

Utilising the future
of site technology



CSD Site is the on-site survey operations of CSD Group Australia Pty Ltd (CSD Group). The team offers survey and set out services, ensuring accuracy of design at pre-construction stage.

Established in 2013, the CSD Group has worked on projects in Australia, Hong Kong and Papua

New Guinea. It offers a suite of services for construction projects, from pre-construction design works to on-site solutions.

CSD Group has four units: CSD BIM, CSD Drafting, CSD Engineering and CSD Site.



SERVICES

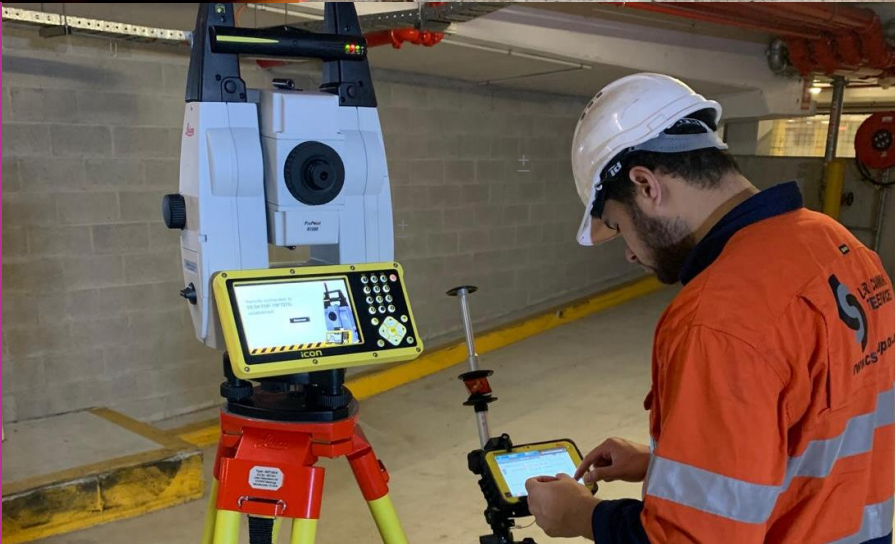
DIGITAL LAYOUT

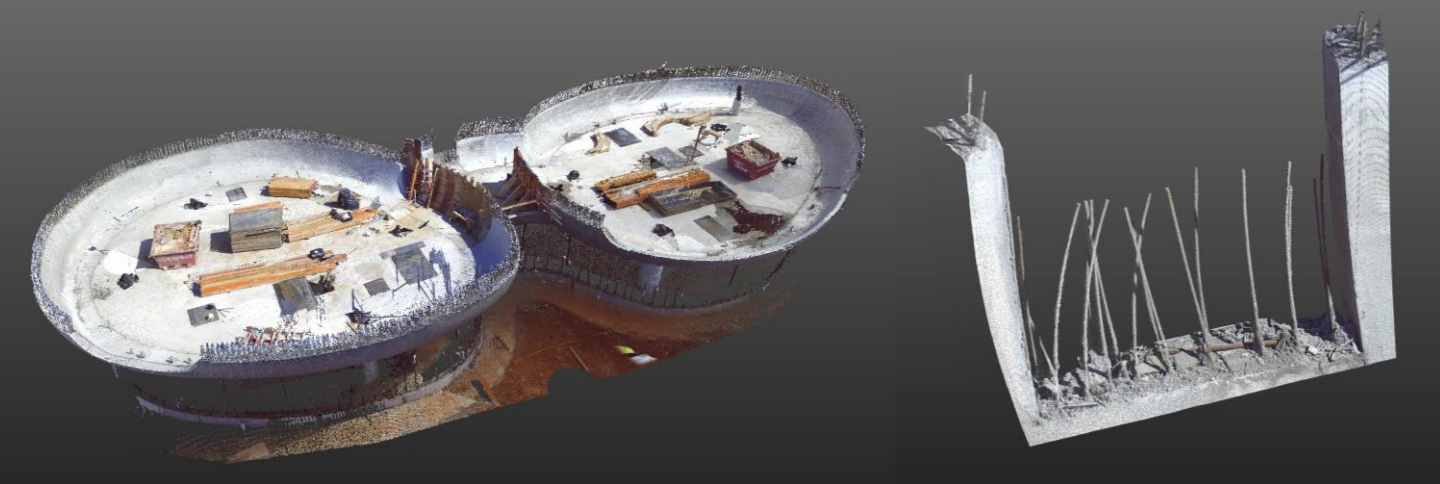
Using the Leica iCR80 Robotic Total Station (RTS) linked with our Tekla models, we can provide layout services and site set-out assistance to place HD bolts, chemsets, position ferrules, site drillings, and more.

