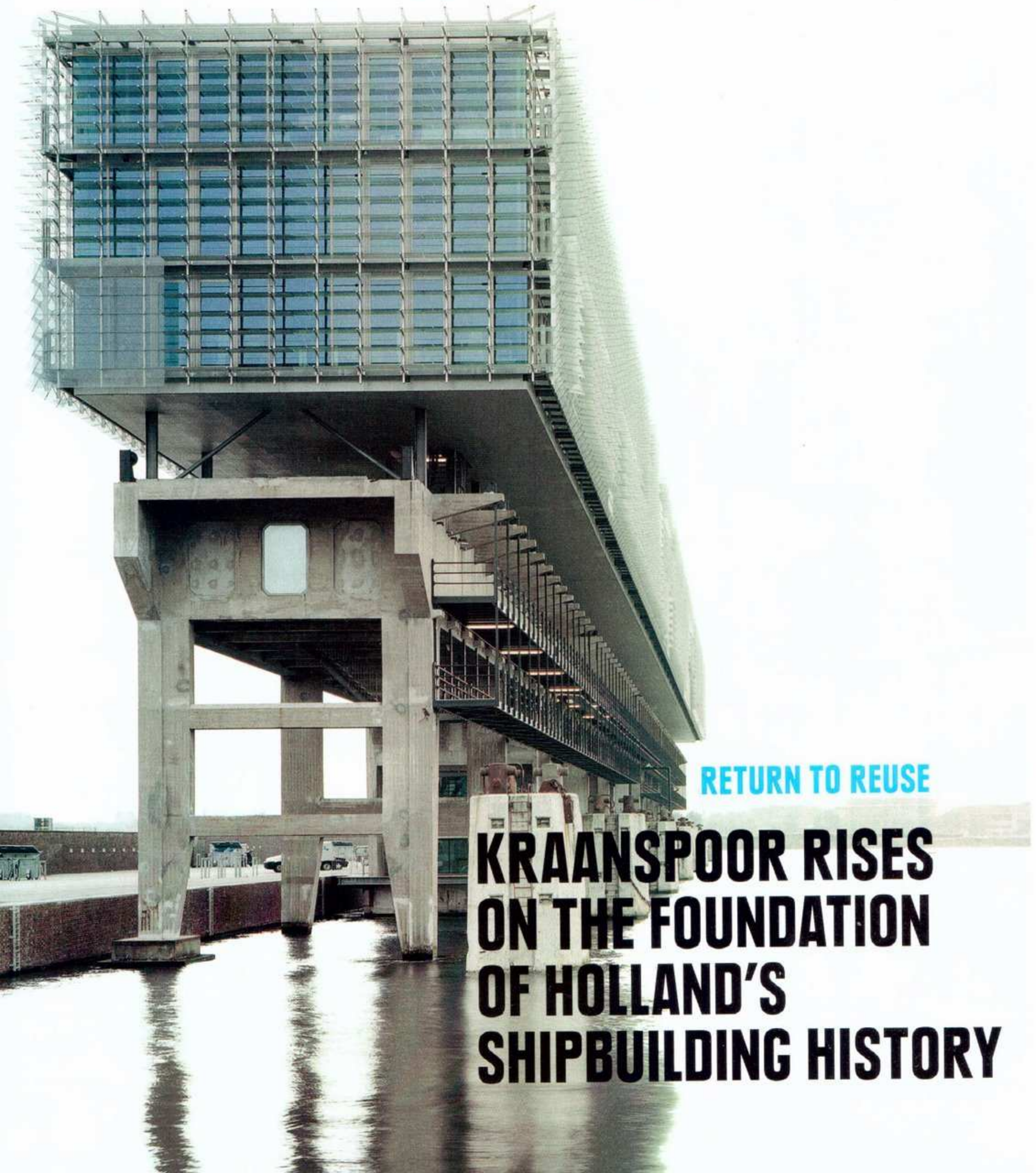


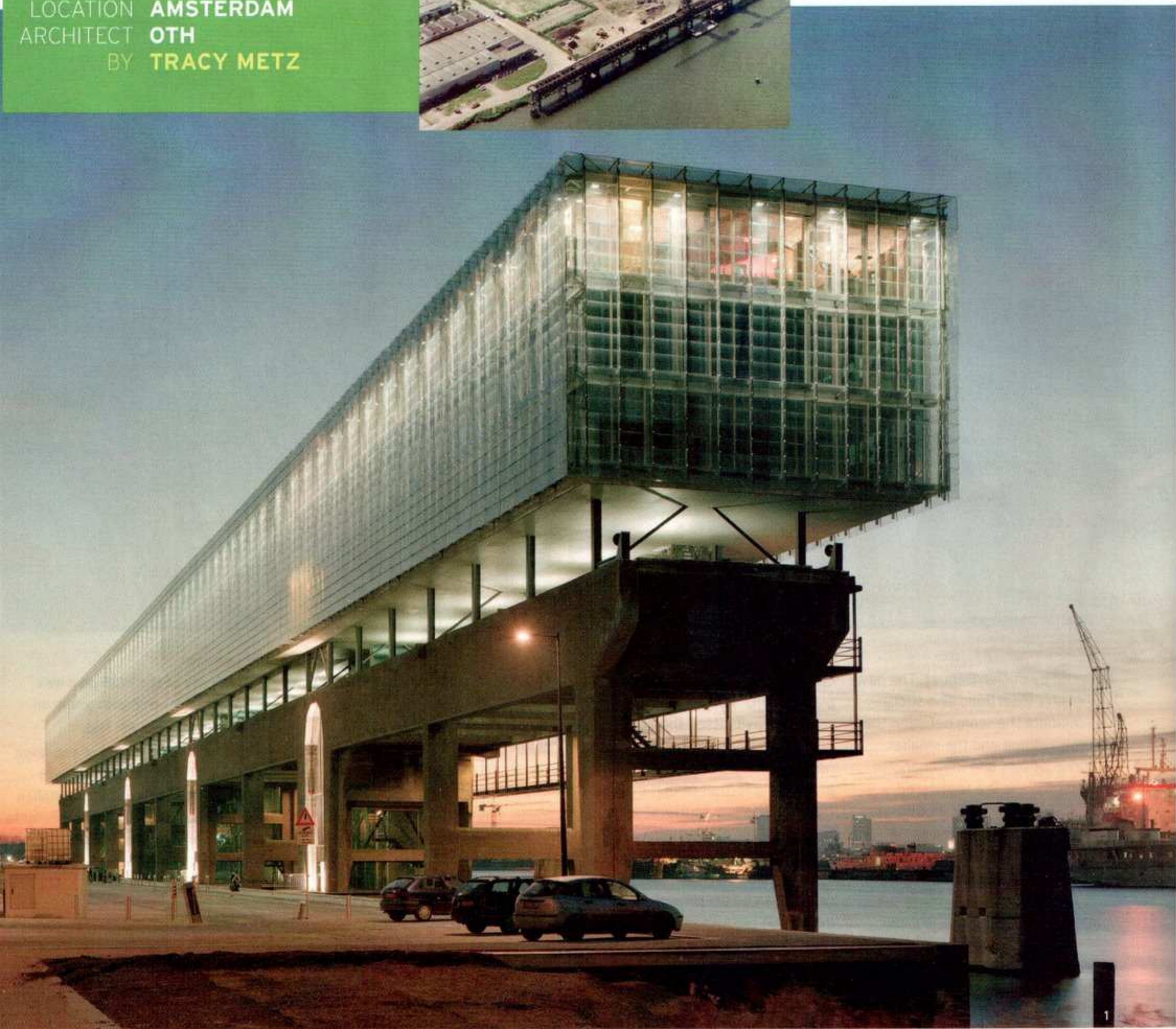
ARCHITECTURAL RECORD



RETURN TO REUSE

**KRAANSPOOR RISES
ON THE FOUNDATION
OF HOLLAND'S
SHIPBUILDING HISTORY**

PROJECT **KRAANSPOOR**
 LOCATION **AMSTERDAM**
 ARCHITECT **OTH**
 BY **TRACY METZ**



1. In the postwar heyday of the shipping industry, huge ships were constructed alongside this concrete *kraanspoor*, literally "crane track," after which the project is named. The architect maintained the structure but added a light box of glass and steel that appears to float above the harbor basin.
2. Kraanspoor has a double-glass facade: an outer layer with mechanized louvers and an inner one with doors that open out onto a buffer zone in between.
3. The architect designed three floors of offices that perch on top of a thin concrete slab and steel columns, which rest on the existing concrete structure.

