

TED 2015 | THE LIONS MARQUEE | BY DBR

THE LIONS | Donated by Interfor and Saint-Gobain

Vancouver is one of the most beautiful cities on earth. Our Marquee structure sits on the waterfront overlooking the magnificent North Shore Mountains and Stanley Park. It also sits next to the beautiful Vancouver Convention Centre.

The Marquee is built to enclose a temporary TED2015 picnic space on the west plaza of the Convention Centre. The structure will ultimately be moved to a new home in the Downtown East Side of Vancouver to become a market.

The Marquee is designed and built by 17 students from 4 universities under the direction of the not for profit DBR | DESIGN BUILD RESEARCH INSTITUTE and lead design and construction instructors Michael Green, Eric Karsh, Sindhu Mahadevan and James Munns. This year's participating students are in design programs at UBC, Kwantlen Polytechnic University, BCIT and Emily Carr. Last year DBR participated in TED2014 by designing and building TED's Community Theatre Stage with a group of 23 students.

The Lions Marquee is built of wood donated by Interfor and clear ETFE film donated by Saint-Gobain. DBR students prepared the design, prefabricated the components of construction and ultimate erection over the past several months. Students and instructors will erect the Marquee in a single day just before TED2015; a daunting task for even the most skilled professionals. The Marquee will then be disassembled and moved over a single day to live its new life as a market.

The unique forms of the design resemble the two intersecting Lions Mountains on Vancouver's north shore. Inside the Marquee TEDsters will picnic and enjoy the incredible views of springtime in Vancouver.



DBR | THE UNIQUE MARQUEE SHAPE AND STRUCTURE

Without question this is an unusual design and it is unusual for some very specific and practical reasons.

The task of building a temporary structure to house 250 people for a picnic is an intriguing opportunity for designers. A simple tent could have performed the function but we set out to design something more special and something that can become a more permanent and meaningful structure after TED2015.

The Marquee structure sits on the western plaza outside the Vancouver Convention Centre. The plaza is above a parking garage and the design could not bolt down or anchor to the structure in any way.

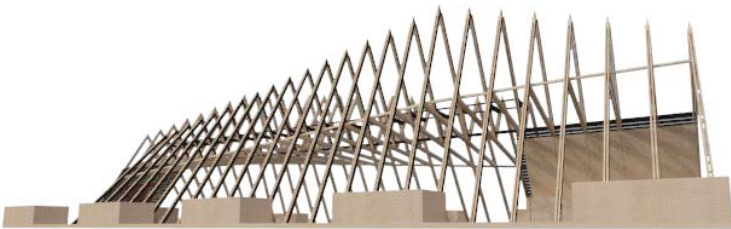
Our solution is a double A-frame that through its shape creates a stable self-supported structure that is durable in the wind and weather. The large intersecting A-frames act like table legs and are triangulated forms to allow a lightweight wood design that simply rests on the plaza.

To weather protect the Marquee space a high tech clear film called ETFE was used to enclose the space but preserve magnificent views of Stanley Park and the North Shore Mountains. The ETFE was donated by Saint-Gobain and illustrates how diverse the use of a high tech material can be.

To prevent the structure from overturning in the wind or sliding across the plaza we created decks with piles of borrowed timber organized by Interfor - the major donor of the Marquee. The piles of wood will be returned after TED2015 and used elsewhere. DBR encourages an understanding that good design borrows and repurposes; it should never waste.

By using Interfor's wood for the Marquee we employed the best major structural material the earth offers. As discussed in Michael Green's TED2013 talk on wooden skyscrapers, wood provides designers and builders with a material that is grown by the sun that is rapidly renewable, strong, and beautiful and uniquely offers us a material that stores carbon.

After TED2015 the students and instructor team will disassemble the structure in one day and move it to a more permanent home in the Downtown East Side of Vancouver where it will take on a new life as a market for some of Vancouver's most economically challenged community.



DBR | A LEGACY PURPOSE

One of the aspirations of all DBR projects is that the project finds a long-term benefit to our community.

Everything we create has a legacy. Everything also has a life cycle and the story of that life cycle is important to us.

DTES | DOWNTOWN EAST SIDE

The Downtown East Side (DTES) community has a complex and varied history, and is home to some of the most struggling citizens of Vancouver.

The DTES Street Market has been in operation for over 5 years with community support, and draws significant crowds to the downtown area. It has enormous potential to scale up from a weekly local event to a vibrant market hub in the city.

DBR and our major sponsor Interfor have donated the TED2015 Marquee to become a marketplace for the uniquely challenged DTES community. The structure will sit on an empty Vancouver city-owned lot that will eventually be developed into an affordable housing project. Over the next few years the Marquee will sit as a weather-protected market and sculpture on the site hopefully attracting visitors and helping the DTES community grow their opportunities through craft and other value-added merchandise sales.

