

**Project Information**

Project Number 123456  
 Project Name Sample Heat Loss Calculation  
 Designed For ABC Residence, Hydrowest Products Ltd.

Vancouver, BC

**Contact Information**

Designed By David Zinn  
 Company Name Hydrowest Products Ltd.  
 Phone Number

**Project Assumptions**

Outdoor Temp -10 °F  
 Elevation 16 ft  
 Wind Speed 10 mph  
 Job Type Residential

**Zone 1**

**Design**

|                    |                  |                    |            |
|--------------------|------------------|--------------------|------------|
| Application:       | Radiant Heating  | Supply Fluid Temp: | 91.7 °F    |
| Product:           | 1/2" RadiantPEX+ | Delta T:           | 20 °F      |
| # of Circuits:     | 2                | Flow:              | 0.33 GPM   |
| Circuit Length:    | 150 ft           | Head:              | 0.2 ft     |
| Manifold Distance: | 0 ft             | Radiant Capacity:  | 2861 BTU/h |
| Heated Area:       |                  | Required Heat:     | 2845 BTU/h |
|                    |                  | Panel Load:        | 3291 BTU/h |
|                    |                  | % Glycol:          | 0%         |

**Construction - Slab**

|                    |                    |                       |      |
|--------------------|--------------------|-----------------------|------|
| Slab Thickness:    | 4 in               | Thickness Above Tube: | 2 in |
| Slab Conductivity: | 0.81 BTU/(h-ft·°F) |                       |      |

**Guest Bedroom (Zone 1)**

**Floor Coverings**

|                              | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|------------------------------|----------|------|---------|--------------|-----------------|
| Oak- 5/8" w/ Mudset : R-0.61 |          |      | R-0.61  |              |                 |

**Walls**

|        | Quantity | Area    | R-Value | Infiltration | Total Heat Loss |
|--------|----------|---------|---------|--------------|-----------------|
| Wall 1 | 1        | 310 ft² | R-20    | 0            | 1513 BTU/h      |

**Windows**

|          | Quantity | Area   | R-Value | Infiltration | Total Heat Loss |
|----------|----------|--------|---------|--------------|-----------------|
| Window 1 | 1        | 20 ft² | R-2.33  | 0.016        | 631 BTU/h       |

**Doors**

|          | Quantity | Area  | R-Value | Infiltration | Total Heat Loss |
|----------|----------|-------|---------|--------------|-----------------|
| No Doors | 0        | 0 ft² | R-0     | 0 in²        |                 |

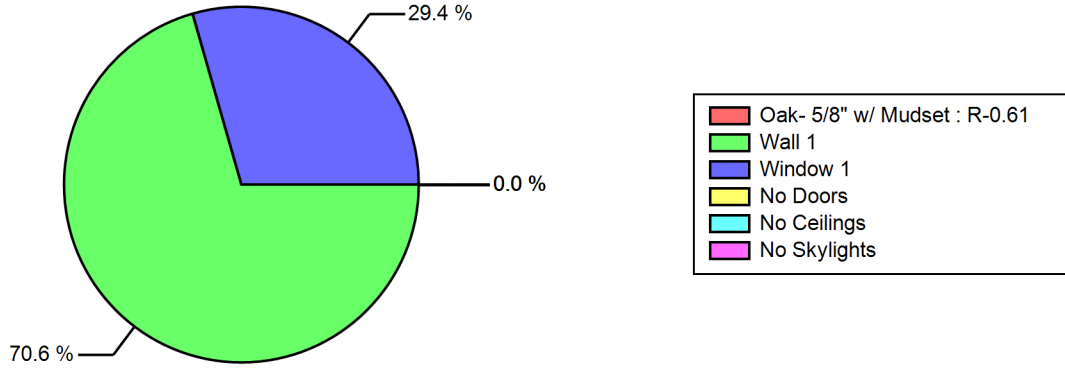
**Ceilings**

|             | Quantity | Area  | R-Value | Infiltration | Total Heat Loss |
|-------------|----------|-------|---------|--------------|-----------------|
| No Ceilings | 0        | 0 ft² | R-0     | 0 in²        |                 |

**Skylights**

|              | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|--------------|----------|-------------------|---------|-------------------|-----------------|
| No Skylights | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Guest Bedroom Heat Loss Summary**



**Zone Notes:**

## Zone 2

| Design             |                  |                    |           |
|--------------------|------------------|--------------------|-----------|
| Application:       | Radiant Heating  | Supply Fluid Temp: | 82.3 °F   |
| Product:           | 1/2" RadiantPEX+ | Delta T:           | 20 °F     |
| # of Circuits:     | 1                | Flow:              | 0.04 GPM  |
| Circuit Length:    | 125 ft           | Head:              | 0.1 ft    |
| Manifold Distance: | 0 ft             | Radiant Capacity:  | 283 BTU/h |
| Heated Area:       |                  | Required Heat:     | 281 BTU/h |
|                    |                  | Panel Load:        | 352 BTU/h |
|                    |                  | % Glycol:          | 0%        |

| Construction - Slab |                    |                       |      |
|---------------------|--------------------|-----------------------|------|
| Slab Thickness:     | 4 in               | Thickness Above Tube: | 2 in |
| Slab Conductivity:  | 0.81 BTU/(h-ft·°F) |                       |      |

## Bathroom (Zone 2)

| Floor Coverings          | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|--------------------------|----------|------|---------|--------------|-----------------|
| Tile- w/ Mudset : R-0.15 |          |      | R-0.15  |              |                 |

| Walls    | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|----------|----------|-------------------|---------|-------------------|-----------------|
| No Walls | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

| Windows    | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|------------|----------|-------------------|---------|-------------------|-----------------|
| No Windows | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

| Doors    | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|----------|----------|-------------------|---------|-------------------|-----------------|
| No Doors | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

| Ceilings    | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|-------------|----------|-------------------|---------|-------------------|-----------------|
| No Ceilings | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

| Skylights    | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|--------------|----------|-------------------|---------|-------------------|-----------------|
| No Skylights | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Zone Notes:**

