

NOT THE GRANTING OF A PERMIT NOR REVIEWING OF SPECS  
& DRAWINGS NOR INSPECTIONS MADE DURING INSTALLATION  
BY THE OFFICIAL HAVING JURISDICTION SHALL RELIEVE THE  
OWNER FROM REQUIREMENTS OF THE ONTARIO BUILDING  
CODE AND ANY OTHER REFERENCED REQUIREMENTS.

## Garden 4 - Elevation 1

| SITE NAME: BARLASSINA          |           | BUILDER: GREENPARK HOMES |         | TYPE: GARDEN 4 |      | GFA: 2615 |      | DATE: Aug-22 |      | LO# 98642 |      | WINTER NATURAL AIR CHANGE RATE 0.307 |      | HEAT LOSS ΔT °F. 72 |      | CSA-F280-12      |      |
|--------------------------------|-----------|--------------------------|---------|----------------|------|-----------|------|--------------|------|-----------|------|--------------------------------------|------|---------------------|------|------------------|------|
|                                |           |                          |         |                |      |           |      |              |      |           |      | SUMMER NATURAL AIR CHANGE RATE 0.084 |      | HEAT GAIN ΔT °F. 9  |      | SB-12 PACKAGE A1 |      |
| ROOM USE                       | EXP. WALL | CLG. HT.                 | FACTORS | LOSS           | GAIN | LOSS      | GAIN | LOSS         | GAIN | LOSS      | GAIN | LOSS                                 | GAIN | LOSS                | GAIN | LOSS             | GAIN |
| GRS.WALL AREA                  | 297       |                          |         |                |      | 207       |      | 72           |      | 270       |      | 306                                  |      | 162                 |      | 90               |      |
| GLAZING                        |           |                          |         |                |      |           |      |              |      |           |      |                                      |      |                     |      |                  |      |
| NORTH                          | 20.3      | 15.0                     | 0       | 0              | 0    | 0         | 0    | 0            | 0    | 0         | 0    | 0                                    | 0    | 0                   | 0    | 0                | 0    |
| EAST                           | 20.3      | 40.5                     | 0       | 0              | 0    | 0         | 0    | 0            | 0    | 27        | 547  | 1095                                 | 42   | 851                 | 1703 | 0                | 0    |
| SOUTH                          | 20.3      | 23.9                     | 0       | 0              | 0    | 9         | 182  | 215          | 0    | 0         | 0    | 0                                    | 24   | 487                 | 573  | 15               | 304  |
| WEST                           | 20.3      | 40.5                     | 20      | 405            | 811  | 9         | 182  | 365          | 0    | 0         | 0    | 0                                    | 0    | 0                   | 0    | 0                | 0    |
| SKYLT.                         | 35.5      | 99.8                     | 0       | 0              | 0    | 0         | 0    | 0            | 0    | 0         | 0    | 0                                    | 0    | 0                   | 0    | 0                | 0    |
| DOORS                          | 19.1      | 2.4                      | 0       | 0              | 0    | 0         | 0    | 0            | 0    | 0         | 0    | 0                                    | 0    | 0                   | 0    | 0                | 0    |
| NET EXPOSED WALL               | 4.3       | 0.5                      | 277     | 1178           | 150  | 189       | 803  | 102          | 72   | 306       | 39   | 243                                  | 1033 | 131                 | 264  | 587              | 75   |
| NET EXPOSED BSMT WALL ABOVE GR | 3.4       | 0.4                      | 0       | 0              | 0    | 0         | 0    | 0            | 0    | 0         | 0    | 0                                    | 0    | 0                   | 0    | 0                | 0    |
| EXPOSED CLG                    | 1.2       | 0.5                      | 260     | 318            | 137  | 142       | 174  | 75           | 104  | 127       | 55   | 228                                  | 279  | 120                 | 267  | 326              | 141  |
| NO ATTIC EXPOSED CLG           | 2.6       | 1.1                      | 0       | 0              | 0    | 0         | 0    | 0            | 0    | 0         | 0    | 14                                   | 37   | 16                  | 18   | 47               | 20   |
| EXPOSED FLOOR                  | 2.4       | 0.3                      | 0       | 0              | 0    | 0         | 0    | 0            | 0    | 0         | 0    | 0                                    | 0    | 0                   | 0    | 0                | 0    |
| BASEMENT/CRAWL HEAT LOSS       |           |                          | 0       |                |      | 0         |      |              | 0    |           |      | 0                                    |      |                     | 0    |                  |      |
| SLAB ON GRADE HEAT LOSS        |           |                          | 0       |                |      | 0         |      |              | 0    |           |      | 0                                    |      |                     | 0    |                  |      |
| SUBTOTAL HT LOSS               |           |                          | 1901    |                |      | 1342      |      |              | 433  |           |      | 2484                                 |      |                     | 2347 |                  |      |
| SUB TOTAL HT GAIN              |           |                          |         | 1098           |      | 757       |      |              | 94   |           |      | 1437                                 |      |                     | 2006 |                  |      |
| LEVEL FACTOR / MULTIPLIER      | 0.20      | 0.24                     |         |                |      | 0.20      | 0.24 |              | 0.20 | 0.24      |      | 0.20                                 | 0.24 |                     | 0.20 | 0.24             |      |
| AIR CHANGE HEAT LOSS           |           |                          | 450     |                |      | 318       |      |              | 103  |           |      | 588                                  |      |                     | 321  |                  |      |
| AIR CHANGE HEAT GAIN           |           |                          |         | 50             |      | 35        |      |              | 4    |           |      | 66                                   |      |                     | 92   |                  |      |
| DUCT LOSS                      |           |                          | 0       |                |      | 0         |      |              | 0    |           |      | 307                                  |      |                     | 0    |                  |      |
| DUCT GAIN                      |           |                          |         | 0              |      | 0         |      |              | 0    |           |      | 246                                  |      |                     | 0    |                  |      |
| HEAT GAIN PEOPLE               | 240       |                          | 2       |                | 480  | 0         |      | 0            | 0    |           | 1    | 240                                  |      | 1                   | 240  |                  | 0    |
| HEAT GAIN APPLIANCES/LIGHTS    |           |                          |         |                | 713  | 0         |      | 0            | 0    |           | 0    | 713                                  |      | 0                   | 713  |                  | 0    |
| TOTAL HT LOSS BTU/H            |           |                          | 2351    |                |      | 1660      |      |              | 536  |           |      | 3379                                 |      |                     | 2903 |                  |      |
| TOTAL HT GAIN x 1.3 BTU/H      |           |                          |         | 3044           |      | 1029      |      |              | 127  |           |      | 3512                                 |      |                     | 3968 |                  |      |

