



# Rocky Mountain high

Centennial Place takes advantage of Alberta's natural beauty

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# Rocky Mou





# intain high

## Calgary's Centennial Place is built with the environment in mind.

by Rich Porayko

**N**amed in honour of the Wild Rose Country's Centennial year, Centennial Place is a set of two LEED Gold certified towers with a linked podium occupying a full city block in the Eau Claire region of Calgary. A typical floor features six corner offices and with minimal structural intrusion for greater layout flexibility and access to breathtaking views of the Rocky Mountains. The buildings represent a completion of a campus of offices that Oxford Properties has built in the Calgary area over the last 30 or 40 years, many of which were designed by WZMH and various generations of the firm. The project is almost like an addition to the family.

Tom Schloessin, project architect of Centennial Place for WZMH, recalls how the Oxford family of buildings progressed as technology and best practices improved. "Over time the styles of the buildings have changed," says Schloessin, "so it is interesting to see how the buildings have evolved. We were quite proud to achieve LEED Gold for Centennial Place. We were told that at the time it was the largest single LEED Gold project in Canada."

### Creative freedom

"Effectively, we filled a city block with this development," says Schloessin. "When you are creating a two-tower project, you want to situate the buildings relative to one another so they perform well and optimize things like daylighting. In that aspect, Centennial Place was very successful in that the buildings don't shadow each other. The other feature that is exploited by the orientation of the towers is the view of the Rocky Mountains to the west, which we wanted to optimize with a lot of vision glazing. We wanted as much sense of natural light as possible. It wasn't low iron glass, however; it was as clear as we could get it within our budget."

Keeping with the ongoing trend for these types of projects, the glazing contract was split between the tower, which was completed by Antamex International (now known as Oldcastle BuildingEnvelope) from Delta, B.C., and the podium, which was supplied and installed by Global Architectural Metals from Welland, Ont. "This happens frequently with these types of buildings," explains Schloessin. "The tower was completed by a company in the curtain wall trade and the perimeter podium glazing is completed by someone with a structural glass system or a basic curtain wall system. For the tower, we were working with Antamex just as they were opening their manufacturing facility in Delta, so they had a tremendous incentive on that project. It worked out very well."

"With a building like Centennial, we were dealing with a standard unitized curtain wall system which is designed to be modular, however, we wanted to introduce new features," says Schloessin. The solution was to incorporate a patterning effect in terms of protrusions in the mullions and cap treatments. "That's how we achieved the play in the facade and Antamex was very good at achieving that effect."

Schloessin continues, "On each tower, one wall is sloped so we had an inclined plane and were putting the unitized glazing system on a slight angle, which was interesting and achieved by

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**LEFT: The spires on both buildings include lighting features that were built at Antamex's Delta factory and shipped to the site to be hung in place. "We designed and fabricated the spires near the end of the job with very little detail, which was fairly challenging," says project manager Otto Ward.**

Antamex without issue. They were well versed in the technology of curtain wall and very knowledgeable in terms of sequence of production and fabrication. We had the benefit of some very experienced people. The end result was quite successful.”

“It was a very interesting job for us,” says Herb Resar, vice-president of western operations for Oldcastle Building-Envelope, the company responsible for design, engineering and overall operations for Centennial Place. “We had one of the best construction managers in the country in PCL and it was a privilege to work with them on this project. Antamex/Oldcastle BuildingEnvelope was part of the design-assist for this project, which went very well with the co-operation of WZMH as there was the need for interaction and communication in the design development. Pressure equalized, unitized, rainscreen curtain wall designs have existed for a number of years; however, the extrusions for this job were all custom manufactured and adapted to the architect’s requirements for the esthetics, while we concentrated our efforts on function and durability of the system.”

“The main parts of the towers were relatively straightforward and went smoothly because there was a lot of repetition, even though WZMH added character to the facade by using different glass types and alternating details in different areas,” explains Otto Ward, Antamex project manager for Centennial Place, now business development leader for Garibaldi Glass. Ward continues, “But when you get to the top, there are recesses and cantilevered beams, decks louvres and other architectural features with steel that penetrated the system, requiring complex framing configurations to maintain air and vapour

seals throughout.”

“There was a point where both buildings were being built at the same time so it was a challenge in keeping enough supply for both towers, in particular with the tops as there was a delay in the steel work,” says Ward. “So near the end of the project we were asked to speed up the job, which made it difficult to find space at the top of the building for the frames while the steel work was still going on. Even though both buildings look similar except for the heights, the steel work at the top of each building was actually designed very differently, so our connections had to be different for each tower. Even though it all looks the same, it is not.”

“It worked out extremely well and was a good job for everybody,” says Resar. “It was the type and size of project that we do well. It had the repetition that we are looking for from a manufacturing point of view and the complexity to really put your head into the design and engineering, especially at the tops of the buildings and the spires.”