## Zone 3

| Design             |                  |                    |             |
|--------------------|------------------|--------------------|-------------|
| Application:       | Radiant Heating  | Supply Fluid Temp: | 89.7 °F     |
| Product:           | 1/2" RadiantPEX+ | Delta T:           | 20 °F       |
| # of Circuits:     | 4                | Flow:              | 1.01 GPM    |
| Circuit Length:    | 250 ft           | Head:              | 0.5 ft      |
| Manifold Distance: | 0 ft             | Radiant Capacity:  | 8699 BTU/h  |
| Heated Area:       |                  | Required Heat:     | 8655 BTU/h  |
|                    |                  | Panel Load:        | 10136 BTU/h |
|                    |                  | % Glycol:          | 0%          |

| Construction - Slab |                    |                       |      |
|---------------------|--------------------|-----------------------|------|
| Slab Thickness:     | 4 in               | Thickness Above Tube: | 2 in |
| Slab Conductivity:  | 0.81 BTU/(h-ft·°F) |                       |      |

## Media room (Zone 3)

| Floor Coverings              | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|------------------------------|----------|------|---------|--------------|-----------------|
| Oak- 5/8" w/ Mudset : R-0.61 |          |      | R-0.61  |              |                 |

| Walls  | Quantity | Area    | R-Value | Infiltration | Total Heat Loss |
|--------|----------|---------|---------|--------------|-----------------|
| Wall 1 | 1        | 560 ft² | R-20    | 0            | 2307 BTU/h      |

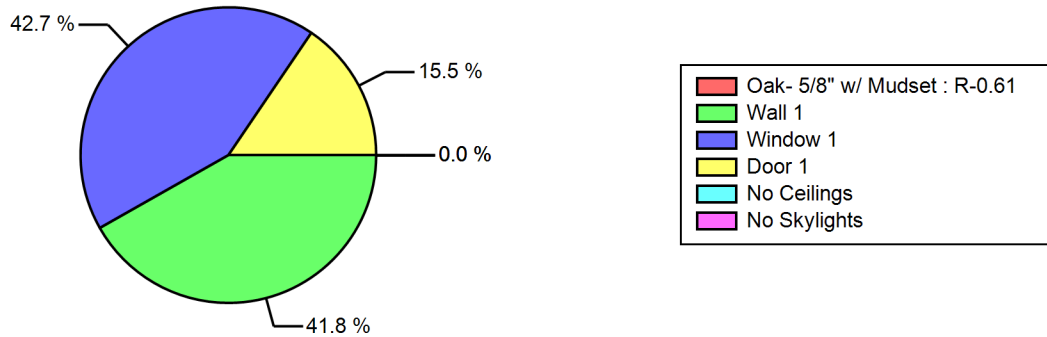
| Windows  | Quantity | Area   | R-Value | Infiltration | Total Heat Loss |
|----------|----------|--------|---------|--------------|-----------------|
| Window 1 | 3        | 25 ft² | R-2.33  | 0.016        | 2356 BTU/h      |

| Doors  | Quantity | Area   | R-Value | Infiltration | Total Heat Loss |
|--------|----------|--------|---------|--------------|-----------------|
| Door 1 | 1        | 24 ft² | R-2.5   | 0.095        | 856 BTU/h       |

| Ceilings    | Quantity | Area  | R-Value | Infiltration | Total Heat Loss |
|-------------|----------|-------|---------|--------------|-----------------|
| No Ceilings | 0        | 0 ft² | R-0     | 0 in²        |                 |

| Skylights    | Quantity | Area  | R-Value | Infiltration | Total Heat Loss |
|--------------|----------|-------|---------|--------------|-----------------|
| No Skylights | 0        | 0 ft² | R-0     | 0 in²        |                 |

### Media room Heat Loss Summary



**Zone Notes:**

## Zone 4

| Design             |                  |                    |             |
|--------------------|------------------|--------------------|-------------|
| Application:       | Radiant Heating  | Supply Fluid Temp: | 111.7 °F    |
| Product:           | 1/2" RadiantPEX+ | Delta T:           | 20 °F       |
| # of Circuits:     | 7                | Flow:              | 5.22 GPM    |
| Circuit Length:    | 250 ft           | Head:              | 5.3 ft      |
| Manifold Distance: | 0 ft             | Radiant Capacity:  | 46046 BTU/h |
| Heated Area:       |                  | Required Heat:     | 31775 BTU/h |
|                    |                  | Panel Load:        | 52240 BTU/h |
|                    |                  | % Glycol:          | 0%          |

| Construction - ThinSlab |                 |                        |                     |
|-------------------------|-----------------|------------------------|---------------------|
| ThinSlab Thickness:     | 2 in            | Subfloor Thickness:    | 0.75 in             |
| ThinSlab Conductivity:  | 2 BTU/(h-ft.°F) | Subfloor Conductivity: | 0.085 BTU/(h-ft.°F) |

## Kitchen/Living/Dining (Zone 4)

| Floor Coverings          | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|--------------------------|----------|------|---------|--------------|-----------------|
| Tile- w/ Mudset : R-0.15 |          |      | R-0.15  |              |                 |

| Walls  | Quantity | Area    | R-Value | Infiltration | Total Heat Loss |
|--------|----------|---------|---------|--------------|-----------------|
| Wall 1 | 1        | 912 ft² | R-20    | 0            | 2928 BTU/h      |

| Doors  | Quantity | Area   | R-Value | Infiltration | Total Heat Loss |
|--------|----------|--------|---------|--------------|-----------------|
| Door 1 | 1        | 72 ft² | R-2.5   | 0.095        | 2569 BTU/h      |

