The Grove Spring @ Yishun, a build-to-order public housing project.



# Teambuild switches to Archicad for successful BIM Implementation

A new build-to-order public housing project by Singapore's Housing and Development Board (HDB) is springing up in Yishun, Singapore. With a façade resembling a grove of trees, complete with earthy colors evoking a forest theme, the Grove Spring at Yishun is aptly named.

BIM

**Project name:** Grove Spring @ Yishun
**Project location:** Yishun Avenue 6, Singapore
**Project type:** Residential
**Project size:** 8 blocks of 15-storey residential buildings (total 987 units)
**Year of completion:** 2024
**Software/s used:** Archicad, Revit
**Architect / Engineer (Structural, MEP, etc):** Surbana Jurong Consultants Pte Ltd
**Consultant:** Surbana Jurong Consultants Pte Ltd
**Contractor:** Teambuild Engineering & Construction Pte Ltd

Rising fifteen stories high, eight residential blocks contain a total of 987 units. This large project features built-in recreational facilities, such as playgrounds, adult and elderly fitness stations, and a roof garden atop the multi-story car park (MSCP). Within the development, residents can take advantage of a network center and a childcare center.
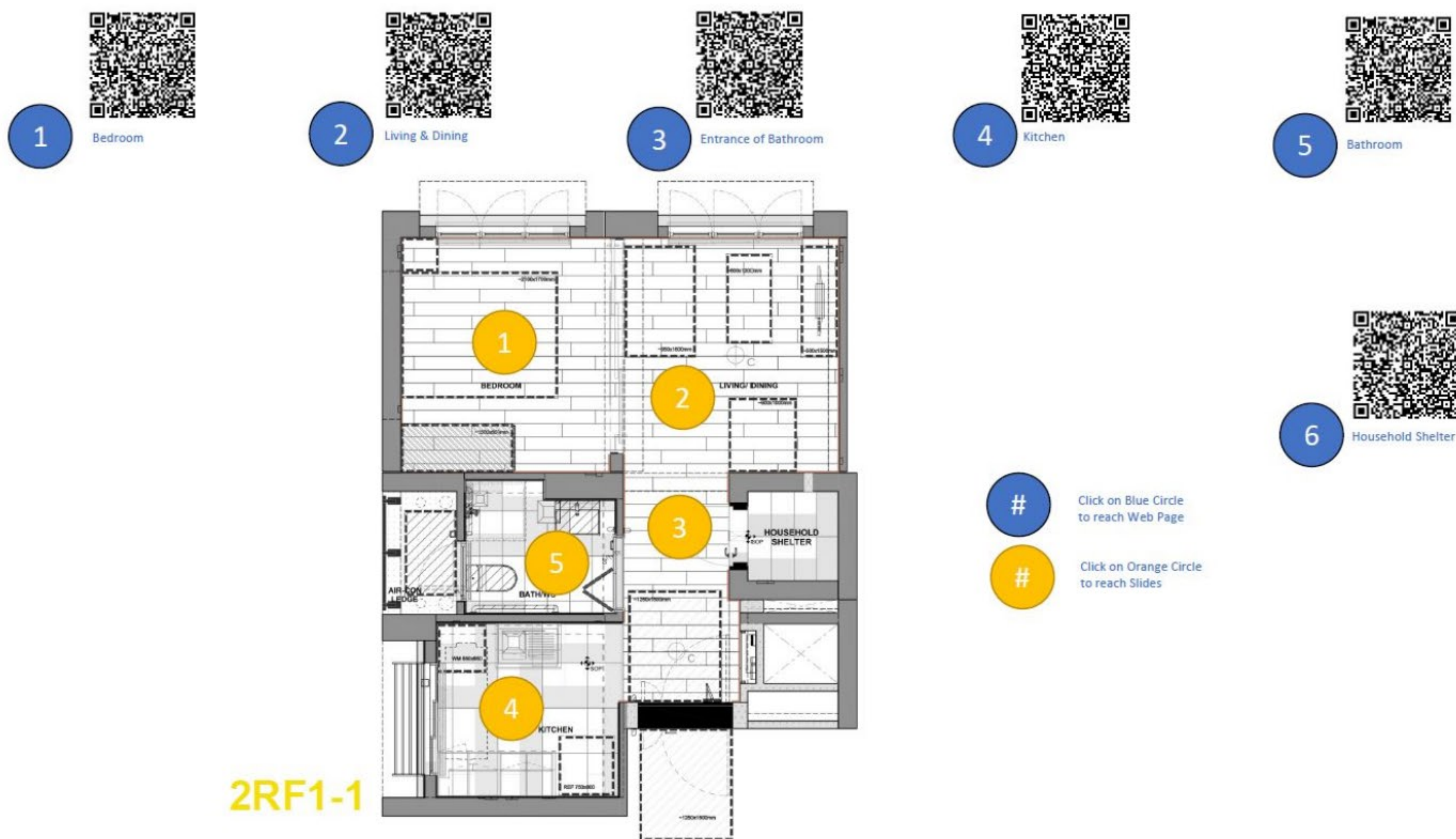
Managing the project, the award-winning Teambuild Construction Group (TBCG) made excellent use of BIM. The company's three decades of experience in progressive multi-disciplinary construction and expertise in residential, institutional, and industrial projects made providing a seamless end-to-end solution possible.