| ROOM USE                       | EXP. WALL | CLG. HT. | FACTORS | LOSS | GAIN | LOSS | GAIN | LOSS | GAIN | LOSS | GAIN | LOSS | GAIN | LOSS | GAIN | LOSS | GAIN |
|--------------------------------|-----------|----------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| GRS.WALL AREA                  | 380       |          |         |      |      | 900  |      | 220  |      | 130  |      | 209  |      | 272  |      | 870  |      |
| GLAZING                        |           |          |         |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| NORTH                          | 20.3      | 15.0     | 0       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| EAST                           | 20.3      | 40.5     | 0       | 0    | 0    | 0    | 0    | 0    | 0    | 9    | 182  | 365  | 30   | 608  | 1216 | 0    | 0    |
| SOUTH                          | 20.3      | 23.9     | 28      | 568  | 669  | 14   | 284  | 334  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 10   | 203  |
| WEST                           | 20.3      | 40.5     | 0       | 0    | 0    | 81   | 1642 | 3284 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| SKYLT.                         | 35.5      | 99.8     | 0       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| DOORS                          | 19.1      | 2.4      | 0       | 0    | 0    | 0    | 0    | 0    | 21   | 401  | 51   | 0    | 0    | 0    | 18   | 344  | 44   |
| NET EXPOSED WALL               | 4.3       | 0.5      | 352     | 1496 | 190  | 805  | 3422 | 435  | 199  | 846  | 108  | 121  | 514  | 65   | 161  | 684  | 87   |
| NET EXPOSED BSMT WALL ABOVE GR | 3.4       | 0.4      | 0       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| EXPOSED CLG                    | 1.2       | 0.5      | 0       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| NO ATTIC EXPOSED CLG           | 2.6       | 1.1      | 0       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| EXPOSED FLOOR                  | 2.4       | 0.3      | 0       | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |
| BASEMENT/CRAWL HEAT LOSS       |           |          | 0       |      |      | 0    |      |      | 0    |      |      | 0    |      |      | 0    |      |      |
| SLAB ON GRADE HEAT LOSS        |           |          | 0       |      |      | 0    |      |      | 0    |      |      | 0    |      |      | 0    |      |      |
| SUBTOTAL HT LOSS               |           |          | 2064    |      |      | 5348 |      |      | 1247 |      |      | 697  |      |      | 1636 |      |      |
| SUB TOTAL HT GAIN              |           |          |         | 859  |      | 4053 |      |      | 158  |      |      | 430  |      |      | 1347 |      |      |
| LEVEL FACTOR / MULTIPLIER      | 0.30      | 0.37     |         |      |      | 0.30 | 0.37 |      | 0.30 | 0.37 |      | 0.30 | 0.37 |      | 0.30 | 0.37 |      |
| AIR CHANGE HEAT LOSS           |           |          | 766     |      |      | 1985 |      |      | 463  |      |      | 259  |      |      | 607  |      |      |
| AIR CHANGE HEAT GAIN           |           |          |         | 40   |      | 186  |      |      | 7    |      |      | 20   |      |      | 62   |      |      |
| DUCT LOSS                      |           |          | 0       |      |      | 0    |      |      | 0    |      |      | 0    |      |      | 0    |      |      |
| DUCT GAIN                      |           |          |         | 0    |      | 0    |      |      | 0    |      |      | 0    |      |      | 0    |      |      |
| HEAT GAIN PEOPLE               | 240       |          | 0       |      | 0    | 0    |      | 0    | 0    |      | 0    | 0    |      | 0    | 0    |      | 0    |
| HEAT GAIN APPLIANCES/LIGHTS    |           |          |         |      | 713  | 713  |      | 0    | 0    |      | 713  | 0    |      | 0    | 0    |      | 0    |
| TOTAL HT LOSS BTU/H            |           |          | 2830    |      |      | 7333 |      |      | 1710 |      |      | 955  |      |      | 2244 |      |      |
| TOTAL HT GAIN x 1.3 BTU/H      |           |          |         | 2095 |      | 6439 |      |      | 1143 |      |      | 585  |      |      | 1832 |      |      |

TOTAL HEAT GAIN BTU/H:

29317

TONS: 2.44

LOSS DUE TO VENTILATION LOAD BTU/H: 1554

STRUCTURAL HEAT LOSS: 45750

TOTAL COMBINED HEAT LOSS BTU/H: 47304



SITE NAME: BARLASSINA  
BUILDER: GREENPARK HOMES

TYPE: GARDEN 4

DATE: Aug-22

GFA: 2615 LO# 98642

HEATING CFM 928 COOLING CFM 928  
TOTAL HEAT LOSS 45,750 TOTAL HEAT GAIN 29,119  
AIR FLOW RATE CFM 20.28 AIR FLOW RATE CFM 31.87

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

#GOODMAN  
GMEC960603BNA 60

AFUE = 96 %  
INPUT (BTU/H) = 60,000  
OUTPUT (BTU/H) = 57,600

| RUN COUNT | 4th | 3rd | 2nd | 1st | Bas |
|-----------|-----|-----|-----|-----|-----|
| S/A       | 0   | 0   | 11  | 7   | 4   |
| R/A       | 0   | 0   | 5   | 1   | 1   |

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

FAN SPEED LOW  
MEDLOW 928  
MEDIUM 1017  
MEDIUM HIGH 1017  
HIGH 1131

DESIGN CFM = 928  
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   | 13    | 14      | 15      | 16      | 17   | 18   | 19   | 21   | 22   | 23   | 24   |
|---------------------------|------|------|------|-------|-------|-------|-------|-------|-------|------|------|-------|---------|---------|---------|------|------|------|------|------|------|------|
| ROOM NAME                 | MBR  | ENS  | WIC  | BED-2 | BED-3 | BED-4 | ENS-3 | BED-2 | BED-3 | MBR  | BATH | LIV/D | K/B/F/D | K/B/F/D | K/B/F/D | LAUN | W/R  | FOY  | BAS  | BAS  | BAS  | BAS  |
| RM LOSS MBH.              | 1.18 | 1.66 | 0.54 | 1.69  | 1.45  | 1.68  | 0.88  | 1.69  | 1.45  | 1.18 | 1.23 | 2.83  | 2.44    | 2.44    | 2.44    | 1.71 | 0.96 | 2.24 | 4.01 | 4.01 | 4.01 | 4.01 |
| CFM PER RUN HEAT          | 24   | 34   | 11   | 34    | 29    | 34    | 18    | 34    | 29    | 24   | 25   | 57    | 50      | 50      | 50      | 35   | 19   | 46   | 81   | 81   | 81   | 81   |
| RM GAIN MBH.              | 1.52 | 1.03 | 0.13 | 1.76  | 1.98  | 2.29  | 0.60  | 1.76  | 1.98  | 1.52 | 0.25 | 2.10  | 2.15    | 2.15    | 2.15    | 1.14 | 0.59 | 1.83 | 0.55 | 0.55 | 0.55 | 0.55 |
| CFM PER RUN COOLING       | 49   | 33   | 4    | 56    | 63    | 73    | 19    | 56    | 63    | 49   | 8    | 67    | 68      | 68      | 68      | 36   | 19   | 58   | 18   | 18   | 18   | 18   |
| ADJUSTED PRESSURE         | 0.17 | 0.17 | 0.17 | 0.17  | 0.17  | 0.17  | 0.17  | 0.17  | 0.17  | 0.17 | 0.17 | 0.17  | 0.17    | 0.17    | 0.17    | 0.17 | 0.17 | 0.17 | 0.16 | 0.16 | 0.16 | 0.16 |
| ACTUAL DUCT LGH.          | 61   | 43   | 21   | 62    | 65    | 33    | 71    | 67    | 70    | 44   | 37   | 41    | 37      | 36      | 20      | 29   | 57   | 48   | 20   | 31   | 17   | 40   |
| EQUIVALENT LENGTH         | 160  | 200  | 120  | 180   | 150   | 200   | 210   | 180   | 140   | 160  | 180  | 110   | 130     | 120     | 170     | 140  | 140  | 120  | 140  | 130  | 130  | 100  |
| TOTAL EFFECTIVE LENGTH    | 221  | 243  | 141  | 242   | 215   | 233   | 281   | 247   | 210   | 204  | 217  | 151   | 167     | 156     | 190     | 169  | 197  | 168  | 160  | 161  | 147  | 140  |
| ADJUSTED PRESSURE         | 0.08 | 0.07 | 0.12 | 0.07  | 0.08  | 0.07  | 0.06  | 0.07  | 0.08  | 0.08 | 0.08 | 0.11  | 0.1     | 0.11    | 0.09    | 0.1  | 0.09 | 0.1  | 0.1  | 0.1  | 0.11 | 0.12 |
| ROUND DUCT SIZE           | 5    | 4    | 4    | 5     | 5     | 6     | 4     | 5     | 5     | 5    | 4    | 5     | 5       | 5       | 5       | 4    | 4    | 5    | 5    | 5    | 5    | 5    |
| HEATING VELOCITY (ft/min) | 176  | 390  | 126  | 250   | 213   | 173   | 207   | 250   | 213   | 176  | 287  | 419   | 367     | 367     | 367     | 402  | 218  | 338  | 595  | 595  | 595  | 595  |
| COOLING VELOCITY (ft/min) | 360  | 379  | 46   | 411   | 463   | 372   | 218   | 411   | 463   | 360  | 92   | 492   | 499     | 499     | 499     | 413  | 218  | 426  | 132  | 132  | 132  | 132  |
| OUTLET GRILL SIZE         | 3X10 | 3X10 | 3X10 | 3X10  | 3X10  | 4X10  | 3X10  | 3X10  | 3X10  | 3X10 | 3X10 | 3X10  | 3X10    | 3X10    | 3X10    | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 | 3X10 |
| TRUNK                     | C    | C    | D    | A     | A     | C     | A     | A     | A     | C    | B    | B     | C       | C       | C       | B    | A    | A    | C    | C    | B    | B    |