**Windows**

|          | Quantity | Area               | R-Value | Infiltration | Total Heat Loss |
|----------|----------|--------------------|---------|--------------|-----------------|
| Window 1 | 3        | 40 ft <sup>2</sup> | R-2.33  | 0.016        | 3740 BTU/h      |
| Window 2 | 4        | 15 ft <sup>2</sup> | R-2.33  | 0.016        | 1906 BTU/h      |
| Window 3 | 1        | 30 ft <sup>2</sup> | R-2.33  | 0.016        | 939 BTU/h       |
| Window 4 | 1        | 30 ft <sup>2</sup> | R-2.33  | 0.016        | 939 BTU/h       |
| Window 5 | 1        | 16 ft <sup>2</sup> | R-2.33  | 0.016        | 507 BTU/h       |

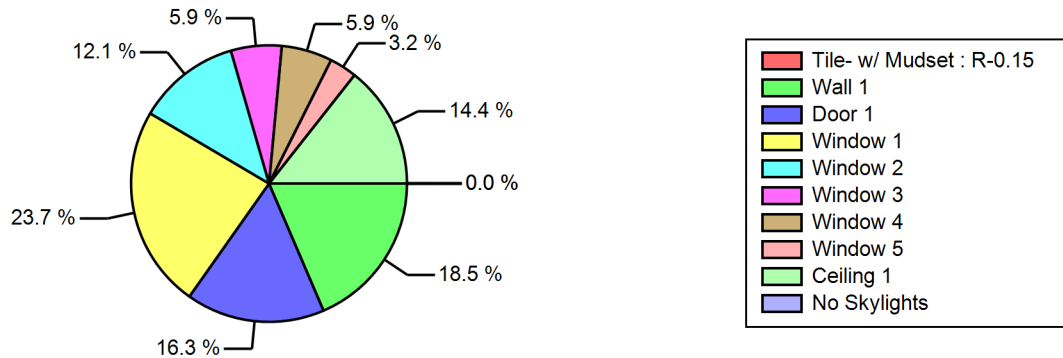
**Ceilings**

|           | Quantity | Area                   | R-Value | Infiltration | Total Heat Loss |
|-----------|----------|------------------------|---------|--------------|-----------------|
| Ceiling 1 | 1        | 879.72 ft <sup>2</sup> | R-30    | 0            | 2268 BTU/h      |

**Skylights**

|              | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|--------------|----------|-------------------|---------|-------------------|-----------------|
| No Skylights | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Kitchen/Living/Dining Heat Loss Summary**



**Foyer (Zone 4)**

**Floor Coverings**

|                          | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|--------------------------|----------|------|---------|--------------|-----------------|
| Tile- w/ Mudset : R-0.15 |          |      | R-0.15  |              |                 |

**Walls**

|        | Quantity | Area                | R-Value | Infiltration | Total Heat Loss |
|--------|----------|---------------------|---------|--------------|-----------------|
| Wall 1 | 1        | 228 ft <sup>2</sup> | R-20    | 0            | 801 BTU/h       |

**Windows**

|          | Quantity | Area               | R-Value | Infiltration | Total Heat Loss |
|----------|----------|--------------------|---------|--------------|-----------------|
| Window 1 | 2        | 36 ft <sup>2</sup> | R-2.33  | 0.016        | 2248 BTU/h      |
| Window 2 | 1        | 12 ft <sup>2</sup> | R-2.33  | 0.016        | 383 BTU/h       |

**Doors**

|        | Quantity | Area               | R-Value | Infiltration | Total Heat Loss |
|--------|----------|--------------------|---------|--------------|-----------------|
| Door 1 | 1        | 24 ft <sup>2</sup> | R-2.5   | 0.095        | 856 BTU/h       |

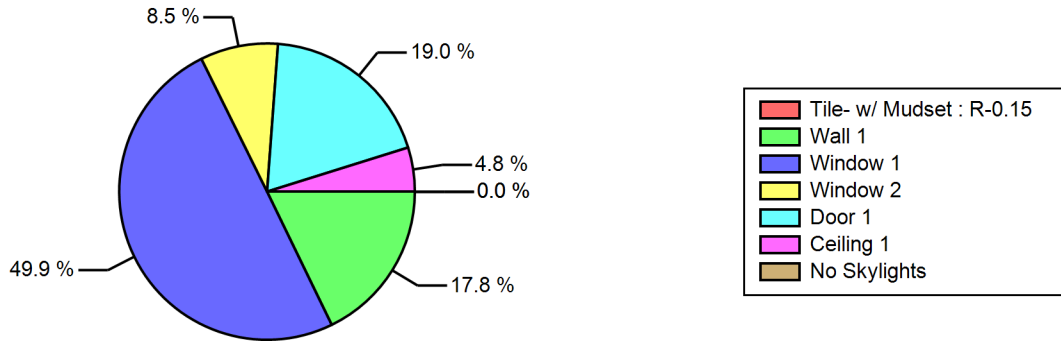
**Ceilings**

|           | Quantity | Area                  | R-Value | Infiltration | Total Heat Loss |
|-----------|----------|-----------------------|---------|--------------|-----------------|
| Ceiling 1 | 1        | 84.09 ft <sup>2</sup> | R-30    | 0            | 217 BTU/h       |

**Skylights**

|              | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|--------------|----------|-------------------|---------|-------------------|-----------------|
| No Skylights | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Foyer Heat Loss Summary**



**Powder room (Zone 4)**

**Floor Coverings**

|                          | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|--------------------------|----------|------|---------|--------------|-----------------|
| Tile- w/ Mudset : R-0.15 |          |      | R-0.15  |              |                 |

**Walls**

|        | Quantity | Area               | R-Value | Infiltration | Total Heat Loss |
|--------|----------|--------------------|---------|--------------|-----------------|
| Wall 1 | 1        | 55 ft <sup>2</sup> | R-20    | 0            | 348 BTU/h       |

