

## COMPANY

**Tru-Bilt**

## LOCATION

**Braeside, Victoria, Australia**

## SOFTWARE

**Autodesk® Advance Steel**

# A new model for fabrication

## Australian manufacturer Tru-Bilt implements a model-based quote to fabrication process with Advance Steel

Advance Steel has helped us go straight from quote to workshop at almost the touch of a button. This has given us significant time-savings, which translates into a significant monetary savings.

—**Doug Rosenberg**  
Operations Manager  
Tru-Bilt Fabrications Pty Ltd.

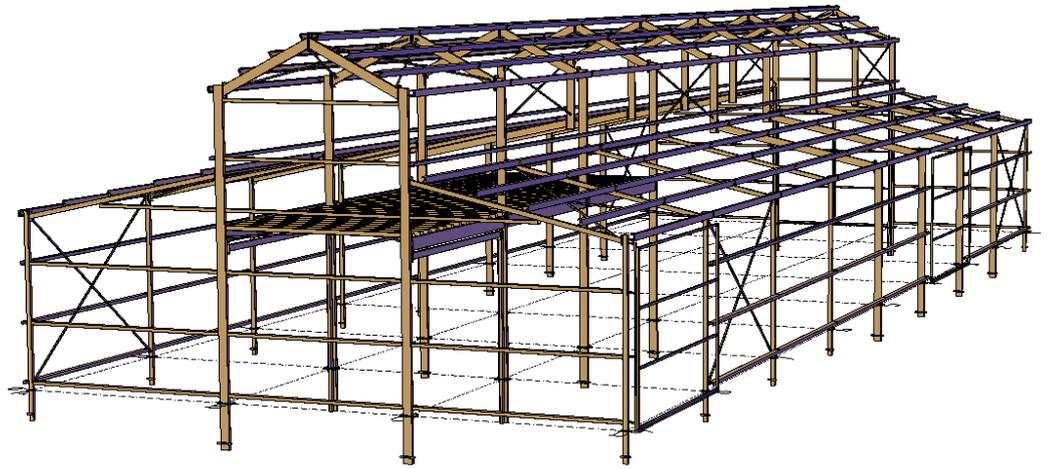


Image courtesy of Tru-Bilt.

### The firm

Australian company Tru-Bilt Fabrications Pty Ltd has been manufacturing steel sheds, farm sheds, garages, barn sheds, and other steel structures since 1966. The company manufactures approximately six hundred steel structures a year, in various shapes and sizes, from its 2,765-square-meter fabrication facility located in the suburbs of Melbourne. Structures can be self-assembled or built onsite by the company's registered installation teams.

### The challenges

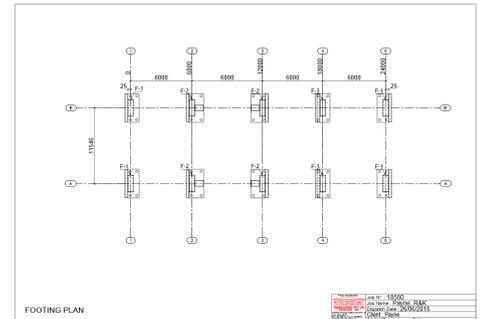
'Although our structures are mostly repetitive—barns, sheds, aircraft hangars, and so on—every job we do is just a little bit different', explains Doug Rosenberg, Tru-Bilt's operations manager. 'But our financial success hinges on volume. So we need to quickly go from quote to design to fabrication, including the generation of all the necessary shop drawings and other documentation'.

To expedite pricing as well as documentation, Tru-Bilt created a customized quoting system called ShedQuote. The firm has been refining this program for several years, which allows its sales team to gather building requirements and dimensions from customers, and automatically produce custom quotes as well as rudimentary shop drawings.

'This custom program was good for helping us quickly develop accurate quotes', says Rosenberg. 'The drawback of our program was the production of the shop drawings'. The program automatically generated 2D CAD drawings, but it took a lot of time and effort to fully detail the drawings for fabrication or update them when changes were required. 'What we really needed was a link between our quoting system and a 3D model-based software solution for steel detailing', says Rosenberg. 'This would accelerate our quote to workshop process by helping us produce more complete shop drawings that we could quickly finalize for fabrication'.

### The solution

In 2014, Tru-Bilt implemented Autodesk Advance Steel software for structural steel detailing and integrated its quoting software with that 3D environment by using Industry Foundation Classes (IFC)—a widely used data exchange standard for 3D building models—as a bridge between the two programs. Tru-Bilt's quoting software produces an IFC data model containing both the geometry and properties of all the individual building elements that make up the customer's Tru-Bilt structure. That data model is then read directly by the Advance Steel software to produce an intelligent 3D model of the structure that contains all the structural steel, plates, bracing, welded assemblies, purlins and girts with punch holes, cladding, flashings, and so on.



'This integration with Advance Steel has helped us streamline production', says Rosenberg. 'Instead of struggling with a largely manual, labor intensive drawing production process, our quoting software now produces Advance Steel models that are close to 90 percent complete'. From those models, Tru-Bilt can check and number a job, and automatically generate customer drawings as well as production documentation such as shop drawings, general assembly drawings, sections, elevations, material lists, and so on.

All the drawings and documentation are linked to the underlying Advance Steel model. Therefore, when changes are needed, Tru-Bilt's designers simply update the Advance Steel model and the software automatically updates the drawings and documentation. 'This model-based detailing process makes us much more efficient and also improves our quality by helping reduce human errors', says Rosenberg.

In addition, Tru-Bilt has invested in automated measuring equipment that can read cutting lists directly generated from Advance Steel. They are also investigating external suppliers that can use digital files for punching details for purlins and girts. Being able to produce a machine compatible digital file within Advance Steel will reduce errors and eliminate the need to re-enter data.

### Affordable and dependable

Tru-Bilt evaluated many different steel design and/or detailing software solutions before selecting Advance Steel. 'In the end, we chose

Advance Steel based on its affordability and the ongoing support we knew we could expect from a company like Autodesk', says Rosenberg. 'Moreover, Advance Steel was very easy to learn and didn't require extensive—and therefore expensive—training. And we can tap into the global community of Advance Steel users for different perspectives and insights into the software'.

### Model-based fabrication

'The benefits of Advance Steel all stem from the intelligent, 3D model at its core', says Rosenberg. 'From the model we can easily error check all the steel connections. We can quickly detect and correct collisions in our designs. We can automatically find identical parts and number them. We can visually display the structure in exploded views or assembly drawings. All of these features help us simplify and expedite our fabrication and assembly processes'.

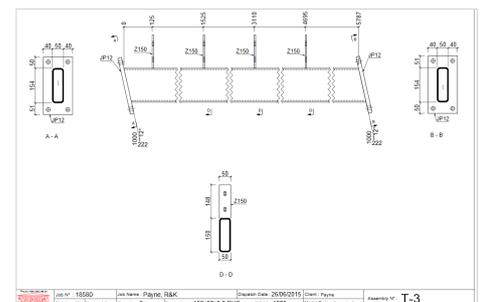
### Results

Using their old detailing method, it took Tru-Bilt more than a day to produce the documentation required for one order. With Advance Steel, the company can now process two or three orders a day. 'Advance Steel has helped us go straight from quote-to-workshop at almost the touch of a button', says Rosenberg. 'This has given us significant timesavings, which translates into a significant monetary savings'.

For more information, visit [www.autodesk.com/advancesteel](http://www.autodesk.com/advancesteel)

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Images courtesy of Tru-Bilt.