|                           |  |
|---------------------------|--|
| RUN #                     |  |
| ROOM NAME                 |  |
| RM LOSS MBH.              |  |
| CFM PER RUN HEAT          |  |
| RM GAIN MBH.              |  |
| CFM PER RUN COOLING       |  |
| ADJUSTED PRESSURE         |  |
| ACTUAL DUCT LGH.          |  |
| EQUIVALENT LENGTH         |  |
| TOTAL EFFECTIVE LENGTH    |  |
| ADJUSTED PRESSURE         |  |
| ROUND DUCT SIZE           |  |
| HEATING VELOCITY (ft/min) |  |
| COOLING VELOCITY (ft/min) |  |
| OUTLET GRILL SIZE         |  |
| TRUNK                     |  |

| SUPPLY AIR TRUNK SIZE |           |               |            |           |   |   |                   |         |           |               |            | RETURN AIR TRUNK SIZE |   |   |                   |         |           |               |            |           |   |   |                   |
|-----------------------|-----------|---------------|------------|-----------|---|---|-------------------|---------|-----------|---------------|------------|-----------------------|---|---|-------------------|---------|-----------|---------------|------------|-----------|---|---|-------------------|
|                       | TRUNK CFM | STATIC PRESS. | ROUND DUCT | RECT DUCT |   |   | VELOCITY (ft/min) |         | TRUNK CFM | STATIC PRESS. | ROUND DUCT | RECT DUCT             |   |   | VELOCITY (ft/min) |         | TRUNK CFM | STATIC PRESS. | ROUND DUCT | RECT DUCT |   |   | VELOCITY (ft/min) |
| TRUNK A               | 209       | 0.06          | 8.4        | 10        | x | 8 | 376               | TRUNK G | 0         | 0.00          | 0          | 0                     | x | 8 | 0                 | TRUNK O | 0         | 0.05          | 0          | 0         | x | 8 | 0                 |
| TRUNK B               | 488       | 0.06          | 11.5       | 16        | x | 8 | 549               | TRUNK H | 0         | 0.00          | 0          | 0                     | x | 8 | 0                 | TRUNK P | 0         | 0.05          | 0          | 0         | x | 8 | 0                 |
| TRUNK C               | 428       | 0.07          | 10.6       | 14        | x | 8 | 550               | TRUNK I | 0         | 0.00          | 0          | 0                     | x | 8 | 0                 | TRUNK Q | 0         | 0.05          | 0          | 0         | x | 8 | 0                 |
| TRUNK D               | 927       | 0.06          | 14.6       | 26        | x | 8 | 642               | TRUNK J | 0         | 0.00          | 0          | 0                     | x | 8 | 0                 | TRUNK R | 0         | 0.05          | 0          | 0         | x | 8 | 0                 |
| TRUNK E               | 0         | 0.00          | 0          | 0         | x | 8 | 0                 | TRUNK K | 0         | 0.00          | 0          | 0                     | x | 8 | 0                 | TRUNK S | 0         | 0.05          | 0          | 0         | x | 8 | 0                 |
| TRUNK F               | 0         | 0.00          | 0          | 0         | x | 8 | 0                 | TRUNK L | 0         | 0.00          | 0          | 0                     | x | 8 | 0                 | TRUNK T | 0         | 0.05          | 0          | 0         | x | 8 | 0                 |

|                    |      |      |      |      |      |      |       |       |       |       |       |       |       |       |       |       |      |
|--------------------|------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| RETURN AIR #       | 1    | 2    | 3    | 4    | 5    | 6    |       |       |       |       |       |       |       |       |       |       | BR   |
|                    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0    |
| AIR VOLUME         | 115  | 75   | 75   | 85   | 95   | 325  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 158  |
| PLENUM PRESSURE    | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15  | 0.15 |
| ACTUAL DUCT LGH.   | 40   | 73   | 72   | 43   | 38   | 36   | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 14   |
| EQUIVALENT LENGTH  | 245  | 225  | 255  | 215  | 185  | 250  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 135  |
| TOTAL EFFECTIVE LH | 285  | 298  | 327  | 258  | 223  | 286  | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 1     | 149  |
| ADJUSTED PRESSURE  | 0.05 | 0.05 | 0.05 | 0.06 | 0.07 | 0.05 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 14.80 | 0.10 |
| ROUND DUCT SIZE    | 7    | 6    | 6    | 6    | 6    | 10.4 | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 6.6  |
| INLET GRILL SIZE   | 8    | 8    | 8    | 8    | 8    | 8    | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 8    |
|                    | X    | X    | X    | X    | X    | X    | X     | X     | X     | X     | X     | X     | X     | X     | X     | X     | X    |
| INLET GRILL SIZE   | 14   | 14   | 14   | 14   | 14   | 30   | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 14   |

|         |     |      |      |    |   |    |     |
|---------|-----|------|------|----|---|----|-----|
| TRUNK V | 0   | 0.05 | 0    | 0  | x | 8  | 0   |
| TRUNK W | 0   | 0.05 | 0    | 0  | x | 8  | 0   |
| TRUNK X | 928 | 0.05 | 15.3 | 28 | x | 8  | 597 |
| TRUNK Y | 475 | 0.05 | 11.9 | 16 | x | 8  | 534 |
| TRUNK Z | 0   | 0.05 | 0    | 0  | x | 8  | 0   |
| DROP    | 928 | 0.05 | 15.3 | 24 | x | 10 | 557 |

