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The Hangover

Cantilevers are extending buildings sideways all over New York, establishing a new frontier for developers and disconcerting preservationists.

160 East 22nd Street, a 21-story, 81-unit condominium, has a 24-foot cantilever over two townhouses.

MARILYNN K. YEE/THE NEW YORK TIMES

By ROBIN FINN

Casting a glance skyward in Manhattan these days may include the risk of beholding not sky but horizontal appendages that curve and jut outward from the sides of residential towers and hover like geometric mutants above the roofs of vertically challenged neighbors, inhabiting space once occupied by open air. ¶ Typically built of glass and steel and suspended in midair, they are not optical illusions. In fact, they are vista-grabbing, profit-generating cantilevers the likes of which Frank Lloyd Wright probably did not contemplate in 1935 when he designed a rural residence known as Fallingwater, which levitated, with assistance from cantilevers, above a 30-foot waterfall in Mill Run, Pa. Wright cantilevered for the aesthetic thrill of it. Piers and bridges cantilever for the sake of a design imperative. The cantilevered entrance of the former IBM building at 590 Madison Avenue, designed by Edward Larrabee Barnes & Associates, continues to be a piece of modernist eye candy that wows passers-by.

But the escalating popularity of cantilevers in luxury residential (and some commercial) developments is apparently driven by — what else? — economics. With "bigger is better" the prevailing mantra among developers, cantilevers are getting bigger, too: superior apartment layouts are the desired endgame.

Enabled by advances in technology — structural steel and reinforced concrete have conspired to make load-bearing walls virtually obsolete — cantilevers are the un-

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surprising sequel to the towers born of air-rights transfers, made feasible by a tweak to the city's zoning codes in 1961 that established density quotas for every neighborhood. Small properties that wished to stay that way could sell their excess rights to developers, and piles of such transfers resulted in some very tall residential buildings, like One57, 845 United Nations Plaza and 432 Park Avenue.

But why stop at building taller, when the opportunity presents itself to build wider via extensions into a neighbor's unused airspace?

Cantilevers can be expensive and difficult to construct; some require support columns along the lines of the traditional flying buttress. But their ultimate cost-effectiveness is determined by the added square footage, and upgraded views, they bring to a project. Their advocates are not shy in pointing out that transfer fees are a source of serious income to properties willing to relinquish their option for future expansion. So long as they don't violate density quotas, and hover at a respectable distance above the neighbor's roof, cantilevers are also architectural catnip because they reward creativity.

"In New York, development is a three-dimensional chess game," said Dan Kaplan, a senior partner at FXFowle Architects, "and the reason we're seeing an increase in the use of cantilevers above neighboring buildings is linked to the complexity of finding a site that can utilize all available development rights."

FXFowle incorporated a pair of eight-foot cantilevers at the Isis, 303 East 77th Street, a condo developed by Alchemy Properties. For Alchemy's new project, 35XV, FXFowle employed two cantilevers: the first extends west 17 feet into the airspace above Xavier High School, and the second projects 36 feet to the north over a rear courtyard.

"The school wanted to monetize its transferable development rights," Mr. Kaplan said, and Alchemy needed them to make its project viable.

In a sense, the cantilever is the urban iteration of the suburban dormer: it is both space-stretcher and brightener. According to Gerry Davis, an Alchemy principal, the cantilevers at 35XV account for some 40 percent of the square footage, in addition to providing improved views and a diversity of layouts. The building has 59 residential units on Floors 8 through 24.

"In the 1920s they used to build straight up, with wedding-cake-type setbacks," Mr. Kaplan added. "But with a cantilever, we can build outward as well as up, and in kind of an inversion of the wedding-cake theme, the floors are bigger toward the top, where space is more valuable.

