

Project:
EMAX Phase II

Location:
Kowloon Bay International Trade and Exhibition Centre (KITEC)

Type:
Trade Mart and Commercial Building

Scheduled Time of Completion:
Jan / Feb 2014

Optimising Cinema Design, Project Time and Costs

“It took one week to visualize everything, which can save two months in construction time. BIM helps keep risk to a minimum.”

Eric Lam,
General Manager
(Project Management),
Hopewell Property and Facility Management Limited

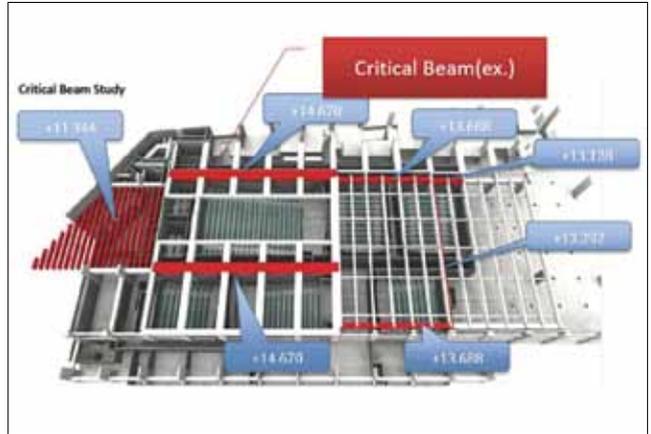


Image courtesy of Hopewell Property and Facility Management Limited

Hopewell Property and Facility Management Limited is converting a bowling alley into a 9-house cineplex, in Kowloon Bay International Trade and Exhibition Centre. This is a relatively challenging addition & alteration (A&A) project, and BIM is helping in ways including visualizing the spatial quality of cinema houses, optimizing sightlines, minimizing site coordination time required, and reducing costs for abortive design.

BIM Partners Involved:

- Adeas Limited
- Reynold (HK) Construction Consultants Limited
- JMK Consultant Engineers Limited
- Sweett Limited
- isBIM Limited

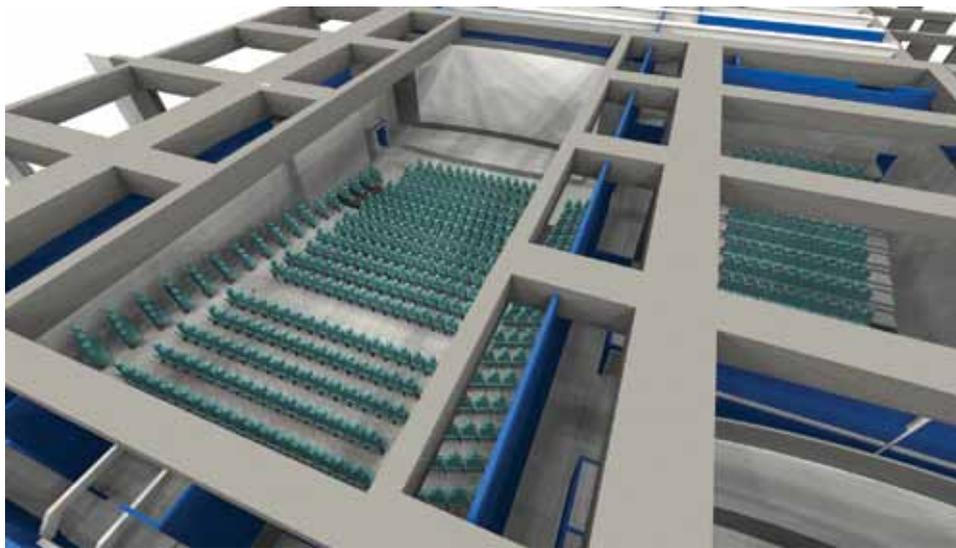


Image courtesy of Hopewell Property and Facility Management Limited

Audience-eye views

"This is a difficult project compared to ordinary A&A," says Mr Eric Lam, General Manager (Project Management), Hopewell Property and Facility Management Limited. "We are working in an existing building, with different existing structural systems and constraints, and the cinema space has a roof soffit varying in height from 6 to 12 metres." Mr Lam suggested deploying BIM, for the first time in a Hopewell project.

"As we are building 9 cinema houses with different sizes, we emphasised the spatial quality and visual corridors – to make sure that everyone in the audience, from the first row to the last, will have a good view," says Mr Lam. "We also wanted to maximize house and screen size within such a tight space." In the BIM model, the team built the visual space to assess the size of cinema houses, sightlines, including with silhouetted figures representing people seated in front.

Tight schedule, and tight spaces

The project schedule is very tight. "We have to complete the project in 5 months and so we need to plan to build it in a more efficient way," says Mr Lam. "To do so, we spent more time in the design stage through developing a BIM model. This was not so complicated – it took one week to visualise everything including E&M services, which can save two months in construction time. BIM helps keep risk and abortive works to a minimum."

The project team also used BIM to resolve the screens replacement matter, which have a working life of around 4 to 5 years. "We learned that some cinemas have trouble replacing screens, so stressed the use of BIM to make sure everything needed to be replaced can pass through the doors and passageways, in particular the silver screen," says Mr Lam.

Space is tight in projector rooms, where BIM revealed that initial designs lacked sufficient headroom, and helped figure out the tilt angles and levels for the projectors.

