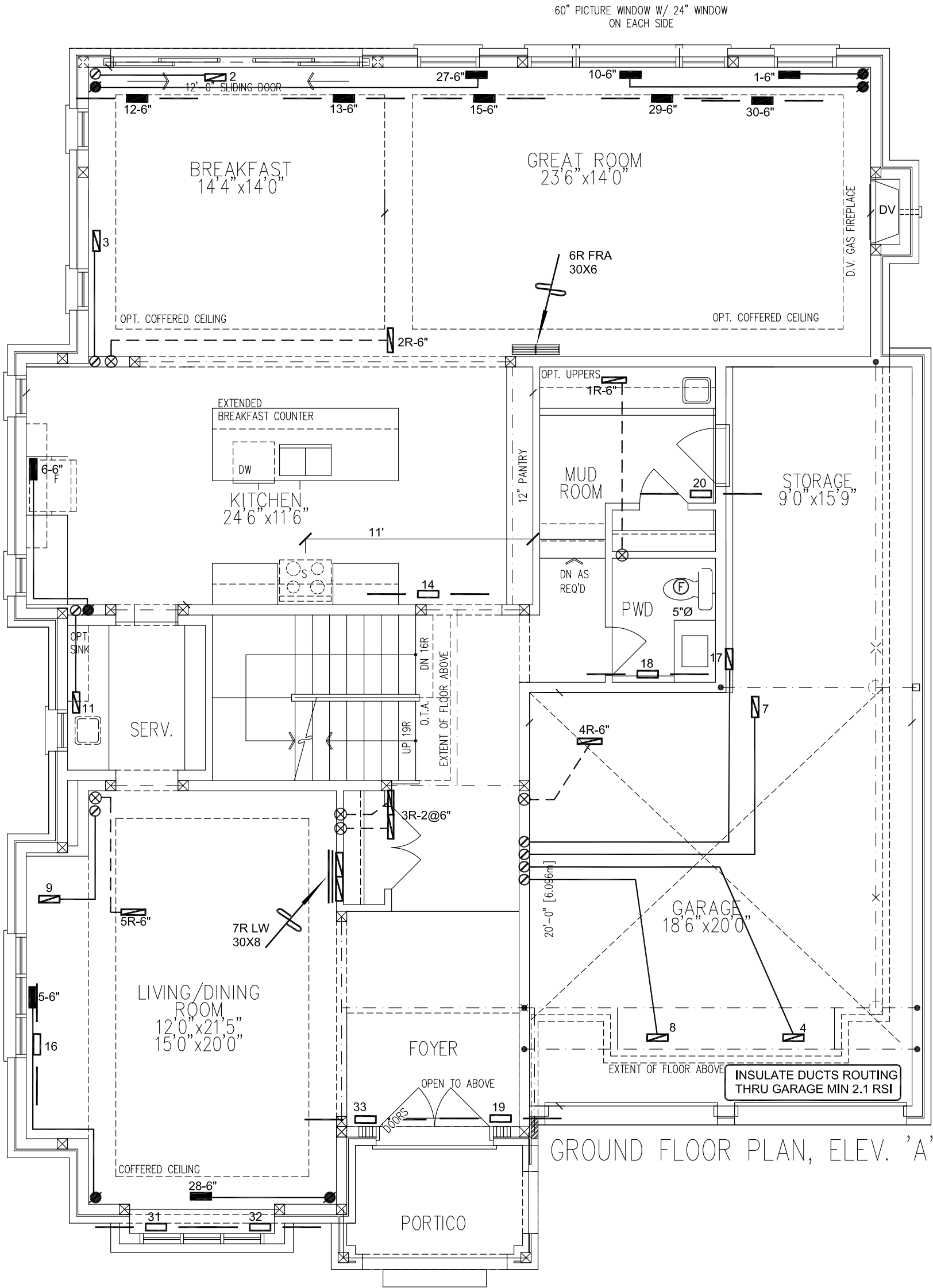
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.

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

| HVAC LEGEND |                           |        |                                 |        |                              |        |                            | 3.        |             |      |
|-------------|---------------------------|--------|---------------------------------|--------|------------------------------|--------|----------------------------|-----------|-------------|------|
| SYMBOL      | DESCRIPTION               | SYMBOL | DESCRIPTION                     | SYMBOL | DESCRIPTION                  | SYMBOL | DESCRIPTION                | 2.        |             |      |
|             | 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>HVACDESIGNS LTD.</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></div> | HEAT LOSS 79385 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 PH 2<br>VAUGHAN, ONTARIO |  |                                                                                                                                                                                                                                                                                | MODEL<br>EL196UH090XE48C                                                                                                                      | 2ND FLOOR | 14                     | 5 | 6           |                               |               |
|                                                      |  |                                                                                                                                                                                                                                                                                | INPUT<br>88 MBTU/H                                                                                                                            | 1ST FLOOR | 13                     | 2 | 2           | Date                          | JULY/2022     |
|                                                      |  |                                                                                                                                                                                                                                                                                | OUTPUT<br>85.6 MBTU/H                                                                                                                         | BASEMENT  | 6                      | 1 | 0           | Scale                         | 3/16" = 1'-0" |
|                                                      |  | COOLING<br>4.0 TONS                                                                                                                                                                                                                                                            | ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A |           |                        |   | BCIN# 19669 |                               |               |
| 5009 - LOT 26      3956 sqft                         |  | FAN SPEED<br>1575 cfm @ 0.6" w.c.                                                                                                                                                                                                                                              |                                                                                                                                               |           |                        |   | LO#         | 98029                         |               |



GROUND FLOOR PLAN, ELEV. 'A'

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.

