
The Ferry Building (1898)

Dedicated as a California Historic Civil Engineering Landmark

by the San Francisco Section, ASCE

*Over 100,000 commuters a day
once passed beneath the Ferry
Building's famed clock tower.*



Constructed at a time when the use of reinforced concrete as a building material was not entirely accepted by most engineers, San Francisco's famed Ferry Building was inspired by the pioneering work of Ernest L. Ransome, the San Francisco engineer who did much to make reinforced concrete a common structural material. By the mid-eighteen-nineties, West Coast civil engineers, led by Ransome, were willing to attempt complex concrete forms, and the design for San Francisco's new ferry terminal provided the opportunity, calling for the use of a series of groined vaults cast as a continuous structure.

Architect Arthur Page Brown supervised the initial construction of the Ferry Building in 1896 but was fatally injured in an accident, and work was carried on by Edward R. Swain. Although the contiguous state offices were not completed until 1903, the building was dedicated on July 11, 1898, when ferry service officially began from the new slips. Intended as both a ferryboat terminal and a state office building, the new structure replaced the old Central Terminal Building, whose three wooden sheds had been in operation since 1877.

Until the completion of the Golden Gate and Bay Bridges in the late 1930's, the Ferry Building served over 100,000 commuters a day, being surpassed only by London's Charing Cross Station as the world's busiest passenger terminal. Although an estimated 30 million people passing through the site proved a source of difficulty during construction, ferryboat service, amounting to 170 daily crossings, suffered no delay, nor were there any accidents or injuries to the traveling public.

The 1906 earthquake left the Ferry Building, already an important San Francisco landmark, shaken but scarcely damaged, although for an entire year afterward, the tower's clock hands pointed eloquently to 5:17 a.m. Fortunately, an order to demolish the building as unsafe was ignored. Ultimately, a committee of engineers inspected the building and found it structurally sound, vindicating the pioneering construction methods used.

After World War II, the famed ferries began to disappear from the bay, the last boat leaving the Ferry Building in 1958. Reflecting the changing role of the

structure, the north wing was rebuilt in 1957 as the World Trade Center, with the addition of an inner third floor of office space. In 1962, the south wing was similarly rebuilt, so that today the Ferry Building has office space for over 1,000 people. The Embarcadero Freeway virtually became a part of the building's facade in the 1960's, eliminating the famous vista up Market Street before appalled San Franciscans halted further freeway construction. The Bay Area Rapid Transit District's transbay tube runs under the south wing. The Ferry Building became city property in 1969 when the State of California transferred port operations to the City and County of San Francisco.

The shoeshine stands, flower stalls, newsstands and Grand Central Station atmosphere of the building's heyday are gone now, but businessmen still congregate at the popular restaurant at the World Trade Club for lunch. And, in recent years, something new has been added to the Ferry Building: a ferryboat pier adjacent to the north wing.

TECHNICAL DATA:

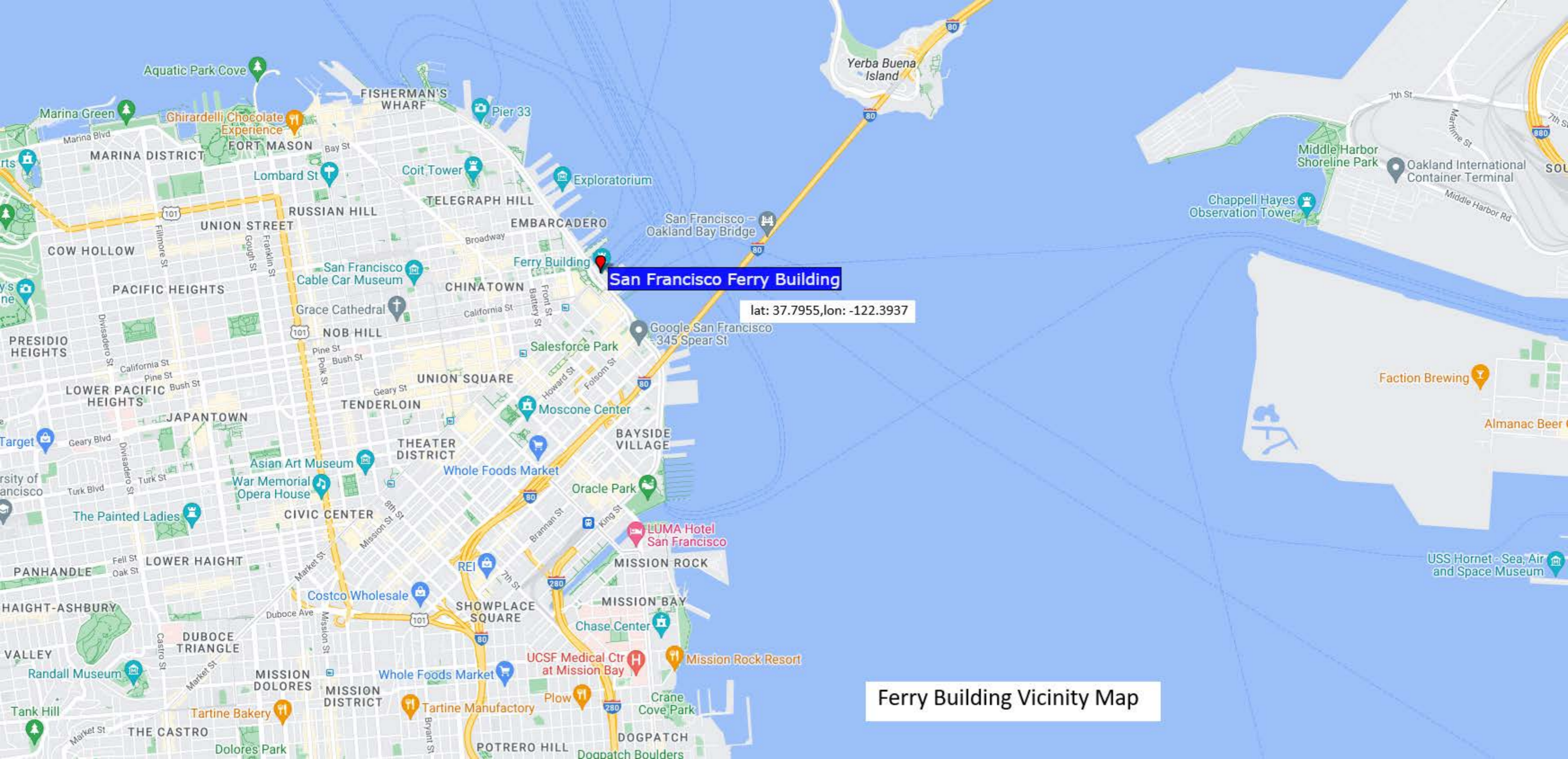
Location:	Foot of Market Street, San Francisco
Dates	Constructed 1896-1903 Dedicated July 11, 1898
Cost	\$3.5 million (to 1903)
Architects	Arthur Page Brown Edward R. Swain
Engineer	Howard C. Holmes, chief engineer for the Board of Harbor Commissioners
Dimensions	Main building and wings: 659 feet long, 159 feet wide Wings: 58 feet high Clock tower: 32 feet square, 235 feet high

SPECIAL NOTES

1. The Ferry Building's foundation, completed in 1896, consists of 11 concrete piers, 16' x 28' at the base and 8'6" x 28" at the top, with a depth of 20' below city base. These piers are joined together by a series of groined concrete arches 2' thick at the soffits to form a floor dimension of 160' x 670'. Supported by 5,000 piles, this type of construction was the first of its kind ever used on the West Coast.
2. During construction, a test arch of expanded metal and concrete was built and tested, and it was found able to support a load of 744 pounds per square inch (psi), ten times the actual requirement.



The Ferry Building once was one of the world's busiest intermodal transportation facilities, with over 170 ferryboats connecting with streetcar lines radiating throughout San Francisco.



San Francisco Ferry Building

lat: 37.7955,lon: -122.3937

Ferry Building Vicinity Map

