



BCA AWARDS 2022

Recognising Excellence in the Built Environment



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Excellence

The Tapestry



DESIGN EXCELLENCE & SAFETY AWARD

The BCA Design and Engineering Safety Award 2022 gives recognition to the Qualified Person for Structural Works [QP(ST)], QP(ST)'s firm and the project team for ingenious design processes and solutions in overcoming project challenges to ensure safety in design, construction and maintenance of building and civil engineering projects locally and overseas.

The Award aims to:-

- a) Inculcate a strong safety culture among building professionals in developing our built environment
- b) Give recognition to QP(ST)s and their firms for engineering achievements
- c) Provide an avenue through which competition for work excellence can be enhanced.

The Awards will be given out in one category which project can be of the following:

- Residential
- Commercial
- Institutional and Industrial
- Civil Engineering

THE TAPESTRY

BCA DESIGN AND ENGINEERING SAFETY AWARD | EXCELLENCE



Qualified Person

Engineer Yiong Hoi Liong

C&S Consultant

P & T Consultants Pte Ltd

Builder

Woh Hup (Private) Limited

Developer

Bellevue Properties Pte
Limited (CDL)

Architectural Consultant

ADDP Architects LLP

KEY CHALLENGES

- To improve productivity with Design for Manufacturing and Assembly (DfMA) through adoption of innovative Prefabricated Prefinished Volumetric Construction (PPVC) which allows for safe and quick assembly on site.
- To reduce wastage, minimize environmental impact and disturbance to the neighbourhood.

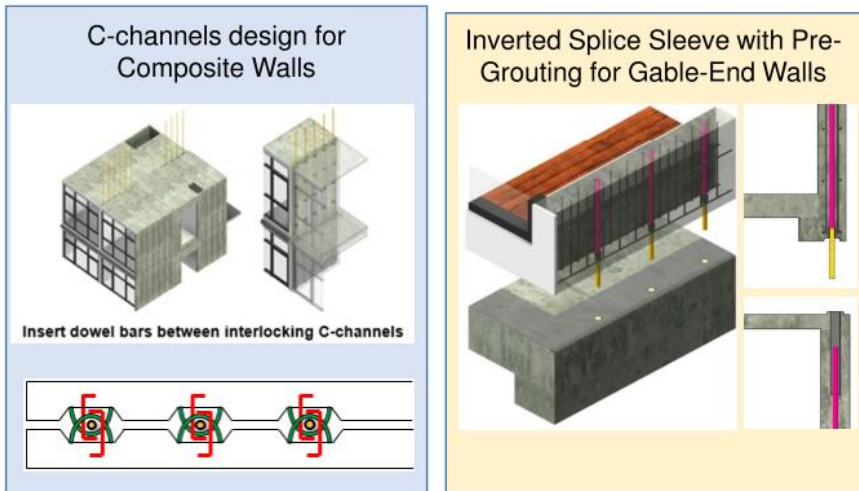
SOLUTIONS

- The ingenious use of C-Channel connections for the shear walls made a big difference is made to homeowners in densely-populated Singapore as some extra space is returned to them for better placement of furniture or simply to move about their home. Nobody likes to see visible kinks and exposed columns in their place, hence this connections proposed by the consultant ensures the aesthetics roominess while enabling better furniture placement by homeowners
- Inverted splice sleeve connection for the gable end walls to avoid erection of external scaffolding for grouting works, which ensures greater human safety.

THE TAPESTRY

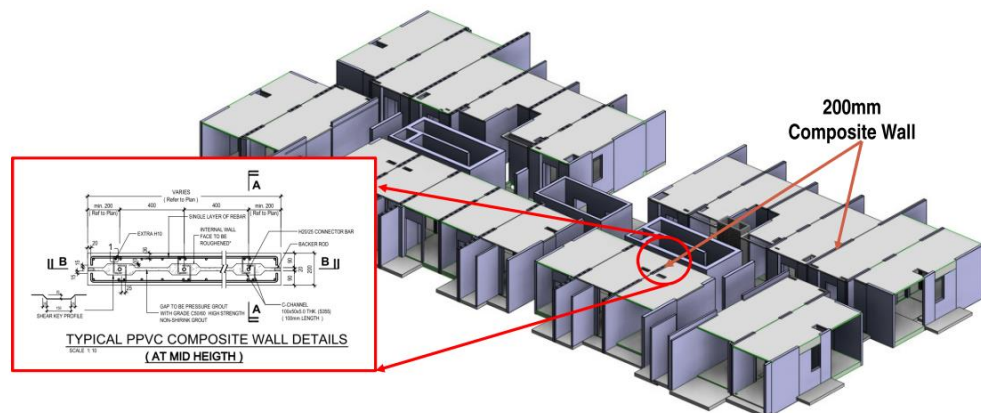
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SOLUTIONS

