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BUILDING JOURNAL
HONGKONG • CHINA • OCTOBER • 2005

AIG Tower

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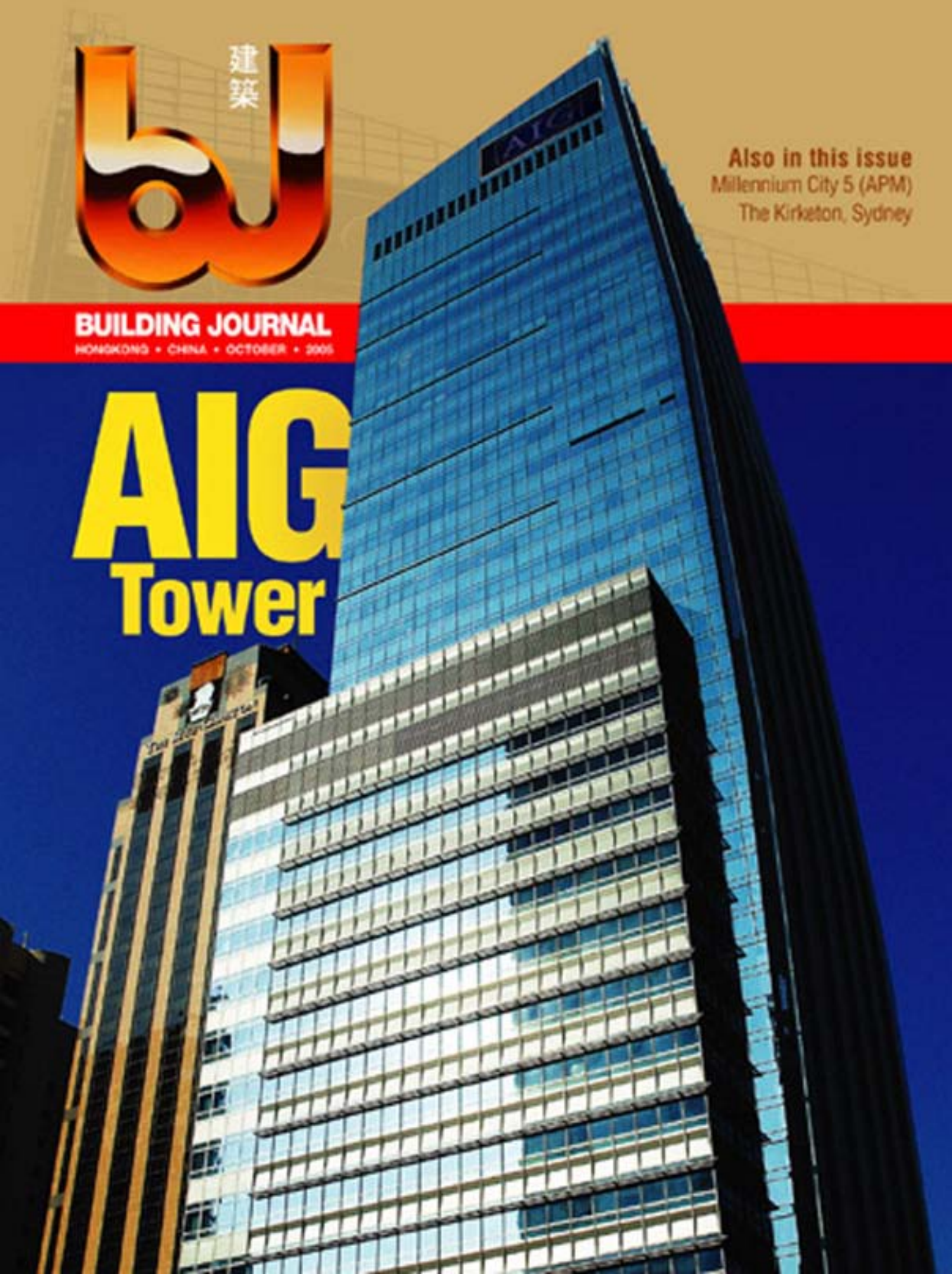
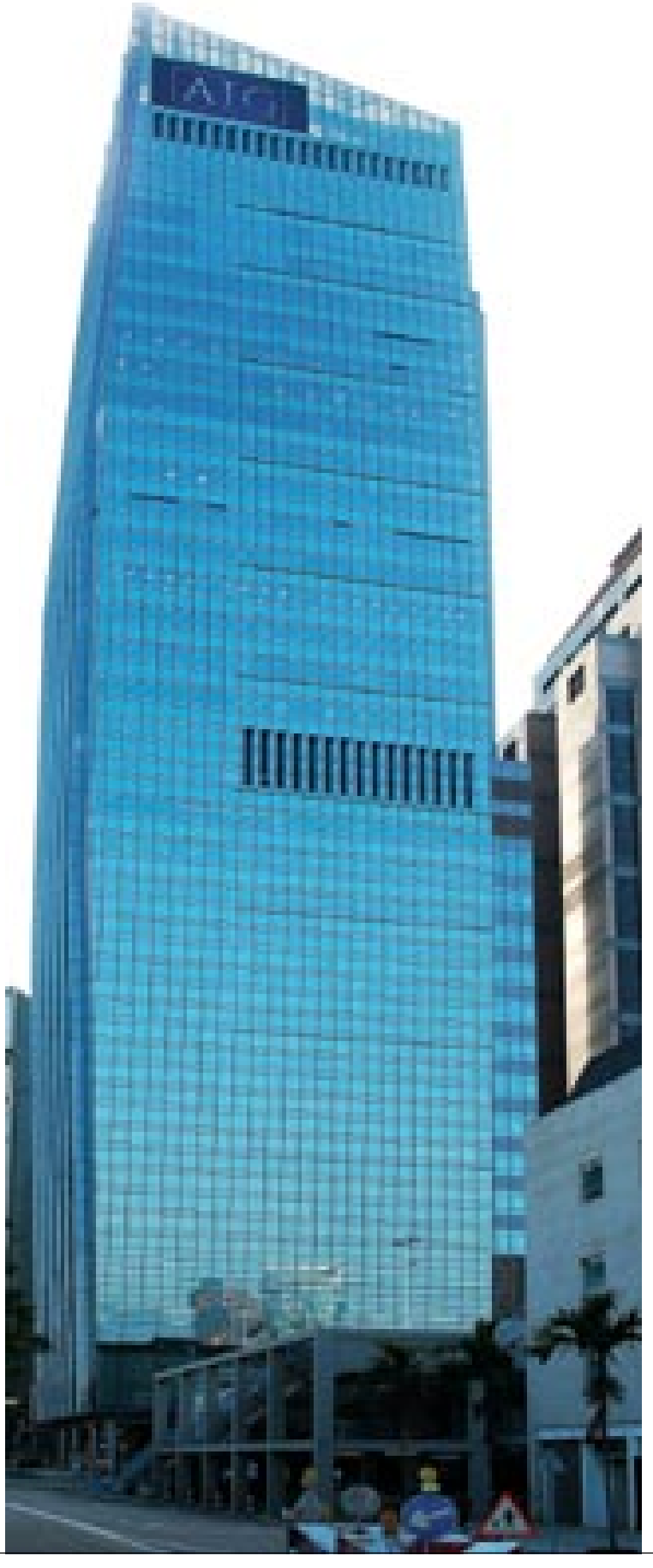