TYPE: GARDEN 4  
SITE NAME: BARLASSINA

LO # 98642

### 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>5</u> @ 10.6 cfm <u>53</u> cfm   |             |
| Other Rooms                | <u>5</u> @ 10.6 cfm <u>53.0</u> cfm |             |
| Table 9.32.3.A.            | TOTAL <u>180.2</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                                   | 79.5 cfm |              |

| SUPPLEMENTAL VENTILATION CAPACITY |                  | 9.32.3.5. |
|-----------------------------------|------------------|-----------|
| Total Ventilation Capacity        | <u>180.2</u> cfm |           |
| Less Principal Ventil. Capacity   | <u>79.5</u> cfm  |           |
| Required Supplemental Capacity    | <u>100.7</u> cfm |           |

| PRINCIPAL EXHAUST FAN CAPACITY |                                                  |
|--------------------------------|--------------------------------------------------|
| Model: VANEE V150H             | Location: BSMT                                   |
| <u>79.5</u> cfm                | <input checked="" type="checkbox"/> HVI Approved |

| PRINCIPAL EXHAUST HEAT LOSS CALCULATION |        |        |        |      |
|-----------------------------------------|--------|--------|--------|------|
| CFM                                     | ΔT °F  | FACTOR | % LOSS |      |
| 79.5 CFM                                | X 72 F | X 1.08 | X      | 0.25 |

| SUPPLEMENTAL FANS |                          | BY INSTALLING CONTRACTOR |                                     |       |
|-------------------|--------------------------|--------------------------|-------------------------------------|-------|
| Location          | Model                    | cfm                      | HVI                                 | Sones |
| ENS               | BY INSTALLING CONTRACTOR | 50                       | <input checked="" type="checkbox"/> | 3.5   |
| ENS-3             | BY INSTALLING CONTRACTOR | 50                       | <input checked="" type="checkbox"/> | 3.5   |
| BATH              | BY INSTALLING CONTRACTOR | 50                       | <input checked="" type="checkbox"/> | 3.5   |
| W/R               | BY INSTALLING CONTRACTOR | 50                       | <input checked="" type="checkbox"/> | 3.5   |

| HEAT RECOVERY VENTILATOR        |                                                  | 9.32.3.11. |
|---------------------------------|--------------------------------------------------|------------|
| Model: VANEE V150H              |                                                  |            |
| <u>150</u> cfm high             | <u>35</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: GREENPARK 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:                                                                                                         | August-22               |

| CSA F280-12 Residential Heat Loss and Heat Gain Calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                   |                                                     |                                                                                                                                        |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------|-------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------------|------|-------|--------|-------|-------|--------|------|--------|-------|-------|-----|--------|-------|--------|---|---|-------|--------|---|---|--------------|--------|--|--|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------|-------|--------------------------------|-------|-------------------------------|--|--|--|--|--|--------|---------|-------|-------|-------------|----|-----|----|----|-------------|----|----|---|---|
| Formula Sheet (For Air Leakage / Ventilation Calculation)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                   |                                                     |                                                                                                                                        |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| LO#: 98642                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Model: GARDEN 4   | Builder: GREENPARK HOMES                            | Date: 8/25/2022                                                                                                                        |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| <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>1189</td> <td>8</td> <td>9512</td> </tr> <tr> <td>First</td> <td>1189</td> <td>10</td> <td>11890</td> </tr> <tr> <td>Second</td> <td>1426</td> <td>9</td> <td>12834</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" style="text-align: right;">Total:</td> <td></td> <td>34,236.0 ft³</td> </tr> <tr> <td colspan="2" style="text-align: right;">Total:</td> <td></td> <td>969.5 m³</td> </tr> </tbody> </table>                                                                                                                                                                                                                                                               |                   |                                                     | Level                                                                                                                                  | Floor Area (ft²)                                          | Floor Height (ft) | Volume (ft³)      | Bsmt                                                | 1189                                                | 8                                                         | 9512 | First | 1189   | 10    | 11890 | Second | 1426 | 9      | 12834 | Third | 0   | 9      | 0     | Fourth | 0 | 9 | 0     | Total: |   |   | 34,236.0 ft³ | Total: |  |  | 969.5 m³ | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">WINTER NATURAL AIR CHANGE RATE</td> <td style="width: 30%;">0.307</td> </tr> <tr> <td>SUMMER NATURAL AIR CHANGE RATE</td> <td>0.084</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>-18</td> <td>40</td> <td>72</td> </tr> <tr> <td>Summer DTDc</td> <td>24</td> <td>29</td> <td>5</td> <td>9</td> </tr> </table> |  | WINTER NATURAL AIR CHANGE RATE | 0.307 | SUMMER NATURAL AIR CHANGE RATE | 0.084 | Design Temperature Difference |  |  |  |  |  | Tin °C | Tout °C | ΔT °C | ΔT °F | Winter DTDh | 22 | -18 | 40 | 72 | Summer DTDc | 24 | 29 | 5 | 9 |
| Level                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Floor Area (ft²)  | Floor Height (ft)                                   | Volume (ft³)                                                                                                                           |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| Bsmt                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1189              | 8                                                   | 9512                                                                                                                                   |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| First                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1189              | 10                                                  | 11890                                                                                                                                  |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| Second                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1426              | 9                                                   | 12834                                                                                                                                  |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| Third                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0                 | 9                                                   | 0                                                                                                                                      |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| Fourth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0                 | 9                                                   | 0                                                                                                                                      |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| Total:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                                     | 34,236.0 ft³                                                                                                                           |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| Total:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                   |                                                     | 969.5 m³                                                                                                                               |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| WINTER NATURAL AIR CHANGE RATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.307             |                                                     |                                                                                                                                        |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| SUMMER NATURAL AIR CHANGE RATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.084             |                                                     |                                                                                                                                        |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| Design Temperature Difference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                   |                                                     |                                                                                                                                        |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Tin °C            | Tout °C                                             | ΔT °C                                                                                                                                  | ΔT °F                                                     |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| Winter DTDh                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 22                | -18                                                 | 40                                                                                                                                     | 72                                                        |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| Summer DTDc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 24                | 29                                                  | 5                                                                                                                                      | 9                                                         |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| <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>0.307 x 269.29 x 40 °C x 1.2 = 3985 W</p> <p>= 13597 Btu/h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                   |                                                     | $HG_{salb} = LR_{airc} \times \frac{V_b}{3.6} \times DTD_c \times 1.2$ <p>= 0.084 x 269.29 x 5 °C x 1.2 = 138 W</p> <p>= 472 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 72 °F x 1.08 x 0.25 = 1554 Btu/h</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                                                     | $HL_{vairb} = PVC \times DTD_h \times 1.08 \times (1 - E)$ <p>80 CFM x 9 °F x 1.08 x 0.25 = 197 Btu/h</p>                              |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| <b>5.2.3.3 Calculation of Air Change Heat Loss for Each Room (Floor Multiplier Section)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |                                                     |                                                                                                                                        |                                                           |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| $HL_{airr} = Level\ Factor \times HL_{airbv} \times \{(HL_{agcr} + HL_{bgcr}) \div (HL_{agclevel} + HL_{bgclevel})\}$ <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Level</th> <th>Level Factor (LF)</th> <th>HLairve Air Leakage + Ventilation Heat Loss (Btu/h)</th> <th>Level Conductive Heat Loss: (HL<sub>clevel</sub>)</th> <th>Air Leakage Heat Loss Multiplier (LF x HLairbv / HLlevel)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>0.5</td> <td rowspan="5" style="text-align: center; vertical-align: middle;">13,597</td> <td>9,255</td> <td>0.735</td> </tr> <tr> <td>2</td> <td>0.3</td> <td>10,993</td> <td>0.371</td> </tr> <tr> <td>3</td> <td>0.2</td> <td>11,485</td> <td>0.237</td> </tr> <tr> <td>4</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> <tr> <td>5</td> <td>0</td> <td>0</td> <td>0.000</td> </tr> </tbody> </table> <p>*HLairbv = Air leakage heat loss + ventilation heat loss<br/> *For a balanced or supply only ventilation system HLairve = 0</p> |                   |                                                     |                                                                                                                                        |                                                           | 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   | 13,597 | 9,255 | 0.735 | 2      | 0.3  | 10,993 | 0.371 | 3     | 0.2 | 11,485 | 0.237 | 4      | 0 | 0 | 0.000 | 5      | 0 | 0 | 0.000        |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| 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               | 13,597                                              | 9,255                                                                                                                                  | 0.735                                                     |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.3               |                                                     | 10,993                                                                                                                                 | 0.371                                                     |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.2               |                                                     | 11,485                                                                                                                                 | 0.237                                                     |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                 |                                                     | 0                                                                                                                                      | 0.000                                                     |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0                 |                                                     | 0                                                                                                                                      | 0.000                                                     |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                   |                                                     |                                                                                                                                        | Michael O'Rourke<br>BCIN# 19669<br>                       |                   |                   |                                                     |                                                     |                                                           |      |       |        |       |       |        |      |        |       |       |     |        |       |        |   |   |       |        |   |   |              |        |  |  |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                |       |                                |       |                               |  |  |  |  |  |        |         |       |       |             |    |     |    |    |             |    |    |   |   |

