

No Place to Go but Up or Down

NYC architects get creative with vertical solutions for building expansions
By Lisa Delgado

The layers of New York City architecture speak volumes about how the city has been expanding vertically in recent years. Modern glass additions sparkle atop aged masonry buildings, and below the city's surface, bedrock bears the imprints of new excavations.

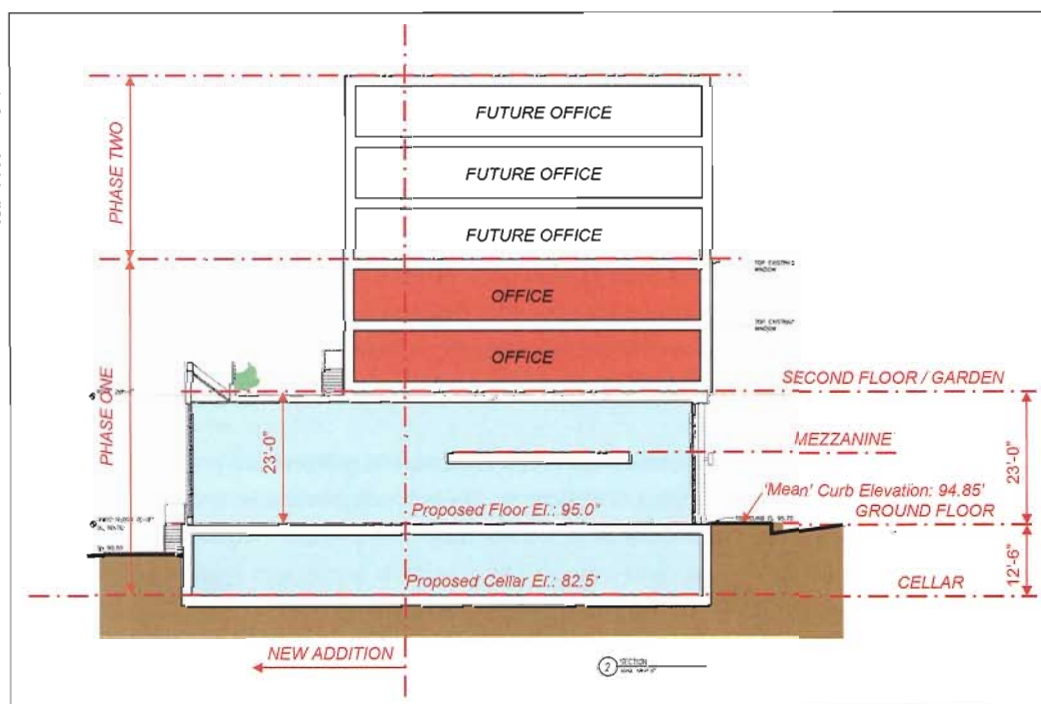
The reason is clear: in such a dense city, expanding up or down is often the only way to go. Plus, "adding space on a building is very cost-effective," says Mary Burnham, AIA, partner at Murphy Burnham & Buttrick (MBB). "As the cost of real estate has skyrocketed, the incentive to build vertically as opposed to move or expand into another building has grown, because economically it makes a lot of sense."

As architects seek to maximize vertical space, some recent projects give testament to their ingenuity – and sometimes diplomacy, as neighbors or city agencies put in their two cents' worth. Case in point: Beyer Blinder Belle Architects & Planners' (BBB) controversial design for expanding the landmarked Domino Sugar refinery and converting it into a mixed-income residential and retail space, part of a larger development designed by Rafael Viñoly Architects on the Williamsburg waterfront in Brooklyn. "The first question was: How or even could you turn this into a residential building?" says Michael Wetstone, AIA, LEED AP, project architect for BBB. Once filled with catwalks connecting machinery, the former refinery lacked traditional

floor levels; furthermore, since the structure was 140 feet wide, the interior spaces wouldn't get enough natural light. The BBB team designed an entirely new steel-frame building nestled inside the brick shell. To bring natural light to the interior, they included an interior courtyard. To recoup the residential space lost to the courtyard, they



Beyer Blinder Belle Architects & Planners: Domino Sugar refinery conversion into a mixed-income residential and retail space



Beatty, Harvey & Associates: Korean Methodist Church and Institute; section illustrates first phase to expand the sanctuary and basement, and second phase upper levels



designed a sleek, glassy, five-story upward expansion. (Going down would have been impractical so close to the waterline.)

Amid a flurry of media coverage, the Landmarks Preservation Commission rejected BBB's initial design as too tall and too contemporary for the old brick building, a beloved neighborhood icon. The architects had to lower it and add a vigorously industrial exterior steel skeleton before the design was approved last June. (At press time, no construction date had been set.) In the end, the input was beneficial, according to Wetstone. "Landmarks gives a lot of scrutiny and feedback," he says, "and, 99 times out of 100, projects improve."

A Beatty, Harvey & Associates (BH&A) design for an expansion of the Korean Methodist Church and Institute stirred up opposition from neighbor Columbia University for structural reasons. The university complained that a plan to remove the existing floors and shift them downward might endanger a party wall shared with a university-owned row house next door, recalls Salvatore Coco, AIA, LEED AP, BH&A's partner-in-charge. The church backed down, though adjusting the floor levels would have improved handicapped access. A new, more conservative design is "losing something in the translation," Coco says, "but the church is still doing a significant addition," which will greatly expand the sanctuary and basement (thanks to community-use zoning) and add three upper levels in the future. The first phase of construction will likely begin this spring.



ROGERS MARVEL ARCHITECTS

Rogers Marvel Architects: Mulberry Street Branch Library; windows in a below-grade children's reading room let in a little natural light and views of the rough-hewn rocky vault

Projects that delve into subterranean space face challenges such as lack of natural light and tricky excavations. When Rogers Marvel Architects designed a gut renovation to transform a former candy factory into the Mulberry Street Branch Library in SoHo, the firm included a dramatic new winding stair and a ceiling ribbon with HVAC to bring light and air downward. Windows in a subterranean children's reading room let in a little natural light augmented by fluorescent lights, giving clear views of the rough-hewn texture of a rocky vault. "We thought it would especially capture the imagination of children, to look out and to see this underside of New York that you rarely do," says project architect Marta Sanders.

During a long-term renovation and expansion project at St. Hilda's & St. Hugh's, a school in Morningside Heights, MBB's Burnham scru-



ALAN WILSON PHOTOGRAPHY

Murphy Burnham & Buttrick: St. Hilda's & St. Hugh's new greenhouse on the school's rooftop is used as a classroom, dining room, and lecture hall

tinized every bit of space from basement to roof to maximize programmatic use for the school's nursery-to-eighth-grade students. In a new rooftop greenhouse, created with greenhouse manufacturer Rough Brothers, "flexibility is the name of the game," she says. A range of sensor-based or timed climate controls and adjustable grow lights make the greenhouse a valuable resource for science classes, and, thanks to movable furniture and equipment, "it's not just a place where we're growing plants; it's also a classroom, dining room, and lecture hall," says Head of School Virginia Connor. Earlier renovations equipped each classroom with its own storage space, freeing up the basement for an exercise room and a music rehearsal space.

After years of working in NYC, Burnham's inclination to build vertically and save space stays with her even in areas prone to sprawl. "We had one client in Westchester who needed a new library," she recalls. "Another architect had said, 'Let's put this library out on this field.' We said, 'No, let's put it on top of the building.' So the sensitivity to maximizing your footprint is something that even applies to suburban settings. Make a building that makes sense – and keeps the green spaces."

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