LOT 26

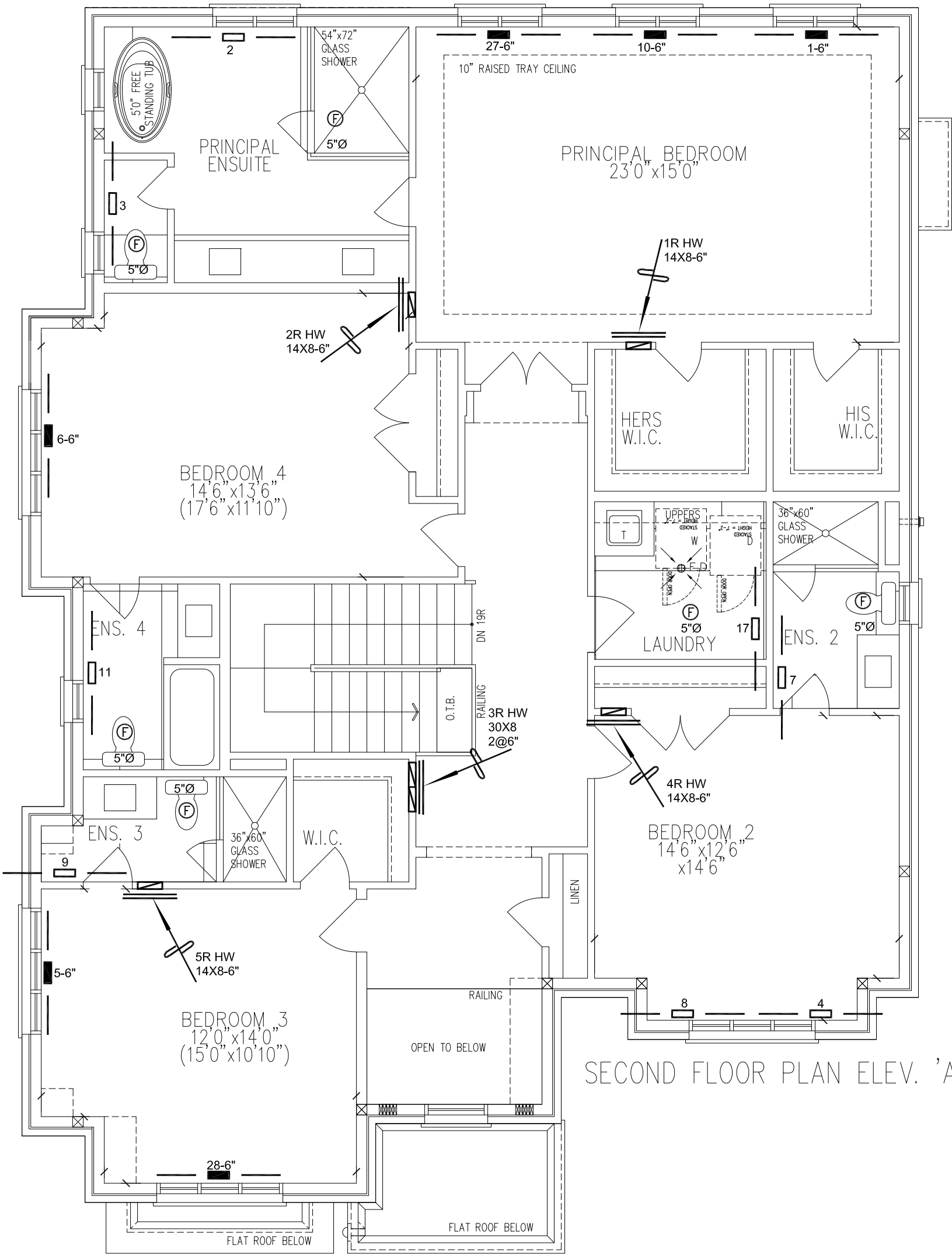
CSA-F280-12

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 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> <div>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.</div> | Sheet Title                |               |
| GOLD PARK HOMES                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | FIRST FLOOR HEATING LAYOUT |               |
| Project Name                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Date                       | JULY/2022     |
| PINE VALLEY PH 2<br>VAUGHAN, ONTARIO |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Scale                      | 3/16" = 1'-0" |
| 5009 - LOT 26                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BCIN# 19669                |               |
| 3956 sqft                            |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LO#                        | 98029         |



SECOND FLOOR PLAN ELEV. 'A'

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.

LOT 26

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 | 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> <div>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.</div> | Sheet Title                 |               |
| GOLD PARK HOMES                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | SECOND FLOOR HEATING LAYOUT |               |
| Project Name                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Date                        | JULY/2022     |
| PINE VALLEY PH 2<br>VAUGHAN, ONTARIO |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Scale                       | 3/16" = 1'-0" |
| 5009 - LOT 26                        |  | BCIN# 19669                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                             |               |
| 3956 sqft                            |  | LO#                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 98029                       |               |