**HEAT LOSS AND GAIN SUMMARY SHEET**

|                        |                                 |
|------------------------|---------------------------------|
| <b>MODEL:</b> GARDEN 4 | <b>BUILDER:</b> GREENPARK HOMES |
| <b>SFQT:</b> 2615      | <b>SITE:</b> BARLASSINA         |
| <b>LO#</b> 98642       |                                 |

**DESIGN ASSUMPTIONS**

|                      |    |                                |      |
|----------------------|----|--------------------------------|------|
| HEATING              | °F | COOLING                        | °F   |
| OUTDOOR DESIGN TEMP. | 0  | OUTDOOR DESIGN TEMP.           | 84   |
| INDOOR DESIGN TEMP.  | 72 | INDOOR DESIGN TEMP. (MAX 75°F) | 75   |
|                      |    | WINDOW SHGC                    | 0.50 |

**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> ):                 | 34236.0         | ASSUMED (Y/N):            | Y        |
| INTERNAL SHADING:                                | BLINDS/CURTAINS | ASSUMED OCCUPANTS:        | 5        |
| INTERIOR LIGHTING LOAD (Btu/h/ft <sup>2</sup> ): | 1.50            | DC BRUSHLESS MOTOR (Y/N): | Y        |
| FOUNDATION CONFIGURATION                         | BCIN_1          | DEPTH BELOW GRADE:        | 5.0 ft   |
| LENGTH: 63.0 ft                                  | WIDTH: 24.0 ft  | EXPOSED PERIMETER:        | 174.0 ft |

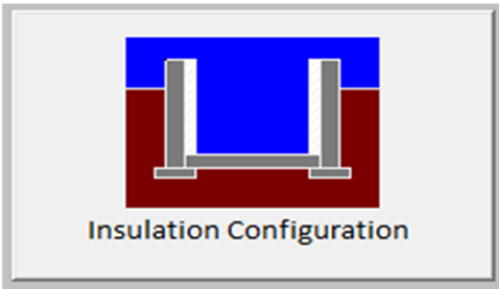
| 2012 OBC - COMPLIANCE PACKAGE                                              |  | Compliance Package A1 |           |
|----------------------------------------------------------------------------|--|-----------------------|-----------|
| Component                                                                  |  | 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                                       |  | 96%                   | -         |
| HRV/ERV 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:                        | Cambridge                                 |                                                                                                                 |
| Site Description               |                                           |                                                                                                                 |
| Soil Conductivity:             | Normal conductivity: dry sand, loam, clay |                                                                                                                 |
| Water Table:                   | Normal (7-10 m, 23-33 ft)                 |                                                                                                                 |
| Foundation Dimensions          |                                           |                                                                                                                 |
| Floor Length (m):              | 19.2                                      | <br>Insulation Configuration |
| Floor Width (m):               | 7.3                                       |                                                                                                                 |
| Exposed Perimeter (m):         | 0.0                                       |                                                                                                                 |
| Wall Height (m):               | 2.4                                       |                                                                                                                 |
| Depth Below Grade (m):         | 1.52                                      |                                                                                                                 |
| Window Area (m <sup>2</sup> ): | 1.6                                       |                                                                                                                 |
| Door Area (m <sup>2</sup> ):   | 2.0                                       |                                                                                                                 |
| Radiant Slab                   |                                           |                                                                                                                 |
| Heated Fraction of the Slab:   | 0                                         |                                                                                                                 |
| Fluid Temperature (°C):        | 33                                        |                                                                                                                 |
| Design Months                  |                                           |                                                                                                                 |
| Heating Month                  | 1                                         |                                                                                                                 |
| Foundation Loads               |                                           |                                                                                                                 |
| Heating Load (Watts):          |                                           | 1639                                                                                                            |

