

Two Bay Area Bridges - The Golden Gate and San Francisco-Oakland Bay Bridge

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Two Bay Area Bridges - The Golden Gate and San Francisco-Oakland Bay Bridge

The Golden Gate Bridge, the symbol of San Francisco, is not on the Interstate System. It carries U.S. 101 across the bay.

On June 14, 1846, Captain John Frémont declared California's independence from Mexico. He had no right to do so, but he nevertheless raised the banner of the Bear Flag Republic at Sonoma, north of San Francisco Bay. He and his supporters then crossed the bay to spike the Mexican cannons at the Presidio in San Francisco. (Kit Carson, while boarding one of Frémont's longboats, said, "I'd rather chase a grizzly bear in the mountings than ride in this thang!") Having spiked the cannons, the men returned to Sonoma, where Frémont charted the trip. At the mile-wide entrance to San Francisco Bay, he noted: "Chrysophylae or Golden Gate." In his 1886 memoirs, he dropped the Greek and proclaimed, "I named it GOLDEN GATE."

Although informal ferry service across the bay existed as early as the 1820's, regular service began in the 1840's as part of an effort to supply water to the city from the springs at Sausalito. The tank boats would carry passengers for \$2.

Following the Gold Rush boom that began in 1849, speculators realized that the Marin County land north of the bay would increase in value in direct proportion to its accessibility to the city. The Sausalito Land and Ferry Company began its ferry service, aboard the *Princess*, a sidewheeler, on May 10, 1868. It made five round trips a day. Eventually, the ferry service came under the control of the Southern Pacific Railroad.

The idea of spanning the Golden Gate took root in 1916, although the idea had been considered earlier. An ex-engineering student, James Wilkins, was working as a journalist with the *San Francisco Bulletin* when he kicked off the idea that year by calling for a suspension bridge with a center span of 3,000 feet, nearly twice the length of any in existence.

San Francisco's city engineer, Michael M. O'Shaughnessy, thought the bridge would cost up to \$100 million, but he began asking bridge engineers whether they could do it for less. Joseph Strauss, a 5-foot tall Cincinnati-born Chicagoan, knew he could. He was an engineer who also wrote poetry--so he was used to dreaming. For his graduate thesis, he had designed a bridge to link North America and Asia across the 55-mile Bering Strait. He would later write:

Our world of today . . . revolves completely around things which at one time couldn't be done because they were supposedly beyond the limits of human endeavor. Don't be afraid to dream!

The first design Strauss came up with--steel-girdered sections on either end with a suspension span in the middle--was decried as a horror. The proposal, and Strauss' estimate that it could be built for \$17 million, led to controversy while officials and the public debated whether to pursue the idea of a span, whatever the cost or design.

Today, looking back, it is strange to think that this most beautiful of all bridges, this bridge that is universally recognized as the symbol of the city, faced bitter opposition from determined foes. It took several favorable court rulings, an enabling act from the State legislature, two Federal hearings prior to approval from the U.S. Department of War (which had long feared that any bridge across San Francisco Bay would hinder navigation), a guarantee that local workers would have first crack at the jobs, and a mass boycott of the ferry service operated by the Southern Pacific Railroad (which had opposed the bridge because it would end the company's monopoly on cross-bay traffic). It also took a new design.

Using advances in metallurgy and bridge design, Strauss abandoned his original concept and replaced it with a pure suspension bridge. The single span would be, in the words of the poet Henry May, "a curve of soaring steel, graceful and confident over infinity"--if it could be built.

By the time the Golden Gate Bridge and Highway District (so-called because of the State's 1923 legislation granting voters the power to form tax districts) had cleared most of the obstacles and was ready to finance construction, the Depression had begun following the stock market crash in October 1929. With financing options limited, the District asked area voters to support \$35 million in bonded indebtedness. Citing the jobs that would be created for the project, the District convinced voters to authorize bond financing, but the issuance was delayed by yet another court challenge by the Southern Pacific Railroad.