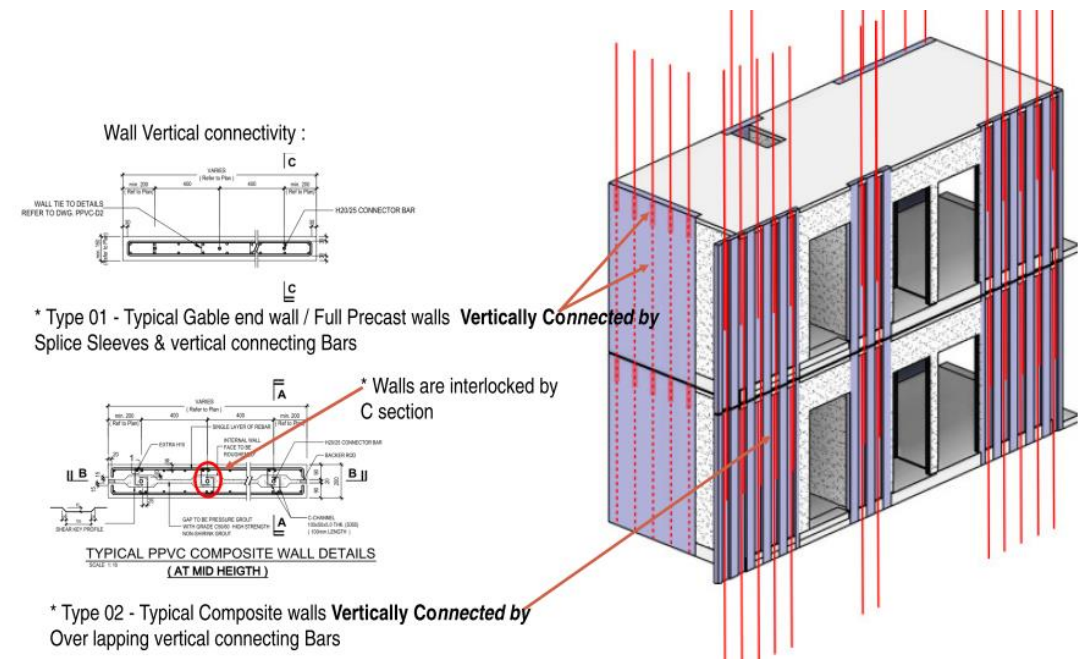


Efforts by the team paid off

Tapestry's extensive use of PPVC even attracted Hong Kong Housing Society, professional organisations, developers and contractors from Hong Kong. The condominium was part of a site visit for foreign delegates in 2019 International Built Environment Week (IBEW)



- Floor Diaphragm was ensured by Loop Wire connections at frequent intervals along column



THE TAPESTRY

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SOLUTIONS

- Standardization was the key to productivity!
 - i. Room width – 5 internal width covering >88% of Total Modules (2527 Nos)
 - ii. Wall thickness –150mm for external wall & 200mm for internal wall
 - iii. Floor height – 3150mm floor to floor
- Productivity is greatly improved as construction floor cycle was shortened to eight days on site. The manpower on-site is **30% less** for than conventional construction.
- The wastage is particularly reduced for the finishes and fixture works, where such works are carried out in a safe controlled environment. The impacts to the environment and neighbourhood are minimized due to less concreting works on site and lesser traffic movement of concrete trucks and deliveries of materials to site.

Winning the DESA has given Er. Yiong, who has almost 30 years of experience as an engineer, a great sense of fulfilment. “I’m happy that I’ve contributed my engineering knowledge to and shared my experience with the Built Environment (BE) industry,” he said.

Safety, sustainability and fulfilling the needs of the buyer, however, will always remain his main priorities – a mindset he would like young engineers to adopt. “Designing something that affects people and the environment is a responsibility, not a liability,” he added.

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PROJECT NAME

The Tapestry

PROJECT TYPE

Residential

QP / QP COMPANY

Engineer Yiong Hoi Liong
P & T Consultants Pte Ltd



Organiser



An Initiative Under

BuildSG