**Windows**

|          | Quantity | Area              | R-Value | Infiltration | Total Heat Loss |
|----------|----------|-------------------|---------|--------------|-----------------|
| Window 1 | 1        | 8 ft <sup>2</sup> | R-2.33  | 0.016        | 259 BTU/h       |

**Ceilings**

|           | Quantity | Area                  | R-Value | Infiltration | Total Heat Loss |
|-----------|----------|-----------------------|---------|--------------|-----------------|
| Ceiling 1 | 1        | 32.95 ft <sup>2</sup> | R-30    | 0            | 85 BTU/h        |

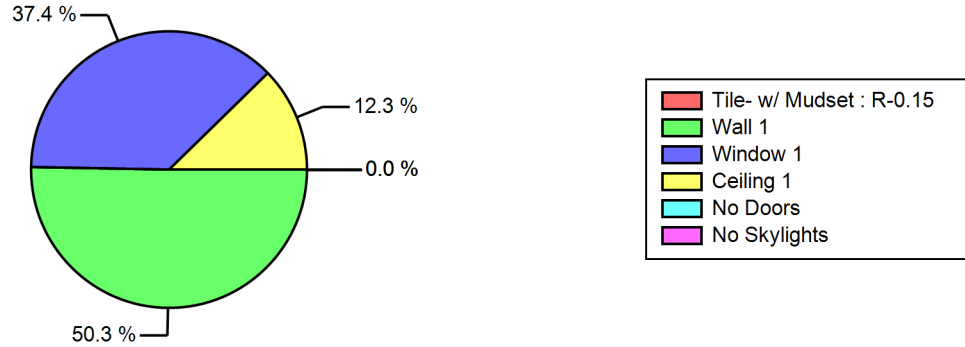
**Doors**

|          | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|----------|----------|-------------------|---------|-------------------|-----------------|
| No Doors | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Skylights**

|              | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|--------------|----------|-------------------|---------|-------------------|-----------------|
| No Skylights | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Powder room Heat Loss Summary**



**Mudroom (Zone 4)**

**Floor Coverings**

|                          | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|--------------------------|----------|------|---------|--------------|-----------------|
| Tile- w/ Mudset : R-0.15 |          |      | R-0.15  |              |                 |

**Walls**

|        | Quantity | Area               | R-Value | Infiltration | Total Heat Loss |
|--------|----------|--------------------|---------|--------------|-----------------|
| Wall 1 | 1        | 75 ft <sup>2</sup> | R-20    | 0            | 360 BTU/h       |

**Windows**

|          | Quantity | Area              | R-Value | Infiltration | Total Heat Loss |
|----------|----------|-------------------|---------|--------------|-----------------|
| Window 1 | 1        | 8 ft <sup>2</sup> | R-2.33  | 0.016        | 259 BTU/h       |

**Doors**

|        | Quantity | Area               | R-Value | Infiltration | Total Heat Loss |
|--------|----------|--------------------|---------|--------------|-----------------|
| Door 1 | 1        | 24 ft <sup>2</sup> | R-2.5   | 0.095        | 856 BTU/h       |



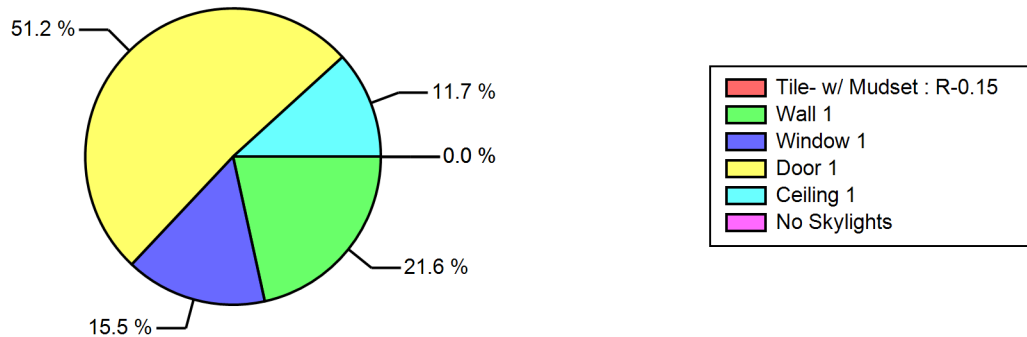
**Ceilings**

|           | Quantity | Area                  | R-Value | Infiltration | Total Heat Loss |
|-----------|----------|-----------------------|---------|--------------|-----------------|
| Ceiling 1 | 1        | 76.04 ft <sup>2</sup> | R-30    | 0            | 196 BTU/h       |

**Skylights**

|              | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|--------------|----------|-------------------|---------|-------------------|-----------------|
| No Skylights | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Mudroom Heat Loss Summary**



**Den (Zone 4)**

**Floor Coverings**

|                          | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|--------------------------|----------|------|---------|--------------|-----------------|
| Tile- w/ Mudset : R-0.15 |          |      | R-0.15  |              |                 |

**Walls**

|        | Quantity | Area                | R-Value | Infiltration | Total Heat Loss |
|--------|----------|---------------------|---------|--------------|-----------------|
| Wall 1 | 1        | 308 ft <sup>2</sup> | R-20    | 0            | 1107 BTU/h      |

**Windows**

|          | Quantity | Area               | R-Value | Infiltration | Total Heat Loss |
|----------|----------|--------------------|---------|--------------|-----------------|
| Window 1 | 2        | 30 ft <sup>2</sup> | R-2.33  | 0.016        | 1879 BTU/h      |
| Window 2 | 1        | 15 ft <sup>2</sup> | R-2.33  | 0.016        | 476 BTU/h       |