The design of the project changes for this new purpose in only two ways. The new site allows the structure to be bolted to the ground allowing us to remove the piles of wood that will be used to anchor it during TED2015. The decks used for the piles of wood are simply rotated like a hinge to the inside of the structure, providing the market with the deck it needs to sit above the dirt empty lot. In time, the structure may move again. By building it as a prefabricated and demountable structure we have allowed it to be repurposed over its life.



DBR | ABOUT US



DESIGN BUILD RESEARCH INSTITUTE offers a new model for teaching design. DBR is a not for profit institute founded by architect Michael Green, engineer Eric Karsh and social entrepreneur Scott Hawthorn.

DBR students learn both the design and building process with projects that focus on social and cultural community benefits. Each project focuses on the full life cycle of the design. Each project finds a legacy in its community.

"GRADE 6 'TIL YOU ARE DEAD" - Our cheeky motto is founded on the idea that every kid in grade 6 knows how to draw and build. By grade 10 only half of the students in a class will raise their hand and say they have those skills. By grade 12, only a small handful feel they have the art and design skill and talent to pursue a design career in particular. Of course design thinking must scale to design professions. Design thinking and empowering students to bring ideas into reality through building is fundamental. Adding a research component in design and material innovation rounds out the DBR program.

Our program starts with elementary school children and continues through University programs and on into our adult lives and retired lives. Our ambition is to encourage a generation of designers, builders and mentors across all age groups. It is the tradition of the design professions to pass our skills from generation to generation. DBR was founded to champion that tradition in a new model of teaching.

The DBR program brings young kids and old into the design and construction process and helps them maintain their curiosity in the built environment as they grow. By engaging students in community based projects they learn life skills; from hands-on design and building to leadership, teamwork and ultimately the importance of lifelong mentorship and community contribution.



TED2015 | DESIGN BUILD TEAM

TED2015 INSTRUCTORS | ORGANIZERS

- Michael Green, MGA | Founder and Course Instructor
- Eric Karsh, Equilibrium | Structural Engineering Instructor
- James Munns, MGA | Shop Lead | Teaching Assistant
- Sindhu Mahadevan, MGA | Lead Project Coordinator
- Daniel Thomi, Equilibrium | Structural Engineering
- Asher De Groot | Teaching Assistant
- Jordan VanDijk | Teaching Assistant

STUDENTS

- Aleksandra Skibicki
- Andjela Vasic
- Callahan Tufts
- Genevieve Poirier
- Haoran Wang
- Kelsey Reddekopp
- Kelvin Skoretz
- Kyle Durante
- Mark Stevenson
- Milton Kim (Yungdoug Kim)
- Monika Loevenmark
- Neil Manchon
- Padraig McMorro
- Patrick Warshawski
- Stuart Lodge
- Tina Shin (Young Sup Shin)
- Whitney Robinson

TED2015 | PARTNERS

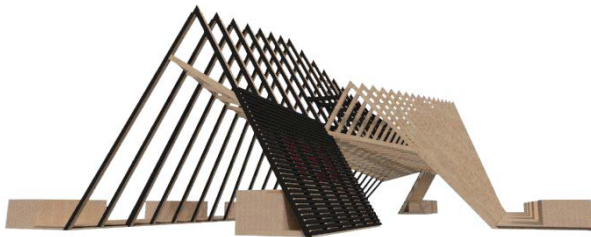
MAJOR SPONSORS OF THE MARQUEE

The entire success of this project relied on the significant donations and support of our major sponsors. Their gift, advice and support deserves enormous acknowledgement by our team and those that enjoy the structure we have created together.

- Interfor
- Michael Green Architecture
- Equilibrium Consulting
- Saint-Gobain Performance Plastics
- Taiga Building Products
- My-Ti-Con Timber Connectors
- FPInnovations
- Canadian Building Restoration Products

MAJOR CONTRIBUTORS

- Ema Peter Photography
- Tradeworks Training Society
- Atura Contracting
- Erik Olofsson Construction



TED2015 | MEDIA CONTACTS

Michael Green Project Lead and DBR Founder

Sindhu Mahadevan
Project Coordinator
778-588-9689
sindhu@mg-architecture.ca

Michael Green Architecture

Dawn Melody
Executive Assistant
604-336-4770
dawn@mg-architecture.ca

Eric Karsh | Structural Engineer and DBR Board Member

Renata Obajtek
Office Manager
Equilibrium Consulting
604-730-1422
robajtek@eqcanada.com

Karen Brandt | Major sponsor

Karen Brandt
Director, Public Affairs & Corporate Communications
Interfor
604-689-6866
karen.brandt@interfor.com

To learn more about DBR

www.dbr-school.org