

## Watch the New East Span of San Francisco's Bay Bridge Go Up in 2 Minutes

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Attention, Bay Area residents: Would you like to see the bridge on which you'll soon spend hours stuck in teeth-grinding traffic jams? Webcam company EarthCam obliges with this well-put-together time lapse of the San Francisco - Oakland Bay Bridge's eastern span rising over the past three-and-a-half years, a monumental engineering effort that's so far cost more than \$6 billion. (The initial estimates amounted to one-third of that cash mountain, FYI.)

Lots of the expense of the project is coming from the way engineers are earthquake-proofing the span. The need to rebuild the eastern section arose after a big chunk of it collapsed during the 1989 Loma Prieta temblor; with scientists predicting a better than 50 percent chance of a "tectonic time bomb" exploding in the next couple decades, the bridge builders really want to make sure that their efforts don't turn into falling rubble.

To prevent that from happening, Oakland and San Francisco could have erected a brawny span so thick and durable that an earthquake couldn't knock it down. But that would've resulted in a colossal eyesore that would be visible for miles. So they chose a slimmer, more sinewy structure instead, one which fights against seismic lashings by swaying and sacrificing parts of itself.

The New York Times has detailed all the neat features of the new bridge designed to counter a major quake, including "deadman" anchors that will be used to straighten sagging girders, sliding steel tubes that break to preserve the larger structure, and long piles driven deep into the sea bed at reinforcing angles. There's also a suspension-bridge tower (shown in the second half of the video) loaded with "shear links," or special connecting plates that deform to absorb a quake's energy like a "bumper."

[This fascinating footage](#) encompasses a period of around-the-clock activity from April 2009 to November 2012. When the eastern span starts accepting drivers, potentially by late summer in 2013, its makers expect it to last for another 150 years before needing serious rehab work. (For closer shots of the construction, check out the Bay Area Toll Authority's webcam network or this worker's drive-over last year.)



*Oakland - San Francisco Bay Bridge suspension tower*