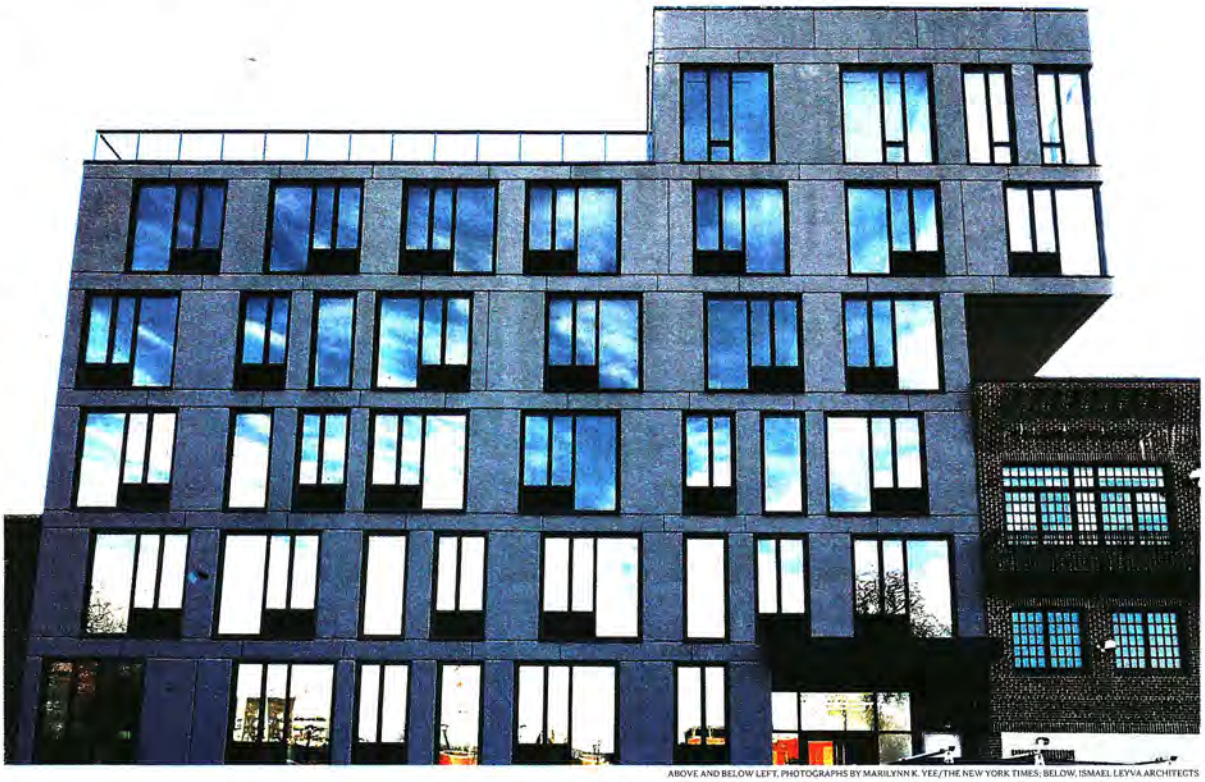
"I picture it like a tree, where the trunk is the footprint and the building branches out above," he said. "The ingenuity in the process, from a developer's point of view, is to take full advantage of every potential dimension a site has to offer, and the cantilever is a key strategy in that regard."

An optimally functioning cantilever is an essential design element, not an afterthought. Describing 35XV, Kenneth S. Horn, the president of Alchemy Properties, said, "The first cantilever begins 85 to 90 feet above the ground, and by virtue of the way it's constructed, when you're inside your apartment, you'll literally feel like you can reach out and grab the Empire State Building."

'Cantilevering can get you a better layout and a larger floor plate.'

The Extell Development Company has plans for the air, too. Its tower at 225 West 57th Street is to cantilever above an 1890s landmark, the Art Students League, to accommodate a 1,423-foot residential tower anchored by New York City's first Nordstrom department store.

Still, whether the cantilevers boldly sprouting all over town are marvels of architectural and engineering ingenuity or capricious eyesores inflicted by developers remains in the eye of the beholder.



ABOVE AND BELOW LEFT, PHOTOGRAPHS BY MARILYNN K. YEE/THE NEW YORK TIMES; BELOW, ISMAEL LEYVA ARCHITECTS

One of two 16-foot cantilevers, above, at 64 Bayard Street, a rental in Brooklyn. Isis, at left, a condo at 303 East 77th Street. Below, a rendering of the Charles, a luxury tower at First Avenue and 73rd Street.

At 64 Bayard, a 53-unit rental with two 16-foot cantilevers, "it turned out to be an absolute home run for the developer, because each apartment in the cantilever has amazing views of Manhattan," said William Ross, a managing director of Halstead Property Development Marketing.

The architect Ismael Leyva, whose firm has incorporated cantilevers in Midtown at Place 57 and the Icon and most recently at the Charles, a 31-story, 27-unit luxury tower at First Avenue and 73rd Street, says cantilevers have become the go-to option for developers.

"It's a good tool for increasing the ratio of salable square feet," Mr. Leyva said. "And it gives a building a different external dynamic: you have the movement of intercepting shapes instead of the typical box."

The Landmarks Preservation Commission has reviewed the contextual appropriateness of cantilevers proposed at historic sites on just three occasions, two of them for the same site. Besides the Nordstrom tower, which it approved in October, the commission twice approved a cantilever for a condominium at 39-41 West 23rd Street, in the Ladies' Mile Historic District. The initial project was a victim of the downturn, but Anbau Enterprises bought the distressed site for $18.5 million in 2010 and eventually selected a redesign by Cook & Fox Architects that retained the cantilever.

"Our experience with cantilevers is sort of dramatic and intrinsically interesting," said Robert Tierney, the commission's chairman. It decided the cantilever above the Art Students League did not diminish the landmark, and on 23rd Street, it again ruled that the sculptural cantilever proposed for the condominium had been integrated into the design and was not an intrusion or a distraction at street level.

But three approvals do not constitute blanket acceptance: "I would say it would be the exception rather than the rule for us to find a cantilever appropriate," said Sarah Carroll, the commission's director of preservation. "It is very site specific."

