

The New Year News

San Francisco Bay Area

30 December 2017

Bridges of the Bay



For the San Francisco-Oakland Bay Bridge's first 77 years after opening in 1936, the eastern span between Yerba Buena Island, in the center of the bay, and Oakland lived in the shadow of the western span between SF and the island. The western span was a photogenic double-deck, twin suspension bridge more than 1,000 feet longer than the Golden Gate Bridge. Oakland's side was a common steel cantilever bridge and causeway. Construction to replace it with an iconic design began in 2002 and lasted for nearly 12 years, nine more than the original bridge took to complete. Removing the original span was finally completed last month, finally giving Oakland a landmark bridge of its own.

Bay Bridge / East Span

Length: 10,176 ft (3,102 m)

Clearance below: 191 ft (58m)

Freeway lanes: 10

Cost: \$6.5 billion (original cost for both spans: \$77 million)

Bridges of the Bay



Happy New
Year.

Tuesday morning, hundreds of thousands of Bay Area residents will awaken on 2018's first ordinary day with the knowledge they are separated from work or Grandma's house or the doctor's office by miles of open water.

This being America – California – the way they plan to get Where they need to go is by car. And the reason they plan to use a car is because the Bay that separates their originations from their destinations has been spanned by seven major bridges that make it possible.

My New Year's newsletters always have a coastal theme. Beaches, lighthouses – that sort of thing.

This one is the big bridges of the Bay Area. A couple of them are landmarks, tourist attractions. But most of them are architecturally uninspired, simply utilitarian.

Together, the Golden Gate, Bay, Benicia-Martinez, Carquinez, Richmond-San Rafael, San Mateo and Dumbarton bridges handle three-quarters of a million vehicles every day. And collect half a billion in tolls every year.

Golden Gate Bridge

Length: 8,981 ft (2,737m)

Clearance below: 220 ft (67m)

Freeway lanes: 6

Cost: \$35 million (1937)



Carquinez Bridge / I-80

Benicia-Martinez
Bridge / I-680

Richmond-San
Rafael Bridge /
I-580

Golden Gate
Bridge / US
101

Bay Bridge / I-80

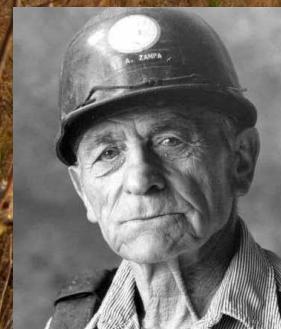
San Mateo Bridge / CA 92

Dumbarton Bridge / CA 84

Bridges of the Bay



Al Zampa grew up in Carquinez, the town on this end of the Carquinez Bridge, and went to work in the C&H Sugar factory, the building beneath the bridge across the Carquinez Strait. But it was the Depression. Iron workers were needed to build the Golden Gate Bridge. Dangerous iron work paid a lot more than sugar and Zampa got a job. He became the founding member of the Halfway to Hell Club when he became the first person to fall from the bridge and survive, thanks to a net, but he still spent three months in the hospital while his four fractured vertebrae healed. Before he retired in 1970, Zampa also worked on the Bay Bridge, Benicia-Martinez Bridge, Richmond-San Rafael Bridge and his hometown bridge. Three years after his death at age 95, the replacement for the western Carquinez span above was named the Alfred Zampa Memorial Bridge. You can watch fellow Tar Heel Charles Kuralt's interview with Zampa at <https://youtu.be/3CbpyS631xs>



