



Northern Front Studio is proud to have been a part of this new Whitehorse Seniors Housing Project for Yukon Housing. As the Architect, I collaborated with a highly skilled team that developed this project, with each player contributing their expertise to the building.

Throughout the project, we looked for ways to promote the design and construction of a high-performance building, using sustainable approaches. Sustainable building strategies use less energy, water and natural resources, create less waste and result in buildings that are healthier and more comfortable for the occupants.

SITE:

- The site is well suited to take advantage of public transit as it is located on the route for both the city bus and the waterfront trolley.
- The site is within walking distance to most amenities including supermarkets, restaurants, cafes, and connected to downtown along the Yukon River Trail
- Alternative forms of transportation are encouraged by providing bicycle storage and with a reduced car parking capacity.
- The development density of a 30 unit multifamily building reduces urban sprawl.
- Landscape design maintains the building's connection to the Yukon River Trail and contains all storm water on site.
- Grey coloured roofing material, along with the rooftop deck and garden, reduces the heat island effect, whereby urban areas become warmer than rural areas due to heat retained by dark surfaces such as roofs and pavement.

WATER EFFICIENCY:

- The grounds are landscaped with native plants to reduce irrigation and pesticide requirements.
- Installation of high-efficiency toilets with the dual-flush option saves up to 40% more water than conventional toilets.
- The showers, dishwashers, and washing machines are all ENERGY STAR® rated, reducing water consumption by 30-70%.
- The roof design helps to contain the snow and rainwater run-off by internally draining, rather than shedding the water to the paved surfaces. This also helps prevent dangerous snow fall and icing at walkways and entries.

ENERGY:

- The exterior walls of the building have 6" of rigid insulation, in addition to 2x6 wood frame wall construction, providing higher insulation values, and a better performing building envelope.
- The major appliances are ENERGY STAR® rated. ENERGY STAR® appliances use 20-40% less energy than standard models, saving homeowners about a third on their energy bill with a similar savings of greenhouse gas emissions.
- The building has been commissioned, to ensure that all mechanical systems, including heating and ventilation, are balanced and running efficiently. Yukon Housing intends to monitor the building over time to see that it remains energy efficient.
- Natural light is present throughout the building, which reduces electrical costs while creating a bright and open environment for the occupants.

MATERIALS AND RESOURCES:

- During the construction of the building, all cardboard and paper from the site was recycled, energy efficient lighting was used, and the working temperature was kept at a low level.
- The wood framing of the building was all prefabricated, which reduced a substantial amount of cut-off material waste.
- Local materials were used wherever possible.
- The durable building design incorporates rainscreen cladding and thru-wall flashings, which allows a second path for any moisture to drain away from the exterior walls to the outside, helping to prevent water damage in the walls.
- HardiPlank siding on the building's exterior increases durability and reduces the need for maintenance. HardiPlank is made of raw materials that are low in toxicity: wood pulp, cement, sand, and water.
- All windows are triple glazed, low-E, argon windows. Heat loss is greatly reduced with the use of low-E [low-emissivity] treatment for the glass, which reflects heat back into the building in the winter and blocks out radiant heat in the summer. The third layer of glass enhances this process making the window a heat processor all on its own.

INDOOR ENVIRONMENTAL QUALITY:

- Each unit has a Heat Recovery Ventilation (HRV) system to provide fresh air and improved climate control, while also saving energy by reducing heating or cooling requirements.
- Low-emitting materials were chosen wherever possible. For example, no vinyl or PVC was used for any of the interior finishes.
- Operable windows in each room keep occupants comfortable by enabling them to control their access to fresh air.
- All spaces are designed to have abundant natural light with views to the Yukon River.
- All residential spaces have a private deck, allowing for a better connection to the outdoors.



If you have any questions about the building or the sustainable strategies that were used, feel free to contact Northern Front Studio. We hope you enjoy your new home.

Regards,

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