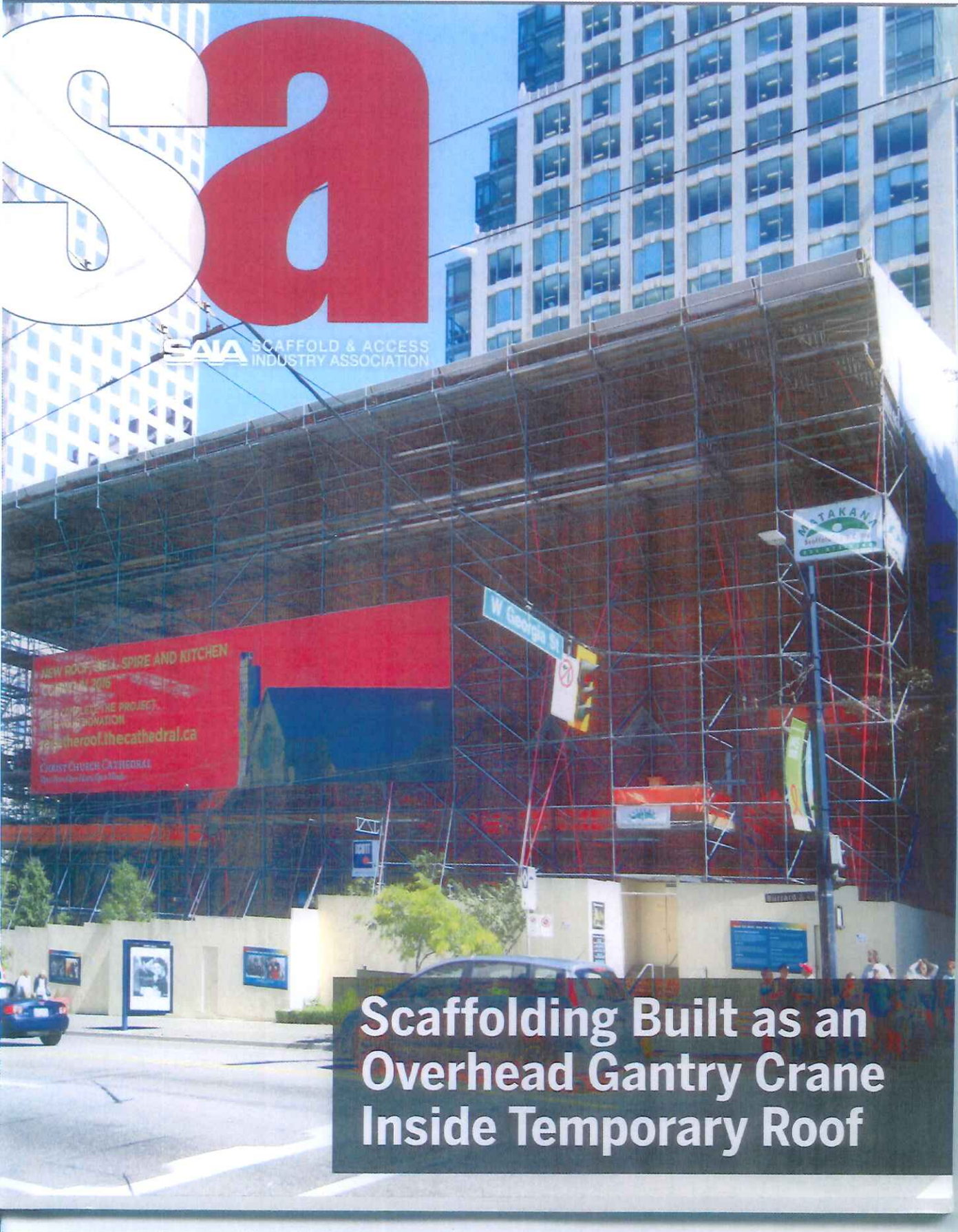


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Scaffolding Built as an Overhead Gantry Crane Inside Temporary Roof


ON THE
COVER

SCAFFOLDING BUILT AS AN OVERHEAD GANTRY CRANE INSIDE A TEMPORARY ROOF

By Paul Griffin

Vancouver's Christ Church Cathedral, the oldest church in the city is finally getting a bell spire, a new roof and expanding its community outreach kitchen.