ON A BRIGHT Sunday morning, the Dutch designer Trude Hooykaas rode her bike to the ferry to the northern part of Amsterdam, across the sea arm called the IJ. She was looking for a new location for her firm, OTH (Ontwerpgroep Trude Hooykaas), now called OTH Office for Architecture and Interior Architecture, and thought there might be an interesting derelict industrial building in the former harbor area. She found something that until then she hadn't even known existed: a huge concrete structure to which ships had been moored while being assembled.

"I knew right away that this was it," she says. "Nowhere in town were there panoramic views of the water and the city like there are here. I thought: I'll put a glass box on top of it that will be as light and transparent as the base is heavy and solid." It took 10 years of persistence, but she did it.

The original structure was built in 1952 in the water of the harbor basin as part of the Dutch Dock and Shipbuilding Company's facilities. Two cranes moved up and down tracks on top of it, hence the name Kraanspoor, meaning "crane track." The concrete pier was the final stage of a shipbuilding "assembly line" that spanned the entire harbor basin. More than a thousand luxury passenger ships were built at the wharf, as well as bridges, sluice doors, and even radiators. In 1984, however, the company went bankrupt. The track with two cranes on top of it stood there for many years, a powerful but obsolete expression. The city never expected to find a new use for it and had already signed off on a demolition permit.

The size and type of structure for the top was determined by the load-bearing capacity of the base. The concrete had deteriorated with time and needed to be restored and reinforced in some places. For the sake of both lightness and transparency, Hooykaas designed a three-story box of glass and prefab steel with floors of concrete slabs