TYPE: GARDEN 4

LO# 98642

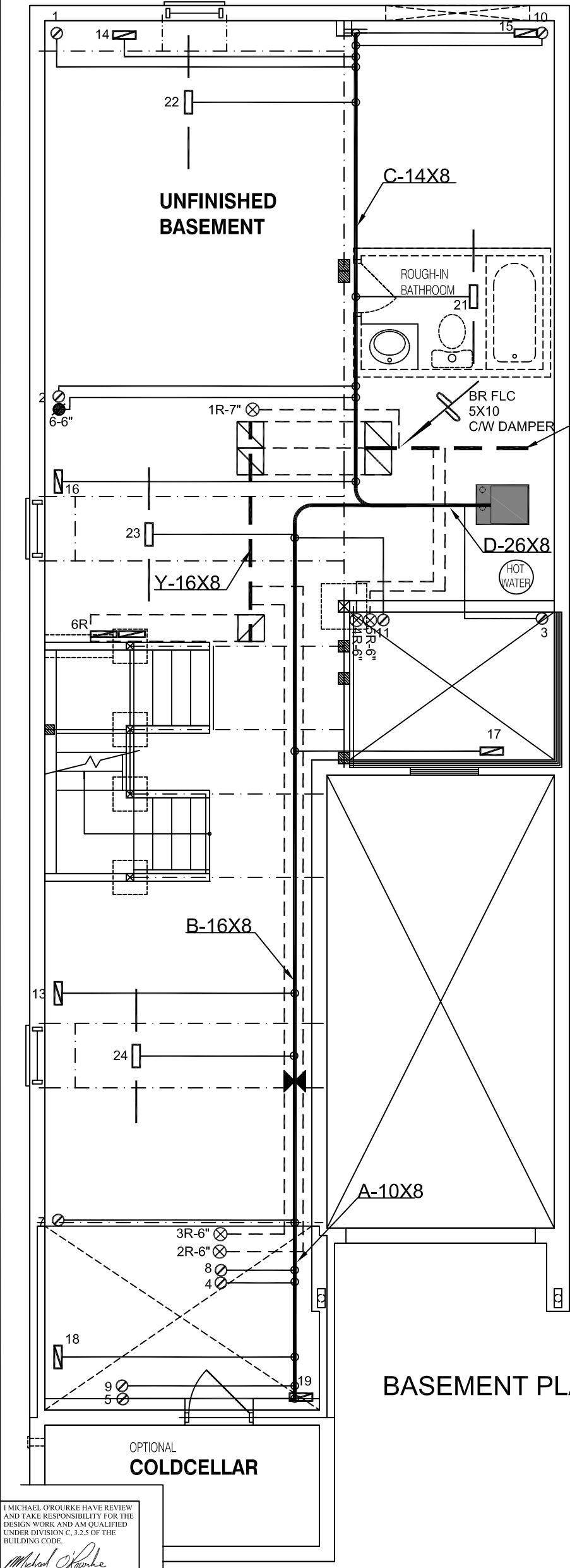
# Air Infiltration Residential Load Calculator

Supplemental tool for CAN/CSA-F280

| Weather Station Description       |                            |                        |    |    |
|-----------------------------------|----------------------------|------------------------|----|----|
| Province:                         | Ontario                    |                        |    |    |
| Region:                           | Cambridge                  |                        |    |    |
| Weather Station Location:         | Open flat terrain, grass   |                        |    |    |
| Anemometer height (m):            | 10                         |                        |    |    |
| Local Shielding                   |                            |                        |    |    |
| Building Site:                    | Suburban, forest           |                        |    |    |
| Walls:                            | Heavy                      |                        |    |    |
| Flue:                             | Heavy                      |                        |    |    |
| Highest Ceiling Height (m):       | 6.71                       |                        |    |    |
| Building Configuration            |                            |                        |    |    |
| Type:                             | Detached                   |                        |    |    |
| Number of Stories:                | Two                        |                        |    |    |
| Foundation:                       | Full                       |                        |    |    |
| House Volume (m <sup>3</sup> ):   | 969.5                      |                        |    |    |
| Air Leakage/Ventilation           |                            |                        |    |    |
| Air Tightness Type:               | Present (1961-) (3.57 ACH) |                        |    |    |
| Custom BDT Data:                  | ELA @ 10 Pa.               | 1292.3 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): | 0.307                      |                        |    |    |
| Cooling Air Leakage Rate (ACH/H): | 0.084                      |                        |    |    |