The team at TBCG has been recognized for pioneering the Prefabricated Pre-Finished Volumetric Construction (PPVC) system in Singapore, a system that enhances construction productivity. TBCG focused on delivering high value within this PPVC system for all stakeholders on the Grove Spring project.

As an early adopter of Building Information Modeling (BIM), TBCG credits BIM with the team's ability to gain valuable insight and wield accurate tools for better decision making and performance across the construction lifecycle. This aspect of TBCG's workflow resulted in stunning efficiencies, according to Zaw Myo Tun, BIM Manager at TBCG. "BIM helps us to reducing the unproductive processes that go along with large projects. We can complete highly detailed and integrated PPVC virtual mock-up units in record time. On Grove Spring at Yishun, the mock-ups were completed two months faster than the time we typically require. BIM has helped us to greatly increase our productivity."

## Scan the QR Codes to View the Model



1 Bedroom   2 Living & Dining   3 Entrance of Bathroom   4 Kitchen   5 Bathroom   6 Household Shelter

# Click on Blue Circle to reach Web Page
# Click on Orange Circle to reach Slides

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## Virtual Mock-up Views



Grove Spring at Yishun was not without its challenges – but TBCG was able to anticipate them, with some support and guidance from Graphisoft Singapore (GSSG). Those challenges dealt with the object creation, modeling, collaboration, and documentation. All were addressed ahead of time and surmounted by employing Archicad and relying on the power of BIM.

Zaw Myo Tun explains, "We needed to decide how to create objects using the specifications and catalog. We had to figure out the best ways to set up a project origin, surveyor origin and how to tie the project base point across other BIM modeling and collaboration tools."

TBCG also knew there was a need to collaborate with the MEP sub-contractors who were using another solution and realized early on that a method of documentation needed to be set to provide measurements as well as tile quantity for take-off purposes.

With help from GSSG, TBCG invested in core team members to become certified through the Graphisoft BIM Manager Program. The ten-week course provides knowledge, tips, and tricks from worldwide experts on Archicad and started to build the capabilities within TBCG. Building on that foundation of knowledge, TBCG developed BIM manuals that addressed developing libraries, templates, workflow, and processes. GSSG worked closely with the firm throughout its efforts to learn and enhance these skills.



" The team from Graphisoft Singapore held regular weekly meetings with us where they provided expert advice on the challenges we faced. In addition to that valuable time, a WhatsApp group chat was ever-present for support. "

Strong support like this gave Zaw Myo Tun and the team at TBCG confidence to use Archicad for this challenging project. Zaw Myo Tun says GSSG was a consistent source of advice to address challenges that come with the type of work the firm took on.



" The implementation of Archicad went smoothly. We can say with absolute certainty that BIM is one of the most important factors to our delivering a project on time and on budget. Management recognizes this and works to ensure our BIM team has all the resources it needs. "

This practice of making sure BIM is a priority has taken shape in many ways. TBCG works to devise new approaches, all the while documenting best practices. They rely on an Open BIM workflow on Grove Spring to coordinate with the main contractor on Archicad for Architectural and Structural Model/ Documentation, pre-caster in Tekla, and the M&E subcontractor uses Revit.

"With Teamwork, we can predetermine the workflow, the process, modeling methodology, the IFC export, and input setting to achieve the desired result. Teamwork BIMcloud SaaS allows us to host Teamwork files on the cloud, giving us the flexibility to access the working files from anywhere. This is a useful feature for a main contractor like us. where we deploy BIM team members at both the project site and HQ."

On Grove Spring, TBCG created a well-integrated virtual mock-up unit, align with consultants, and implement Archicad to integrate highly detailed sub-contractor information into BIM. At just six months into the project now, the team knows it is reaching milestones from EIR without any major challenges.

" Prior to using Archicad, we were using Revit and other BIM software. We consider Archicad to be one of the best and competitively priced openBIM workflow-enabled solutions. It allows us to work with more flexibility while still enabling coordination for peak efficiency. Since calibrating our company's BIM roadmap to Archicad a few years ago, we spearheaded developing templates and workflow as well as training the team to use it. We are a relatively new to the solution but eager to learn and grow our skillsets in it. "

PPVC projects such as Grove Spring require unique modeling and documentation practices, to ensure alignment across all parties. "Archicad allows for all parties to communicate more interactively and provides us with the insight and tools for better decision making and performance across the construction lifecycle."