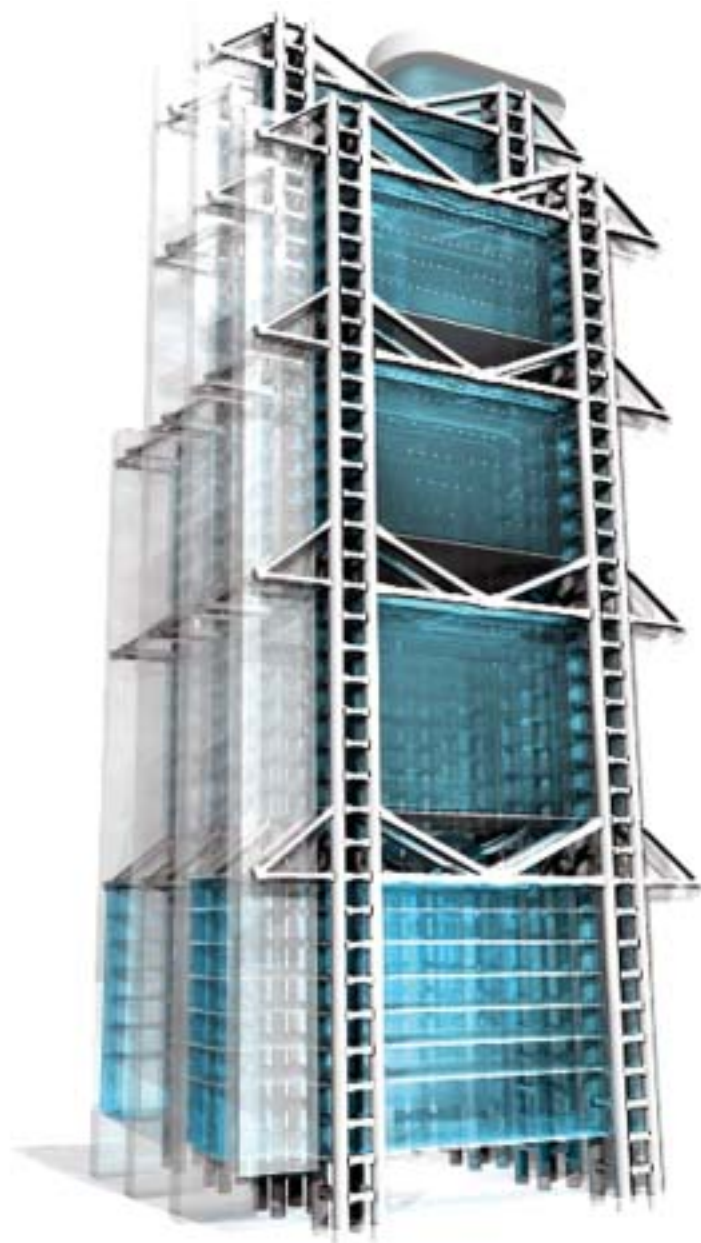


Hong Kong Bank

Norman Foster

The new Hong Kong Bank building is the headquarters for the bank's international and Hong Kong operations, and serves as a local branch as well. It stands on a prime piece of property in Central Hong Kong, overlooking to its North Statue Square and the star ferry terminal, but stable functions which likely to retain the new building's view of the harbor in perpetuity.



Exterior Perspective



The Hong Kong Bank rises 590 feet above Des Voeux Road on its north side-47 floors above ground, four below- and has a gross area of over one million square feet, with net floor areas of up to 29,000 square feet.

The new headquarters for Hong Kong Bank, program called for a banking hall, vaults, offices for various administrative departments, a computer center, dining and conference facilities, executive offices, and an apartment for the bank chairman. The building contains 1,067,467 gross and 757,757 net-to-gross ratio of 1:1.4(1:1.2 on largest floor).