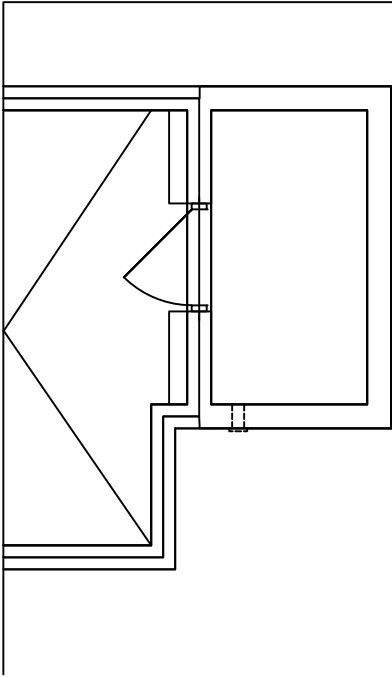
TYPE: GARDEN 4

LO# 98642

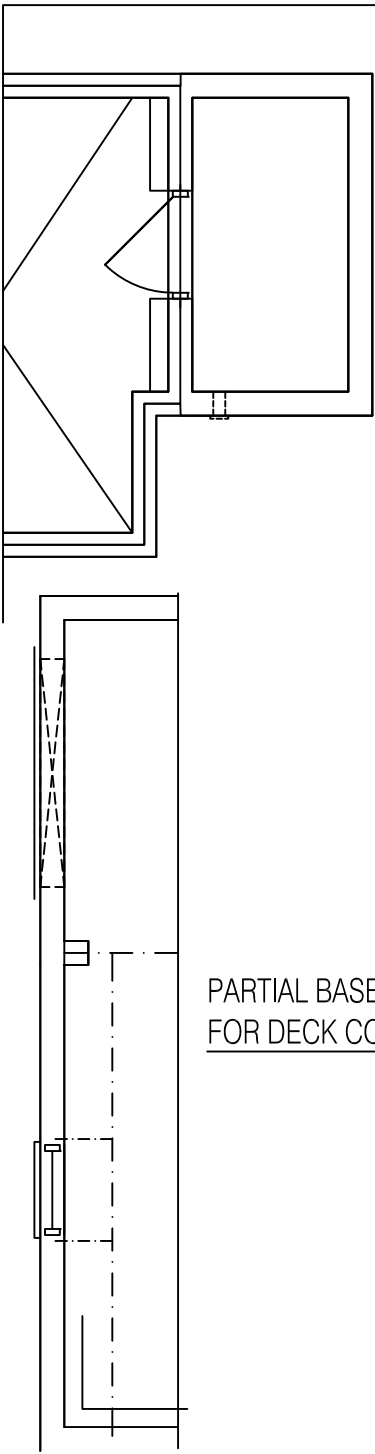


BASEMENT PLAN EL-1

BASEMENT PLAN EL-2



BASEMENT PLAN EL-3



PARTIAL BASEMENT LAYOUT  
FOR DECK CONDITIONS

CSA-F280-12  
PACKAGE A1

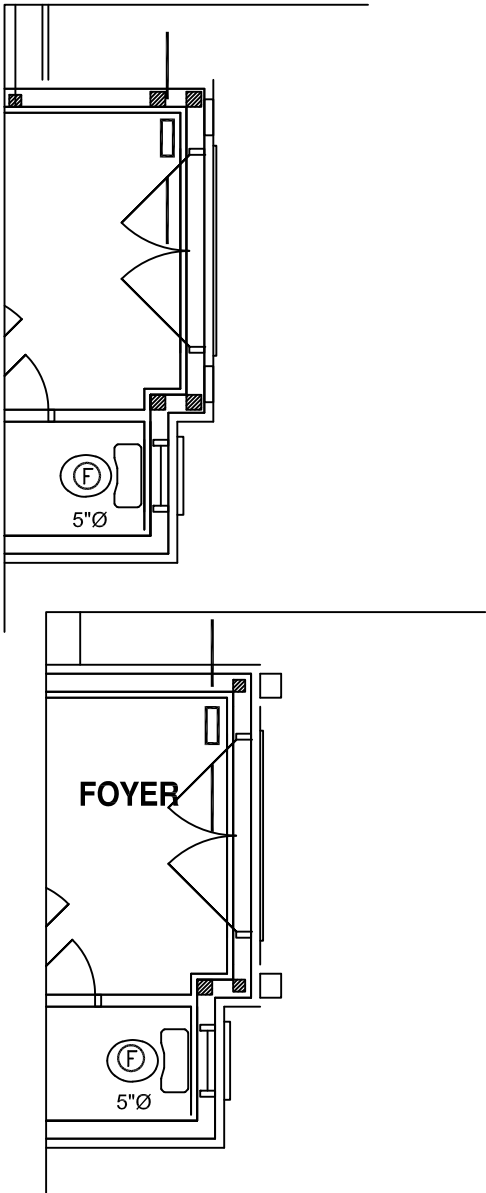
I MICHAEL O'ROURKE HAVE REVIEWED AND TAKE RESPONSIBILITY FOR THE DESIGN WORK AND AM QUALIFIED UNDER DIVISION C, 3.2.5 OF THE BUILDING CODE.  
*Michael O'Rourke*  
Michael O'Rourke, BCIN# 19669  
HVAC DESIGNS LTD.

| 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 |                  |

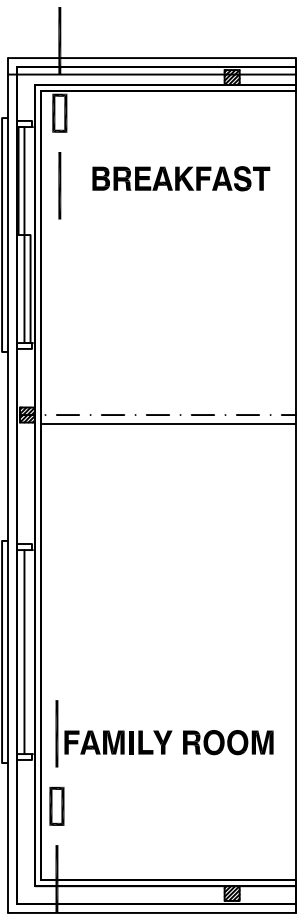
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|                                                  |  |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                               |                |                        |    |   |                               |                  |
|--------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------------|----|---|-------------------------------|------------------|
| Client                                           |  | <div></div> <div>375 Finley Ave. Suite 202 - Ajax, Ontario<br/>L1S 2E2 Tel. 905.619.2300 - 905.420.5300 Fax 905.619.2375<br/>Email: info@hvacdesigns.ca<br/>Web: www.hvacdesigns.ca<br/>Specializing in Residential Mechanical Design Services</div> | HEAT LOSS 47304 BTU/H<br>UNIT DATA                                                                                                            |                | # OF RUNS S/A R/A FANS |    |   | Sheet Title                   |                  |
| GREENPARK HOMES                                  |  |                                                                                                                                                                                                                                                                                                                                          | MAKE<br>GOODMAN                                                                                                                               | 3RD FLOOR      |                        |    |   | BASEMENT<br>HEATING<br>LAYOUT |                  |
| Project Name<br>BARLASSINA<br>CAMBRIDGE, ONTARIO |  |                                                                                                                                                                                                                                                                                                                                          | MODEL<br>GMEC960603BNA                                                                                                                        | 2ND FLOOR      |                        | 10 | 5 | 3                             | Date<br>AUG/2022 |
| Garden 4 - Elevation 1                           |  |                                                                                                                                                                                                                                                                                                                                          | INPUT<br>60 MBTU/H                                                                                                                            | 1ST FLOOR      |                        | 7  | 1 | 3                             |                  |
| GARDEN 4 2615 sqft                               |  |                                                                                                                                                                                                                                                                                                                                          | OUTPUT<br>57.6 MBTU/H                                                                                                                         | BASEMENT 4 1 0 |                        |    |   |                               |                  |
|                                                  |  | COOLING<br>2.5 TONS                                                                                                                                                                                                                                                                                                                      | ALL S/A DIFFUSERS 4 "x10" UNLESS NOTED OTHERWISE ON LAYOUT. ALL S/A RUNS 5"Ø UNLESS NOTED OTHERWISE ON LAYOUT. UNDERCUT DOORS 1" min. FOR R/A |                |                        |    |   | Date<br>AUG/2022              |                  |
|                                                  |  | FAN SPEED<br>928 cfm @ 0.6" w.c.                                                                                                                                                                                                                                                                                                         |                                                                                                                                               |                |                        |    |   | Scale<br>3/16" = 1'-0"        |                  |
|                                                  |  |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                               |                |                        |    |   | BCIN# 19669                   |                  |
|                                                  |  |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                               |                |                        |    |   | LO#                           | 98642            |

