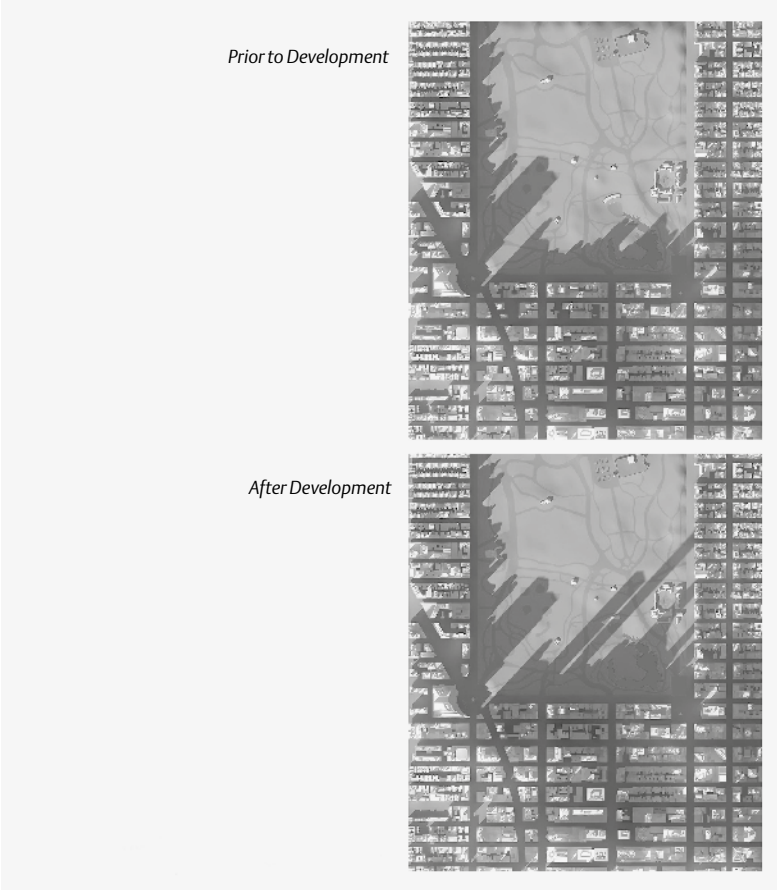
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…New York

Jessie Turnbull



1 Shadows Across Central Park at 4pm on September 21st (© The Municipal Art Society of New York 'Accidental Skyline')

A new typology is emerging in New York City. The 'pencil thin' residential towers rising above 57th Street tread new ground with their tiny footprints. But as well as dragging the city out of the recession and into the 2020s, they are also saving historic buildings.