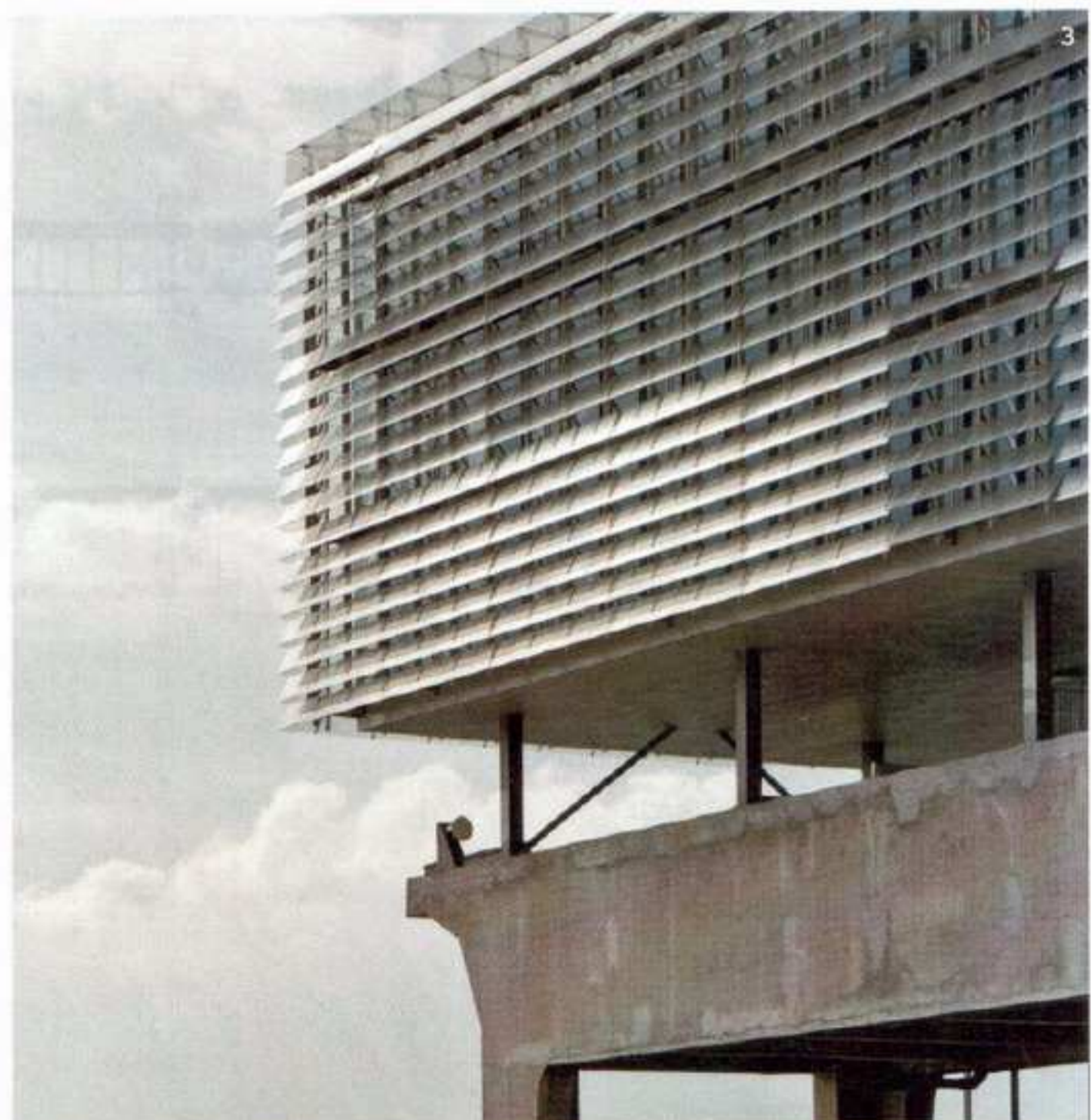
only about 2 3/4 inches thick. "We tried to make architecture by making as little architecture as possible," Hooykaas explains.