**Doors**

|        | Quantity | Area               | R-Value | Infiltration | Total Heat Loss |
|--------|----------|--------------------|---------|--------------|-----------------|
| Door 1 | 1        | 24 ft <sup>2</sup> | R-2.5   | 0.095        | 856 BTU/h       |
| Door 2 | 1        | 24 ft <sup>2</sup> | R-2.5   | 0.095        | 856 BTU/h       |

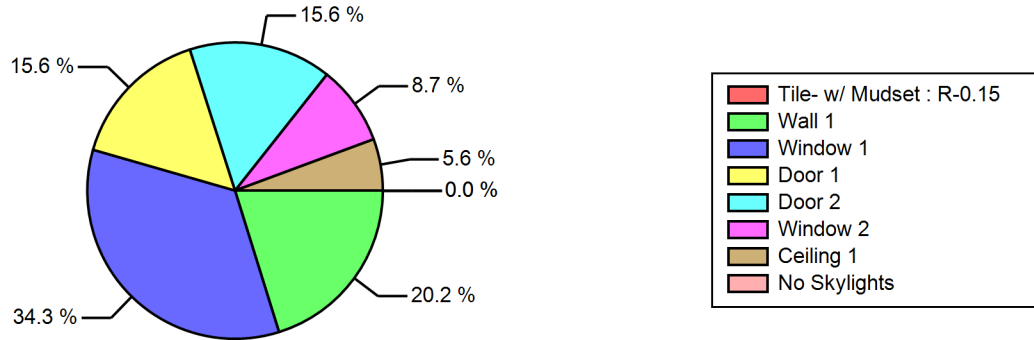
**Ceilings**

|           | Quantity | Area                  | R-Value | Infiltration | Total Heat Loss |
|-----------|----------|-----------------------|---------|--------------|-----------------|
| Ceiling 1 | 1        | 119.9 ft <sup>2</sup> | R-30    | 0            | 309 BTU/h       |

**Skylights**

|              | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|--------------|----------|-------------------|---------|-------------------|-----------------|
| No Skylights | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Den Heat Loss Summary**



**Zone Notes:**

## Zone 5

| Design             |                  |                    |            |
|--------------------|------------------|--------------------|------------|
| Application:       | Radiant Heating  | Supply Fluid Temp: | 97.4 °F    |
| Product:           | 1/2" RadiantPEX+ | Delta T:           | 20 °F      |
| # of Circuits:     | 2                | Flow:              | 0.48 GPM   |
| Circuit Length:    | 175 ft           | Head:              | 0.3 ft     |
| Manifold Distance: | 0 ft             | Radiant Capacity:  | 3209 BTU/h |
| Heated Area:       |                  | Required Heat:     | 3197 BTU/h |
|                    |                  | Panel Load:        | 4766 BTU/h |
|                    |                  | % Glycol:          | 0%         |

| Construction - ThinSlab |                 |                        |                     |
|-------------------------|-----------------|------------------------|---------------------|
| ThinSlab Thickness:     | 2 in            | Subfloor Thickness:    | 0.75 in             |
| ThinSlab Conductivity:  | 2 BTU/(h-ft.°F) | Subfloor Conductivity: | 0.085 BTU/(h-ft.°F) |

## Master Bedroom (Zone 5)

| Floor Coverings    | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|--------------------|----------|------|---------|--------------|-----------------|
| Oak- 5/8" : R-0.57 |          |      | R-0.57  |              |                 |

| Walls  | Quantity | Area    | R-Value | Infiltration | Total Heat Loss |
|--------|----------|---------|---------|--------------|-----------------|
| Wall 1 | 1        | 216 ft² | R-20    | 0            | 1047 BTU/h      |

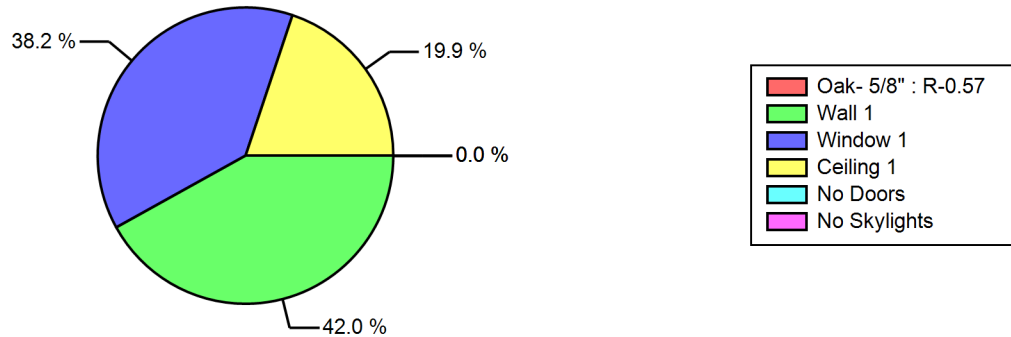
| Windows  | Quantity | Area   | R-Value | Infiltration | Total Heat Loss |
|----------|----------|--------|---------|--------------|-----------------|
| Window 1 | 2        | 15 ft² | R-2.33  | 0.016        | 953 BTU/h       |

| Ceilings  | Quantity | Area      | R-Value | Infiltration | Total Heat Loss |
|-----------|----------|-----------|---------|--------------|-----------------|
| Ceiling 1 | 1        | 192.1 ft² | R-30    | 0            | 495 BTU/h       |

| Doors    | Quantity | Area  | R-Value | Infiltration | Total Heat Loss |
|----------|----------|-------|---------|--------------|-----------------|
| No Doors | 0        | 0 ft² | R-0     | 0 in²        |                 |

| Skylights    | Quantity | Area  | R-Value | Infiltration | Total Heat Loss |
|--------------|----------|-------|---------|--------------|-----------------|
| No Skylights | 0        | 0 ft² | R-0     | 0 in²        |                 |

