

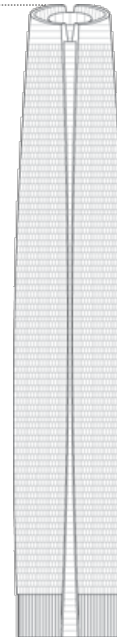
Wuhan Center Tower



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Height: To Tip
438 m / 1,437 ft
Height:
Architectural
438 m / 1,437 ft



Floors Above Ground
88
Tower GFA
343,900 m² / 3,701,709 ft²
of Parking Spaces
1,200

Facts

Official Name	Wuhan Center Tower
Name of Complex	Wuhan Center
Structure Type	Building
Status	COM
Country	China
City	Wuhan
Street Address & Map	Hanxi Road
Building Function	hotel / residential / office
Structural Material	composite <ul style="list-style-type: none"> Core: Reinforced Concrete Columns: Concrete Filled Steel Floor Spanning: Steel
Proposed	2008
Construction Start	2011
Completion	2019

Companies Involved

Owner	China Oceanwide Holdings Group
Developer	Wuhan CBD Investment Development Company
Architect	<ul style="list-style-type: none"> Design: East China Architectural Design & Research Institute
Structural Engineer	<ul style="list-style-type: none"> Design: East China Architectural Design & Research Institute Peer Review: Thornton Tomasetti
MEP Engineer	<ul style="list-style-type: none"> Design: East China Architectural Design & Research Institute
Main Contractor	China State Construction Engineering Corporation
Other Consultant	<ul style="list-style-type: none"> Cost: Sweett Group Façade: ALT Limited; East China Architectural Design & Research Institute Interiors: CityGroup (CTG) Design Landscape: SWA Group Lighting: Grand Sight Design International Wind: RWDI
Material Supplier	<ul style="list-style-type: none"> Cladding: Jangho Group Co., Ltd. Paint/Coating: Jotun Steel: China Construction Steel Structure Corporation

About Wuhan Center Tower

Inspired by a sailing vessel, Wuhan Center Tower is appropriately situated beside the Mengze Lake in Hubei province, along the Yangzhi River. The tower is divided into five vertical sections, seamlessly integrating retail, office, and residential spaces, as well as a hotel. It is easily accessible from public transportation, designed to serve the needs of residents and guests, as well as the city's burgeoning business community.

The primary design features that enhance the structure's sustainability are the façade and an integrated energy core. A folding glass curtain façade enwraps the Wuhan Center, with two bevels running along its height. The slotted sides help reduce wind pressure on the building. The tower's façade materials were carefully considered with respect to appearance and function. Fully glazed and sealed curtain wall systems allow

more light into the space, but also increase solar heat gain. To address this issue, folding curtain wall units optimize shading performance, reducing solar radiation and indoor heat gain by 50% compared to a smooth curtain wall. Comfortable indoor temperatures are also maintained through a sophisticated air flow system, employing techniques such as using stratified air at the top of the tower in cooling systems.

The main focus of the tower's core design is space efficiency. The core area reduces gradually as the building's height increases, leaving more free space in the core tube to arrange mechanical, electrical, and auxiliary systems in an "integrated energy core." The tower's design typifies the sustainable building concept, utilizing both architectural modeling and façade technology to create a high-performance structure, recognizing that as urban population density increases, and buildings grow taller by necessity, the environmental imperative is that much more powerful.

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12 Dec 2019 – CTBUH Journal 2020 Issue I

Significant Progress in Construction Equipment of Super High-Rise Building

1 Sep 2018 – International Journal of High-rise Buildings Volume 7 Number 3

Wuhan Center – A Sustainable Design Exploration for Skyscrapers

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