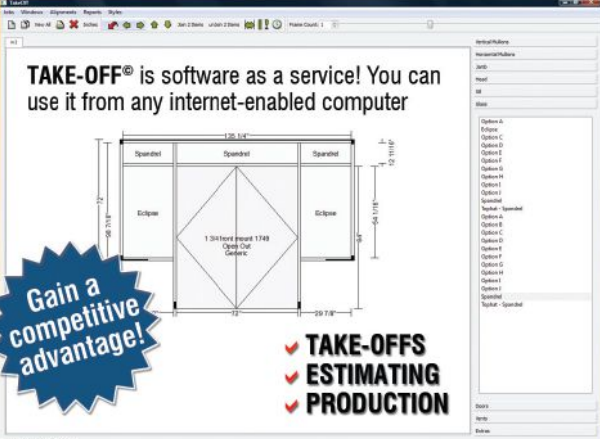
### Connected inside and out

“Another feature of the glazing design that we really like about Centennial Place is that even though it is a full city block, the building is really light in terms of how it comes to ground,” explains Schloessin. “There is a lot of openness. You have the effect that you can look through the entrance lobbies and see the tower elevator cores and the main interior concourse. When you are dealing with a full-block development like Centennial, there is a risk of losing clarity in design and having

**Continued on page 17**

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or coastal areas where buildings can be exposed to chemical fallout or salt spray.

Resistance to UV exposure also is enhanced with a clear coat, as demonstrated by the two photos below, allowing manufacturers to provide improved warranties for chalk and fade.

**FAR LEFT: The differences in fade after five years. The left side of each panel has been treated with a clear topcoat as part of a three-coat system, while the right side of each panel has been left unprotected with a conventional two-coat system and no clear coat.**

**Demonstrating the long-term performance of PVDF coatings treated with a three-coat system with a clear coat after 20 years of South Florida exposure testing.**

### Comparing coatings

The chart below illustrates the relative strengths of four commonly specified types of architectural coatings.

	Standard Polyester	Super-Polyester/ SMP Coatings**	70% PVDF KYNAR®/HYLAR®
Film Integrity	Excellent	Excellent	Excellent
Color Retention	Good	Very Good	Excellent
Chalk Resistance	Good	Very Good	Excellent
Dirt Resistance	Poor	Very Good	Very Good
Gloss Retention	Good	Very Good	Excellent

\*\* Silicone-modified polyester coatings

### Rocky Mountain high Continued from page 12

large stretches of wall that don't really tell you anything. We were trying to eliminate the idea that there is a clearly perceived front or back door to the development. We don't really have that. The logic of the buildings is very apparent from the street and it was very important to us when we designed the building and we were able to achieve it in the final product."

"We couldn't really afford to use a heavy duty structural system," recalls Schloessin. "It just wasn't in the cards; however, we were able to achieve huge transparency and a lot of inter-connection between inside and outside space simply by using high span curtain wall. We were able to use fairly conventional, accessible technology and maximize the limits of the glass sizes available. Because Global Architectural Metals was able to engineer the overall wall area using curtain wall, backup support

and sag rods to cover off deflection, we were able to get a very light looking wall."

"The front entrance was another collaborative effort where we drew something that was technically impossible and Global was able to find a way to make it happen," says Schloessin. The challenge was that when you put a canopy over a front door into a tower you have to break down the scale. However, you don't want to shrink it down to the size of the person. "The concept was to float an all-glass canopy in a space where your main structural supports are nine metres apart. Global was able to run a steel V-profile between the major support points and install the entire remaining canopy with an all-glass gable construction. Very nice work."

"The project turned out very well, considering the context in which we were working and how busy Calgary was at the time," says Schloessin. "There were lots of pressures and I think we weathered the storm." •



# GLASSBUILD BOUNCES BACK

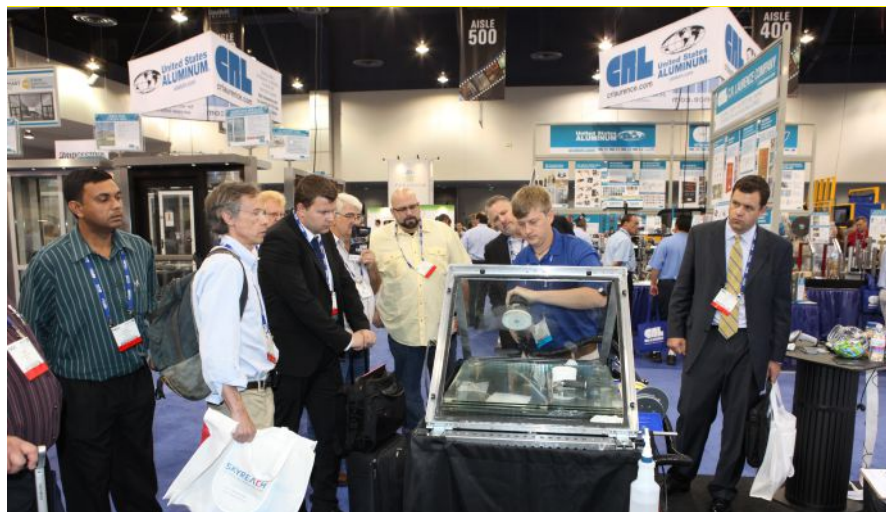
by RICH PORAYKO

It's official. The results are in and the industry chatter agrees: Glass-Build America 2012 has easily been the best glass show with the strongest numbers in North America in years. It wasn't 2006, however, and it may never be 2006 again. At least, not for a very long time.