AIG Tower

Environmentally Friendly and Sustainable Development

by Jerome Wong, Aedas Ltd



AIG Tower, located at the site of the former Furama Hotel in Central, is a 35-storey grade-A office building, with a gross floor area of 39,000 square metres. Demolition of Furama Hotel commenced in December 2001, and the construction of the new tower was started in November 2002 and was completed in May 2005. The building has participated in the Hong Kong Building Environmental Assessment Method (HK-BEAM) and has achieved an Excellent rating in 2005.

Photos: www.scomposition.com

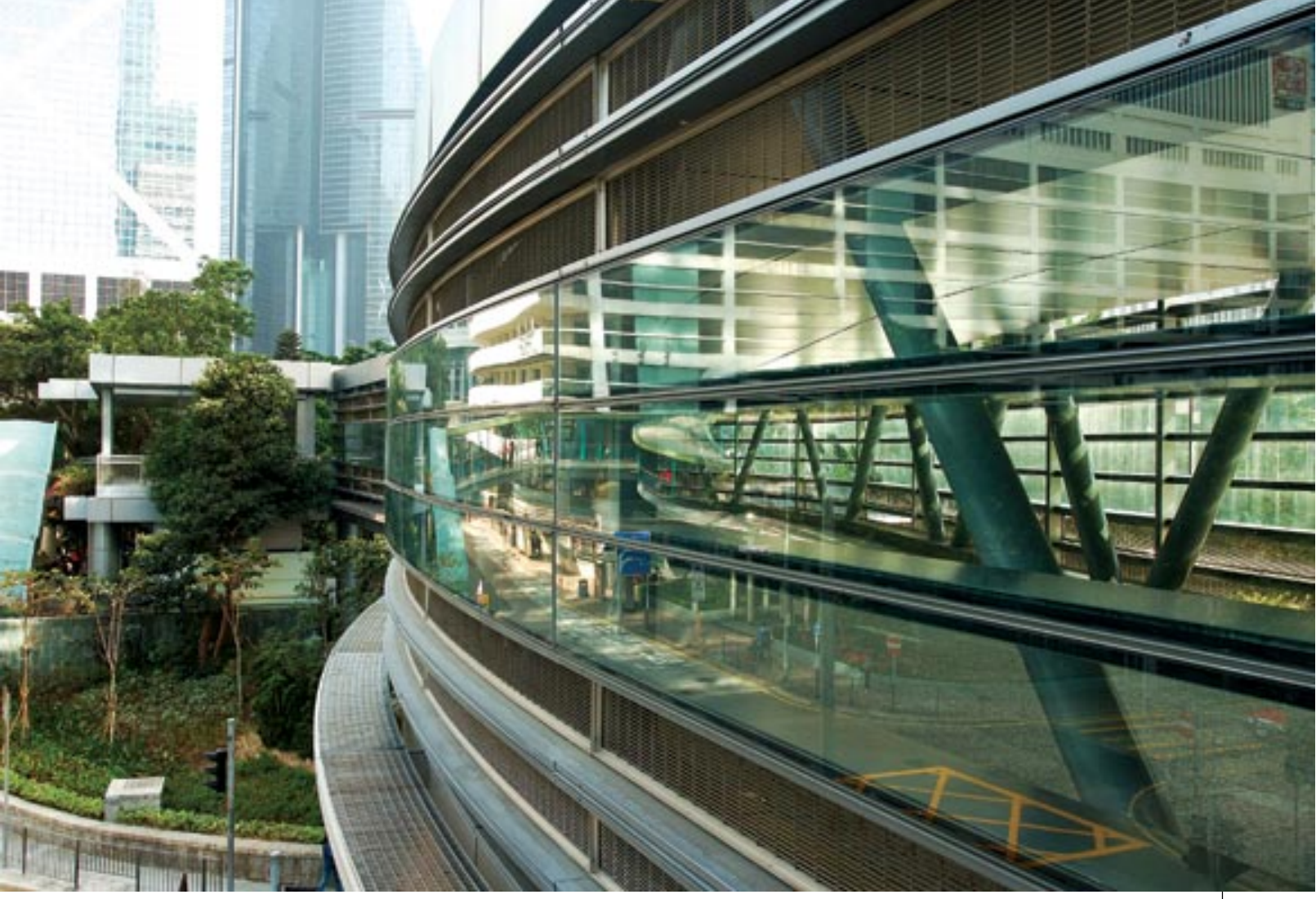
Different from the configuration of conventional buildings in Hong Kong with a 100% site coverage podium and a 65% site coverage tower on top, AIG Tower has its footprint set back by 20% to provide greenery and public passage at the ground level to improve the environment and the streetscape and to promote breezeways. The lower portion of the building up to 18/F has a large floor plate size of 80% site coverage providing modern flexible office space suitable for large multi-national corporations. Such larger floor plates reduce the number of storeys of the building, thus with less floors of building core, lift shafts and stairs, and effectively reducing the construction materials used. The larger floor plates also reduce the building perimeter/external wall to floor area ratio, which save materials used in the external curtain wall, and reduce the overall heat gain thus saving energy used for cooling.

The Main Office Lobby is raised to the Second Floor, while the Ground and First Floors are dedicated for use as a public passage, with a new footbridge constructed to connect to Chater Garden and the existing footbridge of Murray Road Carpark Building to the south, forming part of the elevated walkway system to Admiralty and Cheung Kong Centre. Provision has also been allowed at the First Floor for future connection of elevated pedestrian deck to the Central Reclamation Area to the north. This provides elevated public amenity and improves the pedestrian walking environment.

