



BETAC

Building Envelope Technology Access Centre



The Building Envelope Technology Access Centre (BETAC) has been developed to help Manitoba's building industry address the challenges in designing and constructing a durable, energy-efficient building envelope in Manitoba's unique climate.

The Centre offers services both in-house (at Red River College's main campus) and in the field.

Its purpose is to support the needs of those involved in the design, construction, renovation, commissioning and maintenance of a building's envelope.

BETAC has three focus areas:

Technical services includes facilities and related advisory services for testing the performance of mock-ups and assemblies during design and prior to construction, as well as pre-certification testing of product prototypes.

Applied research is intended to:

- accelerate the development and adoption of new building materials, products and assemblies;
- monitor and assess the performance of individual building envelope components and complete assemblies; and
- assist industry in developing diagnostic tools and improved methods for identifying building envelope deficiencies.



Specialized training and education offered by BETAC is tailored to the specific interests of the building envelope industry after being identified as needed by industry members or BETAC staff. Seminars, courses and programs include topics related to testing methods, protocols and standards to address building materials, assemblies and whole building performance.



BETAC – pushing the envelope.

To find out more or to visit our facilities, please contact:
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Testing the extremes

Manitoba's extreme climate presents special challenges for the building envelope.

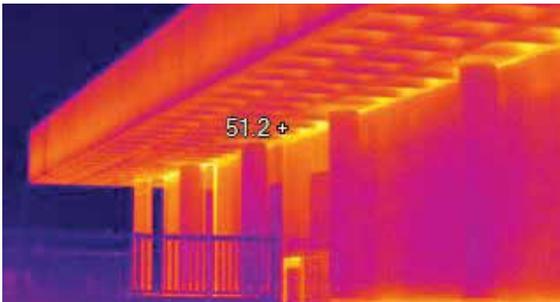
Approaches to building envelopes that have proven successful in other climates are often prone to premature failure in Manitoba.

The building envelope has a major impact on a building's construction cost; durability and appearance; maintenance and repair expenses; energy use; and occupant comfort and health.



Several issues in Manitoba are driving a need for innovation in the design, construction, maintenance and repair of building envelopes. They include:

- ongoing building envelope problems and failures;
- increased complexity driven by an expanding number of new materials and systems;
- new standards and code requirements;
- more aggressive targets to reduce building energy use; and
- a lack of industry capacity to respond to growth in demand for building envelope commissioning.



BETAC has the facilities, equipment and experienced staff to work with companies and organizations to research, test and assess solutions suitable for Manitoba conditions.

BETAC has access to:

- environmental chambers to evaluate thermal performance of windows, doors and mock-up wall systems;
- a removable exterior wall section that uses actual climatic conditions for thermal and lighting properties testing;
- blower door fans for large building airtightness testing;
- infrared camera for thermal analysis of buildings;
- a videoscope for wall inspections;
- CanBest Smart-Lab portable research and testing apparatus for air, water and structural testing of windows and doors;
- weather stations; and
- a 12' by 12' air, water and structural test chamber that accommodates the construction and testing of wall and window assemblies to the standard test methods.



BETAC's philosophy is to listen to the clients' needs, understand what the project requirements are and deliver a unique service that provides guidance, addresses uncertainties and confirms the product will meet its intended expectations.