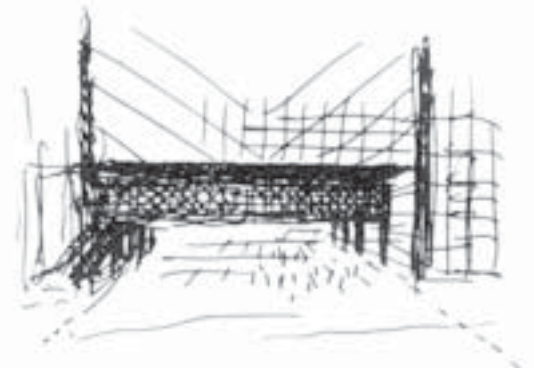


Interior Atrium Space

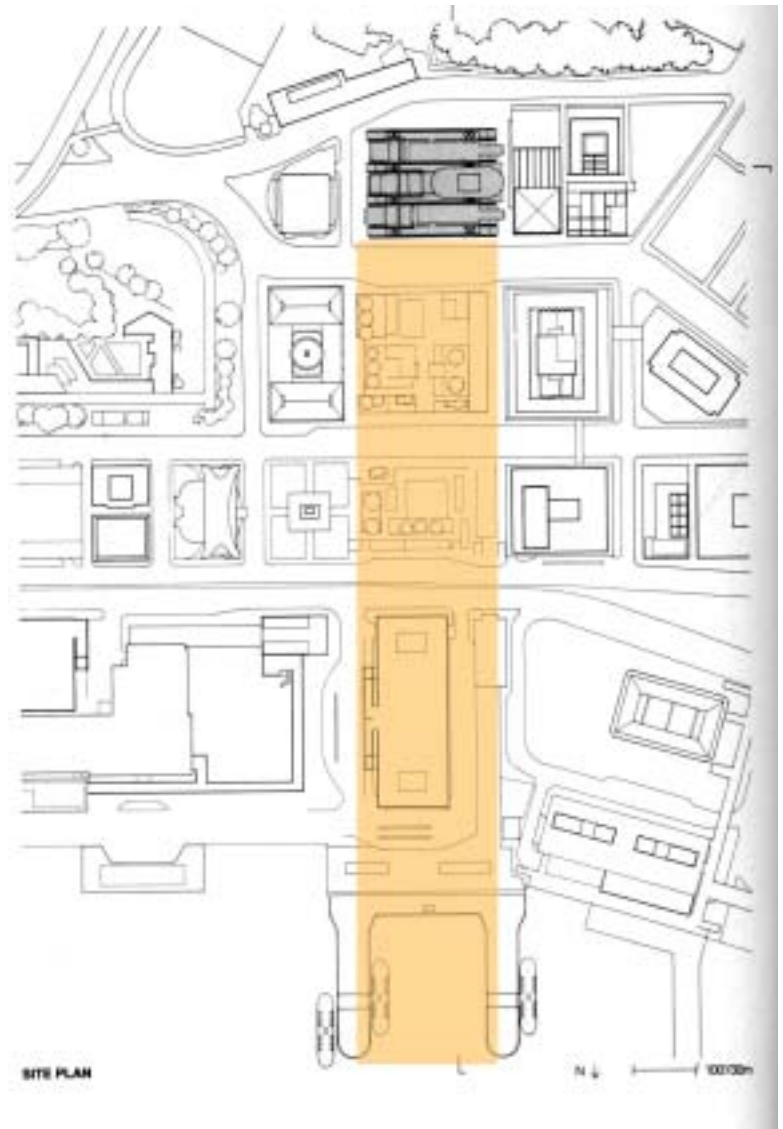


At ground floor level the public plaza which passes beneath the tower is interrupted by just eight steel masts that carry the entire weight of the superstructure down to bedrock, and transfer windloading to the foundation.

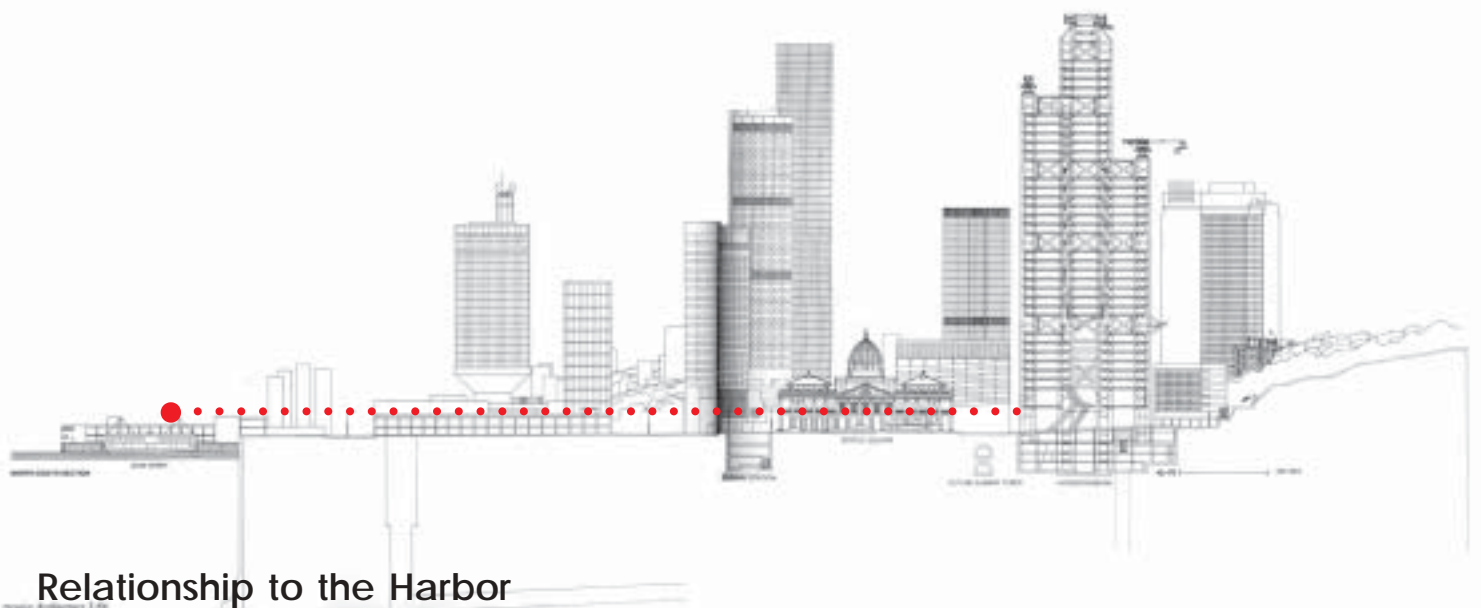
Furthermore, the uninterrupted public passage under the building precludes a sense of grand processional entrance. The two angled escalators (so positioned at the directive of the Chinese fung-shui, or environmental diviner, as are a number of other elements in the building) that lead up through the curved belly into the banking hall do provide an excitingly surrealistic effect, but do not make up for the paucity of the generalized plaza experience, paltry in comparison to associations with grand bank entrances and to the very expectations aroused by this proud and dramatic glass and aluminum structure.



