

Wexler sets his "sites" small with big engineering feats. (Profile of the Week).

By Parke Chapman

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Less is more for Neil Wexler, a structural engineer with a flair for designing buildings on cramped urban sites. In a densely built area like Manhattan, cramming several floors into a small lot is often necessary and rarely simple.

Wexler's solution, as he has refined over years of work, incorporates a slew of engineering jargon such as restrained girder systems, staggered trusses, outriggers, and beam-in-wall-systems. While these are all highly technical engineering procedures, they don't cost a fortune--and herein lies Wexler's appeal to developers.

"We designed a 24-story building on East 23rd Street that is only 40 feet wide and 70 feet deep," says Wexler, president of Manhattan-based Wexler & Associates.

Designing buildings for such odd-shaped sites might sound expensive, but Wexler has pioneered ways to cut costs for developers. One cost-cutting strategy is the staggered-truss system; which relies on geometry to reduce the weight of a building's steel frame, unlike post-and-beam construction. More rent-able space is also created by the column-free area. Wexler uses a pre-cast concrete floors system with staggered-truss frames. These pre-cast floors weigh much less than cast-in-place concrete, which also cuts the cost of construction by reducing foundation requirements. Also, applied fireproofing needs are reduced, thereby saving time and cost.

Wexler used the staggered-truss system at a new 12-story apartment building in North Bergen, NJ. Half Moon Harbor chose the system after conducting a cost/benefit analysis that weighed the use of several other conventional systems. In the end, the lighter weight of the staggered-truss system won out over a much heavier poured-in place concrete system.

The Embassy Suites Hotel in Battery Park City was built using staggered-truss. The Aladdin Hotel, a 2,600-room, 38-story building in Las Vegas was the first steel-framed staggered-truss ever built here, where concrete frames are more common.

Wexler recently designed a building on 143 East 34th Street that-like the street it fronts-is only 34 feet wide. The 160-foot tall structure occupies a gap between two taller buildings-17 stories on its western side and 19 on the other side. The floors are only seven inches thick, with concrete shear walls.

His firm has completed a number of downtown projects using this system. Wexler is quick to praise the cost-reducing advantages of his work-though other advantages come with it.

"All of these processes will result in a low floor-to-floor height and reduced cost for the developer," said Wexler.

The 48-year-old, Romanian-born engineer, has worked in Manhattan for 18 years. In that span, Wexler has probably designed more buildings with the staggered-truss system than most engineers. Most of Wexler's clients request the staggered-truss system, for obvious reasons.

"It's really our forte. We have focused on this system for years now," said Wexler.