With our complete and comprehensive laser layout service, we can ensure all relevant anchors and drillings match the 3D model in which the steelwork is fabricated from, ensuring that expensive site layout issues are eliminated.

Our laser layout service includes:

- laser set-out of HD-Bolts and chemset locations on site using the model coordinates with up to 2 millimetre (mm) accuracy
- import site points back in the model for As-Built reviews





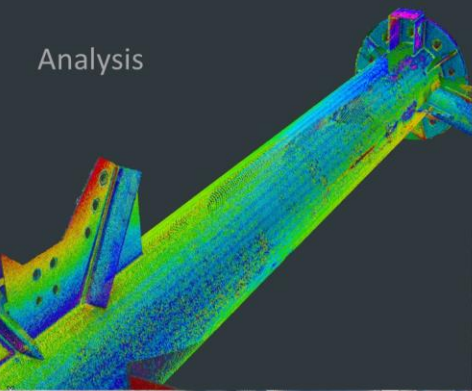
3D SCANNING

Using the latest Faro 3D scanners and software products, we are able to collect millions of survey points, capturing vital information and dimensioning required for projects. A complete and comprehensive site survey is accomplished at one time, with no need for a site revisit. This makes retrofitting of existing structures as easy as building new ones and helps eliminate costly site layout issues. Our 3D scanning covers:

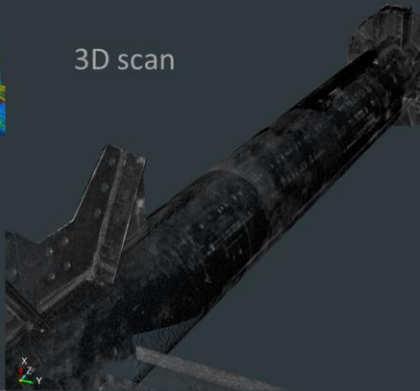
- up to 2mm accuracy on the 3D photo scanning of existing structures
- the capture of site markings and points of interest
- taking measurements from the captured scan model



Analysis



3D scan

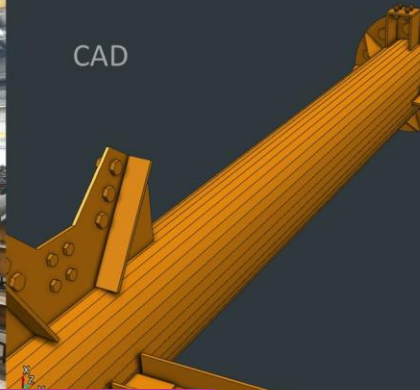


FABRICATION VERIFICATION

Utilising our 3D laser scanners in the workshop is an emerging technology. Coupling our point cloud scans with our verification software, we can analyse real world fabrication objects against the CAD models provided by the drafting team to ensure fabrication is correct on members prior to sending for painting/galvanising. The use cases for this are complex trusses, pre-cambered members and curved members, which often prove difficult to verify quickly in the workshop environment.



