One World Trade Center

Facts

Official Name: One World Trade Center
Name of Complex: World Trade Center
Other Names: Freedom Tower
Structure Type: Building
Status: Completed
Country: United States
City: New York City
Street Address & Map: 1 World Trade Center
Postal Code: 10048
Building Function: Office
Structural Material: Composite
- Core: Reinforced Concrete
- Columns: Steel
- Floor Spanning: Steel

Energy Label: LEED Gold
Proposed: 2005
Construction Start: 2006
Completion: 2014
Official Website: One World Trade Center

Rankings
- Global Ranking: #6 Tallest in the World
- Regional Ranking: #1 Tallest in North America
- National Ranking: #1 Tallest in United States
- City Ranking: #1 Tallest in New York City

Companies Involved

Owner
- Current: 1 World Trade Center LLC
- Past: Silverstein Properties
Developer: Port Authority of New York and New Jersey; The Durst Organization
Architect
- Design: Skidmore, Owings & Merrill LLP
- Peer Review: Leslie E. Robertson Associates
Structural Engineer
- Design: WSP Group; Schlaich Bergermann und Partner
- Peer Review: Leslie E. Robertson Associates
 MEP Engineer
- Design: Jaros, Baum & Bolles
- Project Manager: STV
Main Contractor: Tishman Construction
Other Consultant
- Acoustics: Cerami & Associates
- Building Monitoring: Viridian Energy & Environmental, LLC
- Civil: Philip Habib & Associates
- Code: Code Consultants, Inc.
- Cost: AECOM
- Energy Concept: Viridian Energy & Environmental, LLC
- Environmental: Arnold & Porter LLP
- Façade: Viridian Energy & Environmental, LLC; Benson Industries; Permasteelisa Group
- Façade Maintenance: Lerch Bates
- Geotechnical: Mueser Rutledge Consulting Engineers
- Landscape: Mathews Nielsen Landscape Architects; Peter Walker Landscape Architects
- Lighting: Brandston Partnership, Inc.; Claude Engle

Height: Occupied
386.5 m / 1,268 ft
Height: Architectural
541.3 m / 1,776 ft
Height: To Tip
546.2 m / 1,792 ft
Height: Observatory
386.5 m / 1,268 ft
Floors Above Ground
94
Floors Below Ground
5
# of Elevators
73
Top Elevator Speed
10.16 m/s
Tower GFA
325,279 m² / 3,501,274 ft²
About One World Trade Center

One World Trade Center recaptures the New York skyline, reasserts downtown Manhattan’s preeminence as a business center, and establishes a new civic icon for the country. It is a memorable architectural landmark for the city and the nation, and connects seamlessly to the city with linkages to an extensive underground transportation network. Extending the long tradition of American ingenuity in high-rise construction, the design solution is an innovative mix of architecture, structure, urban design, safety, and sustainability.

The tower is a bold icon in the sky that acknowledges the adjacent memorial. While the memorial, carved out of the earth, speaks of the past and of remembrance, One World Trade Center speaks about the future and hope as it rises upward in a faceted form filled with, and reflecting, light. This tower evokes the slender, tapering triangular forms of great New York City icons such as the Chrysler Building and Empire State Building and replaces almost one quarter of the total office space lost on September 11, 2001 in a single building.

As the tower rises from a cubic base, its edges are chamfered back, resulting in a faceted form composed of eight elongated isosceles triangles. At its middle, the tower forms a perfect octagon in plan and then culminates in a glass parapet whose plan is a 150-foot-by-150-foot square, rotated 45 degrees from the base. Its overall effect is that of a crystalline form that captures an ever-evolving display of refracted light. As the sun moves through the sky or pedestrians move around the tower, the surfaces appear like a kaleidoscope, and change throughout the day as light and weather conditions change.

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CTBUH Initiatives

Vertical Transportation: Ascent & Acceleration
12 Sep 2017 – CTBUH Research

Second CAF–CTBUH Event Examines Tall Building Safety
18 May 2017 – Event Report

Top Company Rankings: The World’s 100 Tallest Buildings
13 Oct 2016 – CTBUH Research

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Research Papers

The Global Tall Building Picture: Impact of 2018
Jan 2019 – CTBUH Journal 2019 Issue I

Using Height-Relative Variables To Design Tall Buildings
Jul 2018 – CTBUH Journal 2018 Issue III

Towards Resource-Generative Skyscrapers
Jul 2018 – International Journal of High-Rise Buildings Volume 7 Number 2

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Videos

Five Minutes With: Carla Swickerath
9 Jul 2018 – Carla Swickerath, Studio Daniel Libeskind

Quay Quarter Tower: Humanizing the High-Rise
30 Oct 2017 – Kim Nielsen, 3XN

From San Diego to Guangzhou: The Story of Marketing Tall Buildings
19 Oct 2016 – William Murray, Wordsearch

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CTBUH Awards

Best Tall Building Americas 2015 Winner
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