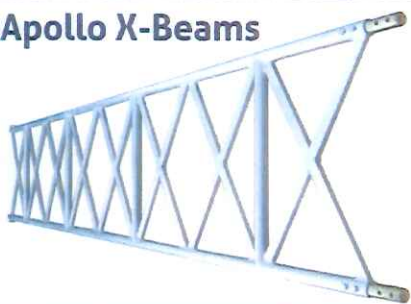


General Contractor Scott Construction was selected as the primary contractor and contacted Matakana Scaffolding to assist in this project. As project manager Simon Down recalled "Matakana brought forward a hugely creative design solution utilizing new products that significantly reduced the risks associated with production loss due to inclement weather." Matakana group is in Western Canada and offered a solution never before used in North American construction by utilizing scaffold in a unique way to form an overhead gantry crane with the Apollo 1.5m X-Beam. The company has made its name by solving some of the most difficult access challenges, suspended platform, and temporary roofing challenges and has completed many unique scaffolding and shoring projects.

NORTH AMERICAN LEADER PIONEERING INNOVATIVE SPECIALIZED ACCESS & SCAFFOLDING SYSTEMS FOR OVER A DECADE.

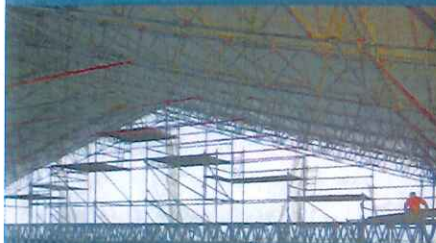
- Largest temporary roofing spans in the industry up to 300ft and beyond
- Interchangeable components between the Clear Span Roof System and Clear Span Suspended Deck System
- Cost effective systems
- Independent supplier offering bespoke solutions and service

Apollo X-Beams



X-Beams manufactured in the UK are the industry leader in high strength and high quality due to their unique patented design.

- Available in a 750mm and 1500mm depth beam in various lengths
- Multiple uses for large temporary roofs, bridges, suspended scaffold
- Reduced labour and installation time.



Temporary Roof System



Suspended Deck System



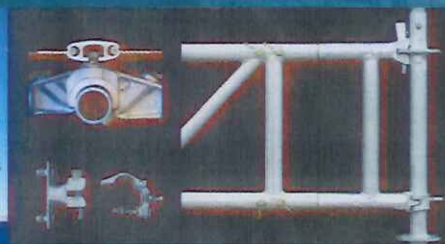
Walkabout Suspended System



Material Catch Fans



Keder Sheetting



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crane.

Phase 2

Large Temporary Roof:

In order to protect the site from the weather, Matakana used a Specialist Scaffold Products (SSP) guard rails, rolled out and securely positioned along the track system. This allowed for quicker installation times, approximately 30ft of roof was erected per day. The roof was protected with heavy duty Keder sheeting which was shrink wrapped to the gable ends. The Keder sheeting ensured ease of installation on the modular track plus it has high strength properties.

Phase 3

Gantry Crane:

The Matakana in-house engineering team required a heavy duty beam

The 1.5m (4.9 feet) X-beam due to its patented design and beam depth, has unsurpassed strength capability...

to provide sufficient loading for the innovative overhead gantry crane system. Matakana sourced a high strength Apollo 1.5m X-Beam from Vancouver based Specialist Scaffold Products (SSP). The high strength beam manufactured in Barnsley, UK by Apollo Cradles provided the ideal solution. The aluminium 1.5m (4.9 feet) deep modular X beam can support a point load of up to 10,000 kg's (22, 043 tons) midway over a span of 100ft. The overhead gantry crane could operate over the whole church structure on the x and y axis. The hoist was connected to the bridge where it travelled back and forth and side-to-side as required. This overhead gantry crane offered a more durable, efficient and customized method under the

roof. The beam was quickly erected in situ by hand and positioned on a track system. The 1.5m (4.9 feet) X-beam due to its patented design and beam depth, has unsurpassed strength capability that will open up new possibilities for craning, cantilevers, suspended loads and large temporary roofs up to 400ft.

The Christ Church scaffold gantry crane system was designed, engineered, assembled and operated in accordance to WorkSafe BC OHS Regulation, CMAA Standard 70 (Crane Manufacturers Association of American) and CMAA Standard 74.

The gantry cranes ingenious design combining the X-beam, single girder crane, motor and traditional swing stage motors, is a significant resource for all trades to increase productivity during construction.

And, this solution has eliminated the need for an overhead crane on site and allows the project to stay weather protected. The team at Scott Construction continues to work on the project to "raise the roof."

About the Author

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