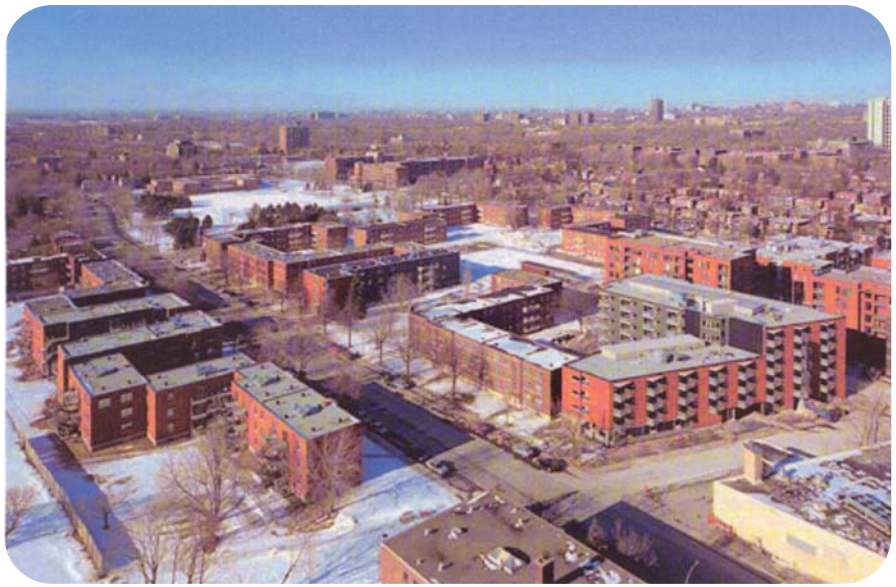
RESIDENTIAL

Gas Absorption Geothermal Heat Pump System

Benny Farm

Montreal - Canada

ROBUR
caring for the environment



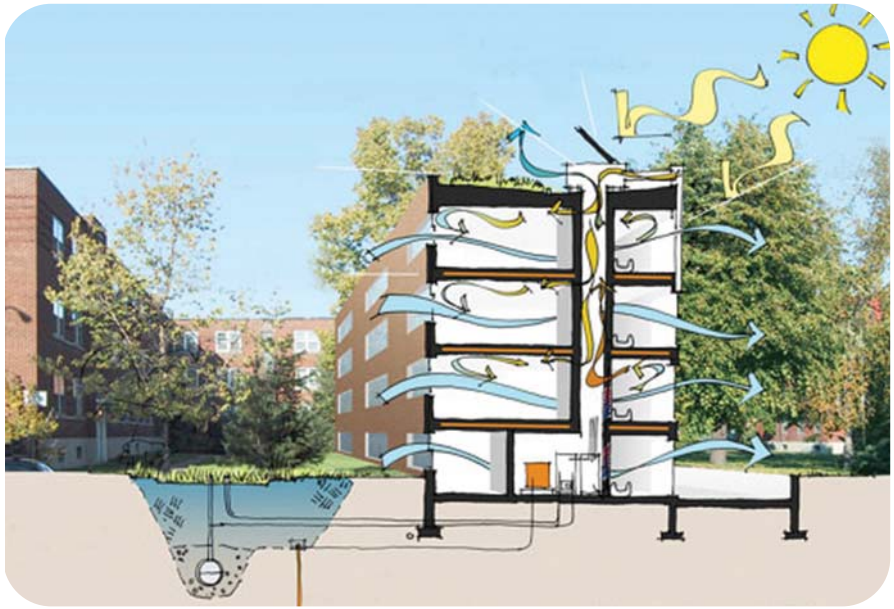
The project provides a protocol for construction that reduces greenhouse gas emissions, potable water use, the production of waste water, and the production of solid waste through retrofitting, reuse and waste diversion.

Building and Facility protocols focus on reuse, heightened air quality, durable construction, and energy efficient envelopes.

Energy systems involve **geothermal heat exchange**, hybrid glycol/electric solar power, radiant heating, and both air- and water-based heat recovery.

Geothermal heat exchange is obtained using Robur GAHP-W LB.
These are the only ground source heat pumps operating on a gas fired water-ammonia absorption cycle which combines the advantages of geothermal systems heat recovery with the advantages of gas fired appliances.

Heating Cooling DHW



Robur GAHP-W LB supplies hot water up to 140 °F and chilled water down to 23 °F, recovering renewable energy from the ground with heating efficiency up to 125% (on HHV).

Water systems involve grey-water and storm-water reuse, wetland treatment and percolation, and sub-grade water-table recharge.

These systems are interconnected and mutually dependent.
All systems contribute to the sustainable and continued development of Benny Farm, and all systems increase the quality of life for the users.

Most energy comes from renewable sources, so partners are significantly protected from increases in energy costs.

Building type	Residential
Energy distribution system	Geothermal heat exchange, hybrid glycol/electric solar power, radiant heating and both air- and water-based heat recovery
Unit number and type	3 GAHP-W LB Gas Absorption Ground-water Heat Pumps
Heating capacity	358,200 BTU/h
Cooling capacity	138,300 BTU/h

Robur Corporation advanced heating and cooling technologies www.robur.com/us sales@robur.com
827 E. Franklin Street Evansville Indiana 47711 USA Ph. (812) 424-1800 Fax (812) 422-5117