

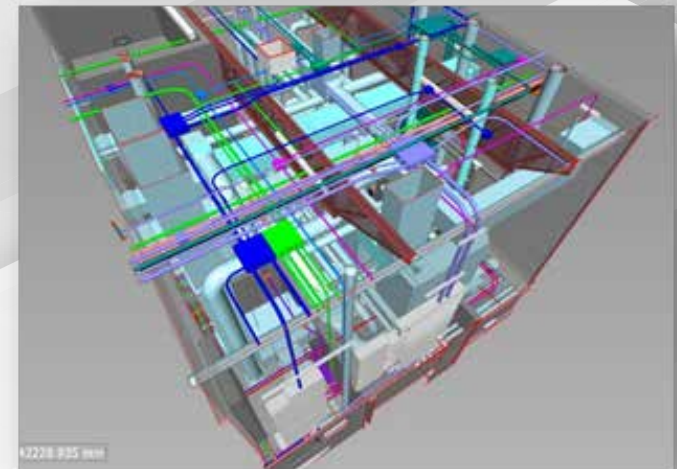
Construction Technologies

Using **Revit** our design and project teams work closely together on each **BIM** project to model all systems in 3D for fabrication and coordination purposes. By optimizing innovative technology and collaborative communication with all team members, Wescan can meet the constructability requirements, view any clashes and help deliver an on-time, on-budget and within scope project. Our approach includes:

- Implementation from the onset of the project with all stakeholders until project completion.
- Weekly model reviews with the team.
- Attend design collaboration meetings on a regular basis throughout the design process.
- Perform regular clash detection with all trades and consultants using Navisworks software.
- Utilize our specialized Revit add on software (Evolve and Sysque) to convert objects and families from a generic 300 level of development to a product specific level 350 / 400.
- Create spool drawings for fabrication purposes.
- Develop work packages that can be easily managed on site.
- Prefabricate work packages and deliver to site as required to meet installation schedules.

Our **Trimble Robotic Total Station** allows us to maximize BIM work flow and lean construction techniques like prefabrication. Trimble Field Points exports any modelled layout from the live, co-ordinated BIM model and sends them to the RTS unit. Using the RTS unit for layout increases efficiency over traditional layout procedures allowing two people to layout up to one hundred modelled locations an hour. This technology also allows accurate project deliverables at turnover as the model becomes a live As-Built.

We create Revit model drawings on multiple projects to secure the best design and outcome. We also run internal clash detection analyses/studies to determine any potential issues prior to any installation, adding cost savings to the project. The use of other discipline models will allow us to layer the drawings and run interference checks to meet the constructability requirements. Once the drawings have been created our prefabrication team can move forward to execute the assemblies.



3D Model

Planning & Pre-Fabrication

Wescan utilizes our 38,000 sq ft fabrication facility where our planning and pre-fabrication teams work together from the early stages of the project to ensure we are able to start fabrication at a much earlier stage than typically seen in the industry. By using our full-time planning and prefabrication departments, we offer our clients many benefits and advantages, some of which include:

- **Lowered Costs** – from efficient prefabricated assemblies. Labour hours decrease because less onsite time is wasted on set-up, material and parts searching.
- **Fewer Changes** – Our pre-planning will identify any issues so that they can be dealt with prior to constructions therefore eliminating many costly changes.
- **Lower Number of Requests for Information (RFIs)** – due to the level of detail and 3D modelling.
- **Reduced Schedules** – Hours used in the shop do not need to be used on-site. Quicker on site installations allow for reducing and maintaining construction schedules.
- **Higher Quality** – Maintainable and higher overall quality installations. Technician’s tools are at their fingertips at all times.
- **Safer** – Controlled environment ensures high quality product and no garbage from the packaging or wasted materials under foot.
- **Reduced Delays** – due to other trades.
- **No Retrofitting** – any recently constructed work for the installation; such as stud walls for installation of fixture carriers.
- **Accurate As Builts** – Since we build from our prefabrication drawings these drawings become your 3D model as-builts. As a result, they will be very accurate and detailed as-builts for facilities maintenance.

Examples of assemblies that we can pre-fabricate include:

**Underground,
domestic water,
heating, cooling,
process, gas and air
piping
Equipment supports
Pump supports**

**Carrier banks
Control valve
sequencing
Pipe racking
Hangers
Conduit bends**

**Motor disconnect
switches
Group motor control
Pre-wire electrical panel
boards and distribution
transformers
Conduit racking, hangers
and equipment stands**

**Wall assemblies:
Receptacles
communication outlets,
audio/visual, lighting
control, fire alarm and
public address, etc.
Lighting fixtures and
whips**