**Master Bedroom Heat Loss Summary**



**Zone Notes:**

**Zone 6**

| Design             |                  |                    |            |
|--------------------|------------------|--------------------|------------|
| Application:       | Radiant Heating  | Supply Fluid Temp: | 100.7 °F   |
| Product:           | 1/2" RadiantPEX+ | Delta T:           | 20 °F      |
| # of Circuits:     | 2                | Flow:              | 0.69 GPM   |
| Circuit Length:    | 175 ft           | Head:              | 1 ft       |
| Manifold Distance: | 0 ft             | Radiant Capacity:  | 5488 BTU/h |
| Heated Area:       |                  | Required Heat:     | 4968 BTU/h |
|                    |                  | Panel Load:        | 6940 BTU/h |
|                    |                  | % Glycol:          | 0%         |

| Construction - ThinSlab |                 |                        |                     |
|-------------------------|-----------------|------------------------|---------------------|
| ThinSlab Thickness:     | 2 in            | Subfloor Thickness:    | 0.75 in             |
| ThinSlab Conductivity:  | 2 BTU/(h-ft.°F) | Subfloor Conductivity: | 0.085 BTU/(h-ft.°F) |

**Ensuite (Zone 6)**

| Floor Coverings          | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|--------------------------|----------|------|---------|--------------|-----------------|
| Tile- w/ Mudset : R-0.15 |          |      | R-0.15  |              |                 |

| Walls  | Quantity | Area    | R-Value | Infiltration | Total Heat Loss |
|--------|----------|---------|---------|--------------|-----------------|
| Wall 1 | 1        | 312 ft² | R-20    | 0            | 1414 BTU/h      |

| Windows  | Quantity | Area   | R-Value | Infiltration | Total Heat Loss |
|----------|----------|--------|---------|--------------|-----------------|
| Window 1 | 2        | 24 ft² | R-2.33  | 0.016        | 1509 BTU/h      |

| Ceilings  | Quantity | Area       | R-Value | Infiltration | Total Heat Loss |
|-----------|----------|------------|---------|--------------|-----------------|
| Ceiling 1 | 1        | 160.02 ft² | R-30    | 0            | 413 BTU/h       |

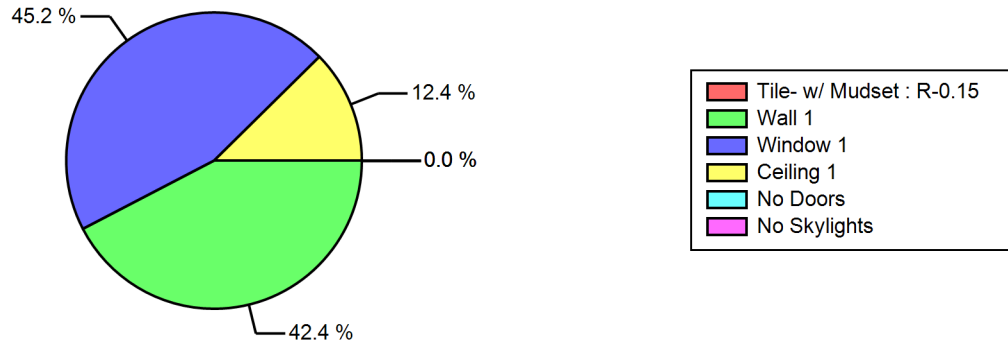
**Doors**

|          | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|----------|----------|-------------------|---------|-------------------|-----------------|
| No Doors | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Skylights**

|              | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|--------------|----------|-------------------|---------|-------------------|-----------------|
| No Skylights | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Ensuite Heat Loss Summary**



**Walk-in closet (Zone 6)**

**Floor Coverings**

|                    | Quantity | Area | R-Value | Infiltration | Total Heat Loss |
|--------------------|----------|------|---------|--------------|-----------------|
| Oak- 5/8" : R-0.57 |          |      | R-0.57  |              |                 |

**Walls**

|        | Quantity | Area               | R-Value | Infiltration | Total Heat Loss |
|--------|----------|--------------------|---------|--------------|-----------------|
| Wall 1 | 1        | 50 ft <sup>2</sup> | R-20    | 0            | 290 BTU/h       |

**Windows**

|          | Quantity | Area              | R-Value | Infiltration | Total Heat Loss |
|----------|----------|-------------------|---------|--------------|-----------------|
| Window 1 | 2        | 8 ft <sup>2</sup> | R-2.33  | 0.016        | 517 BTU/h       |

**Ceilings**

|           | Quantity | Area                  | R-Value | Infiltration | Total Heat Loss |
|-----------|----------|-----------------------|---------|--------------|-----------------|
| Ceiling 1 | 1        | 70.06 ft <sup>2</sup> | R-30    | 0            | 181 BTU/h       |

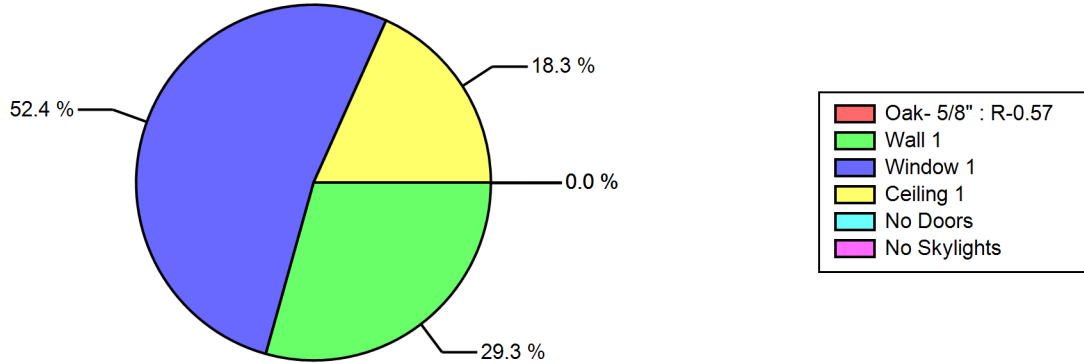
**Doors**

|          | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|----------|----------|-------------------|---------|-------------------|-----------------|
| No Doors | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