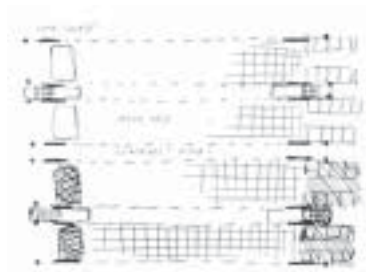
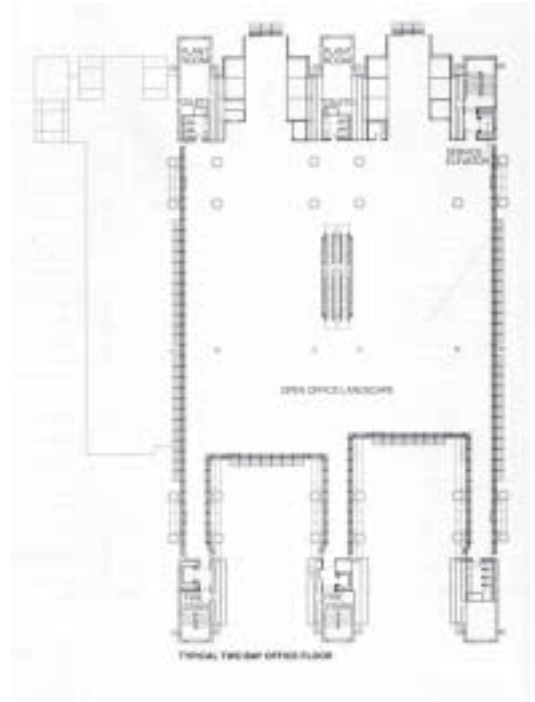
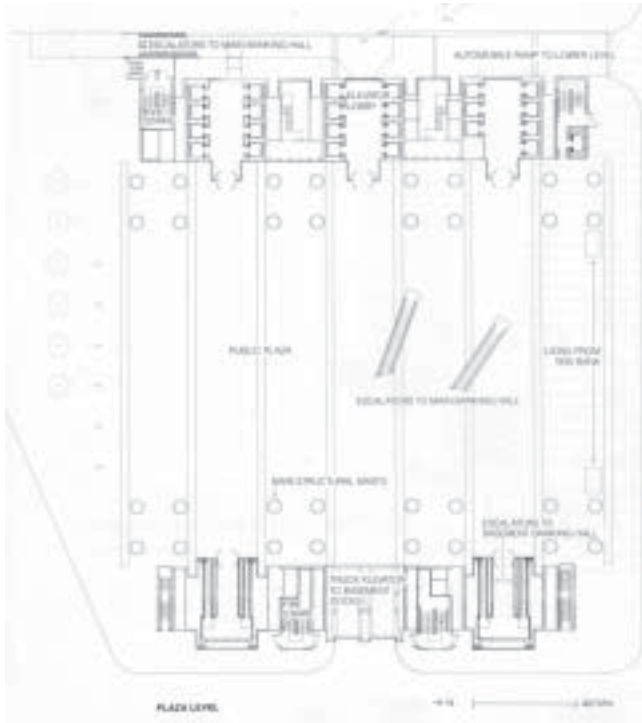
Public Plaza



The site plan and north-south section show the swath of open space that extends from the Star Ferry in Hong Kong's Harbor to the Hong Kong Bank. The section also indicates the location of the seawater tunnel and sunscoop, and the height of the building relative to surrounding structures.

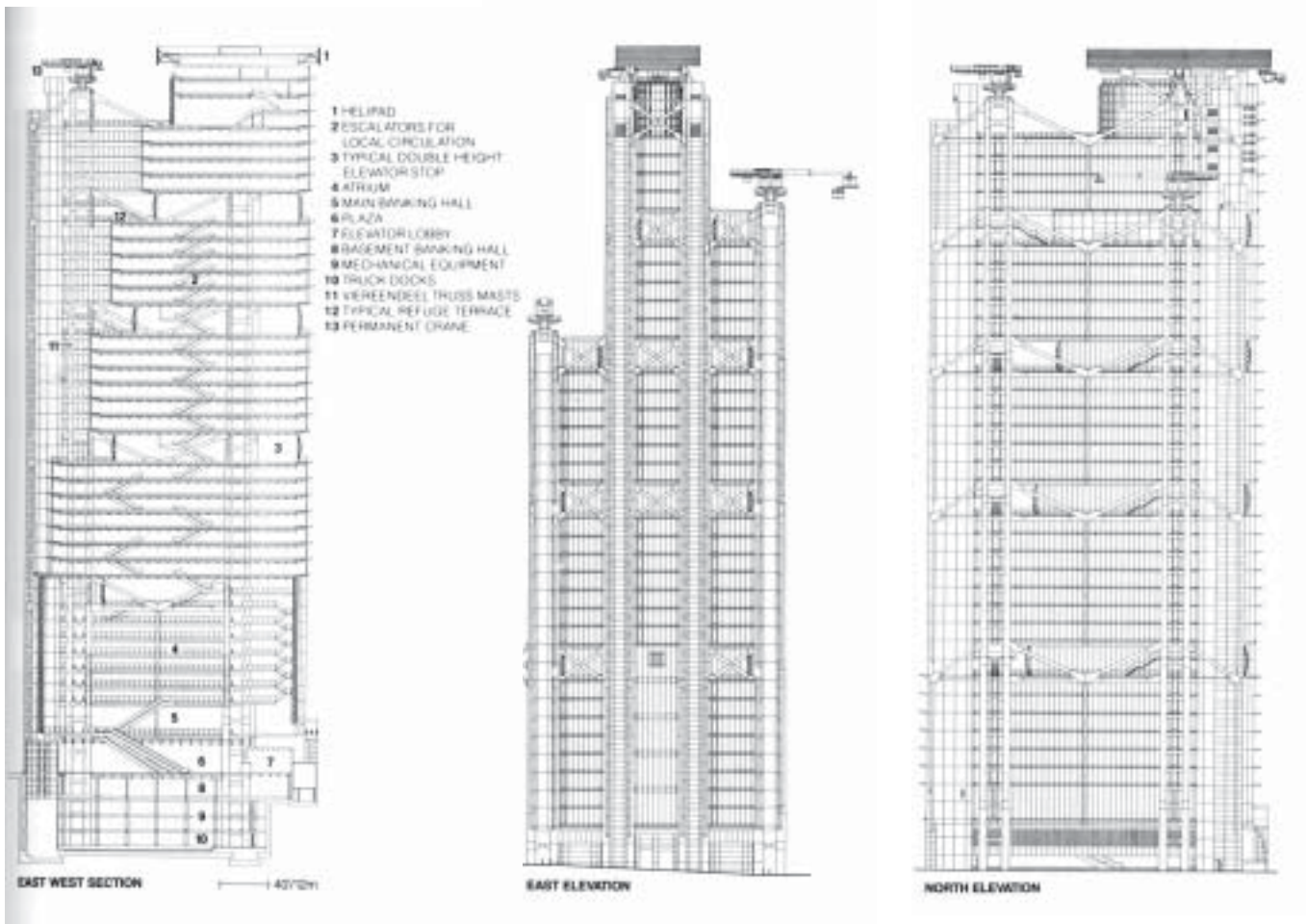


Relationship to the Harbor



The floor plans show how the building step back as it rises. The plaza is largely open except for passenger elevators and mechanical riser on the east side. Floors three through twelve have an atrium in their central bay. Floors thirteen through twenty-nine fill the entire three-bay, 180-foot width. From the thirtieth through the thirty-six floors, the building step back to two bays and above the thirty-seventh floor, used mainly for executive functions, the building is only one bay wide.