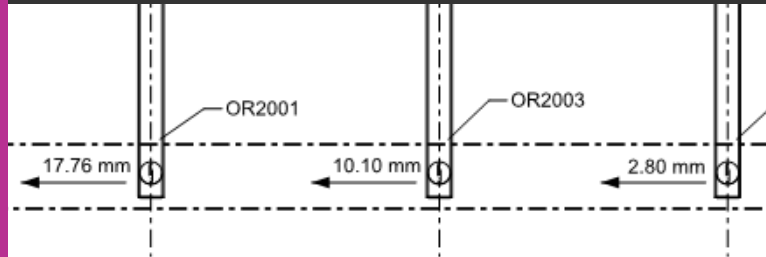
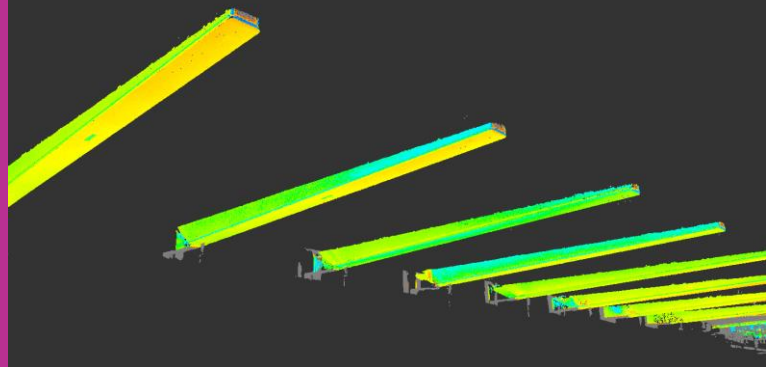
CAD



CONSTRUCTION VERIFICATION

Another recent innovation which has proven to save significant project costs is verification in the field. Using our scanners on the construction site, we can use CAD models to analyse in real time multiple construction trades to determine correct placement of all assets. Use cases can be concrete flatness and positional checking, pre-cast panel positioning and plumbness, beam pre-camber and positional checks and outrigger/complex item levels.

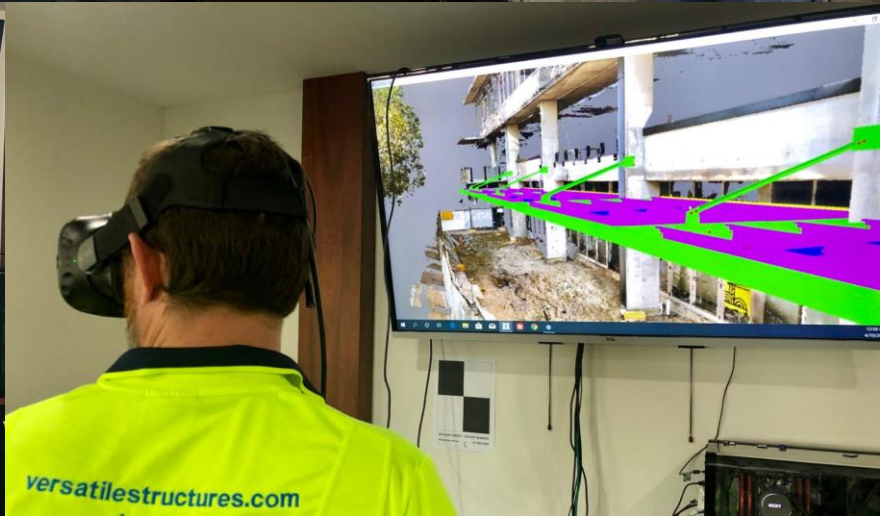
If there are mission critical items on site, they should be scanned to ensure a correct fit before it becomes a bigger expense.





VIRTUAL REALITY

Virtual reality (VR) is an everyday occurrence at the CSD Group office. It is part of our process for ensuring that new design works seamlessly with onsite/as-built conditions. CAD models are overlaid on the point cloud, and an inspection and visual check is done with VR. Clients and stakeholders find huge benefits when planning design and constructability using VR.