The mood of the show was noticeably upbeat. Even if it was the Vegas distraction, it sure was a more positive atmosphere and attendance than in 2010, the last time GlassBuild America was held in Sin City. Depending on whom you talk to, there are mixed reviews about the state of the industry. More than a few companies claim to actually be growing and increasing sales, contradicting the financial indexes, bankruptcies and M&A trends.

## Real innovation

"There is a great enthusiasm on the floor and the attendees are experiencing real innovation, which will only help them improve their business and improve the industry," said Max Perilstein, promo-



tions consultant to the National Glass Association. "The innovation here is like none other. I am completely blown away by some of the products that have been developed over the last year. Companies are actually innovating. This industry is really moving forward."

"Our Canadian exhibitors are some of the leaders of innovation," Perilstein went on. "There is Walker Textures of Montreal, who continue to bring exciting new products to each and every show.

Glassopolis excels in hard-to-find and specialty glass products, and its booth is always packed. There is also a brand new company from Toronto called Ecobox Green Glass Systems, who are bringing brand new recyclable packaging to the glass and glazing industry so companies don't have to use wood anymore – they can use something that is better for the environment."

Perilstein continued, "We are particularly excited for the continued growth of

## "The innovation here is like none other." – Max Perilstein, NGA

our Innovative Products Program area focused on the most cutting-edge products available on the market. It started a few years ago as an idea to focus on new products and it was a handful of booths. Now it has grown substantially and exhibitors want to be part of it. It has really taken off and become very popular. Other new items are the M3 Glass Technologies Networking Booth, which is located on the show floor so that attendees can grab a seat and conduct business in a comfortable environment without leaving the show. Our education sessions continue to be refreshed each and every year with the subjects that concern

the industry and this allows our attendees to learn and share new ideas."

## Sharing best practices

"This is a great opportunity for Fenestration Canada to show off its educational resources, meet with current members, recruit new members and represent the Canadian market," said Patrick Shield of Win-Door North America, official tradeshow of Fenestration Canada (formally the Canadian Window and Door Manufacturers of Canada).

"Exhibiting at GlassBuild is a perfect opportunity to educate the

**ABOVE: Traffic and energy on the floor at GlassBuild were higher than they have been for some time.**

industry about the association, Canada's harmonized building codes and about doing business in Canada in general. It also introduces the U.S. glazing market to the Win-Door show."

"Fenestration Canada has been coming to GBA for seven or eight years and has been a big supporter of the show," Shield added. "We are in harmony with the NGA, the Glass Association of North America, the Insulating Glass Manufacturers Alliance and other partners and have a lot of crossover members. We need to continue working closer together and share best practices such as the Window and Balcony Safety Program that Fenestration Canada developed with the Emergency Services Chiefs of Canada." Partners Promoting Windows and Balcony Safety is an awareness program that identifies risks and offers fall-prevention strategies aspiring to eliminate injuries and deaths associated with falls from a window, balcony or deck.

#### **Glazing Executive Forum economic forecast**

Jeff Dietrich, senior analyst for the Institute for Trend Research, was the keynote speaker for the NGA Glazing Executive Forum. Dietrich has been such a popular presenter that he has spoken at this event every year since its inception. The 2012 forum drew a record crowd of more than 200 glazing industry leaders from across North America.

Dietrich provided an overview of the housing and construction markets, which are key to the glazing industry. "Construction trends are alive. Housing starts are up over 21.4 per cent from one year ago. Housing affordability is at an all-time low. Equally good news is that home prices have hit bottom and are heading higher. Non-residential construction is 14 per cent above one year ago and showing surprising strength. Although the gains are well below the historic peaks of 2008, the recovery touches a broad swath from commercial to health care, manufacturing to malls, sports arenas to education institutions."

"We're not doing the job of training the next generation of workers. You should probably be hiring because your window is probably two and a half to three years before you will be paying them what you were paying them three or four years ago, so hire and train them now. Take advantage of the young, the intelligent, the very

bright, and spend the time and money to train them."

"Manufacturing is never going to come back fully. So here's the good news. If your cash flow or balance sheets aren't healthy right now, you have about two and a half years to get them healthy and borrow money before inflation pushes interest rates up. And we would encourage you to borrow money now while interest rates are historically low, if you haven't already, or borrow again. It's not to buy a

yacht or an airplane. We did that in 2005 and 2006. It is to create wealth, acquire assets, expand your business, introduce a new product or hire someone. It is to do so something for the long term that will set you up for the future."


*Rich Porayko is a professional writer and founding partner of Construction Creative, a marketing and communications company located in Metro Vancouver, B.C. richp@constructioncreative.com*

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