

# The World Trade Center in the Port of New York

## ARCHITECTURAL PLAN OF THE WORLD TRADE CENTER

The design for The World Trade Center assures that the aesthetic and functional requirements of the project will be achieved. The architects have solved major problems in cost, structural design and vertical transportation to produce a self-supporting facility of unparalleled magnitude.

Situated on a 16-acre site in the heart of the Port's world trade community and overlooking the historic New York-New Jersey Harbor, two great towers, each 1,350 feet high, will rise from a spacious Plaza to serve as a symbol of world trade in this, the bi-state gateway to America.

It is expected that 50,000 people will work in the Center in addition to the 80,000 people who will visit the Center every weekday.

### The Plaza and Plaza Buildings

The magnificent Plaza surrounded by reflecting pools and covering almost five acres will rank in size and beauty with the historic plazas of the Old World. From this Plaza will be seen the delicate tracery of the Plaza Buildings and the soaring arches of the entrances to the twin towers.

The graceful design of the Plaza Buildings provides a broad opening on Church Street to serve as the grand entrance to the entire development. The Plaza will be but a step from some of the busiest and narrowest thoroughfares in the world. It is anticipated that it will provide an appropriate setting for important public ceremonies.

At ground level, sheltered archways will form galleries around all four sides of the Plaza. Location along these galleries of essential trade activities such as trade associations and offices of the United States Bureau of Customs, will facilitate the handling of world trade documentation, and speed the administrative processing indispensable to the conduct of this trade. The commercial offices of foreign consulates, the foreign departments of banks and permanent display and sales offices of American and overseas industries will be located in these broad glassed-in, air-conditioned galleries.

In the north wing of the Plaza Buildings, there will be a 250-room hotel which will provide international businessmen with modern quarters in immediate proximity to the extensive trade facilities and services of the Center. Meeting rooms will be used for business seminars and conferences.

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On the third level of the Plaza Buildings spacious exhibit areas will be appropriate showcases for industrial and consumer goods and for imports from the free world. These permanent exhibit facilities of the Trade Center will provide a market place, unmatched for conveniences and accessibility, for the thousands of overseas buyers and American businessmen who visit New York every year.

United States Customs examination and cargo pick-up areas, both of which generate large numbers of truck movements, will be located below the Plaza level completely off the streets. The essential business and consumer amenities required for a project of this magnitude, including tenant storage areas, five parking levels capable of handling 1,600 automobiles, and mechanical and refrigeration equipment, also will be located below the Plaza.

## The Towers

The design of the twin towers is an engineering tour de force—solving the two problems which long have plagued conventional skyscraper design: space-consuming elevator shafts and high structural cost.

In the unique structural framing system proposed for The World Trade Center, the exterior wall of the buildings will carry the vertical loads, resist the lateral wind loads and provide a dividend in the form of column-free interiors, which will permit complete flexibility in space layout. The design also offers maximum efficiency in structural resistance to wind load. Each of the great steel columns which will form the exterior wall and support the structures at  $3\frac{1}{4}$  foot intervals will serve as dramatic frames for the floor-to-ceiling windows in each tower. These narrow windows provide magnificent views and reduce heating and cooling loads.

The skyscraper cannot exist without the elevator, but all skyscrapers pay a penalty because of the large floor areas consumed by elevator shaftways. This problem was brilliantly solved in The World Trade Center by the introduction of the "skylobby" system—a system similar in concept to horizontal mass transit.

It is the practice in mass transit to provide both express and local service. The express trains, making fewer stops, are able to cover relatively long distances rapidly. Passengers transfer to local trains to take them to stations most convenient for them. Similarly, in the skylobby system, express and local elevators are used.

The building is divided into three zones, the first zone extending from the first to the 42nd story; the second zone from the 43rd to the 76th; and the third zone from the 77th to the 110th story. The 43rd and 77th floors are the skylobbies.

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These floors are connected to the main ground floor lobby of the building by large high-speed express elevators.

People entering the building and bound for the upper two zones are moved by express elevators to the skylobbies. Here they transfer to local elevators which serve all floors within the zone.

The lower skylobby is served by 11 and the upper skylobby by 12 high-speed express cars traveling nonstop from the ground floor lobby.

There are 72 local elevators in each tower. Transportation time to any point in the building, including transfer at the skylobby, will not exceed two minutes. The wait for an elevator, even during rush hours, will never be more than 30 seconds.

Altogether, there will be 230 passenger elevators in the Center, including the Plaza Buildings. Those serving the tower will have a speed of more than 1,700 feet per minute, the fastest elevators in the world.

The skylobbies will provide areas for services such as cafeterias and restaurants. They also may be used for trade displays and exhibits and observation areas overlooking the bi-state harbor and the neighboring Port District communities.

On clear days the view from the top of the towers will encompass a sweeping and breathtaking panorama of 45 miles in every direction—south to 10 miles beyond Asbury Park, New Jersey; southwest to Princeton and the outskirts of Trenton, New Jersey; west to Kittatinny Mountains almost as far as the Delaware Water Gap; northeast to Kenisco Reservoir, Westchester County; northwest to Bear Mountain State Park; east-southeast to Jones Beach State Park; and east-northeast to Oyster Bay, Long Island.