

NET ZERO

MULTI-UNIT RESIDENTIAL BUILDING



BUILDER Big Block Construction

Energy Advisor Darcy Bzdel, Sun Ridge Residential Inc.

Location Saskatoon, SK (Climate zone 7a)

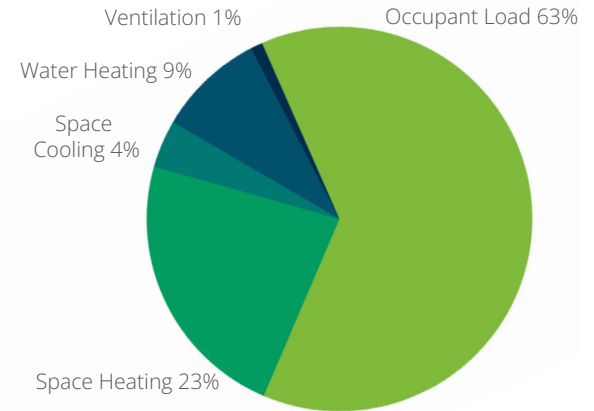


Code-Built MURB:
577 GJ/yr

This MURB:
292 GJ/yr



Modelled Energy Use Breakdown



Energy modelling results are from HOT2000 Version 11.10. The total modelled operational GHG emissions are 54.3 tonnes/CO₂e/yr.

BUILDING ENCLOSURE

Windows:

Berdick Windows, Triple Glazed

Walls:

R-36 2x10 Wall,
Staggered 2x6 & 2x4 Studs

Ceiling:

R-80 Blown-in

Foundation:

ICF Crawlspace
Lower Units: R-28 2x8 wall

Airtightness:

0.47 ACH@50

Envelope:

52% better than NRCan ref

MECHANICALS

Fuel Source:

Dual Fuel
(electricity + natural gas)

Heating & Cooling:

Dettson Chinook Furnace
Upper Units: also include ASHP

Water Heating:

Rheem Heat Pump

Ventilation:

Upper Units: Lifebreath HRV

OTHER FEATURES

Units:

12 total, (6 first floor, 6 second floor)
2 and 3 bedroom units

Prefabrication Approach:

Full modular construction

Labelling Approach:

Whole Building

Common Area:

N/A

Building Ownership:

Rental Building



"There are three groups associated with any build: the people living there, the owners of the project, and the community at large. Each of these groups benefits from building better developments. If we're ever truly going to make a change in our community and advance both our building practices and processes, we need to ensure that we are working together in collaboration and sharing that knowledge across the entire community to ensure that we are building better communities and building better projects. If you're going to build a multifamily project and you're considering sustainability, modular has to be on the table. It absolutely can be a scalable, affordable, Net Zero, repeatable project done anywhere in Canada."

– Alex Miller, CEO