

## TALL BUILDINGS

## Shanghai Tower Set To Rise 492 Meters

The concrete mat for the planned 492-meter-tall Shanghai World Financial Center, on deck to become the world's second-tallest building, is set to be completed early next month. If finished as planned by late 2007, the \$1.1-billion skyscraper would be 16 m shorter than the 508-m Taipei 101, which has a 60-m-tall pinnacle above its highest occupied floor.

The 377,300-sq-m skyscraper in Shanghai is under construction by a consortium of China State and Shanghai Construction. The developer, a division of the Mori Building Co., Tokyo, first started work in 1997. Construction was put on hold after pile foundations were done.

The building's height has been increased from an original 460 m, though its appearance has remained much the same, says the architect, Kohn Pedersen Fox, New York City. The square shaft of the tower has a diagonal face that "shaves back" at higher elevations.

The structural engineer has allowed use of the existing piles for the larger skyscraper by creating a perimeter structural tube that is not as dense as it was in the original structural scheme by another firm (ENR 10/29/01 p. 12).



▲ **Big Mat.** Concrete mat for tower on course for completion next month.

Leslie E. Robertson Associates, New York City, has designed a megastructure of composite perimeter columns, one at each corner of the square base and six as the floor plan morphs into a six-sided form at higher elevations. Diagonal perimeter braces zigzag up the faces, connecting megacolumns and steel belt trusses. The design calls for a reinforced concrete core enhanced by structural steel at specific locations. The core is designed to interact with the perimeter frame through outrigger trusses spanning to megacolumns.

A circular cut-out at the top will be a public observatory. One of the options for the cutout is a Ferris wheel-like tram. But the owner has not yet approved or finalized any scheme. ■

By Nadine M. Post

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