

TIONG SENG CONTRACTORS: HIGH QUALITY HEALTHCARE CONSTRUCTION

The Kallang Polyclinic and Long-Term Care Facility in Singapore is unique: a hybrid of two healthcare disciplines in the same building. As a result, the construction process posed a challenge, with the design of both areas and the stakeholders involved being very different.

Results

- 25% reduction in construction time
- 33% improvement in resolving coordination issues
- 1,000 labor hours saved on project

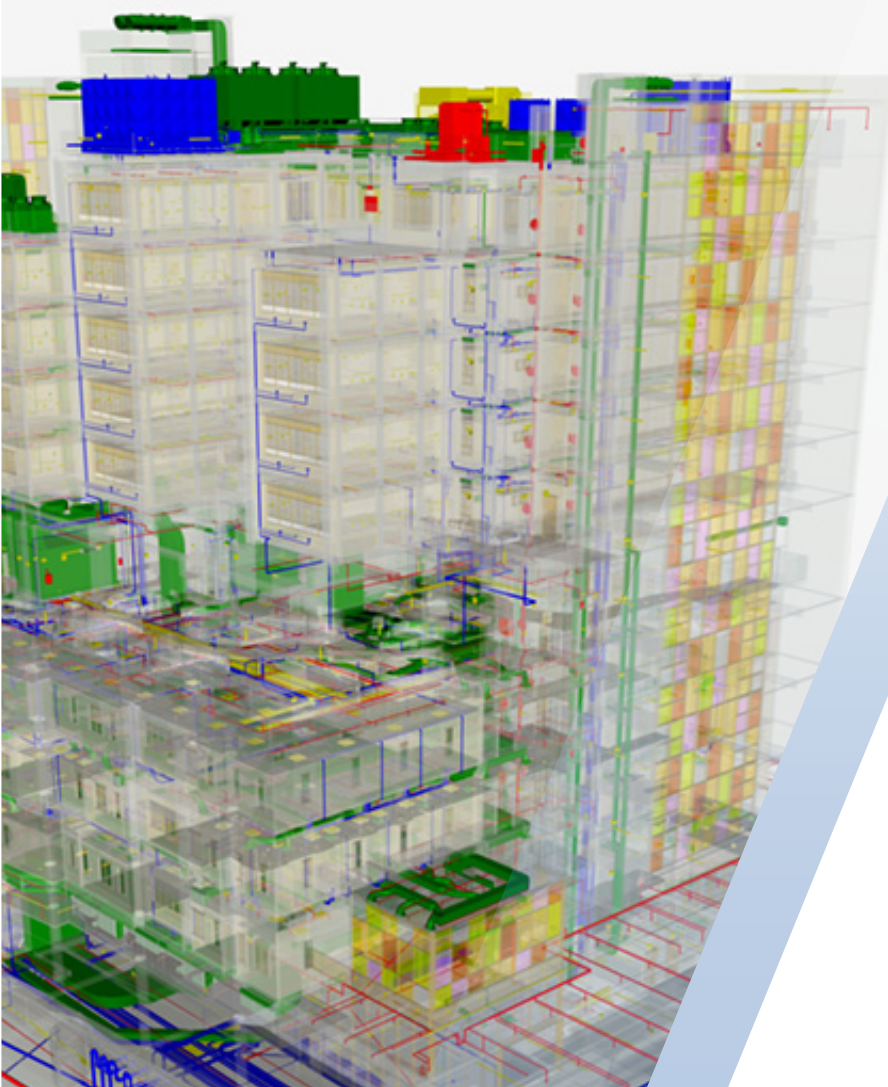


“With Autodesk AEC Collection and BIM 360 solutions, the collaboration between project and stakeholders is seamless. We saw a 33% improvement in resolving coordination issues as compared to past projects where BIM 360 was not adopted.”

