

Annex 2

Yishun Community Hospital's unique construction methods

Yishun Community Hospital's main contractor Kimly-Shimizu JV has to work against a tight timeline to get the community hospital ready for opening by December 2015.

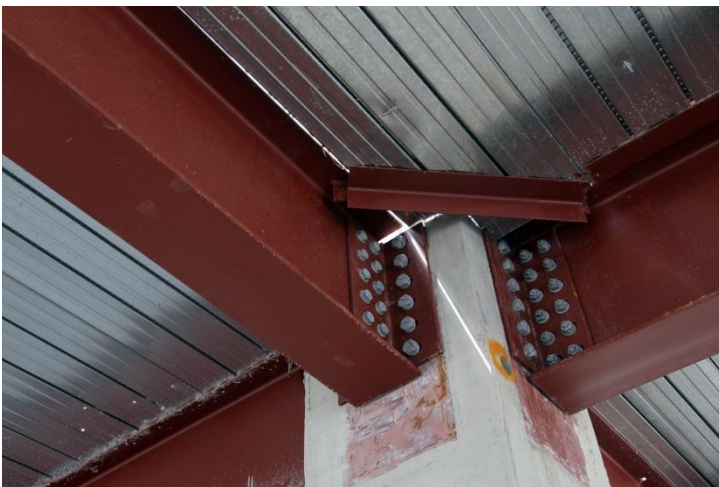
To get around the time challenge, the main contractor adopted several innovative ways to build the superstructure of the hospital.

Using steel & pre-cast columns for superstructure's foundation

YCH's superstructure is built using steel, a more expensive but lighter and more durable material, compared to concrete, which is used traditionally. The superstructure columns are erected using a mix of steel structural beams and precast columns (PCSS). YCH is the first public sector hospital to be built using the PCSS construction method.

Benefits

- 40% time savings as structural elements are fabricated off-site and installed immediately on-site
- 30% manpower savings as in reduction of on-site labour
- Minimises noise & air pollution
- Environmentally-friendly as construction materials are recycled for future construction



Steel structural beams (in red) and pre-cast concrete columns form the superstructure of YCH.

Hi-res photos available in thumbdrive for Media's use

Building from level one upward and downward simultaneously

The superstructure is built using a building method where construction started from level one upward and downward simultaneously. This differs from the conventional way of construction, where work will start sequentially by excavating from the lowest floor, usually the basement, and then move to the upper levels. The YCH team had to adopt this innovative construction method to meet the tight construction deadline of 22 months.

- Estimated time savings of 4 months on the construction duration



A pre-fab yard onsite helps to facilitate the construction process of YCH through time savings.



A pre-fab staircase being assembled on site.

Fire-proofing superstructure for safety

A fire-proof wrap is used to fire-proof the steel structure as opposed to the traditional type of spray-on fire proofing products such as vermiculite.

Benefits

- Removes the need to clean up or protect surroundings; thus resulting in time savings.