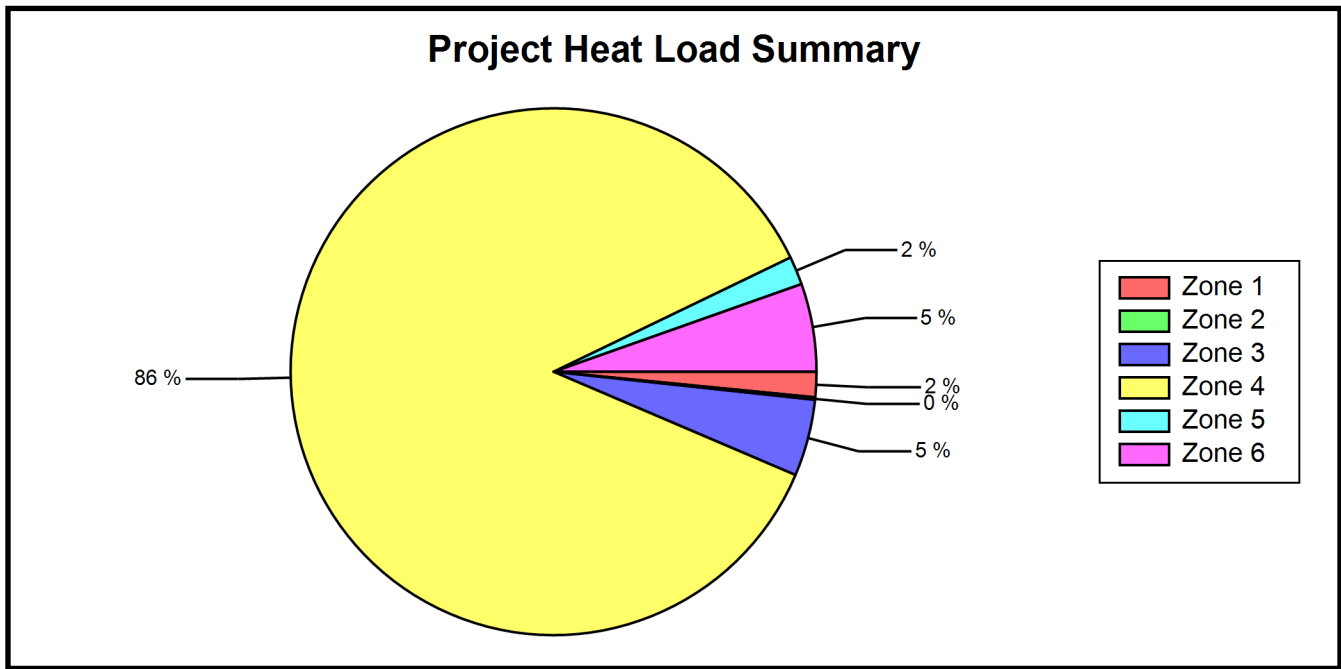
**Skylights**

|              | Quantity | Area              | R-Value | Infiltration      | Total Heat Loss |
|--------------|----------|-------------------|---------|-------------------|-----------------|
| No Skylights | 0        | 0 ft <sup>2</sup> | R-0     | 0 in <sup>2</sup> |                 |

**Walk-in closet Heat Loss Summary**



**Zone Notes:**



**Project Notes:**

Please verify all project information for accuracy.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Project Information**

Project Number 123456  
 Project Quote  
 Project Name Sample Heat Loss Calculation  
 Designed For ABC Residence, Hydrowest Products Ltd.

Vancouver, BC

**Contact Information**

Designed By David Zinn  
 Company Name Hydrowest Products Ltd.  
 Phone Number

**Project Assumptions**

Outdoor Temp -10 °F  
 Elevation 16 ft  
 Wind Speed 10 mph  
 Job Type Residential

**Onix / PEX / HeatWeave**

| Order Number | Model Number  | Description                   | Quantity | Unit Price (C\$) | Total Price (C\$) |
|--------------|---------------|-------------------------------|----------|------------------|-------------------|
| 81001681     | PB032081-1000 | 1/2" RadiantPEX+ x 1000' Coil | 3        | 1,242.00         | 3,726.00          |
| 81003406     | PB032081-300  | 1/2" RadiantPEX+ x 300' Coil  | 2        | 372.60           | 745.20            |
| 81001682     | PB032081-600  | 1/2" RadiantPEX+ x 600' Coil  | 2        | 745.20           | 1,490.40          |

**SubTotal (Onix / PEX / HeatWeave): 5,961.60**

**Manifolds / Fittings**

| Order Number | Model Number | Description                                 | Quantity | Unit Price (C\$) | Total Price (C\$) |
|--------------|--------------|---|----------|------------------|-------------------|
| 81001981     | D3803002SS   | 1" Flowmeter Manifold, Stainless Steel, M-2 | 4        | 310.77           | 1,243.08          |
| 81001983     | D3803004SS   | 1" Flowmeter Manifold, Stainless Steel, M-4 | 1        | 476.82           | 476.82            |
| 81003682     | D3803007SS   | 1" Flowmeter Manifold, Stainless Steel, M-7 | 1        | 745.61           | 745.61            |
| 81005479     | D4201700-S   | SS Circuit Isolation Cap                    | 2        | 16.20            | 32.40             |

**SubTotal (Manifolds / Fittings): 2,497.91**

**Controls**

| Order Number | Model Number | Description  | Quantity | Unit Price (C\$) | Total Price (C\$) |
|--------------|--------------|--|----------|------------------|-------------------|
| 81016550     | 300152       | Thermostat 519, Air/Floor, Digital, 24V, incl floor sensor | 6        | 245.84           | 1,475.01          |

**SubTotal (Controls): 1,475.01**

**Accessories**

| Order Number | Model Number | Description  | Quantity | Unit Price (C\$) | Total Price (C\$) |
|--------------|--------------|--|----------|------------------|-------------------|
| 81003736     | DK1000       | 1" SS Accessories Kit w/ 1" FNPT Isolation Ball Valves | 6        | 231.66           | 1,389.96          |

**SubTotal (Accessories): 1,389.96**

|                             |                  |
|-----------------------------|------------------|
| SubTotal:                   | 11,324.48        |
| Tax:                        | 0.00             |
| Shipping:                   | 0.00             |
| <b>Project Total (C\$):</b> | <b>11,324.48</b> |

Please verify all project information for accuracy.