When that challenge was overcome in 1932, the District--by then nearly broke--found that it could not sell the bonds in Depression era markets. Strauss approached San Francisco's A. P. Giannini, founder of the Bank of America, for help. Convinced that the Bay Area needed the bridge, Giannini told Strauss, "We will take the bonds."

With a \$35-million bond issue, officials were able to begin construction on January 5, 1933. Groundbreaking ceremonies were held a month later, on February 26 at the Presidio's Crissy Field. Despite the many remaining challenges Strauss would face, he completed the bridge under budget by about \$1.3 million.

When the Golden Gate Bridge opened on May 27, 1937, the celebration lasted a week. The day before, 200,000 people walked, ran, and even roller skated across the bridge. On opening day, San Francisco officials boarded the ferry that would carry them to Sausalito. They formed a motorcade that faced three barriers. The first, on the Marin County side, was a redwood log that was sawed through by three champion "log buckers." The second barrier was a series of chains--one of copper, one of gold, and one of silver. They were cut through and the motorcade made its way across the new bridge.

At the San Francisco toll plaza, a living chain of fiesta queens formed the third barricade to the opening. They would not let the motorcade pass until Chief Engineer Strauss had officially presented the completed span to the Golden Gate Bridge and Highway District. One writer described the event:

His hands trembling, Strauss spoke in a low voice: "This bridge needs neither praise, eulogy nor encomium. It speaks for itself. We who have labored long are grateful. What Nature rent asunder long ago, man has joined today"

The president of the bridge district accepted the bridge, the gate of fiesta queens stepped aside, and the motorcade passed.

At noon, President Franklin D. Roosevelt pushed a telegraph key in the White House, sending 100 skyrocketers aloft in San Francisco. Overhead, 500 aircraft screamed. Every horn, bell, siren, auto horn, and whistle in the city shrieked in unison.

The bridge was open. At the time, Strauss said:

If the entire 4,200 feet of [main] span were jammed with loaded limousines standing bumper to bumper in all six traffic lanes; if the 10 ½-foot sidewalks on both sides were crowded their full length with foot passengers standing shoulder to shoulder; if a 90-mile gale . . . should suddenly press against the huge exposed side of the bridge, if at that moment someone should saw both cables halfway through--why, the Golden Gate Bridge would stand!

And it has. Most recently, it survived the devastating Loma Prieta Earthquake, which took place during the baseball's Oakland-San Francisco World Series on October 17, 1989. Seismic retrofit is underway, but if the Bay Area has an earthquake strong enough to knock down the Golden Gate Bridge, there probably won't be anybody left to care if it's rebuilt.

The first person to drive across the bridge was William McCarthy, an aide to then-Mayor Angelo Rossi. McCarthy drove the Mayor's car at the head of a procession at the bridge's opening ceremonies. On February 22, 1985, the one billionth driver, chosen at random on the approximate day when it would occur, crossed the span. A dentist, Dr. Arthur Molinari, was given a bridge-construction hard hat and a case of champagne.

Strauss, the poet, expressed his views of his great project in "The Mighty Task is Done," a poem he wrote after completing the Golden Gate Bridge. Here is his poem:

At last the mighty task is done;
Resplendent in the western sun
The bridge looms mountain high;
Its Titan piers grip ocean floor,
Its great steel arms link shore with shore,
Its towers pierce the sky.

On its broad decks in rightful pride,
The world in swift parade shall ride,
Throughout all time to be;
Beneath, fleet ships from every port,
Vast land-locked Bay, historic fort,
And dwarfing all--the sea.

Launched 'midst a thousand hopes and fears
Damned by a thousand hostile seers
Yet ne'er its course was stayed
But ask of those who met the foe,
Who stood alone when faith was low
Ask them the price they paid.

Ask of the steel, each strut and wire,
Ask of the searching, purging fire
That marked their natal hour;
Ask of the mind, the hand, the heart,
Ask of each single stalwart part
What gave it force and power.

An honored cause and nobly fought,
And that which they so bravely wrought
Now glorifies their deed;
No selfish urge shall stain its life,
Nor envy, greed, intrigue, nor strife,
Nor false, ignoble creed.

