

## Zifeng Tower

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**Height: To Tip**  
450 m / 1,476 ft

**Height: Architectural**  
450 m / 1,476 ft

**Height: Occupied**  
316.6 m / 1,039 ft

**Height: Observatory**  
271.8 m / 892 ft

**Floors Above Ground**  
66

**Floors Below Ground**  
5

**# of Elevators**  
54

**Top Elevator Speed**  
7 m/s

**Tower GFA**  
137,529 m<sup>2</sup> / 1,480,350 ft<sup>2</sup>

**# of Hotel Rooms**  
450

**# of Parking Spaces**  
1,200

### Facts

<b>Official Name</b>	Zifeng Tower
<b>Other Names</b>	Nanjing Greenland Financial Center
<b>Structure Type</b>	Building
<b>Status</b>	Completed
<b>Country</b>	China
<b>City</b>	Nanjing
<b>Street Address &amp; Map</b>	No. 9 Zhongyang Road, Gulou District
<b>Postal Code</b>	210008
<b>Building Function</b>	hotel / office
<b>Structural Material</b>	composite <ul style="list-style-type: none"> <li>• Core: Reinforced Concrete</li> <li>• Columns: Concrete Filled Steel</li> <li>• Floor Spanning: Steel</li> </ul>

<b>Proposed</b>	2004
<b>Construction Start</b>	2005
<b>Completion</b>	2010
<b>Official Website</b>	<a href="#">Zifeng Tower</a>

### Rankings

Click arrows to view the next taller/shorter buildings

<b>Global Ranking</b>	#17 Tallest in the <a href="#">World</a>	▲ ▼
<b>Regional Ranking</b>	#14 Tallest in <a href="#">Asia</a>	▲ ▼
<b>National Ranking</b>	#10 Tallest in <a href="#">China</a>	▲ ▼
<b>City Ranking</b>	#1 Tallest in <a href="#">Nanjing</a>	▼

### Companies Involved

<b>Owner/Developer</b>	Greenland Group; Nanjing Guzzi Greenland Financial Center; Nanjing State Owned Assets
<b>Architect</b>	<ul style="list-style-type: none"> <li>• <b>Design</b> <a href="#">Skidmore, Owings &amp; Merrill LLP</a></li> <li>• <b>Architect of Record</b> <a href="#">East China Architectural Design &amp; Research Institute</a></li> </ul>
<b>Structural Engineer</b>	<ul style="list-style-type: none"> <li>• <b>Design</b> <a href="#">Skidmore, Owings &amp; Merrill LLP</a></li> <li>• <b>Engineer of Record</b> <a href="#">East China Architectural Design &amp; Research Institute</a></li> </ul>
<b>MEP Engineer</b>	<ul style="list-style-type: none"> <li>• <b>Design</b> <a href="#">Skidmore, Owings &amp; Merrill LLP</a></li> <li>• <b>Engineer of Record</b> <a href="#">East China Architectural Design &amp; Research Institute</a></li> </ul>
<b>Main Contractor</b>	<a href="#">Shanghai Construction Group</a>
<b>Other Consultant</b>	<ul style="list-style-type: none"> <li>• <b>Access</b> <a href="#">CBRE</a></li> <li>• <b>Fire</b> <a href="#">Rolf Jensen &amp; Associates</a></li> <li>• <b>Landscape</b> <a href="#">SWA Group</a></li> <li>• <b>Lighting</b> <a href="#">PHA Lighting Design</a></li> </ul>
<b>Material Supplier</b>	<ul style="list-style-type: none"> <li>• <b>Ceiling</b> <a href="#">Armstrong World Industries</a></li> <li>• <b>Elevator</b> <a href="#">KONE; Schindler; Sematic S.r.l.</a></li> <li>• <b>Façade Maintenance Equipment</b> <a href="#">CoxGomyl</a></li> <li>• <b>Sealants</b> <a href="#">Dow Corning Corporation</a></li> </ul>

### About Zifeng Tower

Zifeng Tower is a mixed-use complex comprising of several buildings resting on two sites, parcels A1 and A2. Parcel A1 contains a podium connecting two towers. The taller 450m (1,476ft) tower consists of offices and hotels, and the tower contains purely office space. The shape and placement of the buildings are designed to echo the geometry of the existing roads and maximize exterior views of the city. The buildings' composition maintains the east-west viewing corridors along East Beijing Road and provides a visual link to the nearby historical drum and bell towers.