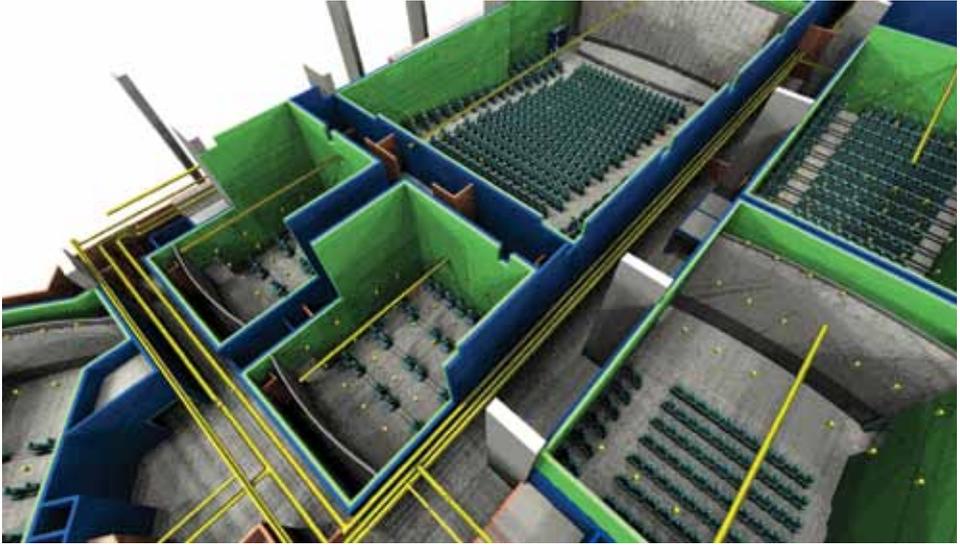


Image courtesy of Hopewell Property and Facility Management Limited

Space within ceiling void is tight, in contrast to maximizing the houses and screen sizes. E&M services were arranged with the assistance of BIM to work out a workable and feasible layout so that site coordination works for combined services could be minimised.

Win-win software

“We also have inside ceiling, Dolby Atmos overhead speakers, which could not be flush with the ceiling soffit,” says Mr Lam. “BIM proved very useful for coordinating this system, helping us communicate with the acoustic engineers to ensure best audio quality in the cinemas, and ensuring we could have maximum screen sizes without being obstructed by the speakers.”

Reflecting on use of BIM for coordination, Mr Lam says: “For professionals, we used to do it ourselves manually with cross reference amongst different disciplines but it takes times, though BIM is a smarter and more efficient way. Clients benefit from minimizing risk of future abortive works. So it’s the win-win software for all parties.”

The BIM model also helped save costs for effective design like installation arrangement of acoustic panels, each of which requires isolation brackets. The project team tried an alternative design with larger panel size. “Using BIM to produce detailed design for the wall panels, we found we could save 600 brackets,” says Mr Lam. “We might have tested the design in traditional way, but it may have taken two or three days, while with BIM it took just a few hours. Using BIM in this way, we can maximize the design, and minimise wastage. Wish that more professionals can use BIM to produce design.”

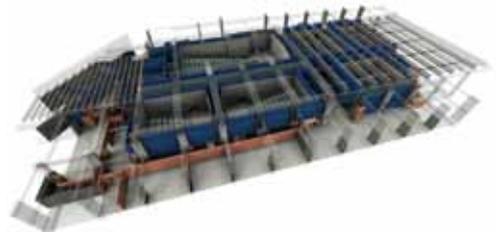
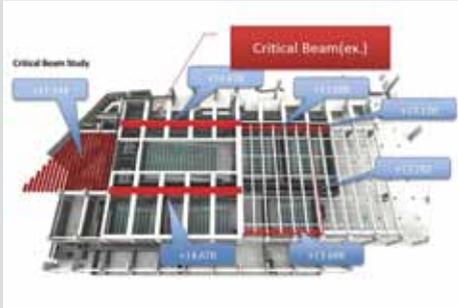


Image courtesy of Hopewell Property and Facility Management Limited



About Hopewell Holdings Limited

Hopewell Properties and Facilities Management Limited is a subsidiary company of Hopewell Holdings Limited for properties enhancement works.

The Group, with strong expertise in investment, development and engineering of major projects, focuses on Hong Kong and the Pearl River Delta region in the PRC and is founded on visionary strategic initiatives.

The involvement by the Group in the PRC projects can be traced back to the adoption of the Open Door Policy in the late 1970's. The Group's first project in the PRC was the 5-star hotel project in Guangzhou, the China Hotel. Since then, the Group invested in major power and transportation infrastructure projects in the Pearl River Delta region, initiating the trend of investment in such areas by Hong Kong enterprises, which included:

- The Shenzhen Railway Station Customs and Frontier Inspection Building in Lowu,
- The Huanggang Crossing Border Control Complex,
- The 122.80-km Guangzhou Shenzhen Superhighway,
- The 38-km Guangzhou East-South-West Ring Road,
- The 102-km Shunde Roads,
- The 40-km Shunde 105 Road,
- The Boca Tigris Bridge,
- The 15-km Guangzhou Zhuhai Superhighway (Phase I),
- The Shajiao 'B' and 'C' power station projects.

The strategy of the Group is to capitalize on the Pearl River Delta regional demand induced by continued economic growth in the PRC. Building on its existing presence, Hopewell maintains its position as a pre-eminent developer. Over the years, the Group developed many large-scale projects in Asia, playing a significant role in improving the economies in many communities and raising the living standards of their people.