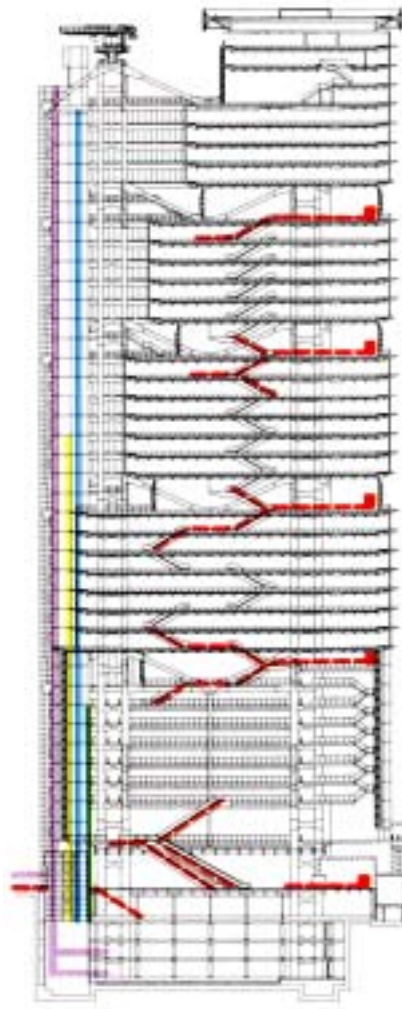
Plans



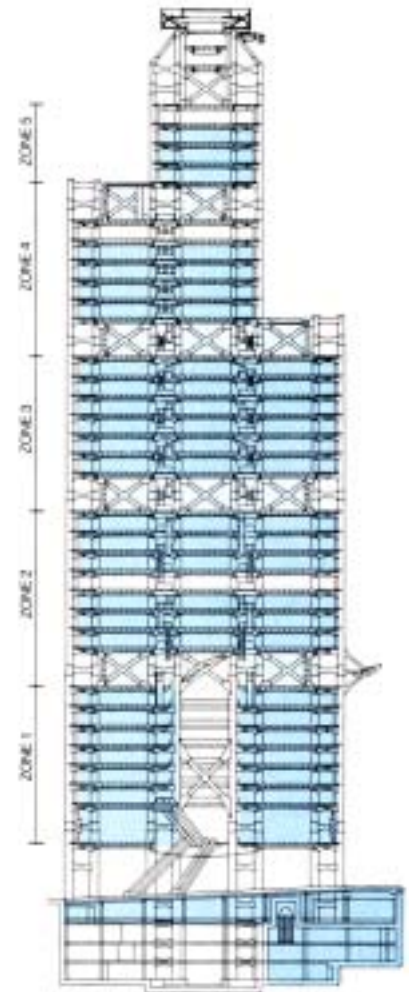
The east-west section reveals the stepping back of the floors along the building's east side to meet zoning requirements. Despite these setbacks, the stacks of service modules along the east side of the building rise vertically, making the building look rectilinear when viewed from the north or like a series of thin, "mechanistic" slices when viewed from the east.

Elevations & Section

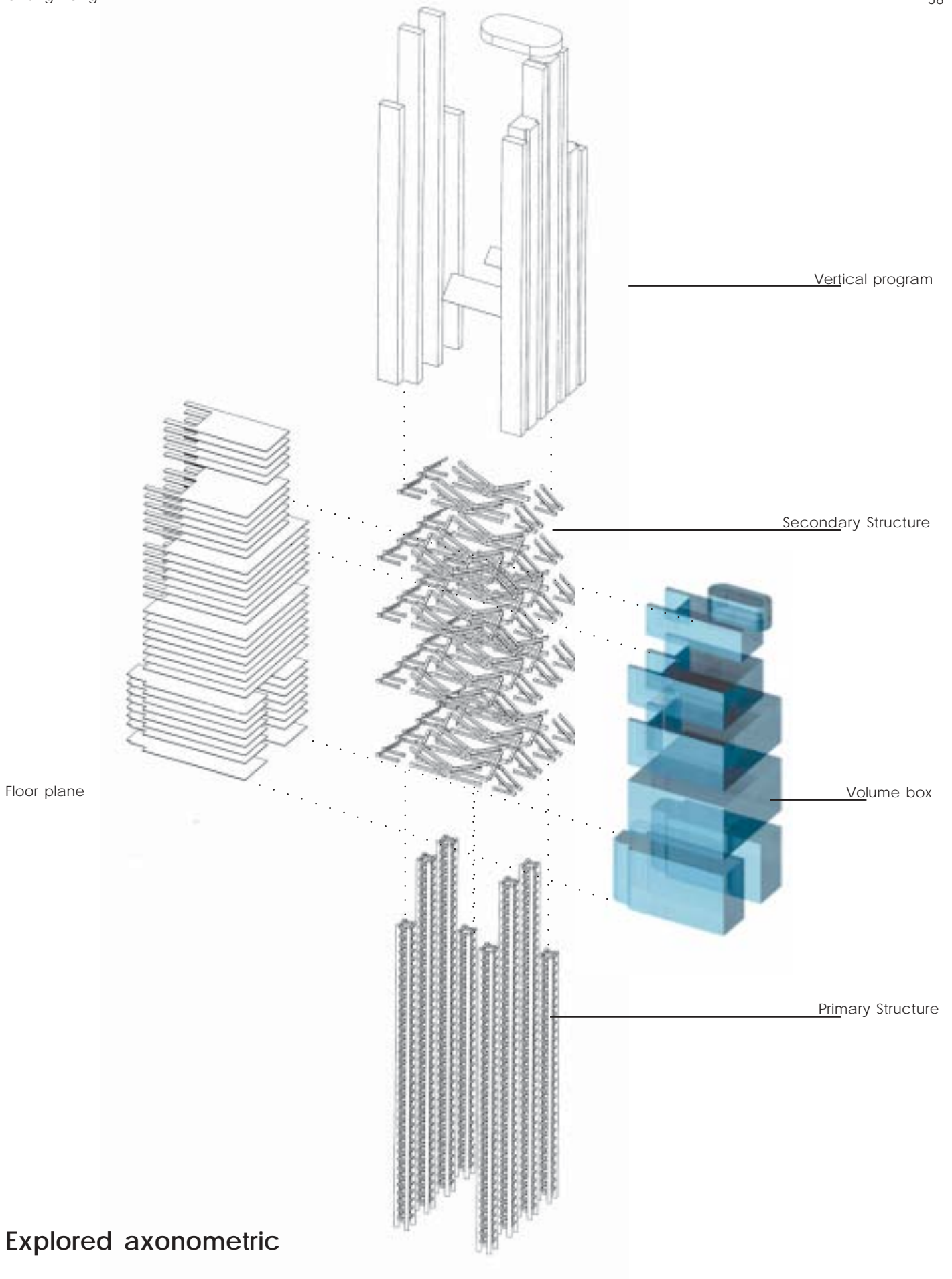
In **circulation**, functional zones correspond to these five structural ones: The truss levels are double height and have specialized common functions, and the highspeed elevators, located at the west side of the building, are programmed to stop at them. From these floors, vertical circulation is via escalators, to provide a more sociable way of moving through the zones than by elevator. Each **zone** accommodates a single bank function or several related ones, and the concept is that the zones are "social villages" subsets of the bank as a whole, with which the employees identify.