Landscaping is a significant part of the complex as the buildings are set back from the street with several large landscaped, public open

spaces. South of parcel A1, is a sunken garden that will connect to the future subway. There is also a roof garden at the top of the podium in parcel A1 to reduce the heat island effect. In addition to the ground level and podium garden spaces, the design incorporates sky gardens that wind their way up the façade, bringing the green all the way up the tower.

As one of the tallest structures in the world to date and being constructed in a seismic region, enhanced design measures and performance-based evaluations were utilized in order to obtain seismic review approval for the main tower. The critical parts of the lateral system were designed for earthquake forces between two and six times more than typically required by Chinese code. Additionally, a full 3-Dimensional Non-Linear Elasto-Plastic analysis for a 2,500-year earthquake was completed to determine the structural response and serviceability. A multi-stage axial shortening, creep and shrinkage analysis was also performed to evaluate the long-term load sharing between the central core and the perimeter of the Tower through the outrigger truss system.

The tower features a unique façade system, rather than a typical flush-glass curtain wall system; it is composed of offset modular panels that protrude in plan to create a distinctive texture to the building's elevations. Each curtain wall unit is a triangle in plan and shifts a half module between each two floors. It creates a scaled effect and has a very unique visual appeal in catching the light and reflections of the city. The small edge of the triangle unit is a fixed perforated metal panel with a hidden operable panel behind it for natural ventilation and smoke exhaust. This will help to reduce mechanical ventilation energy usage during some transitional seasons. The long edge of each triangle unit consists of a high performance insulated low-E glass panel, to help to cut down the heat gain through the building façade.

The office tower is served by floor-by-floor, variable volume, supply air handling units with variable speed drive. Four pipe fan coil units are provided for hotel guest rooms. Gas fired steam boilers and chillers, and associated water pumps are located on the first basement level. Gas service is brought into the building for the boilers and for kitchens. The fire protection system for the building consists of a zoned combination automatic sprinkler and standpipe system in accordance with regulatory requirements for a fully sprinklered high-rise building in China.

The office tower is served by two banks of seven elevators, one bank for the low-rise office levels, and one for the high-rise office levels. Two service elevators are designated as fire elevators and serve all floors of the office tower (three separate service elevators will serve all floors of the hotel). The hotel portion of the main tower will be served by three express passenger elevators from the ground floor entrance lobby to the level 36 sky lobby, where five local passenger lifts will take guests up to the highest hotel level on 65.

## Zifeng Tower

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### CTBUH Initiatives

#### [Top Company Rankings: The World's 100 Tallest Buildings](#)

13 Oct 2016 – CTBUH Research

#### [Nanjing Regional Tour Report](#)

20-21 Sep 2014 – Tour Report

#### [Zifeng Tower Chosen as Featured Building](#)

Sep 2013 – Featured Tall Building

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### Research Papers

#### [SOM and China: Evolving Skyscraper Design Amid Rapid Urban Growth](#)

Oct 2016 – CTBUH Journal, 2016 Issue IV

#### [The Tallest 15 Cities in China](#)

Sep 2012 – CTBUH Journal, 2012 Issue III

#### [Advanced Supertall Building Design in Hot-Summer and Cold-Winter Climates](#)

Sep 2012 – CTBUH 2012 9th World Congress, Shanghai

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### Videos

#### [Advanced Supertall Building Design in Hot-Summer and Cold-Winter Climates](#)

21 Sep 2012 – Jianqiang Li, ISA Architecture

#### [Supertall Building Difficulties and Control Points](#)

20 Sep 2012 – ZhaoHui Jia, Greenland Group

#### [From Jin Mao to Kingdom: Search for an Asian Supertall Vernacular](#)

19 Sep 2012 – Adrian Smith, Adrian Smith + Gordon Gill Architecture

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