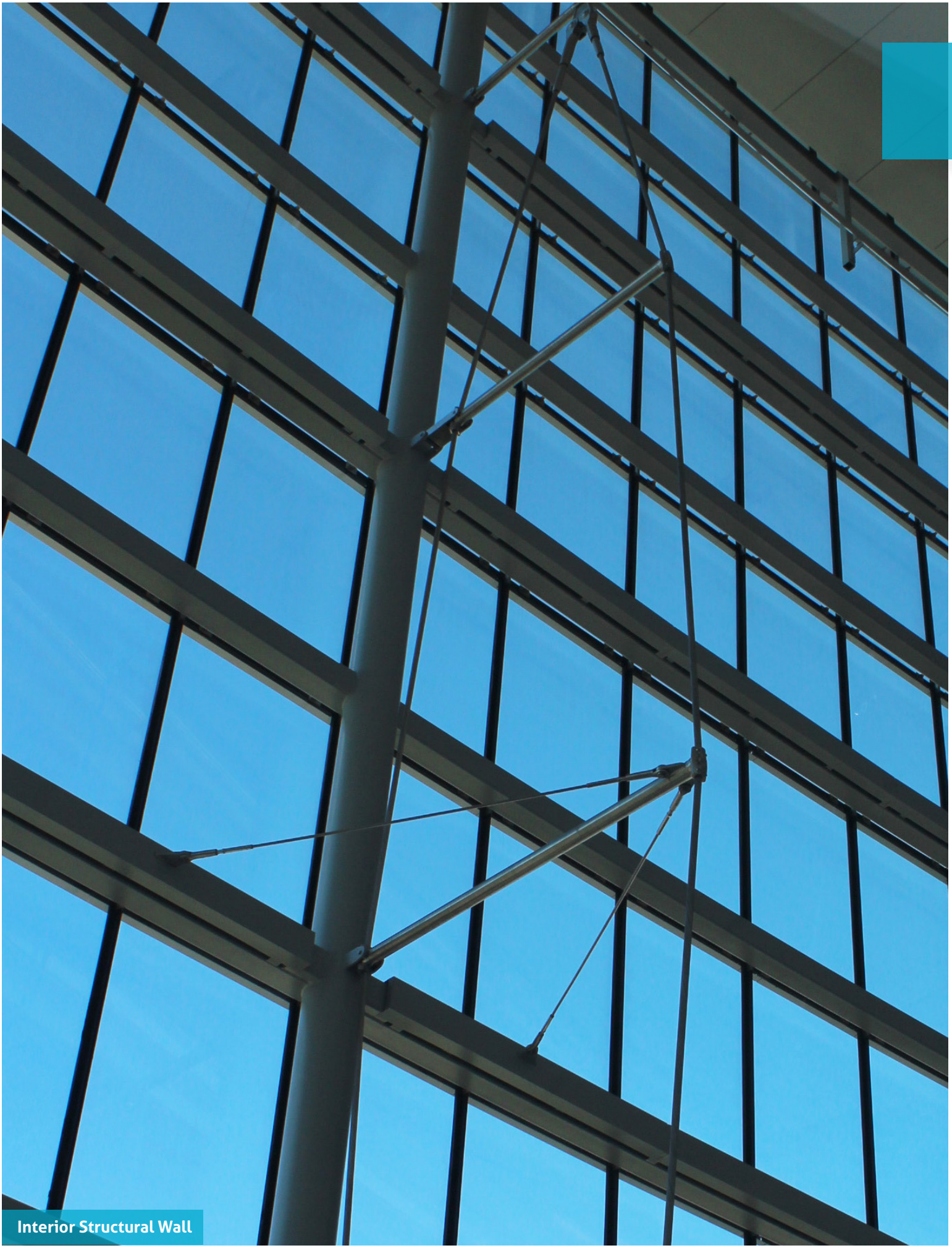
stella
Custom Glass Hardware

Edmonton Clinic South

Case Study

Edmonton, Alberta

Edmonton Clinic - Edmonton, AB



Interior Structural Wall

Edmonton Clinic South
Project Overview

Project Name
Kaye Edmonton Clinic South

Location
Edmonton, Alberta

Design Overview
Completed in 2012, this technically complex project - believed to be the largest bow truss in Canada - has involved much collaboration with our engineering team and Dialog's in-house engineering team.

The vastness of this seven-story atrium is made possible with our tension cable support that spans all seven floors. Our custom edge support bracket supports the double-glazed glass in a visually light manner.

Architect
Dialog

Year Completed
2016

Products Supplied
AB602T Adjustable Glass Bolts, S20 Heavy Duty Spiders, Custom Splice Plates, Custom Fin Shoes

Design Services
Glazing System, Hardware Design, Shop Drawings, Glass Fabrication Drawings, Engineering

Sector
Civic + Community & Health

Actual Project Photo - Taken August 2012

Part 1 / Edge Glass Support

Stella made a total of 1224 of these brackets for Edmonton Clinic. An edge-supported glazing support was used to eliminate the need for holes in glass. The edge-support brackets were bolted to horizontal stainless HSS sections and supported glass at the quarter points. Adjustability was the key feature of Stella's design, this was demonstrated by:

- In/out adjustablity - for steel variances
- Slotted holes - vertical adjustability at steel connection
- Rotational pivot - for curved surface of the atrium wall
- Front-mounting - for install of beauty cap

Part 2 / Cable Truss System

Edmonton Clinic consisted of seven tension trusses - approximately 26.5m high comprising 36.6mm diameter cables tested to 945kN - which were fixed to the structural steelwork above and below. In collaboration with our partner Erdevicki Engineering, Stella created a system that provided structural support for the glass wall allowing the use of slender steel columns that add to the vastness of the atrium. Some of the steps that we performed with cables are as follows:

1) Design
2) Test to breaking point
3) Installation and field testing

Part 3 / Cable Truss System (Continued)

The scope of the size of resulting clevis and cables that Stella designed, manufactured and supplied is demonstrated in the photo on the left.

- The cable was a total of 366mm diameter thick.
- The clevis is 540mm tall and weighs 12kg.
- The loading capacity of the bow truss system was the equivalent of two fully loaded eighteen wheeler trucks.

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Edmonton, Alberta

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Stella Custom Glass Hardware Head Office
#105-8218 North Fraser Way
Burnaby, BC V3N 0E9
Canada

P: 604-231-5892
Info@stellaglasshardware.com

Follow Us @Stella_Glass