High overhead its lights shall gleam,
Far, far below life's restless stream
Unceasingly shall flow;
For this was spun its lithe fine form
To fear not war, not time, not storm,
For Fate had meant it so.

Strauss died a year after the bridge was completed. A bronze statue was erected near the San Francisco-side toll booth and unveiled on the bridge's fourth birthday. But it is the bridge, his impossible dream come true, that is the real monument to a man who was not afraid to dream.

In May 1987, Mayor Dianne Feinstein presided over a celebration of the Golden Gate Bridge's 50th anniversary. The biggest event of the celebration came on May 24, when the bridge was closed to automobile traffic to recreate that exhilarating day in 1937 before the bridge opened when pedestrians were its sole users. This time, more than 250,000 people surged across the span. They included walkers, roller skaters, people in wheelchairs, and moms and dads pushing babies in strollers piled high with blankets to cut the fierce morning winds. Another 500,000 people had to be turned away out of fear the bridge could not stand the load. Those who did cross comprised, in fact, the greatest load factor in the bridge's life and they flattened the normal arch of the bridge at midspan. But as Strauss had predicted, the bridge stood.

Mayor Feinstein was among the throng. She had wanted to throw a wreath in the bay, but it was misplaced, so instead she threw in State Assembly Speaker (and future Mayor) Willie Brown's hat. *The Washington Post* pointed out that, "Since William Brown is . . . a figure of legendary local political power and a famously sharp dresser, this was a gesture of some significance. (The hat, reporters were informed later, was a 'Ferrari golf hat,' in black.)"

In February 1994, the American Society of Civil Engineers (ASCE) declared the Golden Gate Bridge one of the "Seven Wonders of the United States." (Other "wonders" were Hoover Dam, the Interstate System, the Kennedy Space Center, the Panama Canal, the Trans-Alaska Pipeline, and the World Trade Center.)

In December 1995, *Popular Mechanics*, in cooperation with the ASCE, declared the Golden Gate Bridge one of "The Seven Wonders of the Modern World."

The Other Bridge-The San Francisco-Oakland Bay Bridge

If bridges had feelings, the San Francisco-Oakland Bay Bridge would be experiencing one of the biggest, and most justified, inferiority complexes in history. Though an incredible engineering achievement and the terminus of transcontinental I-80, it lives in the shadow of its beautiful famous sister, the Golden Gate Bridge.

The idea of a bridge linking San Francisco with the cities of Oakland, Berkeley, and Alameda can be traced to 1850 when San Francisco newspaper editor William Walker proposed construction of a causeway, similar to the 2,000-foot Clay Street wharf. Later, railroad executives who had built the western portion of the transcontinental railroad that was completed in 1869 considered the idea. The idea-premature in view of the challenges involved-never took shape.

Although many others supported construction of a link, no history of the bridge can ignore "Emperor" Joshua Abraham Norton, a well-known San Francisco character (if only because he's the most colorful person in the story even though he had little to do with the actual bridge). He had been born in London and raised in the Cape of Good Hope. Business failures prompted him to travel to San Francisco in the wake of the Gold Rush. He became wealthy in the commission business but in 1852, lost everything in a failed attempt to corner the rice market (more rice came in by ship, undercutting him). Following his bankruptcy and an illness, the once-respected Joshua Norton declared himself Norton I, Emperor of the United States and Protector of Mexico. An article in *The Highway Magazine* of June 1957 described the Emperor:

He soon became the best known personage in San Francisco. Clad in a blue military uniform with epaulets of exaggerated size, he wore a tall beaver hat, at the front of which was a brass rosette holding a gorgeous plume of gay-colored feathers. There was always a rosebud in his lapel and a regal sword at his belt. Stocky of build, with a heavy mustache and a finely-pointed beard, he was truly the benevolent monarch.

Although he was treated to the theater and in restaurants, he raised money on Market Street by handing out Emperor Norton Bonds to passersby in return for a half-dollar. Other times, he went to businessmen who humored him by paying his 50-cent tax.