Various building systems, materials and construction techniques, which are environmentally friendly, are applied in the

Photos: Marcus Oleniuk

Photos: www.scomposition.com

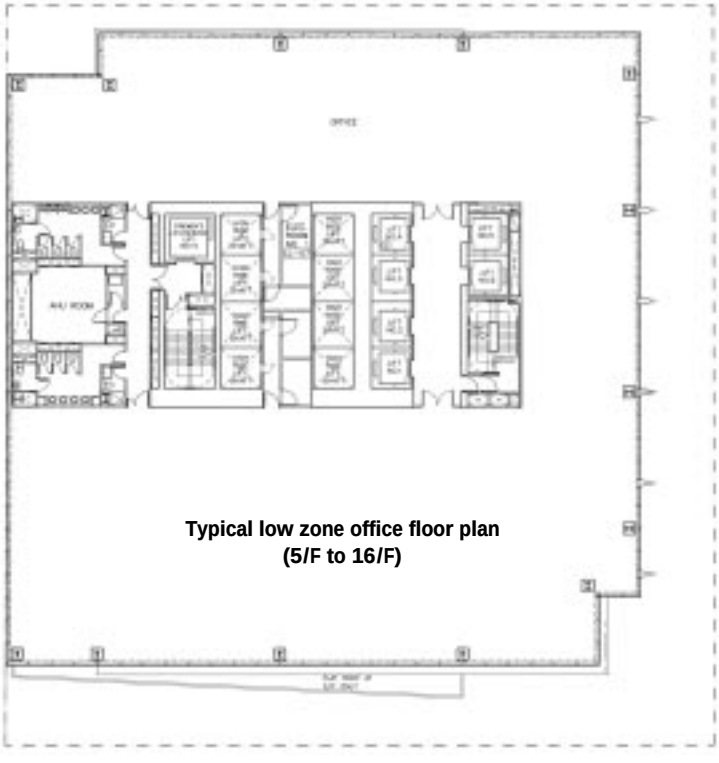


design and construction of the building.

The external wall is a fully-unitised curtain wall with double-glazed insulated glass units with a low-e reflective coating for best heat and noise insulation performance.

Sun shading devices are provided to the curtain wall on the south elevation. The core of the building is pushed to the west with the external curtain wall finished with solid metal cladding to minimise the heat gain in the afternoon and save energy for cooling.

The existing basement retaining walls and pile cap of the former Furama Hotel are also reused as part of the new basement structure of AIG Tower. This minimises the impact to the surrounding structures and environment, saves time, energy and resources in the demolition and excavation works, and minimises the demolition and construction waste and debris resulting in less landfill.



Typical low zone office floor plan (5/F to 16/F)

The structure of the building is reinforced concrete core with structural steel frame and composite slab structure. Since the configuration of the core wall is similar throughout the tower, it was constructed with a self-climbing form, which re-used the same set of formwork throughout the tower, and was jacked upwards after concreting of each section of core wall for the construction of the next section. This system allows a fast construction cycle of 4 days per floor for the core and efficiently reduces the use of formwork material. The structural steel frame members are all precisely prefabricated offsite and assembled on site, and are recyclable materials. The

