Shanghai Tower

Shanghai, China

Developer
The Shanghai Tower Construction & Development Company

Architect
Gensler

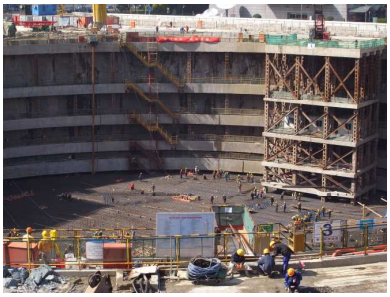
Completion Date
2014

Construction Cost
$2.2 billion

Total Area
4,090,285 sf

Number of Stories
124

Total Height
632 meters (2,074 feet)



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Thornton Tomasetti is providing structural engineering for another of the world's most distinctive and innovative high-rise buildings. The mixed-use development is comprised of 4,090,285 square feet and at 632 meters (2,074 feet), the Tower is the world's third tallest building under construction. The building features world class offices, luxury hotels, retail, convention facilities, observation decks and a 2,200 seat arena. Connections to the Shanghai Metro and three floors of parking are below-grade.

Thornton Tomasetti engineered a simple, safe and cost-effective structural system that enables a creative architectural form. The exterior of the tower is a twisting triangle that tapers with height, which drapes around an inner concrete structure comprising nine cylinders stacked one atop another. Our firm developed an efficient design of super-columns with outriggers that also support the twisting-form curtain wall. The outrigger trusses and super columns derive stiffness from the concrete inner building, comprising an effective system for resisting wind and seismic loads for super tall buildings.

The project incorporates the latest sustainable technologies, including wind turbines and solar panels as renewable energy sources to achieve a low carbon footprint. The project will seek certification as a LEED project by the China Green Building Council (in association with the USGBC).