

# Tall Buildings

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SUBJECT	<i>21<sup>st</sup> CENTURY DIRECTIONS &amp; FUTURES</i>
DEFINING THE ISSUES	<p><b>The last competition to build the world's tallest building</b></p> <ul style="list-style-type: none"> <li>● For 40 yrs the Eiffel Tower in Paris was the world's tallest 'structure' though it wasn't actually a building. That term is reserved for skyscrapers that contain office or residential space. (Residential includes hotel rental space as well as apartments)</li> </ul> <p><b>Chrysler vs 40 Wall Street</b></p> <ul style="list-style-type: none"> <li>● The Chrysler building was originally planned to be 808 ft tall. Then it turns out that the 40 Wall Street office building was planned to be 834 ft tall. So each kept adding height via added decorative features. Finally it appeared that 40 Wall Street was going to win at 925 ft. However, hidden inside the upper structure of the Chrysler building was a 27 ton spire over 100 ft tall. After both building were apparently completed in April of 1930, Chrysler builders raised the 'steel vertex' in 90 minutes and ended with the world's tallest building at 1048 ft. Within a year, however, the Empire State building topped out at 1250 ft including a 102 ft zeppelin mooring mast that turned out to be unusable due to high winds. This building was the world's tallest for over 40 yrs.</li> </ul> <p><b>The current competition is world wide</b></p> <p>The US, Taiwan, Malaysia, United Arab Emirates, and mainland China are building taller and taller skyscrapers.</p> <p>What are the current 'completed' tall buildings and other structures?</p> <ul style="list-style-type: none"> <li>● Buildings</li> <li>● Free standing structures (partially submerged and land based)</li> <li>● Structures supported by guy wires</li> </ul>
POSSIBILITIES	<p><b>Unusual buildings</b></p> <p>Turning Torso and the proposed Fordham Tower</p> <p><b>Under construction</b></p> <p>Freedom Tower, Ice tower and (current winner!) the Burj Dubai</p> <p><b>Proposed but not started</b></p> <p>Siam Tribute Tower, Al Burj and Sphere Lighthouse Paris</p> <p><b>An American Green Skyscraper in Paris</b></p> <p>Developers have selected a design by an American architect for a new building nearly as tall as the Eiffel Tower and powered partly by the wind.</p> <p>Dubbed the Lighthouse, the 984-foot-high skyscraper will be designed by Thom Mayne and erected at La Defense, a complex of office towers in a business district west of Paris where many of France's major corporations are headquartered.</p> <p>Mayne's design shows a building "curving asymmetrically upward, topped by a crown of spiky antennae." It's being billed as a "green" building, as the wind turbines on the roof will power the building's heating and cooling system for a part of the year. A retractable outer layer will reduce the heat from sunlight through the windows in summer.</p> <p>Set for completion in 2012 and reported to cost upwards of \$1 billion, the building will be shorter than the 1,062-foot Eiffel Tower but significantly taller than Paris' highest office building, the 688-foot Montparnasse Tower.</p> <p><b>Proposed but abandoned</b></p> <p>Mile High Illinois, <i>Frank Lloyd Wright, 1956</i></p> <p>Frank Lloyd Wright intended his Mile High Illinois skyscraper to be the focal point of Broadacre City, the theoretical city, he began planning in the 1920s. Because the Broadacre project was</p>

	<p>an exploration of horizontal space, a one-mile-high skyscraper might at first seem out of place—but by the 1950s Wright had decided that some cities were “incorrigible,” and that even Broadacre City could use a tall building as a cultural and social hub. The foundation of Wright’s building was a massive column, shaped like an inverted tripod, sunk deeply into the ground. This supported a slender, tapering tower with cantilevered floors. In keeping with his belief that architecture ought to be organic, Wright likened this system to a tree trunk with branches. He planned to use gold-tinted metal on the facade to highlight angular surfaces along balconies and parapets and specified Plexiglas for window glazing. Inside the building, mechanical systems were to be housed inside hollow cantilevered beams.</p> <p><b>Far Future</b></p> <p>Japan <a href="#">X-Seed 4000 concept</a> Inspired by Mount Fuji, Taisei Construction Corporation has completed designs for construction of the world's tallest building. The X-Seed 4000 (no idea where that came from) would stand at approximately 13,123 feet (4 km), nearly 700 feet (213 m) taller than the real Mount Fuji. The next tallest buildings don't even break 2,000 feet, how puny! While likely to never be built, the X-Seed would have up to 800 floors, and be capable of housing between 500,000 and 1,000,000 people.</p> <p>The proposed structure would have a base 6 km wide and contain 800 floors. Designed by Taisei Construction Corporation, this mountain-shaped living environment would be powered by solar power and blend together high living with natural surroundings. It seems odd to claim that it would be powered by the sun entirely - this would mean that the company either intends to devote entire floors to nothing but solar panels or that it has found a way to power buildings economically with minimal paneling.</p> <p>Designed as an “intelligent building” the super-futuristically-named X-Seed 4000 would maintain light, temperature, and air pressure in response to changing external weather conditions. Because it has already been fully designed using materials available today, the structure could, in principle, be built, although it would likely cost several <i>hundred billion</i> dollars, if not more. Because the structure would weigh so much, it could only be built on the sea if present-day construction materials were used.</p> <p>The X-Seed 4000 sounds an awful lot like an arcology, that is, ecological piece of architecture that would contain its own dependent ecosystem as well as human housing. In the long run, as buildings grow to such huge sizes that they become cities unto themselves, the integration of plants and animals will be essential for the preservation of human sanity and basic aesthetics. Eventually the Earth’s surface could become entirely covered in such structures.</p>
<p>SOCIETAL IMPACTS &amp; CONSEQUENCES</p>	<ul style="list-style-type: none"> <li>● Targets for terrorists? Irrational exuberance? Does this presage a world wide depression? (Chrysler raised their spire the day before the stock market crashed! )</li> </ul>

