

**Rideau Residences****Assemblies****X0 . Footing:**

reinforced concrete (width and depth as per OBC)  
formed with 2.0" extruded polystyrene rigid board insulation (R 10), joints sealed  
on 2.0" high-load extruded polystyrene rigid board insulation (R 10)  
covered with 2.0" extruded polystyrene rigid board insulation (R 10)  
top sprayed with waterproof membrane continuous from foundation wall waterproof membrane

**W1 . Wall Foundation Below Grade:**

6.0" extruded polystyrene rigid board insulation (R 30), joints sealed  
0.02" water barrier (adhesive sheet or fluid-applied membrane)  
8.0" reinforced concrete  
0.75" wood strapping  
0.5" gypsum board

**W2 . Wall Foundation Above Grade:**

0.5" parging with metal lath  
0.5" cement board  
6.0" extruded polystyrene rigid board insulation (R 30), joints sealed  
0.02" water barrier (adhesive sheet or fluid-applied membrane)  
8.0" reinforced concrete  
0.75" wood strapping  
0.5" gypsum board

**W3 . Wall Exterior Brick:**

3.5" brick  
0.75" wood strapping rain screen with brick ties  
4.0" foil-faced polyisocyanurate rigid insulation (R 22), joints sealed  
0.44" oriented strand board sheathing  
1.5" x 5.5" (2" x 6") wood frame (16" on centre) with 3.5" closed-cell polyurethane spray foam insulation (R 21)  
0.5" gypsum board

**W4 . Wall Exterior Metal:**

1.0" corrugated metal siding  
0.75" wood strapping rain screen  
4.0" foil-faced polyisocyanurate rigid insulation (R 22), joints sealed  
0.44" oriented strand board sheathing  
1.5" x 5.5" (2" x 6") wood frame (16" on centre) with 3.5" closed-cell polyurethane spray foam insulation (R 21)  
0.5" gypsum board

**W5 . Wall Partition:**

0.5" gypsum board  
1.5" x 3.5" (2" x 4") wood frame  
0.5" gypsum board

**W6 . Wall Partition Wet:**

0.5" paperless gypsum board ( high-humidity side)  
1.5" x 3.5" (2" x 4") wood frame  
0.5" gypsum board (dry side)

**W7 . Wall Chase:**

0.5" gypsum board  
1.5" x 3.5" (2" x 4") wood frame  
0.5" gypsum board

W8 . Wall Fire Partition:

0.625" gypsum board (Type X)  
1.5" x 5.5" (2" x 6") independent wood frame with mineral fibre  
0.006" sheathing membrane / air barrier  
0.5" sheathing  
0.5" air gap  
0.5" sheathing  
0.006" sheathing membrane / air barrier  
1.5" x 5.5" (2" x 6") independent wood frame with mineral fibre  
0.625" gypsum board (Type X)

F1 . Floor Basement Slab:

3.0" agilia screed A  
0.006" polyethylene vapour retarder  
6.0" closed-cell polyurethane spray foam (R 30)  
>6.0" granular drainage

F2 . Floor Concrete:

1.5" agilia screed A  
1.0" extruded polystyrene rigid panel insulation with foil faces (R 5)  
0.75" subfloor  
14.0" wood I-joist  
0.75" strapping  
0.5" gypsum board

R1 . Roof Flat Vegetated:

vegetation (vegetables, grasses, shrubs)  
12.0" engineered soil (growing medium)  
filter fabric (separation layer)  
geo-composite / granular material (water retention & drainage layer)  
water barrier protection (separation layer)  
fully-bonded water barrier  
2.0" sloped polyisocyanurate rigid panel insulation (R 10)  
0.75" plywood  
14.0" wood I-joist  
9.5" closed-cell polyurethane spray foam (R 57)  
0.5" strapping  
0.5" gypsum board

R2 . Roof Flat Wood Deck:

1.5" wood decking (cedar)  
0.02" water barrier  
2.0" sloped polyisocyanurate rigid panel insulation (R 10)  
0.75" plywood  
9.5" wood I-joist  
9.5" closed-cell polyurethane spray foam (R 57)  
0.5" strapping  
0.5" gypsum board

**Windows & Doors**

3x7 doors = Inline Fiberglass 301 series (tilt-n-turn) = 0.22 U Value, 0.35 SHGC, 0.39 Vt, x ER  
2x2 windows = Inline Fiberglass 700 series (hopper) = 0.25 U Value, 0.36 SHGC, 0.39 Vt, x ER  
2x4 windows = Inline Fiberglass 700 series (casement) = 0.25 U Value, 0.36 SHGC, 0.39 Vt, 30 ER  
2x5 window (casement) with 4x4 window (fixed) = Inline Fiberglass 700 series = 0.19 U Value, 0.46 SHGC, 0.53 Vt, 43 ER  
4x7 windows = Inline Fiberglass (fixed) = 0.20 U Value, 0.49 SHGC, 0.55 Vt, x ER

Triple Glazed, Clear, Low E ( Hard Coat ), Argon, Thermal Edge Spacer

## Heating & Ventilation Equipment

Heat Recovery Ventilator = Lifebreath 195 ECM Dual Core  
Air Filter = Lifebreath TFP3000HEPA  
Geothermal Heat Pump = Nordic DXW25H  
Geothermal Heating System Water Storage Tank = GSW SS640LDE  
Domestic Hot Water Tank = GSW SS640LDE

## Photovoltaic Electrical Generation Equipment

Panels = Heliene HEE 215M  
Microinverter = Enphase Energy D380  
(grid tied / Ontario Micro Feed In Tariff Contract)

## Envelope Penetrations

1 supply air = 48" Duct Length (exterior wall face to face of unit)  
1 exhaust air = 96" Duct Length (exterior wall face to face of unit)  
2 roof drains - one above third floor roof, one above second floor roof  
1 plumbing vent stack  
1 radon vent stack  
1 solar ready conduit  
1 central vacuum  
1 dryer vent  
4 water hose bibs  
1 electrical supply  
5 electrical outlets

## Air Tightness

pressurization test at 0.57 ACH50 (by Homesol Building Solutions)

## Site & Building Orientation

project site is located north of a public park (undeveloped open space) and the Rideau River  
walls of building are oriented within 15 degrees of the cardinal points

## Declaration

I certify that the Rideau Residences, located at 279 Crichton Street in Ottawa, was built using the specifications, materials and equipment outlined above.



**Christopher Straka** . MEDES MCIP  
Principal . Vert Design Incorporated  
buildings . lands . communities

chris@vertdesign.ca  
www.vertdesign.ca

613.244.9484