

PROJECT PROFILE

Videotron Centre, Quebec City, Quebec

On September 8, 2015, Quebec City's newly built Videotron Centre is set to become the city's leading venue for indoor events, replacing the more than 60-year-old Colisée Pepsi. Construction on this impressive 723,000-square-foot building began in September of 2012 and cost approximately \$370 million.

With construction now completed, the Videotron Centre boasts a number of state-of-the-art features and seats over 18,000 people, making it the second largest arena in Quebec. This new arena will be used primarily for ice hockey, and has been proposed as a possible venue for a new or relocated National Hockey League team in Quebec City.

When designing this incredible structure, architects took into consideration Quebec City's landscapes and its seasons. Snow drifts sculpted by wind guided the architectural concept. The building is stratified by two irregular bands of windows. By day, it offers views of the city and at night, it highlights the snowdrifts.

It was extremely important to the concept team that the arena be highly sustainable and environmentally friendly: LEED certification, one of their ultimate goals, was achieved at the silver level. The Centre's website touts the various benefits of LEED-certified buildings, including the production of less waste than conventional buildings, and significant water and energy savings.

Videotron Centre at a glance

Location:

Quebec City, Quebec

Architects:

Populous, ABCP Architecture & GLCRM Architectes

Contractor:

Meza Construction ; Sylvain St-Jean, Yves Lacroix et Kevin Cloutier

Distributor:

Dispro Quebec: Alain Lévesque

Project Type:

New Construction

Carlisle Coatings & Waterproofing

Products:

- CCW-705LT
- CCW-702 Primer
- CCW-704
- LM-800XL Mastic



Carlisle Coatings & Waterproofing

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A sustainable structure of this size and enormous value requires a high-performance building envelope equipped with air and vapour barriers to ensure its longevity. In light of the year-round construction schedule, contractors had to turn to a company they knew they could trust for high-quality AVB materials.

A properly functioning air and vapour barrier system protects against air leakage and diffusion, as well as the exchange of vapour, all of which increase a building's operating costs. Air leakage can result in up to a 30-40 percent increase in energy costs in heating climates. Water vapour that is allowed to enter the building can condense and form liquid water, which can lead to corrosion and the potential for mold development. Air and vapour barrier systems also provide a barrier against pollutants, water vapour, dust, insects, and odors that might enter the building.

Because of their history of quality products and excellent service, Carlisle Coatings & Waterproofing (CCW) was selected to provide the materials for this extensive job. CCW-705 LT was selected as the air and vapour barrier for the project, and several of Carlisle's accessory products, including CCW-702 Primer, CCW-704, and LM-800XL Mastic were also utilized.

Carlisle's AVB products have been evaluated by the Air Barrier Association of America (ABAA) and meet the most stringent building codes for air barriers, including the Canadian National Building Code. CCW 705 LT is durable, easy to install in a wide range of temperatures, resists mechanical damage, seals easily around fasteners and other penetrations to prevent wall assembly leaks, is self-adhering, and is easy to repair. "CCW-705 LT was a wise choice for this particular project," said contractor Kevin Cloutier of Meza Construction, Inc.

On a job this size, application of CCW-705LT was no small task for installers, as they had to cover 150,000 square feet of the structure, which included 92 spherical and curved wall sections with angled window junctions, edges, and expansion joints. To work around these difficult areas, a "V"-shaped piece of metal was fastened at the expansion joints so that the CCW 705 LT could be used on each of the 92 identical details.

Unique Design Features: Original EPDM expansion joint detail was reviewed by the design team; they decided using a "V"-shaped 26-gauge metal plate was their best option, as it allowed them to use the 705LT as the continuous AVB membrane.

Overall, the contractor was impressed by the simplicity of the installation. "The membrane was easy to move around and work with," Kevin Cloutier said, also attributing much of the credit to CCW's 702 Primer, which he remarked "had a very good grip on both concrete and steel substrates, making it easy to adhere the membrane, even in extreme weather conditions ranging from 25°C (77°F) to -25°C (-13°F)."

Upon completion of the building's construction, two system tests were done by an external firm. One test utilized water and the other used smoke. The wall system (including CCW-705LT and the other components) passed both tests.

"I was not surprised by CCW-705 LT's performance on this particular job," said Alain Lévesque from Dispro. "CCW products have an extensive history in the Quebec City area with great results."