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_



**Project Information**

Project Number 123456  
 Project Quote  
 Project Name Sample Heat Loss Calculation  
 Designed For ABC Residence, Hydrowest Products Ltd.

Vancouver, BC

**Contact Information**

Designed By David Zinn  
 Company Name Hydrowest Products Ltd.  
 Phone Number

**Project Assumptions**

Outdoor Temp -10 °F  
 Elevation 16 ft  
 Wind Speed 10 mph  
 Job Type Residential

**Pump Specs**

| Zone Name | Flow    | Head   | Delta T | Supply Fluid Temp |
|-----------|---------|--------|---------|-------------------|
| Zone 1    | 0.3 GPM | 0.2 ft | 20      | 91.7 °F           |
| Zone 2    | 0.1 GPM | 0.1 ft | 20      | 82.3 °F           |
| Zone 3    | 1 GPM   | 0.5 ft | 20      | 89.7 °F           |
| Zone 4    | 5.2 GPM | 5.3 ft | 20      | 111.7 °F          |
| Zone 5    | 0.5 GPM | 0.3 ft | 20      | 97.4 °F           |
| Zone 6    | 0.7 GPM | 1 ft   | 20      | 100.7 °F          |

**Heated Area Descriptions**

|   | Application     | Construction     | Heated Area | Product Totals                       |
|---|-----------------|------------------|-------------|--------------------------------------|
| Zone 1 <> Room List (Guest Bedroom)   | Radiant Heating | Slab<br>None     | 200 ft²     | (2) 150' Lengths of 1/2" RadiantPEX+ |
| Zone 2 <> Room List (Bathroom)  | Radiant Heating | Slab<br>None     | 38 ft²      | (1) 125' Lengths of 1/2" RadiantPEX+ |
| Zone 3 <> Room List (Media room)  | Radiant Heating | Slab<br>None     | 700 ft²     | (4) 250' Lengths of 1/2" RadiantPEX+ |
| Zone 4 <> Room List (Kitchen/Living/Dining, Foyer, Powder room, Mudroom, Den) | Radiant Heating | ThinSlab<br>None | 1082 ft²    | (7) 250' Lengths of 1/2" RadiantPEX+ |
| Zone 5 <> Room List (Master Bedroom)  | Radiant Heating | ThinSlab<br>None | 192 ft²     | (2) 175' Lengths of 1/2" RadiantPEX+ |
| Zone 6 <> Room List (Ensuite, Walk-in closet)                                 | Radiant Heating | ThinSlab<br>None | 195 ft²     | (2) 175' Lengths of 1/2" RadiantPEX+ |

## Heating Load Summary

|                       | Tube Spacing (in) | Intensity (BTU/h-ft <sup>2</sup> ) | Back/Edge Losses (BTU/h-ft <sup>2</sup> ) | Total Required (BTU/h) | Total Provided (BTU/h) | Supp. Needed |
|-----------------------|-------------------|------------------------------------|---|------------------------|------------------------|--------------|
| <b>Zone 1</b>         |                   |                                    |   | <b>2845</b>            | <b>2861</b>            |              |
| Guest Bedroom         | 9 (Banded: 6)     | 14.22                              | 2.23                                      | 2845                   | 2861                   |              |
| <b>Zone 2</b>         |                   |                                    |   | <b>281</b>             | <b>283</b>             |              |
| Bathroom              | 8                 | 7.39                               | 1.88                                      | 281                    | 283                    |              |
| <b>Zone 3</b>         |                   |                                    |   | <b>8655</b>            | <b>8699</b>            |              |
| Media room            | 9 (Banded: 6)     | 12.36                              | 2.12                                      | 8655                   | 8699                   |              |
| <b>Zone 4</b>         |                   |                                    |   | <b>31775</b>           | <b>46046</b>           |              |
| Kitchen/Living/Dining | 8 (Banded: 6)     | 23.96                              | 23.71                                     | 19382                  | 33952                  |              |
| Foyer                 | 8                 | 53.64                              | 15.44                                     | 4505                   | 3482                   | YES          |
| Powder room           | 8                 | 33.01                              | 15.57                                     | 693                    | 1037                   |              |
| Mudroom               | 8                 | 35.65                              | 16.08                                     | 1711                   | 2366                   |              |
| Den                   | 8 (Banded: 6)     | 45.7                               | 1.56                                      | 5484                   | 5209                   | YES          |
| <b>Zone 5</b>         |                   |                                    |   | <b>3197</b>            | <b>3209</b>            |              |
| Master Bedroom        | 8                 | 16.65                              | 8.17                                      | 3197                   | 3209                   |              |
| <b>Zone 6</b>         |                   |                                    |   | <b>4967</b>            | <b>5488</b>            |              |
| Ensuite               | 8                 | 30.23                              | 10.32                                     | 3779                   | 4297                   |              |
| Walk-in closet        | 8                 | 16.98                              | 9.76                                      | 1188                   | 1191                   |              |

## Project Summary

Total Flow: 7.8 GPM  
 Total System Head: 5.3 ft  
 Boiler Load: 77725 BTU/h  
 Total System Volume: 37 Gallons  
 Total Heated Area: 2407 ft<sup>2</sup>

Please verify all project information for accuracy.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_