On August 18, 1869, Emperor Norton issued a proclamation ordering construction of what are now called the Golden Gate Bridge and the San Francisco-Oakland Bay Bridge:

Whereas it is our pleasure to acquiesce in all means of civilization and population; Now, therefore we, Norton I, Dei Gracia, Emperor of the United States and Protector of Mexico, do order and direct . . . that a suspension bridge be constructed from the improvements lately ordered by our royal decree at Oakland Point to Yerba Buena, from thence to the mountain range at Saucilleto and from thence to the Farallones, to be of sufficient strength and size for a railroad . . . wherefore fail not, under pain of death.

Emperor Norton had a "summer capital" in Oakland.

As *The Highway Magazine* pointed out, this was the Emperor's "most outstanding proclamation," the only one that would, eventually, be carried out. Other proclamations, such as those abolishing the Republic, the laws of Congress and the State legislatures, the offices of the President and Vice President, and the Democratic and Republican parties, await followers.

Alas! The Emperor did not live to see his best proclamation come true:

Then in 1880 while taking his customary daily stroll, the Emperor suffered a fatal stroke. San Francisco mourned his passing and he lay in state. The funeral was financed by business men of the city. In 1939 the Pacific Club raised funds to remove his remains to a new cemetery and erected an imposing monument which proclaimed his reign.

Despite the Emperor's demand for a suspension bridge, little progress was made until the 1920's. In 1921, the San Francisco Motor Car Dealers Association financed an engineering report on the feasibility of a link consisting of a tunnel and a concrete causeway. Proposals for alternative types of links proliferated, but a bill introduced in Congress in 1928 authorizing San Francisco to build a bridge stalled as a result of objections by the Army and Navy. With legislation stalled at the Federal level, the State approved legislation in 1929 creating the California Toll Bridge Authority.

The Chief Engineer of the San Francisco-Oakland Bay Bridge would be Charles Henry Purcell. Born on January 27, 1883, in North Bend, Nebraska, Purcell graduated from the University of Nebraska in Lincoln with a Bachelor of Science degree in civil engineering on June 14, 1906. As noted in a biographical sketch by E. A Kral, Purcell pursued "positions in which he progressively demonstrated a high degree of innovativeness, ability, courage, integrity, dedication, and leadership." After several positions in the private sector, Purcell became the Oregon State Highway Department's first bridge engineer in 1913 and later an assistant to the State Highway Engineer. Kral said:

In April 1915, however, he was dismissed after exposing excessive bridge costs due to scandalous steel charges, though an editorial in the *Oregon Daily Journal* praised him, stating, "He is able. He is highly trained in his profession. He is incorruptible. In his work, he could not be fooled, he could not be outwitted, and he could not be bought."

During these years, Purcell had become skilled in construction of concrete bridges. After leaving his State position, Purcell used his skill in concrete bridge construction on the Columbia River Highway. His 170-foot long concrete arch bridge across Moffett Creek "gained the attention of engineers nationwide."

Although he returned to his position of State bridge engineer, he resigned to become a bridge engineer in Portland with the U.S. Bureau of Public Roads (BPR) in 1918. A few years later, the BPR appointed him District Engineer in charge of the Federal-aid program in Alaska, Idaho, Montana, Oregon, and Washington.

Leaving the BPR, Purcell became California State Highway Engineer on March 1, 1928, knowing that the proposed bridge spanning San Francisco Bay would be one of his responsibilities. Following enactment of the California Toll Bridge Authority Act, Governor C. C. Young and President Herbert Hoover appointed a Bay Bridge Commission to prepare preliminary plans and develop a funding proposal. Purcell, a member of the commission and its secretary, prepared the commission's report. In August 1931, he became the Chief Engineer.

Because of the Depression, bond financing that had seemed a foregone conclusion at the time of the California Toll Bridge Authority Act was now a difficult hurdle. However, with President Hoover's help, the authority raised funding for the bridge, including \$61.4 million in bonds purchased by the U.S. Reconstruction Finance Corporation (RFC) on October 10, 1932, and \$6 million through a State bond issuance backed by the State gas tax.