References:

Worlds tallest buildings photo and criteria - <http://www.infoplease.com/ipa/A0001338.html>

Worlds tallest towers CN Tower 1815 ft (1975)<http://www.infoplease.com/ipa/A0886190.html>

Frank Lloyd Wright and other wild concepts [http://archrecord.construction.com/innovation/2\\_Features/0411history.asp](http://archrecord.construction.com/innovation/2_Features/0411history.asp)

X-seed 4000 [http://www.geekologie.com/2007/08/japans\\_plan\\_for\\_worlds\\_tallest.php](http://www.geekologie.com/2007/08/japans_plan_for_worlds_tallest.php) and <http://www.acceleratingfuture.com/michael/blog/?p=24>

<http://bash-mohandis.blogspot.com/2007/06/race-for-worlds-tallest-building.html> (photo of line up and links)

Ice Tower is a building that will be starting constructions by the ends of this month and will be built by early 2010. This massive building of 381m tall and 1,250 feet will be the tallest building in Panama,as well as all of the Caribbean,Central America,South America,Mexico and Canada. Also the tallest residential building in the world. This building will be the same height as the Empire State Building in New York City,New York. (Ice tower photo)

<http://www.agoraphoria.com/index.php?showtopic=173&mode=threaded&pid=798>

<http://upload.wikimedia.org/wikipedia/commons/thumb/8/83/Burjdubaiaaug92007.jpg/180px-Burjdubaiaaug92007.jpg> burj

[http://en.wikipedia.org/wiki/List\\_of\\_tallest\\_buildings\\_and\\_structures\\_in\\_the\\_world](http://en.wikipedia.org/wiki/List_of_tallest_buildings_and_structures_in_the_world) (list of buildings and towers)

<http://architecture.about.com/library/btall.htm> List of proposed structures

<http://www.tallest-building-in-the-world.com/category/news/> blog – latest May07

[http://blog.scifi.com/tech/archives/2007/07/23/new\\_record\\_for.html](http://blog.scifi.com/tech/archives/2007/07/23/new_record_for.html)

Burj Dubai, a tower under construction in the skyscraper-crazy United Arab Emirates, has now eclipsed the former world's tallest building in height and number of storeys. For those of you keeping track, the world's tallest *completed* building is still the [Taipei 101](#) in Taiwan, at 1,666 feet. Nobody knows exactly how tall the Burj Dubai will be when it's completed, but for now it's 1,680 feet, with 141 structurally-sound stories, another world record.

Currently the world's tallest tower and freestanding structure is the [Canadian National Tower](#) in Toronto, whose spire reaches 1,815 feet. The Burj's developers promise that when their [skyscraper](#) is completed, it will eclipse all current tall-building records, including the reach of its spire. The building's final planned height is still secret (so that other developers don't design buildings just a few yards taller while the Burj is under construction), but developers promise a minimum of 2,275 feet. All we can really say in this situation is, cough, *Icarus*. — S.E. Kramer

<http://2bangkok.com/2bangkok/buildings/siamtribute/siamtribute.shtml> Siam Tribute

<http://cgullworld.blogspot.com/2007/07/burj-dubai-becomes-tallest-building-on.html>

[http://en.wikipedia.org/wiki/Al\\_Burj](http://en.wikipedia.org/wiki/Al_Burj) Al Burj photo

<http://www.burjdubaiskyscraper.com/> blog on the burj

<http://www.arcspace.com/architects/calatrava/fordham/fordham.html>

Fordham Spire of Chicago and Turning Torso of Malmo, Sweden

[http://en.wikipedia.org/wiki/Turning\\_Torso](http://en.wikipedia.org/wiki/Turning_Torso)

Apartment rents start at \$2,200/mo. Not recommended for the vertigo challenged.

<http://www.tribuneindia.com/2003/20030214/biz.htm>

A rendering of the revised plan of the Shanghai World Financial Center building (L) is shown next to China's tallest building Jinmao Tower (R) on Thursday. Shanghai is set to house the world's ultimate symbol of capitalist success by 2007, as work restarted on Thursday on the 101-storey, 492-metre tall skyscraper that its Japanese builders hope will be the tallest on the planet. — Reuters

[http://en.wikipedia.org/wiki/Freedom\\_Tower](http://en.wikipedia.org/wiki/Freedom_Tower)

The base of the tower (fortified because of security concerns) has also been a source of controversy. A number of critics have suggested that it is alienating and dull, and reflects a sense of fear rather than freedom, leading them to dub the project "the Fear Tower." Nicolai Ouroussoff, the architecture critic for the New York Times, calls the tower base decorations a "grotesque attempt to disguise its underlying paranoia"

<http://skyscraperpage.com/diagrams/?2063133>