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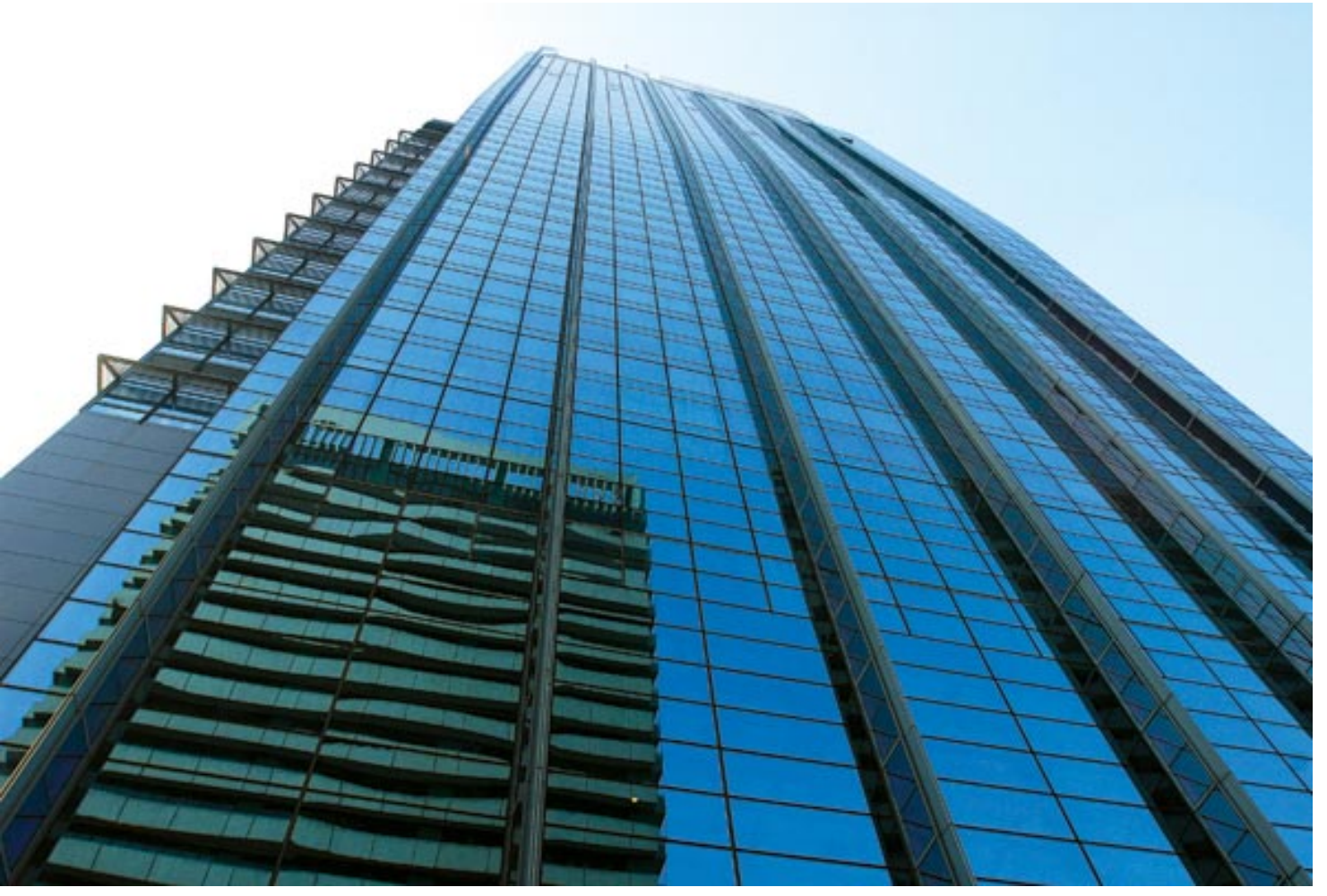
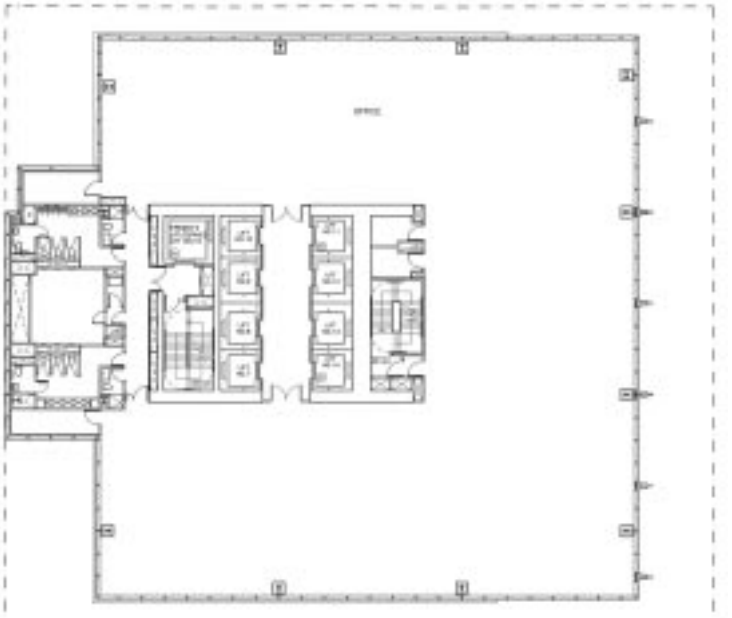


composite slab structure is a reinforced concrete slab with the steel deck as the reinforcement. The steel deck not only works as part of the structure, but also acts as a permanent left-in formwork, which totally eliminates the need for formwork and propping for construction of floor slabs. This saves a lot of timber material and energy as compared with traditional construction methods still often used in Hong Kong.