(As John Van Der Zee explained in *The Gate: The True Story of the Design and Construction of the Golden Gate Bridge* (A Touchstone Book by Simon and Schuster, 1986, p. 159-160), the RFC financing had created difficulties for the Golden Gate Bridge. "Any funds that might have been available from the Reconstruction Finance Corporation had been committed to the San Francisco-Oakland Bay Bridge; there was no possibility of the government committing a similar sum to another project in the same area.")

The design chosen for the bridge was a combination of linked structures that constituted an historic engineering challenge. It included a cantilever span of 1,400 feet in the East Bay crossing, two 2,310-foot center suspension spans, two 1,160-foot side spans in the West Bay crossing, and a tunnel carrying the upper (six lanes for fast traffic) and lower decks (three truck lanes and two interurban track lines) through Yerba Buena Island. As Glenn B. Woodruff, Engineer of Design, explained:

The largest and deepest foundations on record, the world's largest tunnel, a new type of suspension bridge, the longest and heaviest cantilever span in the United States were among the problems that faced the designers.

For all of these, it was necessary not only to provide a design that would be adequate when completed but to develop construction methods on which the contractors would stake their resources to accomplish what many engineers, not to speak of laymen, had declared impossible.

There was still another task, to produce such designs that this work could be accomplished within reasonable financial limits. For several parts of the work it was necessary to develop not only new designs, but also new theories of design.

Ground was broken on July 9, 1933, and construction was completed in 3 years, 5 months. The Bay Area celebrated completion with a four-day festival that began in Oakland before the opening and concluded in San Francisco after the opening. A special issue of *California Highways and Public Works* (November 1936) described the opening ceremony, which began in Oakland:

Here were gathered thousands of men, women and children, many of whom had passed most of the night in their automobiles in order to be among the first to cross the bridge when it was formally thrown open. They came to hear the speeches of prominent officials, leading citizens and the builders of the huge transbay structure themselves, and to see Governor [Frank F.] Merriam cut the chain barrier that stretched across the traffic lanes soon to be opened to them.

In front of the crowd, vividly remindful of pioneer California days and slower modes of travel were an ox-drawn cart from Sacramento, a stage coach from Auburn, a prairie schooner from Woodland, an Indian with squaw and papoose on a drag from Oroville and prospectors and their burros from Placerville.

Presiding over the ceremony was Oakland's Harrison S. Robinson, president of the Financial Advisory Committee. "This bridge," he said, "is an inspiring example of the great things which can be accomplished when men work together—a modern miracle—a supreme achievement of human endeavor." William J. Hamilton, Chairman of the Alameda County Board of Supervisors, called the bridge "the greatest engineering feat of modern times." Oakland Mayor William J. McCracken agreed. He called it "a world-wonder, significant in its economic, human and spiritual advantages to all of California."

Former President Hoover described some of the difficulties he had helped unravel during the planning of the bridge, noting, "But let no one think these things are as easy to do as to say them." As an engineer himself, he understood the

difficulties the bridge builders faced:

That this is the greatest bridge yet constructed in the world requires no repetition by me. Its construction also spans the whole advance in industrial civilization-our discoveries in science, our inventions, our increasing skill. It is the product of hundreds of years of cumulative knowledge.

But above them all are the engineers and workmen right here who combined all those centuries of knowledge with courage and imagination-your own chief engineer, Charles Purcell and his able assistants, Charles Andrew and Glenn Woodruff, are men whose courage and whose knowledge combine not only the product of these generations of ideas but from their own genius designed and built this bridge.

Purcell addressed the crowd to describe the history of the bridge. He concluded:

The engineers and those connected with the construction of this great bridge have worked long and hard during these past three years. We now turn the structure over to the people for their use.

As Governor Merriam prepared to deliver the final address of the ceremony, a thousand pigeons were released "and soared into the air with a din of drumming wings." He said:

This bridge belongs to this generation. We built it and we shall pay for. But in a broader sense it belongs to the generations that are to come. When the youths of today become the citizens of tomorrow they will use it without cost. Accordingly we dedicate it today to our own use and to theirs, hoping that they will receive it as a legacy of great worth and an indication of our desire to serve.