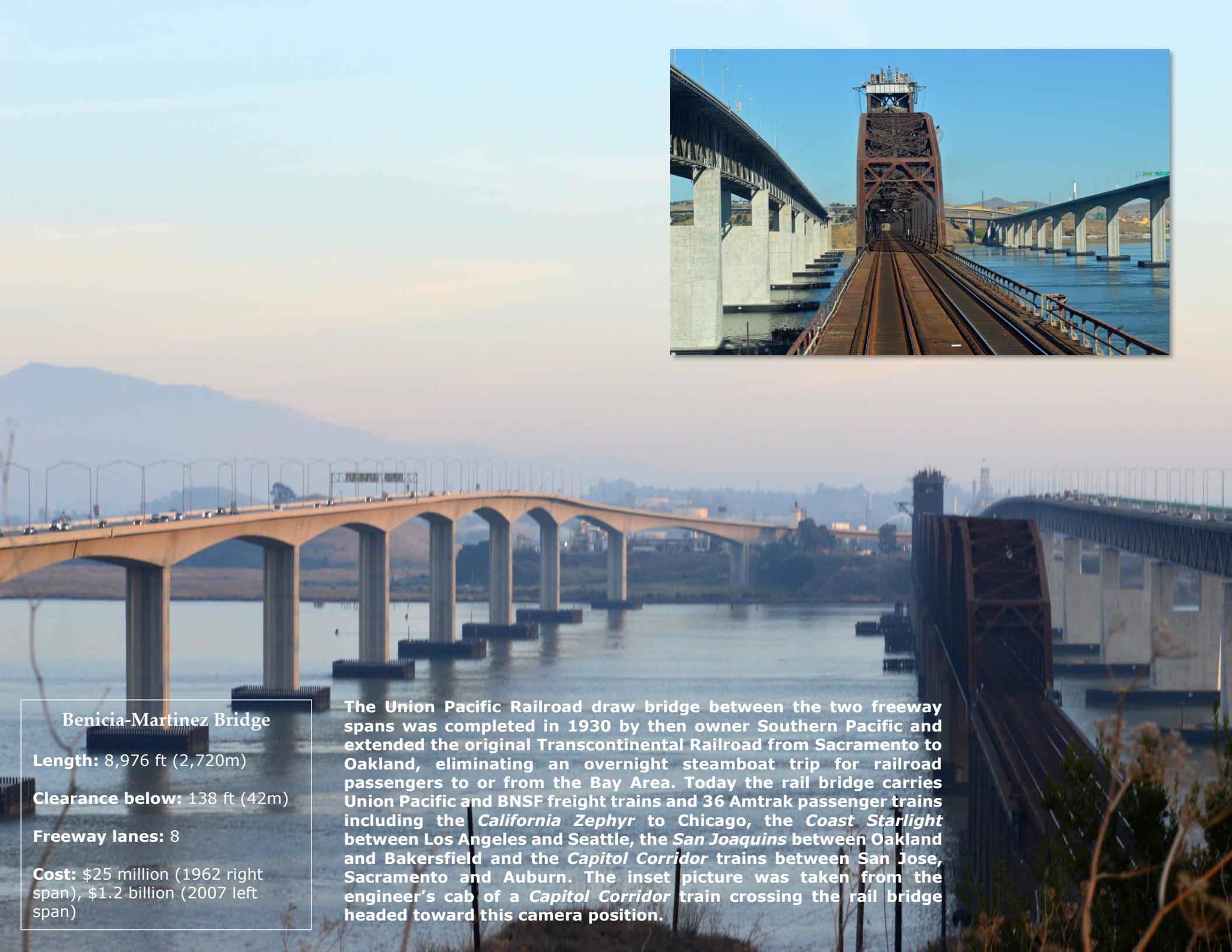
Carquinez Bridge

Length: 3,465 ft (1,056m)

Clearance below: 148 ft (45m)

Freeway lanes: 8

Cost: \$8 million (1927 first span), \$38 million (1958 second span), \$240 million (2003 suspension replacement)



Benicia-Martinez Bridge

Length: 8,976 ft (2,720m)

Clearance below: 138 ft (42m)

Freeway lanes: 8

Cost: \$25 million (1962 right span), \$1.2 billion (2007 left span)



The Union Pacific Railroad draw bridge between the two freeway spans was completed in 1930 by then owner Southern Pacific and extended the original Transcontinental Railroad from Sacramento to Oakland, eliminating an overnight steamboat trip for railroad passengers to or from the Bay Area. Today the rail bridge carries Union Pacific and BNSF freight trains and 36 Amtrak passenger trains including the *California Zephyr* to Chicago, the *Coast Starlight* between Los Angeles and Seattle, the *San Joaquin*s between Oakland and Bakersfield and the *Capitol Corridor* trains between San Jose, Sacramento and Auburn. The inset picture was taken from the engineer's cab of a *Capitol Corridor* train crossing the rail bridge headed toward this camera position.



Richmond-San Rafael Bridge

Length: 29,040 ft (8.85km)

Clearance below: 185 ft (56m) main channel, 135 ft (41m) secondary channel

Freeway lanes: 4, evenly divided between upper and lower decks

Cost: \$62 million (1956)

This view is from the northern, Marin County, end of the bridge. Immediately across the freeway, out of sight on the right is San Quentin State Prison, California's oldest prison built in 1852.



San Mateo Bridge

Length: 39,960 ft (11.3km)

Clearance below: 135 ft (41m)

Freeway lanes: 6

Cost: \$70 million (1967)

This span replaced a privately built, two-lane bridge that was the longest in the world when it was completed in 1929.



Like the bridge immediately to its north, the Dumbarton Bridge replaced an earlier privately built bridge. And like the Benicia-Martinez Bridge, it is part of a triple crossing. The inset shows the former Southern Pacific Railroad bridge just to the south, which hides part of the Hetch Hetchy Aqueduct, which brings water entirely by gravity flow 167 miles from the Tuolumne River in Yosemite National Park. Facebook, whose headquarters are on this western end of the Dumbarton Bridge, has funded a \$1 million study to assess the viability of reopening the rail crossing to passenger trains to give its East Bay workers (and other travelers) an alternative to the traffic-choked freeway bridge.

Dumbarton Bridge

Length: 8,600 ft (2,620m)

Clearance below: 85 ft (26m)

Freeway lanes: 4

Cost: \$70 million (1982)



Bay Bridge / West Span

Length: 10,304 ft (3,141m)

Clearance below: 220 ft (67m)

Freeway lanes: 10, evenly divided between upper and lower decks

Cost: \$77 million (1936)

The western span of the Bay Bridge is the second mile of Interstate 80, which runs from its interchange with U.S. 101 in San Francisco for 2,900 miles (4,670 kilometers) across 11 states to an interchange with I-95 in Teaneck, New Jersey, 10 miles from New York City. This span is double-decked, with five lanes on the upper level westbound into San Francisco and the five eastbound lanes on the lower level. Originally the lower deck carried the twin tracks of the Key System commuter railroad from Berkeley, Oakland and other East Bay cities into San Francisco. The tracks were removed and the lower deck converted solely to truck and automobile use in 1958.