

A GREEN EXCHANGE

+ Iredale Group and HGS's design for Vancouver's Exchange Building preserves the past while making a bold, sleek statement for the future. *By Jim Harris*

Iredale Group Architecture – The Exchange Building

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Project cost: \$200 million

Location: Vancouver

Employees on site at peak: 200

Scope of work: Historic preservation and new construction

> Between 1929 and 1947, the Vancouver Stock Exchange building at 475 Howe St. in the city's business district was a place where deals were made and money changed hands as stocks rose and fell. In less than two years, that address will once again be associated with business, and a different kind of "green" will flow through its halls.

A major revitalization, expansion and modernization effort centered on the old VSE building is underway. Groundbreaking on the \$200 million project was in early 2014, and completion is anticipated in March 2017. The building is projected to be Canada's first LEED Platinum heritage conversion project and the second-tallest LEED Platinum office tower in the country.

The original structure – also known as the Crown Trust Building – is distinguished by its brick and concrete structure and terra cotta exterior. The building's modernist/Gothic exterior extends into its barrel vault lobby, which features symbols of medieval England.

The building, which is listed on the Vancouver Heritage Register, was designed by Townley, Matheson & Partners. During its existence from 1919 to 1974, the architecture firm designed more than 1,100 structures in the city including Vancouver City Hall.

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The floor plates of the original 11-storey Crown Trust Building will be aligned with those of the new structure, which will reach 31 storeys.



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Heritage Preservation

Most of the 11-storey Crown Trust Building will be retained and incorporated into a larger, 31-storey triple-glazed curtainwall building to be built around and on top of it. The total project will be 400,000 square feet in area. "The new tower in a sense will envelop the old building," says Daniel Hawreluk, an associate at Iredale Group Architecture. "This is not a 'facade-ism' project where the heritage building is torn down with the exception of the outside walls. We're keeping the majority of the heritage building."

Iredale Group designed the new Exchange Building project in conjunction with Switzerland-based architect HGS. This is HGS's first North American building. Developer Credit Suisse is the majority owner of the project, with SwissReal Group Canada also owning a portion of the building. The project manager is MKT and PCL is the general contractor. "Our challenge was to weave together the ornate heritage building with the sleek minimalistic tower, so that each reinforces the other. Walking through the final building will be like proceeding from one period of history to another," said Peter Hildebrand, a partner at Iredale and the project's design architect.

The floor plates of the original building will be aligned with those of the new structure, creating a larger floor plate on the bottom 11 levels before tapering off on the upper levels. The back walls of the heritage building will be torn down to accommodate this, but the rest of the building will remain. The interiors of the original building will also match that of the new tower. The heritage building will be upgraded to current seismic resistance standards. "The outer facade of the original building will remain the same, but it will otherwise feel very much like a modern building," notes Graham Coleman, Iredale's partner-in-charge at the project.

The original barrel vault elevator lobby will also remain. "The lobby is an elaborate example of the architecture of the era, and is a key part of the conservation plan," he adds. "We will completely protect the lobby and preserve it in its existing state."

The existing entrance lobby in the Old Stock Exchange, which has undergone a few renovations over the life of the

building, will be given a fresh makeover to complement the ornate heritage elevator lobby. The transition into the new stark and modern elevator lobby for the tower will be accomplished with a dramatic mosaic floor installation that will pick up the colour tones of the old building and morph into something quite spectacular as it moves towards the six story new tower lobby," says Hildebrand.

Sharp Contrasts

The exterior of the new portion of the building will also have a sleek, modern look that will contrast with that of the heritage building while retaining some of its design influence. "The existing building is quite ornate, but one thing that stands out is the strong vertical pilasters between the windows, used to accentuate the verticality of the building," Hildebrand says. "The intent was to incorporate those pilasters into the new tower, but in a sleeker version."

The new tower includes vertical aluminum fins that serve the same visual purpose as the pilasters while also having another benefit. "This is not only an architectural response

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to the original building but also an environmental response, since these fins will help shade the building,” he adds.

The fins reflect the design team’s approach to the project. “We want to maximize the environmental sustainability

components of the project,” Hawreluk says. “The tower curtainwall and every other element of the building are carefully designed to contribute to it not just aesthetically but environmentally.”

The curtainwall facade is designed to

have different features based on the building orientation. The south-facing portion of the building will feature higher-density fritting to reduce glare from the sun, but the north-facing portion – which has the best view of the surrounding natural landscape and less solar exposure – will have less fritting to allow for maximum visibility, he adds.

The triple-glazed curtainwall and sun shades are just two of the features projected to earn the building LEED Platinum certification. The building – anticipated to be Canada’s second-tallest LEED Platinum tower – will consume half the energy of a traditional office building of comparable size. Other sustainability features include:

- + Stormwater retention and re-use;
- + Highly efficient hydronic heating and cooling features;
- + Integrated geo-exchange thermal regulation system;
- + Solar thermal panels;
- + Low-flow plumbing and water fixtures; and
- + Solar thermal panels.

Small Yet Diverse

Environmentally minded architecture is a high priority for Iredale Group. The firm, founded in 1960 and re-branded under its current name in 1990, is experienced in a variety of project types including commercial, cultural, institutional, multi-unit residential, custom homes and First Nations projects. Working on such a diverse range of project types promotes the cross-pollination of ideas.

The firm considers itself a small boutique firm led by five partners who each work closely with staff members. “Partners are intimately involved in each project, which is possible because of our flat structure,” Coleman adds. “The partners’ attention to client needs explains our long-standing associations with firms such as Swissreal, and the firm’s growing success.” ☺