May it always remain a thing of beauty and interest, an example of the genius and courage of the engineer, financier, builder and the people of California.

Governor Merriam concluded by reading a poem by Evelyn Simms:

They have builded magnificent bridges where the nation's highways go;
O'er perilous mountain ridges and where great rivers flow.
Wherever a link was needed between the new and the known
They have left their marks of Progress, in iron and steel and stone.
There was never a land too distant nor ever a way too wide,
But some man's mind, insistent, reached out to the other side.
They cleared the way, these heroes, for the march of future years.
The march of Civilization-and they were its Pioneers.

Stepping to the heavy golden chain stretched across the traffic lanes of the new bridge, Governor Merriam applied an acetylene torch to sever the chain:

Overhead, two hundred navy planes in perfect mass formation roared by, huge bombs burst high in the sky releasing parachutes with American flags, sirens and whistles in Oakland and the East Bay cities added to the bedlam of noise, and the chain barrier fell apart.

The eastern end of the bridge was open to the traffic that soon was to flood over it to San Francisco. Hastening to automobiles, the Governor and his official party sped across the bridge to the San Francisco approach, where another chain barred their way.

Governor Merriam, flanked by Purcell, former President Hoover, Oakland Mayor McCracken, RFC Director Charles Henderson, Senator William G. McAdoo, and Director of Public Works Earl Lee Kelly, again used a blow torch to sever

the second golden chain. Hundreds of fishing boats, yachts and water craft passed under the bridge in "the greatest marine parade San Francisco ever has witnessed."

Meanwhile, the great siren on the Ferry Building and hundreds of factory whistles throughout San Francisco were adding to the chorus of thousands of cheering San Franciscans gathered at the Fifth Street plaza between Harrison and Bryant streets.

With the chain severed, the dignitaries headed to the speaker's platform for another round of speeches. San Francisco Mayor Angelo Rossi said:

This bridge is a sample of the West to come, a signal for renewed civic effort, a proof that the pioneer spirit of San Francisco still lives. This magnificent structure will serve to unite us more closely with our friendly neighbors across the bay and means progress for all of us.

Senator McAdoo called it "a bridge of national implications-an imposing tribute to the genius of our people and the progress of our times-a great miracle."

Because of timing, other speakers cut their talks short. Finally, the great moment arrived:

With one eye on his watch, Governor Merriam concluded his remarks with these words:

"At this minute the President of the United States is seated at his desk in the White House. In a few seconds he will press an electric switch. Turn around all of you and look at the signal tower. Soon the red light will turn to orange and then to green. Ah! There it goes. I now declare the San Francisco-Oakland Bay Bridge officially opened."

It was a dramatic moment. A dramatic, stirring scene. As the light on the signal tower flashed from orange to green cheers from thousands of throats swelled into the air, whistles and sirens screeched and down on navy row big guns boomed a salute.

It was a half hour after noon on November 12, 1936. The Governor and his party returned to their cars for the ride back to Oakland followed by thousands of cars. A similar parade of cars left Oakland bound for San Francisco.

One additional moment remained for the night:

When darkness fell the huge bay bridge that had loomed up in the dusk as a great silvery span across the bay suddenly became aflame with light as the sodium vapor lamps spaced along the upper deck from the Oakland plaza to the curving ramps of the San Francisco approaches burst into fire.

Simultaneously, searchlights on every battleship in navy row shot great beams of light into the clear night sky and for an hour wove designs in the heavens.

Against a blue-black background of the southern horizon an endless procession of automobiles moved back and forth across the bridge, their headlights giving the impression of flaming pearls in motion on an unearthly jeweled brooch stretched across the bay.

The San Francisco-Oakland Bay Bridge was built at a cost of \$53.6 million, about \$6 million under the estimated cost.

The 8-mile long Bay Bridge is older (by a few months) than the Golden Gate Bridge. It was given a nice opening ceremony, and it made lots of money from tolls. But the opening was minor compared with the gala opening of the Golden Gate Bridge just a few months later.