Vertical Movement/
Circulation



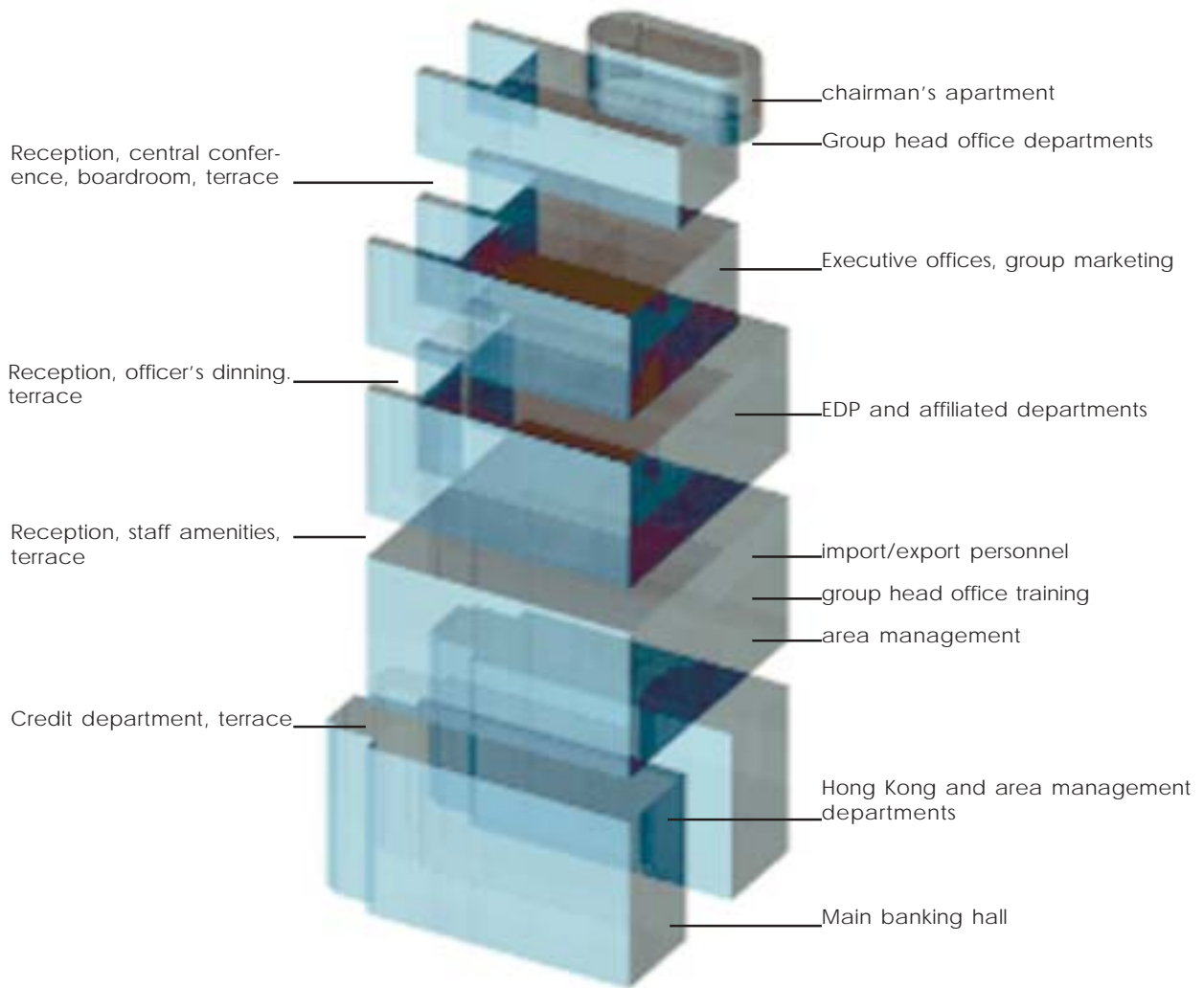
Vertical Organization/
Solid&Void



Explored axonometric

“in-between” Programs

“volume” Programs



To break down the anonymity of the building, Forster's first principle was to divide the 47-story structure into five above-ground zones, each served by a double-height floor. Apart from the escalators leading directly from plaza to banking hall, a total of 23 express elevators deliver staff and clients to the double-height floors, which correspond to the major structural transfer levels; circulation continues from these floors, upwards or downwards, via escalators, 60 in all.