Barbara van Beuren, a managing partner at Anbau, is not a cantilever enthusiast. "They've become an accepted part of building in the city now that you can build sideways if you own the air," she said. "But it's expensive to build a pretty building, so

The Nordstrom cantilever (Extell's first) passed muster with the Landmarks Preservation Commission after Gary Barnett, Extell's president, testified that it was an essential element of the design. One dissenting commissioner, however, referred to it as a gimmick.

There has also been grumbling about the 24-foot cantilever built by Toll Brothers City Living at 160 East 22nd Street, a 21-story, 81-unit condominium. The cantilever starts at the sixth floor and hangs above a pair of townhouses (neither is a landmark). The additional square footage allowed the developer to include an extra line of apartments.

"Some people may not like it," said David Von Spreckelsen, the president of the City Living division. "But I think it adds an interesting modern component, and with people not willing to sell their property to you, but willing to sell their air rights, the cantilever almost becomes a necessity."

Cantilevers may be yet another fact of life in a city with a shortage of logical building sites but a seemingly inexhaustible appetite for new housing stock.

"They were more commonly in the back of buildings and out of view," said Vin Cipolla, the president of the Municipal Art Society. "But with fewer highly desirable sites available, they're popping up to grab eye-popping views and are becoming integral design features. Design matters — so is this good design? And what about environmental impact? There needs to be an understanding of these hyper-tall buildings and their effect on the streetscape."

When New York City began selling the rights to its airspace in earnest in the last few decades, the objective of the developers who bought them was usually to push the skyscraper envelope. Buy the unused air rights of stodgy structures next door, and suddenly a 25-story project on a lot of less-than-lordly proportions could attain impressive heights.

But what happens when vertical limitations are imposed on an already constricted or less-than-perfectly situated building site? What happens when a developer has spent millions of dollars on air rights to bolster a project and needs to find a way to use them that doesn't offend a neighborhood's contextual height and zoning codes?

Cantilevers happen.

"Cantilevers are being done around the city, very often in nonlandmarked areas," Mr. Barnett said, "because there are a lot of places with height limitations, and cantilevering can get you a better layout and a larger floor plate."

"In our case," he continued, "the constraint was that we needed to accommodate Nordstrom, which is used to a wide-open, suburban-style layout. It wasn't critical to cantilever for the residential portion of the project, but we needed to give Nordstrom the largest possible floor plate, and as it turns out, the cantilever gives the apartments a bit better view shot, too."

On top of the original $23 million it spent for air rights, Extell paid the league nearly $30 million for the privilege of adding the cantilever. "I wouldn't call it a donation," Mr. Barnett said, "but I guess I'm happy it will assist an important and historic arts institution in making a huge chunk of some sorely needed repairs."

He added that the Nordstrom cantilever definitely wouldn't be Extell's last. Other developers are on the same wavelength.

Of late, what's showing up at developments around Manhattan (and at 64 Bayard opposite McCarren Park in Brooklyn) is a profusion of cantilevers that exponentially expand square footage and can also, thanks to lot-line easements, legally transform unexceptional one- or two-bedroom units into three-bedroom beauties with fabulous light and, often, uniquely positioned outdoor space. The cantilevers at 56 Leonard Street in TriBeCa, a 57-story condominium that doesn't have a single terrace overshadowed by that of its immediate upstairs neighbor, epitomize that innovation. (The tower, designed by Herzog & de Meuron, paid New York Law School $150 million for land and air rights.)

FXFOWLE

A rendering of 35XV, 35 West 15th Street, which will have two cantilevers, one over Xavier High School and a second over a rear courtyard.

they aren't always pretty, especially where Landmarks isn't there to hold your feet to the fire designwise. Some are not obtrusive; others are horrendous. They may make a project viable, but they're not easy to do, and I would never do one if given a choice."

"On West 23rd Street," she added, "we inherited a site and a design and wound up keeping the cantilever because it was a critical part of making the project work. We're proud of the design. We live in the 21st century, not the 19th, and even in a historic district, the point is not to reproduce what was. But the burden of proof is on the designer."

Nancy Belsky and her husband, Mark, who live in a Georgian colonial in the Boston suburbs, bought their 17th-floor penthouse at the Isis three years ago to use as a pied-à-terre. They were not looking to live in a cantilever building (she researched cantilevers after moving in). But they loved the apartment's layout the instant they opened the door.

"Besides the floor-to-ceiling windows and the two terraces," she said, "there was this automatic, almost transcendent feeling, thrusting us into being a part of the beauty that is New York City. You don't feel contained; there's almost this Frank Lloyd Wright sense of being at one with your surroundings. It's like you're invited to be part of what's beyond your space." Vertigo is not, she said, part of the experience.

"The ability to cantilever has been one of the real impetuses of modern architecture with a capital M," said Mr. Kaplan, whose firm designed the Isis. "It's an opportunity to make a great design — and it unlocks the potential inherent in development rights."