And so it has been ever since for the San Francisco-Oakland Bay Bridge. No one wants to sing about it. No one wants to paint pictures of it. No one remembers Charles Purcell, the Chief Engineer, who was not quirky, not a known dreamer, and not short (in a photo of the chain-cutting ceremony in San Francisco, Purcell is just an inch or two shorter than the 5'11" former President Hoover). After many years of helping to create California's highway and bridge network, Purcell retired in 1951 "because of nervous exhaustion and a reported heart ailment," according to Kral. He died 5 weeks later, on September 7, 1951, at the age of 68.

Meanwhile, the world falls all over itself thinking of ways to praise the Golden Gate Bridge. For example, as noted earlier, the ASCE declared the Golden Gate Bridge one of the "Seven Wonders of the United States." Only once before had the ASCE compiled such a list. In 1955, the San Francisco-Oakland Bay Bridge made the cut ("the outstanding wonder among the bridges of the United States"). But even this honor would be snatched away by the San Francisco-Oakland Bay Bridge's brat of a little sister, the Golden Gate Bridge, when ASCE updated its list.

Even people committing suicide shun the San Francisco-Oakland Bay Bridge. Many of them—over 1,000 have done so—drive across the bridge to get to the Golden Gate Bridge so their death can have a poetic feel to it.

And so it goes. On the 50th anniversary of the San Francisco-Oakland Bay Bridge, one newspaper called it "the ugly stepsister to the famed arches of the Golden Gate Bridge." Words can hurt!

Nature even conspired against the bridge during the Loma Prieta Earthquake. The earthquake shook part of the upper deck loose, sending a car into a nose dive into the lower deck and killing the driver. Of course, Ms. Perfect, the Golden Gate Bridge, made it through the earthquake unscathed—and was praised for its durability.

The New York Times picked up on the story:

It is the other bridge in San Francisco. Unlike its famous neighbor, the Golden Gate Bridge, the Bay Bridge is decidedly unsexy. It does not gracefully arch over the Pacific Ocean, linking gorgeous headlands. Blue Angels do not fly over it during Fleet Week.

Instead the San Francisco-Oakland Bay Bridge, which is actually four times as long and much more than twice as busy as the Golden Gate Bridge, is painted an industrial gray and mostly crawls over the backwaters of San Francisco Bay, connecting the least lovely part of San Francisco with Oakland's prosaic waterfront. The structure's biggest claim to fame was during the 1989 earthquake when a 50-foot chunk of its upper deck collapses, killing a motorist.

2003 Update

The Loma Prieta Earthquake prompted a seismic review of the San Francisco-Oakland Bay Bridge. The resulting retrofit strategy covers each element of the bridge, including retrofit of the western suspension span and replacement of the eastern span. After much debate, officials decided to replace it with a cable-stayed suspension span. A discussion in the September 2000 issue of *Civil Engineering* magazine concluded that the new cable-stayed eastern span "will be a bridge that not only complements the many other outstanding Bay Area bridges but also offers East Bay residents their own signature span." Thus, even with a signature span, the San Francisco-Oakland Bay Bridge will merely complement, not surpass the Golden Gate Bridge.

On December 15, 2003, Time, Inc., published a special edition of *Life* magazine devoted to "The Seven Wonders of the World: Yesterday, Today and Tomorrow." Under the category of Seven Wonders of the Modern World, the editors chose the Empire State Building, the Panama Canal, Itaipu Dam on the Brazil-Paraguay border, the Channel Tunnel, CERN (Conseil Européen pour la Recherche Nucléaire) in Switzerland, the North Sea Protection Works, and one bridge. See if you can guess which one. It's in California. It's in the Bay Area. It's not the San Francisco-Oakland Bay Bridge. Which bridge is it?

The editors do, at least, offer a glimmer of hope by pointing out that, "Since evolutionary principles are written in stone and the future draws closer each day, it's probable that one of our seven Moderns will soon be replaced." So any day now, the revitalized San Francisco-Oakland Bay Bridge could replace the Golden Gate Bridge as one of the Seven Wonders. But don't hold your breath.

Fortunately, bridges can't feel. As far as we know.