Apart from the unitised curtain wall and the steel frame structure, there is also a wide use of prefabricated components inside the building, which provides a cleaner, safer and healthier site working environment. Examples include



Typical high zone office floor plan (19/F to 35/F)

Project Data

Location	1 Connaught Road, Central, Hong Kong
Developer	Bayshore Development Group Limited
Completion	March 2005
Building Height	185 m
No. of Levels	39
GFA	39,000 sq m
Site Area	2,269 sq m

Consultants

Design Architect	Skidmore, Owing & Merrill LLP
Project Architect	Aedas Limited
Design Structural Engineer	Leslie. E Robertson Associates
Local Structural Engineer	Maunsell Structural Consultants Ltd.
MEP Engineer	Flack + Kurtz Inc.
	WSP (HK) Ltd.
Lift	Van Deusen & Associates
Traffic	MVA (HK) Ltd.
Quantity Surveyor	Davis Langdon & Seah (HK) Ltd.
Main Contractor	Hip Hing Construction Co. Ltd.

the specifying of dry wall systems for the partitions inside the building which minimises concrete and wet trades resulting in a cleaner site, and the use of a specially designed stairform which is a standardised and prefabricated permanent left-in steel formwork system for construction of stairs which minimises the use of timber formwork and the resulting construction waste.

Other environmental features of the building include solar panels at the roof to provide and supplement the hot water supply for the office executive washrooms.

AIG Tower is in many ways, both from design and construction, a highly environmentally friendly and sustainable development, and is in the Hong Kong context a leading benchmark for HK-BEAM.

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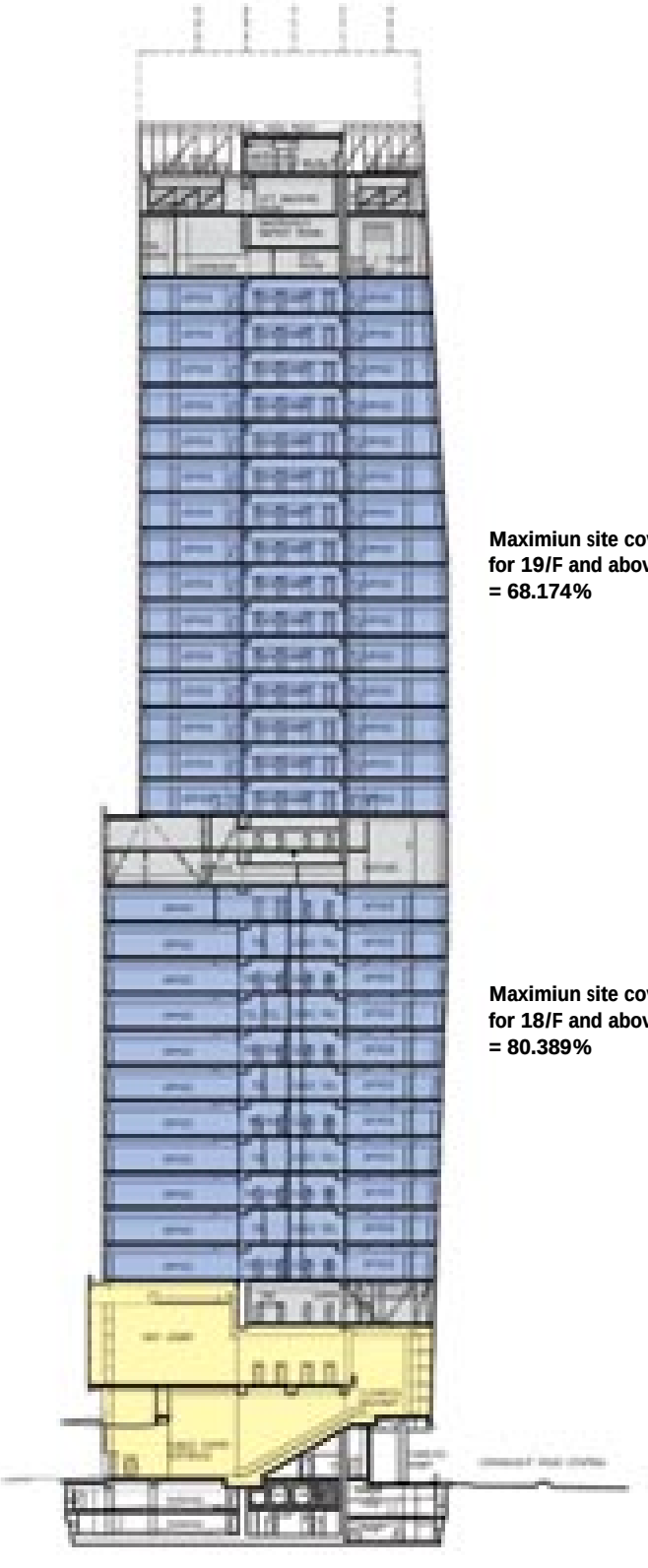

Maximiun site coverage for 19/F and above = 68.174%

Maximiun site coverage for 18/F and above = 80.389%