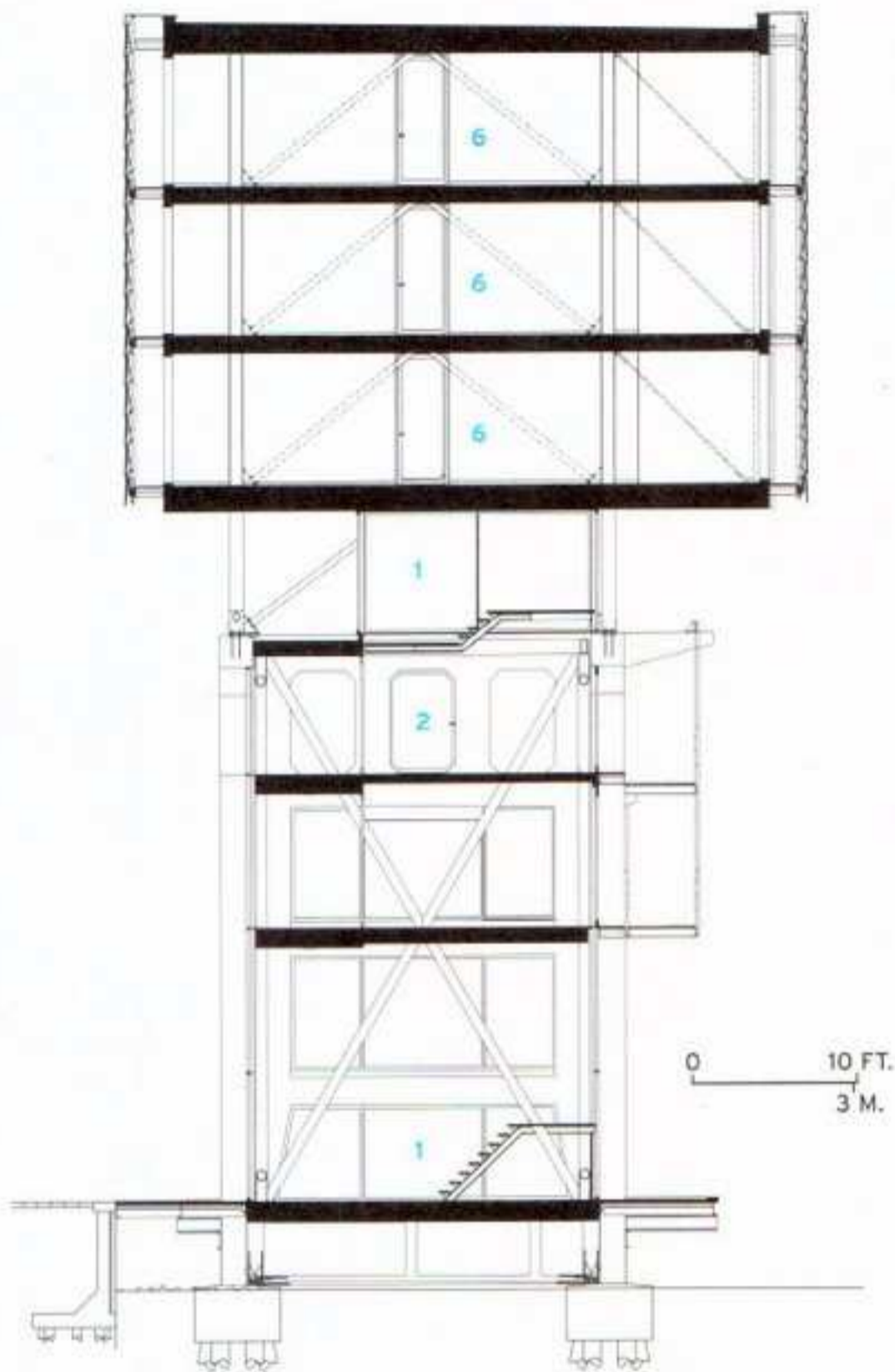
The 886-foot-long, 38-foot-high, and 43-foot-wide box, with a volume of approximately 423,700 cubic feet, is supported by slender steel H-profiles, which in turn rest on the concrete columns of the original structure. "There is a 10-foot-tall gap between the two structures," says project architect Julian Wolse. "That is essential to mark both the contrast and the coming together of old and new." While the entire concrete structure stands in the water, one side abuts the quay, where Hooykaas added wooden decks to facilitate access into the building. Here again, new follows old – the box stands asymmetrically on the base, with slightly more overhang on the water side, miming the concrete base, which is also heavier on the water side to compensate for the weight of the cranes that swung material onto the ships being assembled there.

Although Hooykaas succeeded in preserving the structure, the two cranes had to be blown up to make way for the new addition. The metal walkways along the water side that gave the workmen access to the ships are still there but have been re-created in modern materials with the function of fire escape routes.

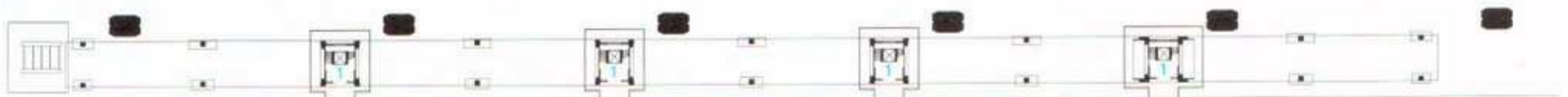
The building is still accessed through the four original entrances, with oak stairs wrapped around the core of the glass elevators leading up to four separate lobbies. Into each of these access points Wolse sunk prefab steel frames with trusses to guarantee stability in strong winds. A striking feature becomes visible from the circulation pathway – one has a view of the octagonal openings in the concrete slabs that provide lateral stability. That sensation of peering into an optical illusion of receding openings gives the massive structure a surprisingly airy feeling – the heavy lifter and the ballerina.

