

Station Pointe Greens, Edmonton (The Communitas Group Ltd.)



Image courtesy of
Hartwig Architects Inc.

Station Pointe Greens is a project selected under the Equilibrium™ Communities Initiative, a \$4.2M collaborative sustainable community demonstration initiative of Natural Resources Canada (NRCan) and Canada Mortgage and Housing Corporation (CMHC).

The Equilibrium™ Communities Initiative provides financial assistance for technical activities and showcasing the performance of selected neighbourhood development projects which, through their planning, design, implementation and operation, will provide measurable improvements over current approaches in the areas of energy and water consumption, environmental protection, land use planning, sustainable transportation and other features. Capital construction costs are not funded through the initiative.

This transit-oriented development is to be the first redevelopment within the Fort Road community renewal project initiated by the City of Edmonton on former industrial lands northeast of downtown. The site is located within walking distance of a light rail transit station and bus terminal. The project is planned to include 219 affordable and market-priced homes in the form of townhomes, and mid- and high-rise apartments. The mix of uses is expected to include over 2,500 m² of commercial/retail uses, a daycare and community facilities.

Research Objectives

Natural Resources Canada

- NRCan's CanmetENERGY works with communities to reduce their energy consumption by understanding the synergies between building design, urban form, transportation and land use, and assisting with the development of integrated community energy system concepts.

Canada Mortgage and Housing Corporation

- Improved environmental performance of residential, mixed use neighbourhoods;
- Integration of housing and community infrastructure such as energy, transportation, water and waste water; natural environment;
- Built examples, technical analysis and supporting information that is of use to developers and municipalities.

Affordability is a guiding objective in this project, targeting prices competitive with the area average. A green loan is proposed to cover the increased capital costs of energy-saving features and be paid back through a monthly green fee equal to the operating savings realized. Communitas has had success with this approach in another high-efficiency multi-residential building in Edmonton.

Station Pointe is planned to be developed as a number of cooperatives, including both home ownership and continuing, as well as a second tier cooperative. Because the co-ops are to function as a neighbourhood association and take responsibility for the common property and systems, the long-term viability of the community features is ensured.

The design of Station Pointe Greens (SPG) aims to achieve Passive House standards targeting a 90% reduction in energy use for heating and cooling. To achieve this, all suites in the design face south, clustered around single-loaded corridors to enable the suites to be heated primarily through passive solar gains. The building envelope will be well-insulated, with R60 walls,

R70 roofs, R50 slab, R7 windows and with minimal thermal bridging. In addition, each suite will have high efficiency energy recovery ventilation and be compartmentalized with sealed doors.

Communitas is also proposing a biological wastewater treatment facility to treat 100% of the wastewater on-site which will then be re-used for toilet flushing and sub-surface irrigation. The design also features Low-impact Development practices to reduce stormwater run-off, such as green roofs over 50% of the site and bioretention cells.

The Initiative-funded work focused on consultation/alignment, analysis and design for performance improvements. This included consultation with approval authorities on the proposed water re-use options and alignment with the community and future residents. Analysis and design improvements were in areas that included: renewable and waste energy use at the neighbourhood scale; green financing options; and options for on-site collection, treatment and re-use of rainwater and wastewater.



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For more information about the EQuilibrium™ Communities Initiative and the projects, visit: <http://cmhc.ca/en/inpr/su/eqscoin/index.cfm> or visit the community energy section of the Natural Resources Canada website or emailquilibrium.communities@nrcan-rncan.gc.ca