One of a kind building for Trimble Navigation

Trimble Navigation

Client: Trimble Navigation
Location: Christchurch
Completion Date: 2014

After Trimble Navigation's Christchurch Office was destroyed by a fire in May 2011 following the February earthquake, our Architectural expertise was called upon to design an innovative and bespoke new building. Our vision was to use the latest timber engineering and damage limiting technology while creating a large space that encompasses current and future needs.

Following the Christchurch earthquakes, the safety benefits of using timber as a structural material were brought to light. By harnessing the power of post-tensioned Laminated Veneer Lumber (LVL) frames and walls and energy dispersing technology, we designed the largest pre-stressed laminated timber building ever constructed with a total floor area of 6000m².

Our design incorporates research from the Universities of Canterbury and Auckland involving technology that significantly reduces the risk of building damage from seismic activity through dissipation of energy and the controlled movement of the structure itself. Energy dissipating devices mounted to the exterior of the building absorb energy released during an earthquake and damping in the frames and walls help to create a more resilient structure. Our use of high strength screws and timber rivets create robust connections and in this project, is the first extensive use of riveted seismic connections in New Zealand. Extensive instrumentation installed by Trimble monitors the building's ongoing performance which will enable informed decisions on occupancy after a significant earthquake, and allow informed maintenance decisions in the future.

Our multi-disciplinary Trimble design team provided architectural, structural, geotechnical, fire and building services design for the award-winning building. This project allowed us to utilise our extensive skills in performance based design to deliver a low-damage, resilient building that provides the owners and tenants with peace of mind in seismic events. Using sustainable materials and innovative design, this building is the result of our ongoing commitment to the Canterbury rebuild.

In 2015 we received the Wellington NZ Wood Award for Engineering Excellence and the NZ Wood Highly Commended Award, and the Resene Overall Supreme Award for the design of the Christchurch Trimble Navigation Building.

All services we provided: Architectural, Structural, Geotechnical, Fire and Building Services Design

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