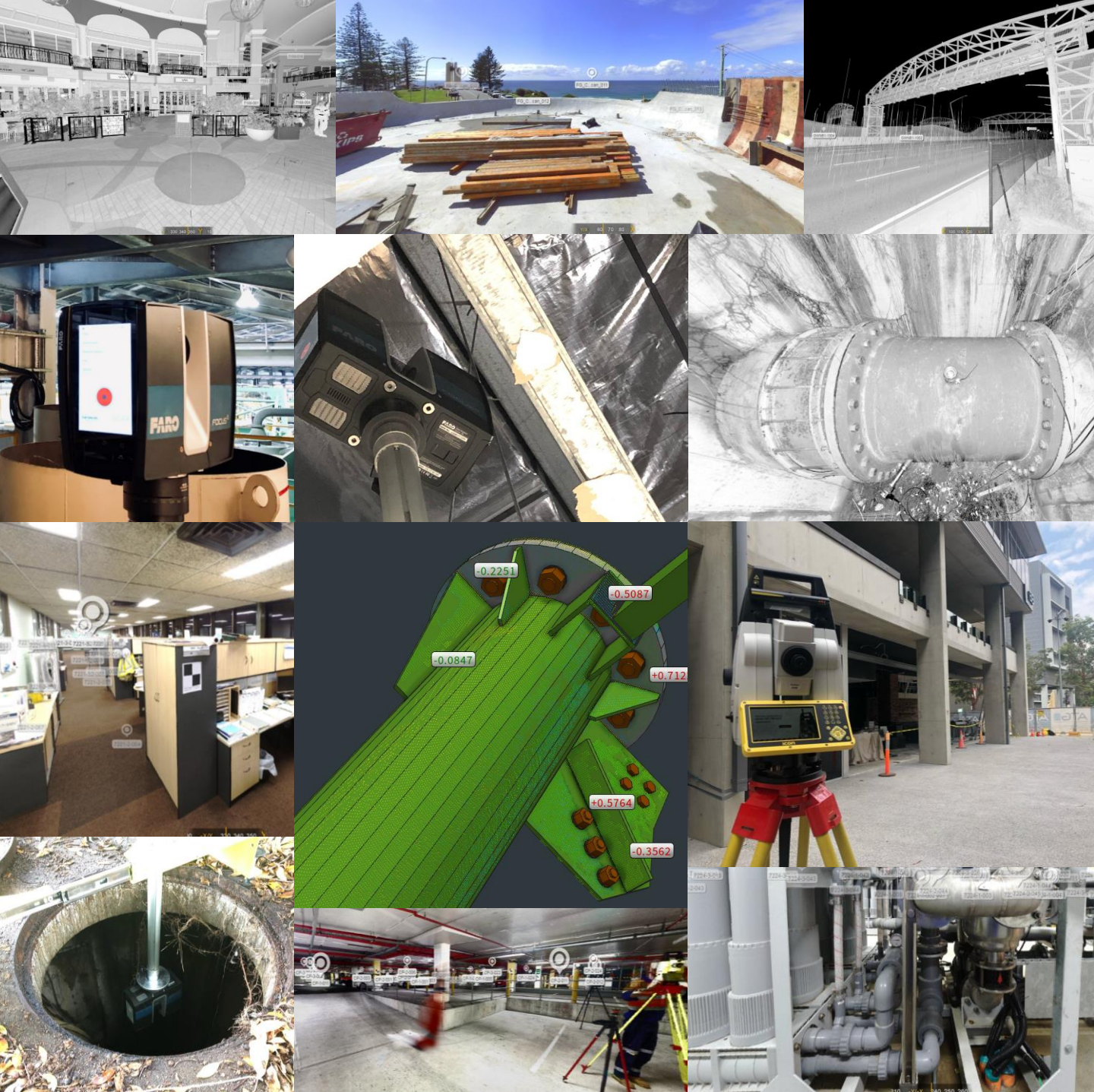


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