

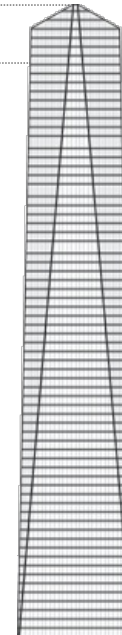
Northeast Asia Trade Tower



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Height: To Tip
305 m / 1,001 ft

Height:
Architectural
305 m / 1,001 ft
Height: Occupied
276.7 m / 908 ft



Height: Observatory
276.7 m / 908 ft

Height: Helipad
300 m / 984 ft

Floors Above Ground
68

Floors Below Ground
3

of Elevators
22

Tower GFA
140,000 m² / 1,506,947 ft²

of Apartments
200

of Hotel Rooms
204

of Parking Spaces
1,357

Facts

Official Name	Northeast Asia Trade Tower
Other Names	NEATT
Structure Type	Building
Status	COM
Country	South Korea
City	Incheon
Street Address & Map	Songdo International Business District
Building Function	residential / hotel / office
Structural Material	composite <ul style="list-style-type: none"> Core: Reinforced Concrete Columns: Concrete Encased Steel Floor Spanning: Steel
Proposed	2005
Construction Start	2006
Completion	2011

Companies Involved

Owner/Developer	Gale International
Architect	<ul style="list-style-type: none"> Design: Kohn Pedersen Fox Associates Architect of Record: Heerim Architects & Planners
Structural Engineer	<ul style="list-style-type: none"> Design: Arup; Dong Yang Structural Engineers
MEP Engineer	<ul style="list-style-type: none"> Design: Arup
Project Manager	Parsons Brinckerhoff Consultants Private Limited
Main Contractor	Daewoo E&C
Other Consultant	<ul style="list-style-type: none"> Façade: ALT Limited Wind: RWDI

About Northeast Asia Trade Tower

The Northeast Asia Trade Tower symbolizes the region's role as a new center of economic activity and development. The tower embodies the planning principles of New Songdo City, a 607 hectare (1,500 acre), master-planned community on the Incheon, Korea, waterfront. Northeast Asia Trade Tower is a large-scale mixed-use development designed to attract top tier Global and Korean companies as tenants to this new international free-trade zone. Occupying a site centrally located at the southern edge of Songdo Central Park, the tower is adjacent to the Songdo Convensia Convention Center, and near the Songdo First World Towers. The tallest building in Korea at the time of its completion, Northeast Asia Trade Tower rises above the new city offering views of the Yellow Sea, the cities of Seoul and Incheon, and the surrounding mountains.

The tall form tapers from a trapezoid shape at the ground level to a triangle at the top, reflecting the shifting programs within. The tower's large base accommodates the open floor plates required by office tenants, while the tower's slender upper floors provide hotel and residential spaces with shallower floor plates, maximizing views and light penetration. The very top of the tower—its observation space—is fittingly paired with the tower's most slender profile. The transition in plan from trapezoidal to triangular form translates into an elegant exterior with reflective faces that resemble elongated triangles, the edges of which converge and diverge in an alternating pattern.

The form appears to lean toward Songdo Central Park and, in fact, it does bow out by 5m (16ft). This effect is achieved without compromising the tower's stability. To stabilize the structure of the building, the core rises vertically and the centroid of the tower mass aligns with the centroid of the tower ground level, thereby eliminating any rotational forces in the foundation from the tower form. This results in a very efficient structural system. The concrete core and the lightweight steel floor framing are conventional construction methods resulting in a cost effective building.

Northeast Asia Trade Tower serves as a model of sustainable design strategies, carefully balancing energy conservation, increased indoor environmental quality, and occupant comfort. The exterior glazing allows for abundant daylight penetration and expansive views. Exterior shading devices, together with a high performance glazing specification, limit solar heat gain and reduce air conditioning costs. Operable windows allow for smoke exhaust and small LED lights are embedded into the façade outriggers greatly reducing the energy spent on lighting the building at night.

Like other buildings in New Songdo City, Northeast Asia Trade Tower purchases district hot water from a new, highly efficient cogeneration facility located nearby. Hot water, used for heating and cooling via absorption chillers, is generated from waste heat recovered during the process of producing electricity. The building is estimated to reduce source-energy CO2 emissions by 6,000 tons per year when compared to a "standard" code-compliant office tower with on-site electric chillers and a natural-gas boiler plant.

Because water conservation is a chief concern in Korea, the design for Northeast Asia Trade Tower addresses this issue in several ways. First, low-flow plumbing fixtures reduce water usage by more than 20% in comparison to the consumption rate of a typical office building. Second, a grey water collection system is used for flushing toilets and urinals to further decrease potable water demand and reduce sewage conveyance. Third, the building utilizes collected stormwater for site irrigation via large storage tanks, reducing potable water used for this purpose by more than 50%.

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