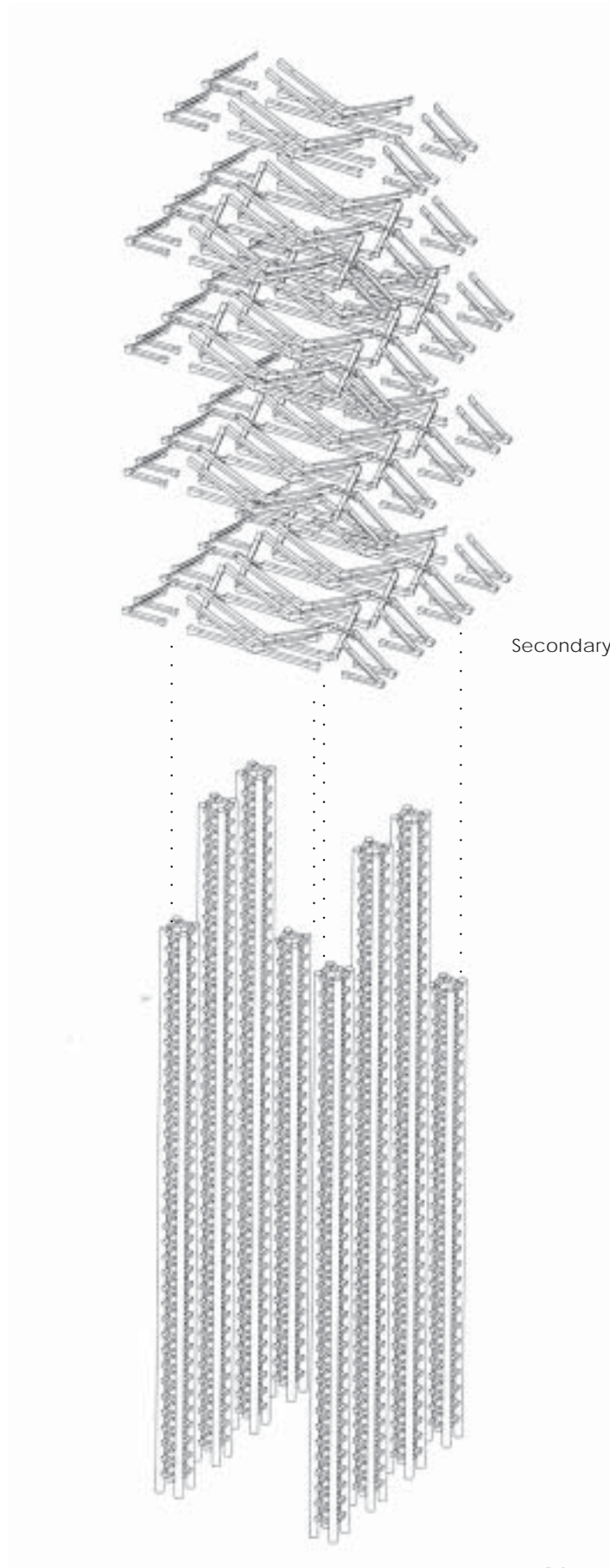
The zoning is well suited to the building's programmatic needs, permitting individual identities for its local, area, and international corporate headquarters functions.

The double height levels contains reception areas, fire refuge terraces, and specialized functions such as dining, recreation, and conference rooms.

Programs



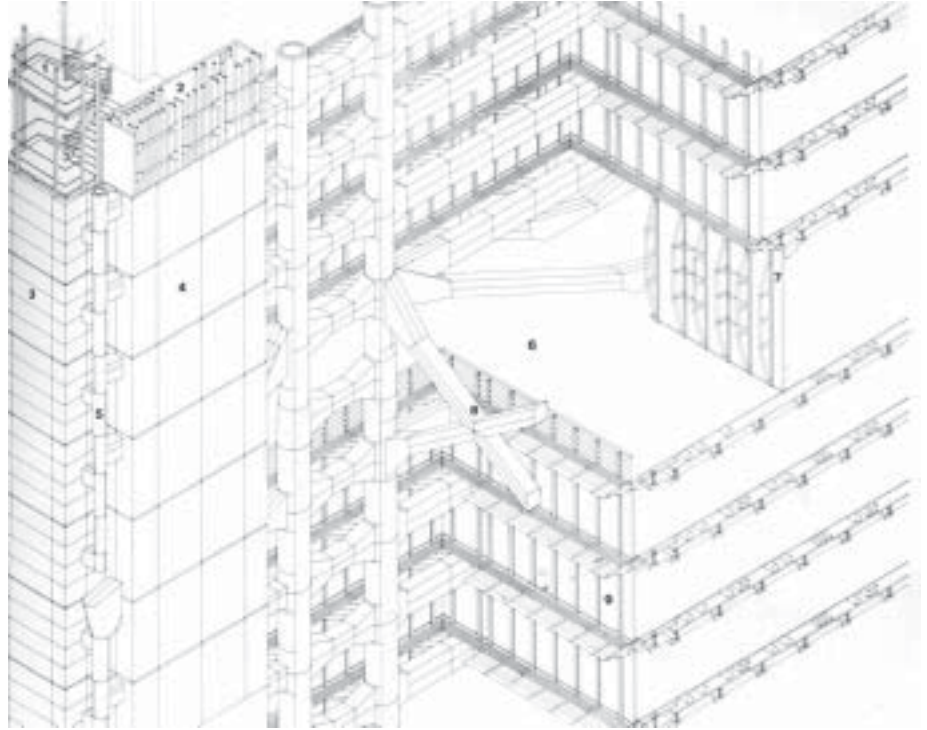
The **structure** of the building is its most striking aspect, visually and functionally. Both for reasons of flexible office planning and to allow clear views of the harbor from all points, the floors are virtually column-free. Four mast towers, each composed of four tubular steel columns connected by haunched beams to act as Vierendeel trusses, rise on either side of the building, the front and back pairs located outside the building envelope. At five intermediate levels, suspension trusses suspend the weight of the floors in the zone below.