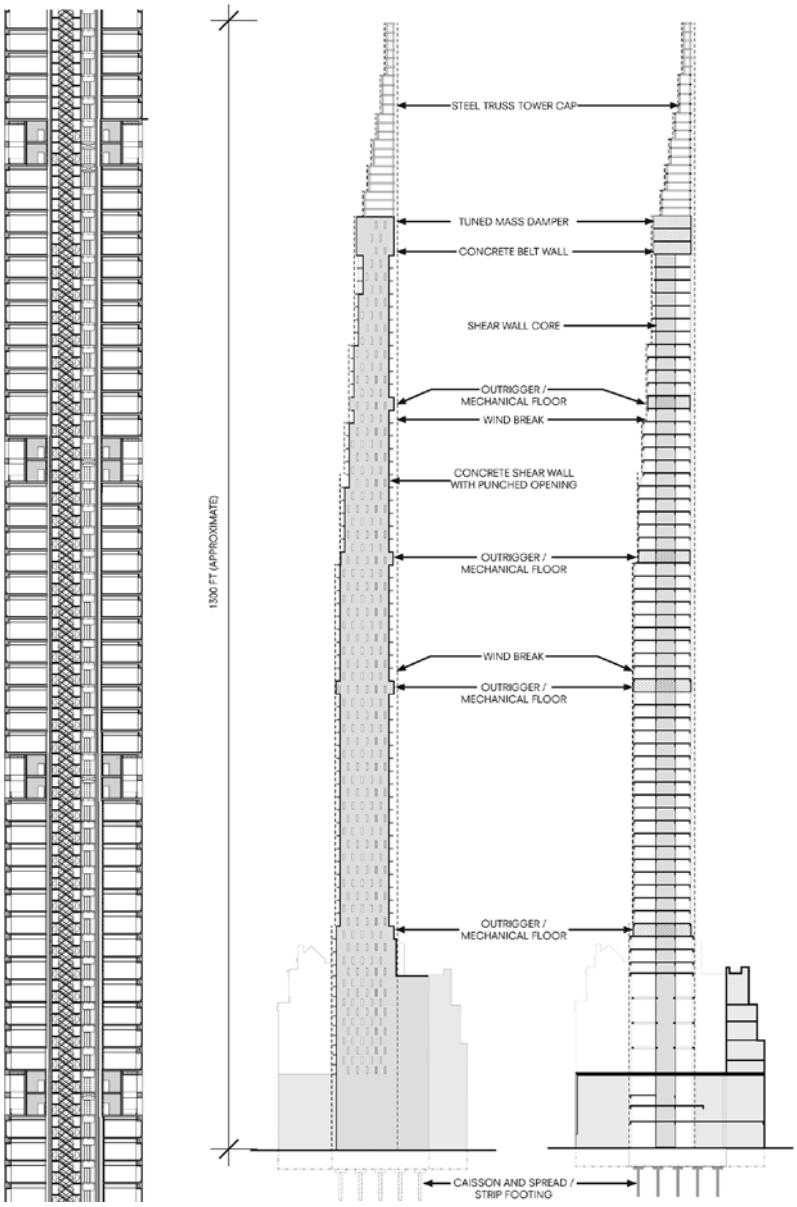
Around 2007, at the peak of the housing market, the New York City Department of Buildings received the drawings for a series of ultra-slender, ultra-expensive residential towers. The plans lay dormant over the recession, and the developer of One Madison Park even went bankrupt. But now the first of the cluster, seventy-five storeys of blue glass, totters over a 6,245 square foot footprint on 57th Street. Designed by the French architect Christian de Portzamparc for Extell Development Company, the building is substantially complete, and its Central-Park-view penthouses sold for over $90 million – the most expensive real estate in New York City.

Such development might seem predatory rather than protective. But surprisingly, the skinny buildings are helping to save the historic fabric. This is because their soaring heights are achieved through the purchasing of air rights from neighbouring properties, including buildings recognised as historically and architecturally significant by the New York City Landmarks Preservation Commission.

In 1916, as residents raised concerns about dark canyons between skyscrapers, the city enacted the first zoning laws. These laws allowed for unlimited height, but defined a bulky pyramidal envelope of setbacks for the lower floors, from which a tower could rise on 25% or less of the overall building footprint. Large parts of Lower and Midtown Manhattan developed in this model in the 1920s. In the postwar building boom of the 1960s a new law drastically reduced the allowed height of skyscrapers. A limit was placed on the ratio of the building footprint to total square footage: a floor area ratio (FAR) of, say, six, ten, or fifteen, in whatever configuration the developer chose. This FAR is defined block-by-block

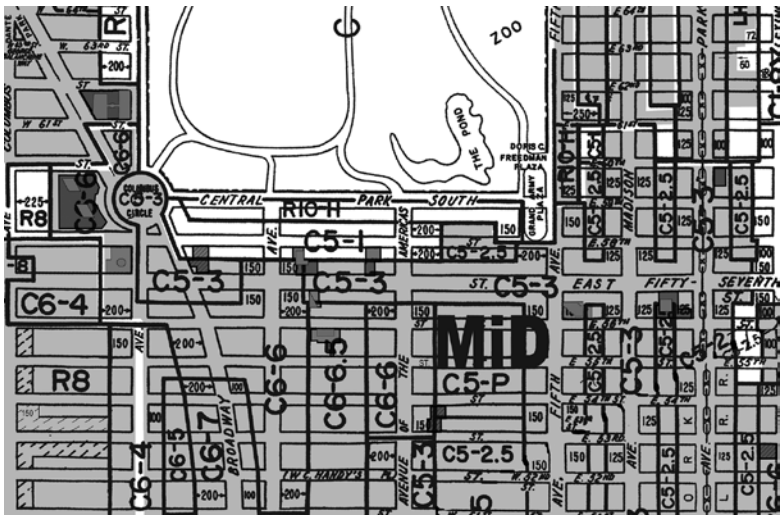
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2 Structural section of 432 Park Avenue (© Rafael Viñoly Architects)

3 Diagrammatic section of 111 West 57th Street (© SHoP Architects)



4 Partial zoning map of 57th Street (© Skyscraper Museum, 'Sky High')

in city-issued zoning maps. The C5-3 district – which the majority of the buildings mentioned here fall under – has a FAR of ten for residential, one of the highest in the city. Also introduced with the 1961 law was a mechanism to buy unused FAR from nearby buildings (usually within the same block) that do not fully utilise their 'air rights', or ability to build tall. The provision of public space at ground level is rewarded with bonus height allowances, but is not a requirement.

