

Case Study



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Innovative energy-saving solution built into Ottawa affordable housing complex

The environmentally-friendly Beaver Barracks Redevelopment Project uses cutting edge thermal break elements in construction - Schöck Isokorb®

Beaver Barracks, a multi-story rental housing building currently under construction in Ottawa, Canada, is gaining attention as one of the top sustainable housing projects in the area. Eco-friendly products and ground-breaking thermal technologies such as Schöck Isokorb® have been included in the project's construction to improve energy efficiency and create longer-lasting structures. Schöck Isokorb® is a load-bearing thermal insulation element for the connection of cantilevered reinforced concrete components. Schöck Isokorb® will be incorporated into the project's balconies as a thermal insulator and load-bearing element.

The thermal insulation properties of Schöck Isokorb® make it a key element in environmentally-friendly construction. By decreasing the heat loss around thermal bridges in construction, the Schöck Isokorb® thermal breaks ensure higher surface temperatures, preventing condensation and mold while saving energy and lowering utility costs.

Prioritizing sustainable design and energy efficiency

The project designers placed an emphasis on energy conservation when drafting project plans. A variety of sustainable design techniques and components are being used in the Beaver Barracks development, including:

- Geothermal heating and cooling
- High efficiency building envelopes
- Low VOC materials throughout
- Green roofs with planter boxes, a community garden, composting and recycling stations
- Secure bicycle parking
- Access to VRTUCAR car-sharing services
- Low-flow water fixtures
- Energy Star appliances
- Energy efficient lighting systems

About Beaver Barracks

Built in downtown Ottawa by Centretown Citizens Ottawa Corporation (CCOC), a private, volunteer-directed non-profit housing organization, Beaver Barracks is an affordable housing complex named after the former military barracks that existed on the site. The complex was designed by Barry J. Hobin & Associates Architects Inc., engineered by Halsall Associates Ltd. and built by ZW PMI. CCOC anticipates the finished buildings will use 40 percent less energy than previously constructed housing.

Construction of the 254-unit redevelopment, valued at \$65 million, began in 2009, with the first phase completed in December 2010. Beaver Barracks construction is slated to be complete by the fall of

2012. The development received half its funding through an agreement with the Canadian government.

The development includes a mix of studio, one-, two- and three-bedroom apartments and townhouses providing housing for singles, families and a diverse range of individuals and incomes, including those who require wheelchair accessibility.

Project Photographs



The Beaver Barracks redevelopment site located in downtown Ottawa.

Source: Schoeck Canada Inc.



Schöck Canada's Isokorb thermal break element ready for installation.

Source: Schoeck Canada Inc.



Simple, drop-in-place installation techniques for Schöck Isokorb[®], a load-bearing thermal break element for the thermal break of free cantilever balconies.

Source: Schoeck Canada Inc.



An overhead view of how Schöck Isokorb[®] concrete connection fits into a balcony during construction tied back to the structural elements.

Source: Schoeck Canada Inc.



Schöck Isokorb[®] lying exposed in place before concrete is poured. Having the element in a building prevents mould and allergies, increasing comfort for residents.

Source: Schoeck Canada Inc.



The Catherine building: balconies, built using Isokorb to provide a thermal break between the internal and external components, conserving energy and preventing heat loss.

Source: Centretown Citizens Ottawa Corporation (CCOC)

Schöck Bauteile: The Leading Thermal Break Supplier.

Schöck develops and produces innovative components, solving thermal bridges and impact noise in buildings. For almost thirty years, the Schöck Isokorb® product range has led the market in providing exceptionally high performance thermal break and reinforcement solutions for houses, industrial and commercial buildings with balcony, canopy, and beam connections. Schöck Isokorb® type CM and S provide solutions to prevent thermal bridging and allow design freedom for concrete-to-concrete and steel-to-steel cantilever connections.

The Schöck group of companies had over 36 million linear feet installed with headquarters in southern Germany. Schöck provides high-quality, easy-to-install products with the highest level of technical back-up and comprehensive customer service to the construction industry - for simply better building.

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