Secondary Structure

Primary Structure

Structure



Outside each double-height space is a terrace used not only for recreation but also as refuge areas in case of fire. Evident is the suspension truss, as well as the typhoon bracing for the windows. The glass-enclosed escape stairways are finely detailed.

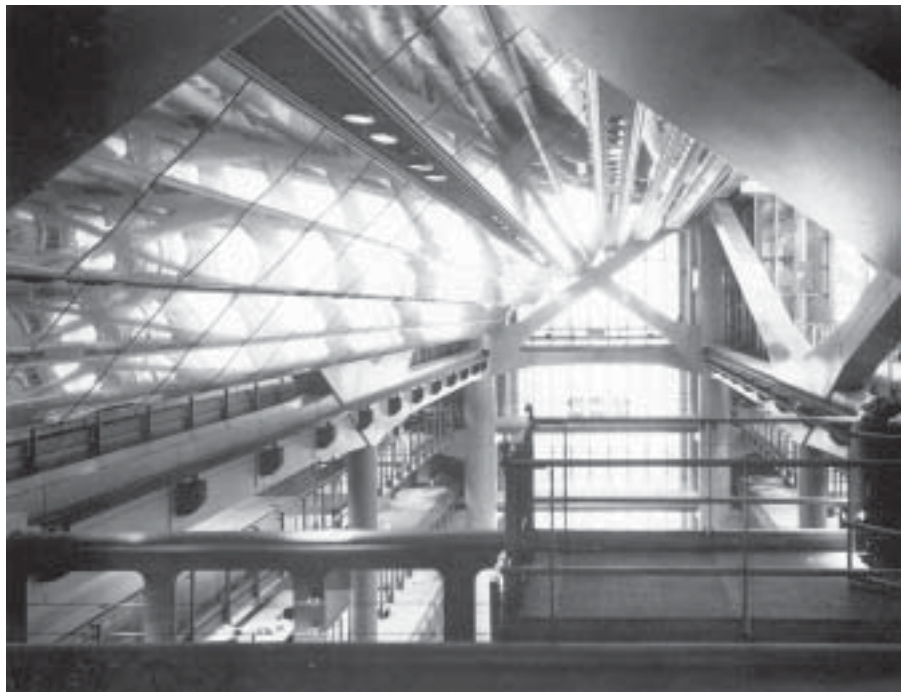
Visitors and employees alike move by elevator to the various double-story spaces in the building and, from there, by escalator to the intervening floors. At the central elevator core, Foster has pulled the floor away from the elevator shafts, allowing a view of them rising through the building. The dramatization of movement continues in the double-story levels, where switch-back escalators, along with trusses and hangers, sweep through the space, and where glass elevator shafts and escalator undercarriages reveal the motion of machinery.



Terrace



Looking up to the ceiling of the atrium on a sunny day one sees what appears to be some kind of glazed vault through which sunlight gently filters. But this cannot be, since there are 25 floors of offices above this ceiling. In fact it's all done by mirrors. This is the famous "sunscoop"--a huge periscope projecting sunlight onto the banking halls and through the glazed underbelly to the public plaza beneath the building. It has two main components: a bank of flat mirrors attached to the south side of the building at level 12 and a curved canopy of convex mirrors suspended over the atrium.