Until the late twentieth century the sale of air rights didn't have great impact on the architectural character of the city, but in 1991 Carnegie Hall sold their air rights to allow a developer to build the commercial building Carnegie Hall Tower, designed by César Pelli, adjacent to their landmarked concert hall on 57th Street. (Incidentally, the Portzamparc tower now blocks its Central Park view.) In 2001 Donald Trump purchased the air above the Japan Center, the Holy Family Church, and two brownstones on 46th Street to build the Trump World Tower. The structurally innovative design by architect Costas Kondylis and structural engineers WSP Cantor Seinuk (now WSP Group) used tuned mass dampers for the first time in a residential structure. Notably, these buildings are permitted 'as of right' – building taller because of purchased air rights does not require any special building permit review by the city.

The demand for residential real estate as a financial asset has continued to grow dramatically, even surpassing the pre-recession 2007 housing bubble. Extremely tall and slender towers have become an attractive prospect for luxury developers, selling to individuals or groups of investors who may never live in the building.

The 'MoMA Tower', designed by Jean Nouvel for developer Hines with Goldman Sachs, leveraged the air rights of the adjacent Museum of Modern Art to gain extra height. MoMA sold the land to the developers in 2007 for $125 million, and the residential tower plans made headlines for the plan to demolish the precious little American Folk Art Museum by Williams & Tsien (opened in 2001), ostensibly to allow for the obstructed plan of the MoMA expansion that will inhabit the bottom floors of the new residential tower. Although the

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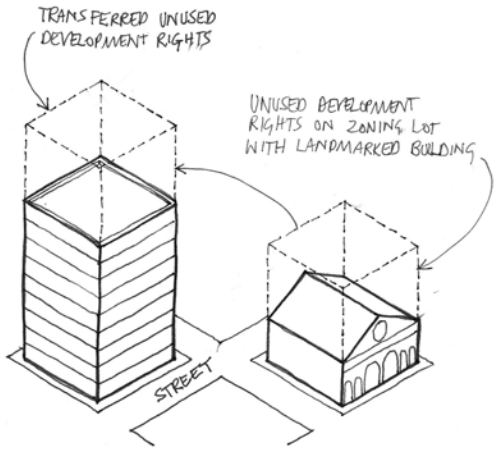
Folk Art Museum fell victim to developer greed, the Museum of Modern Art itself is now protected from future development because its air rights have been transferred to the new tower.

In 2013, plans were approved for the building at 225 West 57th Street by Chicago architects Smith + Gill for developer Extell. This building height was recently revealed as 1,775 feet with the addition of a spire, which makes the building just one foot shorter than the new World Trade Center. In order to accommodate a Nordstrom department store on the lower floors it became necessary for the tower above to be sited smack against the landmarked Art Students League building, with a 28-foot cantilever, which emerges 200 feet above the landmark. Although Michael Kimmelman, the *New York Times* architecture critic, describes this as '[...] a giant with one foot raised, poised to squash a poodle', the fact remains that the Art Students League received $54.9 million from Extell for development rights, and their land and building is now protected in perpetuity against predatory developers, as the development potential of the site has been sold, sucked up by Extell; creating a delirious contrast of French Renaissance style tucked beneath the boot-heel of contemporary structural acrobatics.

