



Glottman•Simpson
GROUP OF COMPANIES

Creative Structural Solutions Utilized in 2010 Olympic Venues.

Speak to expert engineers at Glottman•Simpson Consulting Engineers who developed the creative structural solutions behind many of the 2010 Olympic venues.

Nature excels at designing remarkably strong and elegant structures with a minimum of materials. Good structural engineers follow this example. Glottman•Simpson Consulting Engineers have had the opportunity to develop creative structural solutions for many of the high profile venues built for the Vancouver 2010 Olympic and Paralympic Games.

Richmond Oval (Base Structure) – This LEED Silver certified Olympic Oval required Glottman•Simpson to create a super-flat surface to Olympic specifications on the boggy soil of Richmond. Pressure of the building had to be spread uniformly across a 33,000 square-metre Oval. Glottman•Simpson proposed a hybrid foundation at ground level and raised the ice surface up above the nearby dike on an elevated structure. This distributed the weight evenly, provided views of the North Shore Mountains and created 450 parking spaces under the ice slab.

Vancouver Convention Centre - For Vancouver's new Convention Centre, Glottman•Simpson had to determine how to build a living green roof above a 180' clear Ballroom span and a 300' x 735' Exhibition Hall space below. The solution developed was a unique system of multi-storey deep steel trusses that had the added benefit of introducing 450 parking stalls within the interstitial space between the Ballroom and Exhibition Hall. These solutions enabled the architects to realize their design vision in the most affordable way possible. The Vancouver Convention Centre is the first convention centre in the world to be Platinum LEED Certified.

Whistler Peak-to-peak Gondola Terminal Buildings - Glottman•Simpson were principal structural consultants for the concrete building structure, including the gondola platforms, masts, and foundations of the super structure. The Whistler Peak 2 Peak project presented Glottman•Simpson with the challenge of providing a design for the anchorage for the gondola cables. The horizontal tension load from each station was equivalent to the thrust force of four 747 Jumbo Jets. The structural design relied upon sophisticated engineering analysis and complete understanding of the overall gondola system for the structural design solutions.

Olympic Village – Millennium Water - Glottman•Simpson were the principal structural engineers on this high profile, large scale project. This project was completed in less than three years and required highly efficient and reliable partners. The Village has officially been called the “greenest, most energy efficient and sustainable neighbourhood on Earth”, as well as an overall LEED Platinum certification from the US Green Building Council. Glottman•Simpson was proud to contribute many sustainable structural solutions to this project, including concrete mixes that reduced carbon emissions for the buildings.

These are just a few of the leading-edge structural solutions that Glotman Simpson recently developed. Other recent Glotman•Simpson projects include:

- The Salt Building *aka* 'The Living Room' at the Olympic Village
- Woodward's Redevelopment
- CBC Radio Canada Broadcast Centre Redevelopment
- The Erickson at 1560 Homer Mews

To find out more about Glotman Simpson's highly collaborative approach to engineering, please visit our website at www.glotmansimpson.com. You'll see a number of innovative structural solutions there.

About Glotman• Simpson Consulting Engineers

Glotman•Simpson is one of North America's premier structural engineering firms. We offer our clients leading-edge structural solutions in the areas of commercial, institutional, industrial and residential design. With over 4,000 projects completed in the last 45 years, we have proven our ability to provide innovative and cost effective answers to the most complex structural problems. *Creative Thinkers, Cleverly Disguised as Engineers.*

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For more information about these projects, or to schedule an interview with an expert Glotman Simpson engineer contact:

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