FIRST FLOOR PLAN EL-2



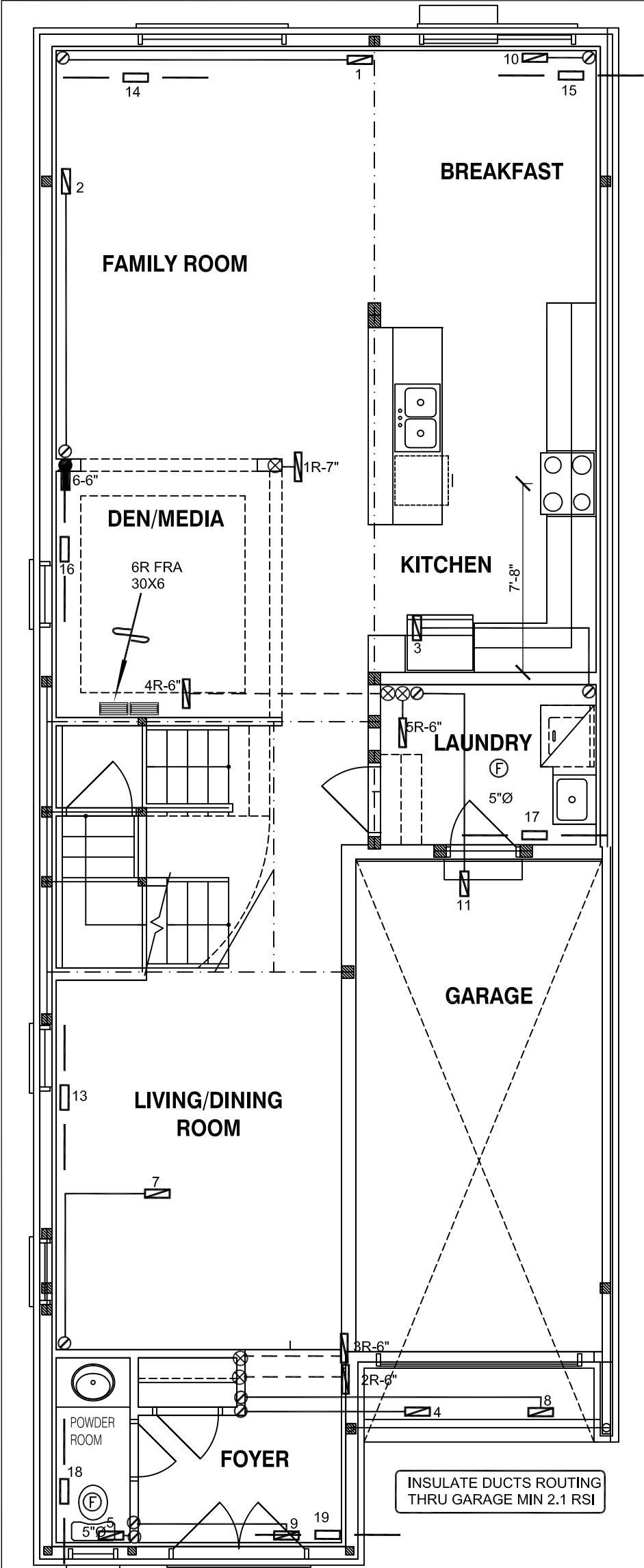
FIRST FLOOR PLAN EL-3



PARTIAL FIRST FLOOR LAYOUT  
FOR DECK CONDITION EL-3

CSA-F280-12

PACKAGE A1



FIRST FLOOR PLAN EL-1

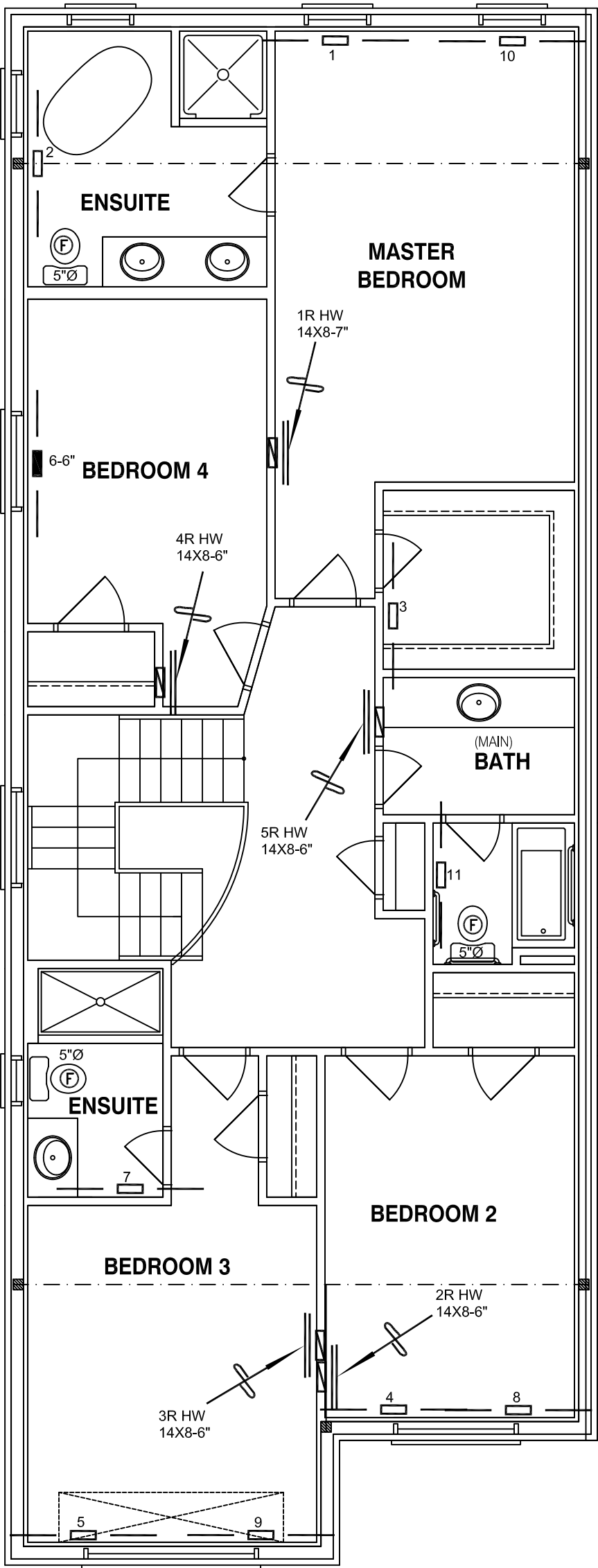
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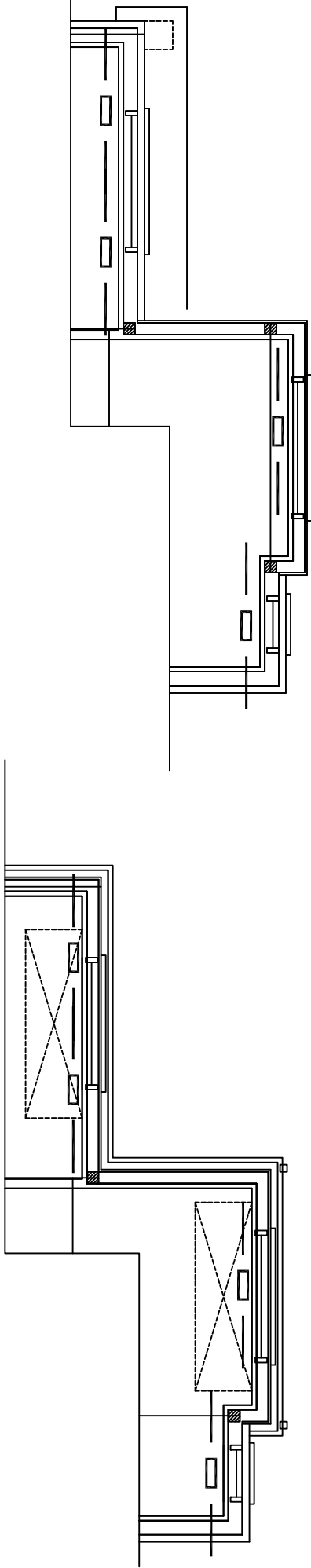
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|                                                  |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                           |       |
|--------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------|
| Client<br>GREENPARK HOMES                        |  | <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<br>FIRST FLOOR HEATING LAYOUT |       |
| Project Name<br>BARLASSINA<br>CAMBRIDGE, ONTARIO |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Date<br>AUG/2022                          |       |
| Garden 4 - Elevation 1                           |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Scale<br>3/16" = 1'-0"                    |       |
| GARDEN 4                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BCIN# 19669                               |       |
| 2615 sqft                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LO#                                       | 98642 |



SECOND FLOOR PLAN EL-1

SECOND FLOOR PLAN EL-2



SECOND FLOOR PLAN EL-3

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

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<br>GREENPARK HOMES                        |  | <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<br>SECOND FLOOR<br>HEATING<br>LAYOUT |       |
| Project Name<br>BARLASSINA<br>CAMBRIDGE, ONTARIO |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Date<br>AUG/2022                                 |       |
| Garden 4 - Elevation 1                           |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Scale<br>3/16" = 1'-0"                           |       |
| GARDEN 4                                         |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BCIN# 19669                                      |       |
| 2615 sqft                                        |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | LO#                                              | 98642 |