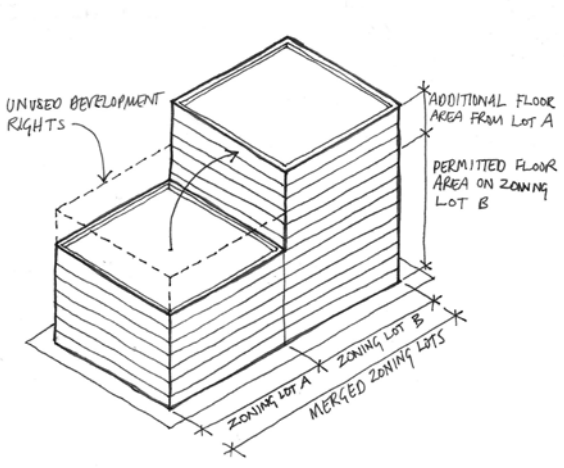


5 Photograph of 432 Park Avenue (Rafael Viñoly Architects) under construction (© Richard Berenholtz 2014)

Just a block away on the same street, SHoP Architects' tapered tower has bought up and will occupy the empty space around and above the Steinway Hall piano showroom at 111 West 57th Street. On a 60-foot wide site, the building is planned to be 1,397 feet tall, taller than the Empire State Building. Any building with a base to height ratio of 1:12 or over is considered to be slender in engineering terms, requiring special measures to counteract effects of wind-induced vibration and lateral seismic forces. This building, with its ratio of 1:23, will be the most slender in the world. Its tapering form is required by the setback zoning laws of New York, which SHoP exploits and transforms into a 'feathered' stepping facade. Transfer beams in the lateral walls are disguised behind terracotta panels – a historic New York City building material. Meanwhile, the shell and the street presence of the Steinway Hall below are maintained and

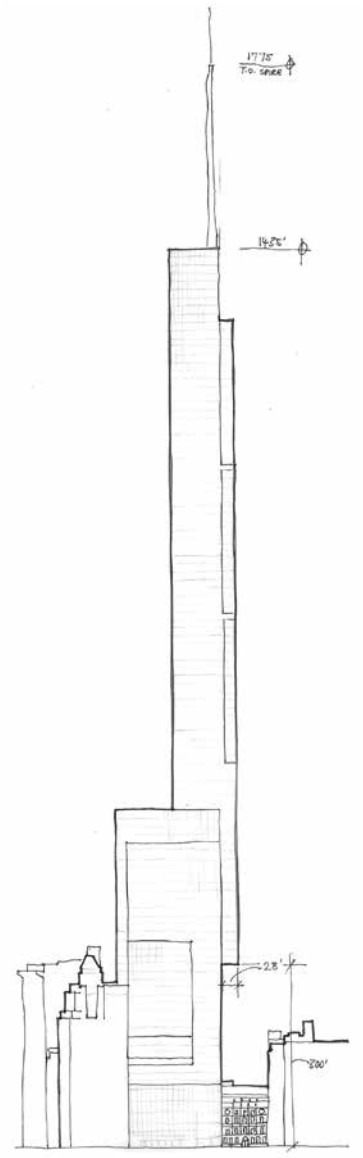


6 Illustration of Transfer of Development Rights based on diagram from NYC Department of City Planning



7 Illustration of Zoning Lot Merger based on diagram from NYC Department of City Planning

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8 Elevation sketch of 225 West 57th Street Adjacent to the Art Students League based on drawings by Adrian Smith + Gordon Gill Architecture



9 Rendering of 432 Park Avenue (Rafael Viñoly Architects) showing context of New York (© dbox for CIM Group & Macklowe Properties)



10 Photograph of 432 Park Avenue (Rafael Viñoly Architects) under construction (© dbox for CIM Group & Macklowe Properties)

protected, with new functions for the piano showroom housed in the base of the tower.

Perhaps the most exciting of the bunch has just hit the halfway mark – it's already taller than most of Midtown. When Rafael Viñoly's 432 Park Avenue Tower is finished, it will surpass the new World Trade Center as the building with the highest occupied floor in the Western Hemisphere at 1,396 feet. It replaces (and uses the air rights of) the non-landmarked Drake Hotel, and uses the air rights of several other buildings around, all balanced on a footprint of 97 x 97 feet. Each floor houses only one or two apartments, and the whole building is served by only three lifts and a pair of scissor stairs in an incredibly efficient core. To mitigate the wind forces, every tenth floor is open as a terrace, breaking up the bulk of the building structurally. The square plan with square windows has already been likened by many to a Sol LeWitt sculpture: a pillar of masonry with punched windows in a growing sea of glass.

The structural engineer, WSP Group, designed the structural systems for all the buildings mentioned here; they, along with the author of the zoning laws, are the current re-shaper of the New York City skyline.

Predatory or protective? The rapid development of this area of Midtown has met with resistance from those concerned about the shadows cast on Central Park, or the lack of oversight from city government, or the social vacuum created by absentee overseas owners. But it has had one positive effect. The landmark buildings that have yielded up their air rights have not only acquired striking architectural neighbours and a useful injection of cash. They have also, by losing the right to replace themselves with anything taller on the same plot, rendered themselves poisonous to predatory developers. NYC zoning laws have, inadvertently or not, secured the protection that has been so elusive to the Landmarks Preservation Committee.

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The Skyscraper Museum, 4

Author's biography

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