Ye Zaw Lin, Corporate BIM Manager,
Tiong Seng Contractors PTE LTD

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How they did it Tiong Seng’s methodology



High degree of coordination

Seamless collaboration during design

With a complex design and multiple stakeholders involved in decision-making, construction of the facility posed a big challenge to the team.

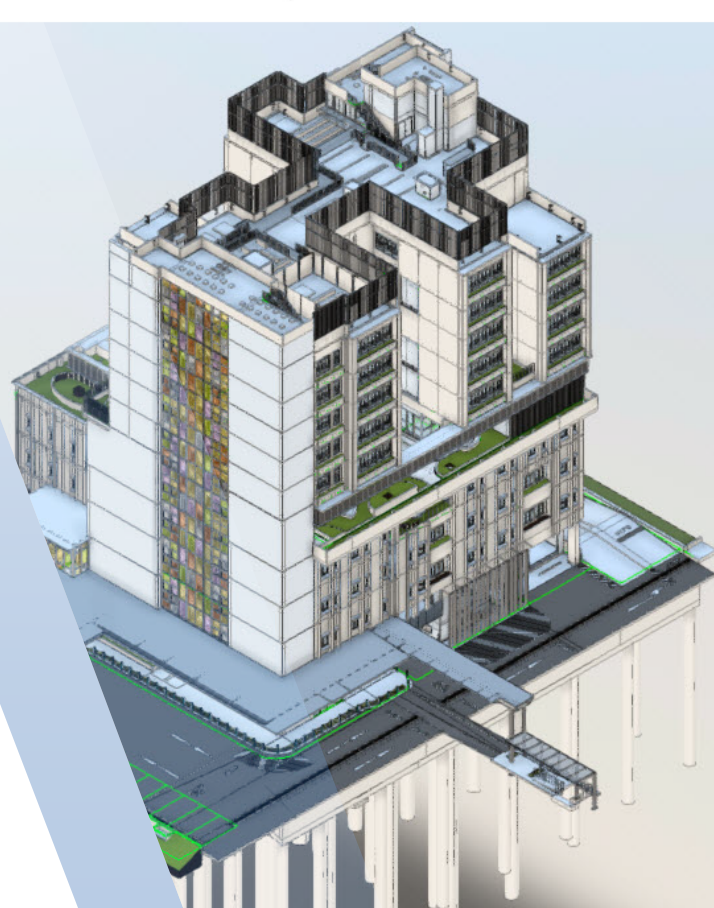
Tiong Seng required contractors to use Revit and Autodesk Collaborate Pro, ensuring a streamlined feedback and sign-off cycle. The design model could be fully detailed in Revit, creating a VR experience which allowed collaborators to better visualize the design and provide efficacious feedback.

Automated asset management

Complex designs simplified

The owner has a unique requirement for detailed floor plans and drawings (known as a “room book” in Singapore), that requires every aspect of a room to be detailed, from the placement of beds to the paint color of the walls.

To aid in this complex asset management, the Tiong Seng team took an automated approach, using Dynamo and Python scripting to create an in-depth six-sided view of each room. This saved more than 1,000 labor hours on the project.



Accelerated construction process

Fast and efficient construction

The two different components of the facility required two different construction processes, where prefabrication was used more extensively on levels 6 to 9 than on levels 1 to 5.

More than 130 units of PPVC (Prefabricated Prefinished Volumetric Construction) were fully coordinated through BIM and IDD before fabricated in the factory and delivered to the site. Harnessing BIM and IDD optimized PPVC modular units and shortened the construction timeline by 25%.

The bottom line

Key benefits of Tiong Seng’s approach



SEAMLESS COLLABORATION
DURING DESIGN



AUTOMATED ASSET
MANAGEMENT



ACCELERATED CONSTRUCTION
PROCESS

“Even with the unique challenges and requirements from the start, we were able to tackle them with BIM, collaboration, and new integration processes.”

Lim Tee Yoke, Head of Productivity, Tiong Seng Contractors PTE LTD

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