Ever since Mies, glass boxes have





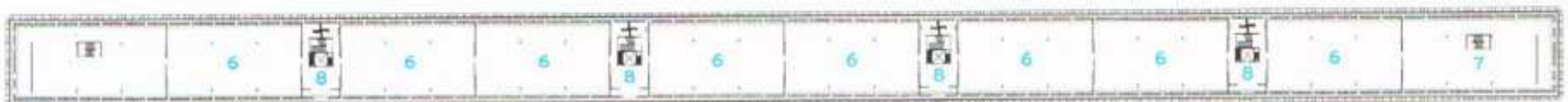
SECTION A-A



GROUND FLOOR



SECOND FLOOR



FOURTH/FIFTH/SIXTH FLOOR

- 1 PANORAMA LIFT AND STAIRS
- 2 ARCHIVES/STORAGE
- 3 DISABLED ACCESS RESTROOM
- 4 BUILDING SERVICES
- 5 MEETING ROOM
- 6 OFFICE
- 7 EMERGENCY STAIRS
- 8 LIFT LOBBY

1. In its new incarnation as an office building, Kraanspoor uses the four original access points it had when it served as a ship assembly pier. The areas have been glazed, with glass elevators and oak stairs inside and wooden decks that connect them to the quay.
2. Television production company IDTV located its corporate restaurant on the top floor so employees could enjoy the view.
3. Fully glazed walls fill meeting rooms with abundant light, which reflects off the textured concrete ceilings and makes the spaces bright and welcoming.

presented challenges with respect to controlling daylight and temperature. Kraanspoor is heated and cooled by water pumped up from 26 feet below in the harbor basin. The water is brought to a constant temperature by a heat exchanger, then pumped through pipes in the concrete floor slabs. The outer skin of the facade on the land side is fritted with charcoal-gray dots to reduce glare and heat. "The entire glass box has a double skin," Wolse explains. "The outer facade is made of motorized glass louvers; the inner one is floor-to-ceiling glass panels and doors in wood frames. The zone between facades acts both as a buffer against outdoor temperatures and wind, as well as a source of natural ventilation through the hollow floors. And the window washers can get to both layers from here."

Does it work? Susanne van der Klugt, manager of communications at IDTV, a television production company that rents half the building, speaks from experience. "The building is beautiful and the view is magnificent," she says. "The daylight is not a problem. Thanks to the glass louvers, we can modulate the light so that it does not create glare on our computer screens. On one side of the building, we did hang up roll-down blinds for when the sun is low. The climate control could be better. It can be too cold in one part of the office and too hot in another."

In the end, the project had only one disappointment for Hooykaas. She retired while it was still under way, and her successors decided not to move in after all. Instead, eight media companies occupy the building. Altogether, it has served as a cornerstone for redevelopment — thanks to projects like Kraanspoor, Amsterdam-North is gradually blossoming into a locale for Amsterdam's creative economy.

Transformed from a relic into an icon of Amsterdam's industrial heritage, Kraanspoor presents a striking addition to the skyline, especially at dusk when the glass box, lit from within, seems to float weightlessly above the water. ■



CREDITS

ARCHITECT: OTH Office for Architecture and Interior Architecture — Trude Hooykaas, design director; Julian Wolse, project architect; Steven Reisinger and Gerald Lindner, team

ENGINEERS: Aronsohn Raadgevende Ingenieurs (structural); Facade Consulting & Engineering (facade)

CONSULTANTS: Huygen Installatie

Adviseurs (lighting); M.J. de Nijs en Zn. and Bot Bouw (contractors); Grontmij (project management); Lichtveld, Buis & Partners BV (acoustics)

CLIENT: ING Real Estate Development

SIZE: 134,549 gross square feet

COST: \$32.95 million

COMPLETION DATE: November 2007

SOURCES

CURTAIN WALL: Brakel Atmos BV

FLOORS: Prefab Limburg

STEEL WINDOWS: Scheldebouw

GLAZING: Permasteelica

DOORS: Scheldebouw

ACOUSTICAL CEILINGS: Slimline Buildings

LIGHTING: Zumtobel Lighting