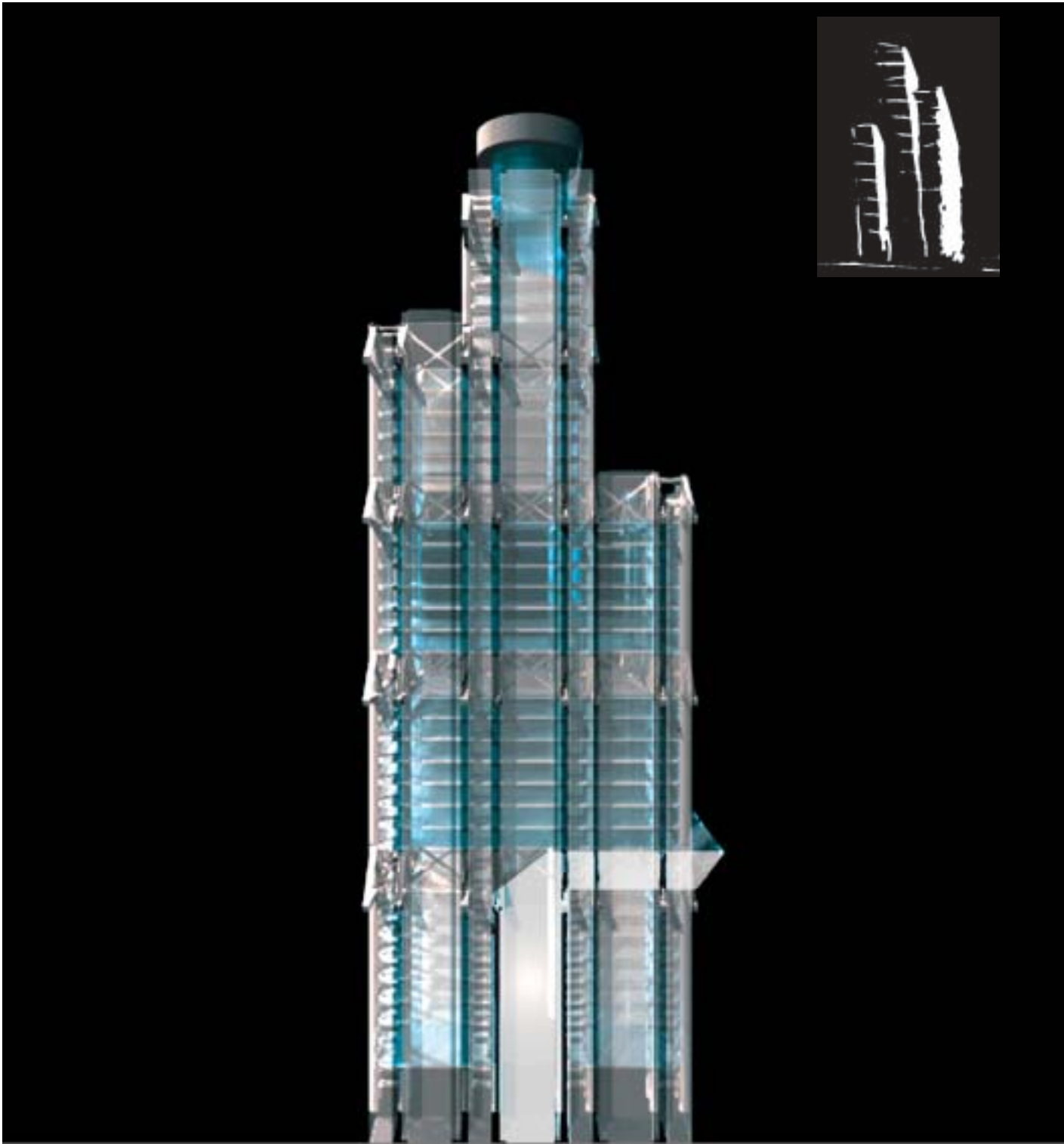
Sunscoop Light the Atrium



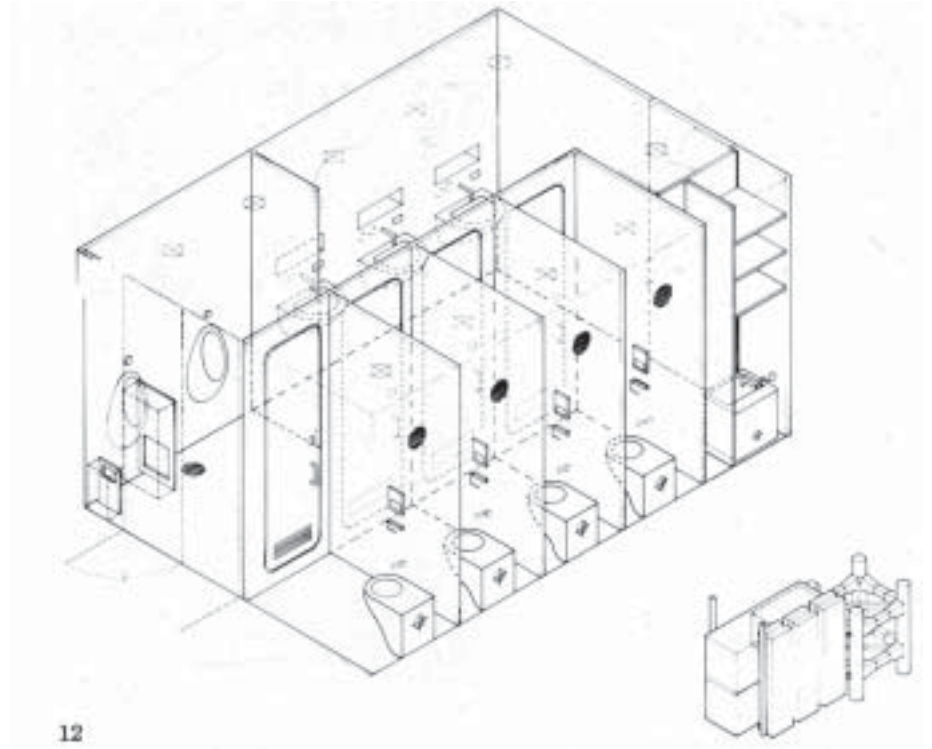
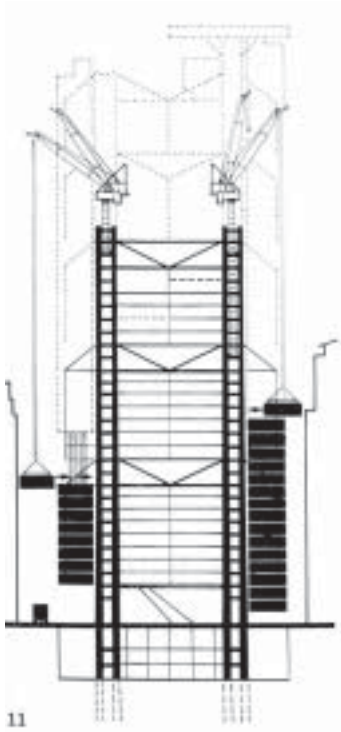
The mirrors move in one plane only, adjusting to the height of the sun above the horizon but not to its east/west position. This means that the light falling inside the building moves across the atrium space during the day, just as it would if shining directly through a skylight. The mechanism is basically the same as that for motorised external louvres, except that the motors are controlled by a computer programmed to know precisely how high the sun will be on every day of the year.



Sunscoop Light the Atrium



Sunscope
Light the Atrium



Speed, quality and compactness: these were the three main reasons for the decision to package the air-handling plant and lavatories into container-size modules made on a production line and shipped to the site fully fitted out, commissioned and tested. There are 139 modules stacked in tows on the east and west sides of the building. They are linked together by risers which were also prefabricated in two and three-storey high steel frames.

Modules



Foster's scheme for reorganizing Statue Square and the Star Ferry Terminal.



Between Hong Kong Bank & Harbor

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4. "Hong Kong Bank Annexe" Norman Foster-Building and Projects. Vol. 4. 1982-1989. pp. 18 - 29.



"Innovation occurs in almost every aspect of the bank's design and construction. For its efficient seawater cooling system, its bridgelike suspension structure, its socially oriented organization, and just the many products developed specifically for it, the bank will be long remembered."