



**NEW MILLENNIUM**  
BUILDING SYSTEMS  
Building a better steel experience.



## DESIGN IDEAS

April, 2018

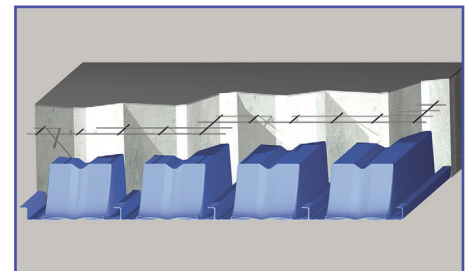
### Turning Construction Upside Down

Zoning height limitations, a neighbor's air rights, and narrow side streets may seem like impossible challenges for a luxury condominium project. But not for this 12-story development that hangs over the Lower East Side of New York, enabled by the Versa-Floor™ Long-Span Composite system.



The 12-story condominium development erected in the eclectic Lower East Side of New York at 100 Norfolk has turned new construction upside down. Architectural creativity overcame strict zoning height limitations that would have otherwise put a limit on the occupancy of the parcel of land.

After having secured the air rights to the corner pawnshop neighbor, the cantilevered design was made possible by a Versa-Floor™ Long-Span Composite system, resulting in greater square footage at the higher elevations.



*Versa-Floor™ featuring Deep-Dek® Composite enabled the expansive, cantilevered floor plans, allowing strong light exposure to the luxury condos built in New York's eclectic Lower East Side community.*

### Heart of the Lower East Side

The strong light exposure of the interior spaces and direct views of Downtown, Midtown, and the Williamsburg Bridge make this a prime opportunity for city living in the heart of a thriving shopping and cultural destination. The long spans, enabled by Deep-Dek® 4.5 Composite combined with light-density concrete, helped create open, unobstructed spaces.

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But the chic area wasn't as conducive to construction during the erection of this eye-catching structure. "The builder needed to use a portable crane which could be brought on-site only once a week because a permanent crane would have blocked narrow Norfolk Street," says Marty Williams, design development manager for New Millennium Building Systems. "Hats off to our project management team for coordinating the steel deck deliveries."

### Making the design possible

The design cantilevers a minimum of 15 feet over the adjacent buildings and covers a total of 50,000 square feet. Without the deep-ribbed profile of Deep-Dek® Composite, the reduced support sizing (steel beams, columns, and lateral bracing) of the cantilevered portion of the structure would not have been possible. "With span-to-depth ratios equaling those of traditional cast-in-place concrete and hollow-core plank, a Versa-Floor™ system featuring Deep-Dek® Composite helps make steel frame solutions affordable and the design aspirations of architects possible," says Marty.

The striking glass façade and cantilevered design maximizes floor area towards the top of the building and looms over the diverse and eccentric community. A towering double-height lobby, architectural wood wall, and fireplace greet guests of the building. Residents enjoy a state-of-the-art gym, roof deck, and outdoor garden lounge.



New Millennium's project management team coordinated on-time steel deck deliveries to meet the hectic construction schedule for a New York condo development. This was accomplished even with the constraint of using a portable crane on-site just once a week due to traffic concerns.

### Featured structural solution:

#### Versa-Floor™ system featuring Deep-Dek® Composite

When designed with Deep-Dek® Composite, Versa-Floor™ provides the longest spanning composite floor systems available, helping to make steel frame solutions affordable. Patented side-lap connections achieve composite bond.

- Spans up to 36 ft. / unshored pours up to 22-ft. spans
- Deep-ribbed steel-deck profile installs directly onto the frame



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