China World Tower

Facts

Official Name: China World Tower
Name of Complex: China World Trade Center
Other Names: ????????, China World Trade Tower, China World Tower III, China World Trade Center III
Structure Type: Building
Status: Completed
Country: China
City: Beijing
Street Address & Map: 1 Jian Guo Men Wai Avenue
Postal Code: 100004
Building Function: hotel / office
Structural Material: composite
  • Core: Reinforced Concrete
  • Columns: Concrete Encased Steel
  • Floor Spanning: Steel

Energy Label: LEED Gold
Proposed: 2003
Construction Start: 2005
Completion: 2010
Rankings: Click arrows to view the next taller/shorter buildings
  Global Ranking: #71 Tallest in the World
  Regional Ranking: #39 Tallest in Asia
  National Ranking: #32 Tallest in China
  City Ranking: #2 Tallest in Beijing

Companies Involved

Developer: China World Trade Centre Company
Architect: Skidmore, Owings & Merrill LLP
  • Design
  • Architect of Record: Wong Tung & Partners
Structural Engineer: Arup
  • Design
  • Engineer of Record: Ceris MCC Group
MEP Engineer: Atkins; Parsons Brinckerhoff Consultants Private Limited
  • Design
Project Manager: China World Trade Centre Company
Main Contractor: China State Construction Engineering Corporation
Other Consultant: Campbell Shillinglaw Lau Ltd
  • Acoustics
  •Facade: Meinhardt
  • Façade Maintenance: CS Caufkins Co. Inc
  • Food Service: Romano Gatland
  • Geotechnical: China World Trade Centre Company
  • Interiors: Benoy; Hirsch Bedner Associates
  • Landscape: SWA Group
  • Lighting: Frances Krahe & Associates, Inc.
  • Property Management: Jones Lang LaSalle, Inc.
  • Quantity Surveyor: WT Partnership
  • Security: Parsons Brinckerhoff Consultants Private Limited
  • Traffic: Maunsell Consultants Asia Ltd.
  • Vertical Transportation: Edgett Williams Consulting Group Inc.
About China World Tower

The China World Tower is the third phase and heart of the China World Trade Center (CWTC) in Beijing. The master plan and internal site circulation, both vehicular and pedestrian, were carefully considered in context to the rapidly expanding 3rd Ring Road area and existing Phase I & II programs in the World Trade Center complex to create a vibrant urban center. The project meets the ground with public garden spaces, active retail frontages, and protected courts to bring a sense of urbanity to the entire development. Walkways and open spaces reinforce a pedestrian-oriented environment.

The building was intended to achieve a quiet yet powerful dignity as the marker for the central business district of Beijing. The building is a slender columnar form with articulated corners and surfaces that are faceted in an undulating, waterfall-like plane. The walls are layered with crystalline fins that shade and catch the light, changing the view of the tower as one moves around it. The skyscraper stands in contrast to the jumble of new buildings in the fast-growing area of the city’s central hub.

The tower is said to have 112,000 square meters of total façade area, which is equivalent to 16 standard football fields. The façade features a thermally broken, unitized curtain wall system with low-emissivity insulated glazed units, shaded by full height external vertical glass fins. Because the tower tapers as it rises, the curtain wall undulates on alternating floors to create a micro-texture for the exterior. The external glass fins cantilever 600 millimeters from the glazed façade, providing shading and housing LED lighting strips along the outer edges for nighttime illumination.

Multiple new techniques, including computer simulation and physical tests, were used to examine the behavior of the building at different seismic levels. To achieve the necessary combination of strength and flexibility, engineers introduced a new system to China by adopting a composite steel plate shear wall at the base of the tower. The result illustrates a desirable balance between economics and the structural safety of a high-rise in a high seismic zone.

The tower’s robust base is folded seamlessly into the existing urban fabric and visually anchors the tapering tower. The ground floor contains clearly organized entries to offices on the west and a hotel on the east. The complex acts as a social and commercial hub for the city, with its retail podium drawing a constant bustle of activity to the area.

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