

San Francisco-Oakland Bay Bridge Seismic Safety Projects

Program Overview



THE SAN FRANCISCO-OAKLAND
BAY BRIDGE
SEISMIC SAFETY PROJECTS

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BAY AREA TOLL AUTHORITY

CALIFORNIA TRANSPORTATION COMMISSION

Bay Area Bridges



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San Francisco-Oakland Bay Bridge



San Francisco

Treasure Island

Yerba Buena Island

Oakland



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Seismic Safety Projects



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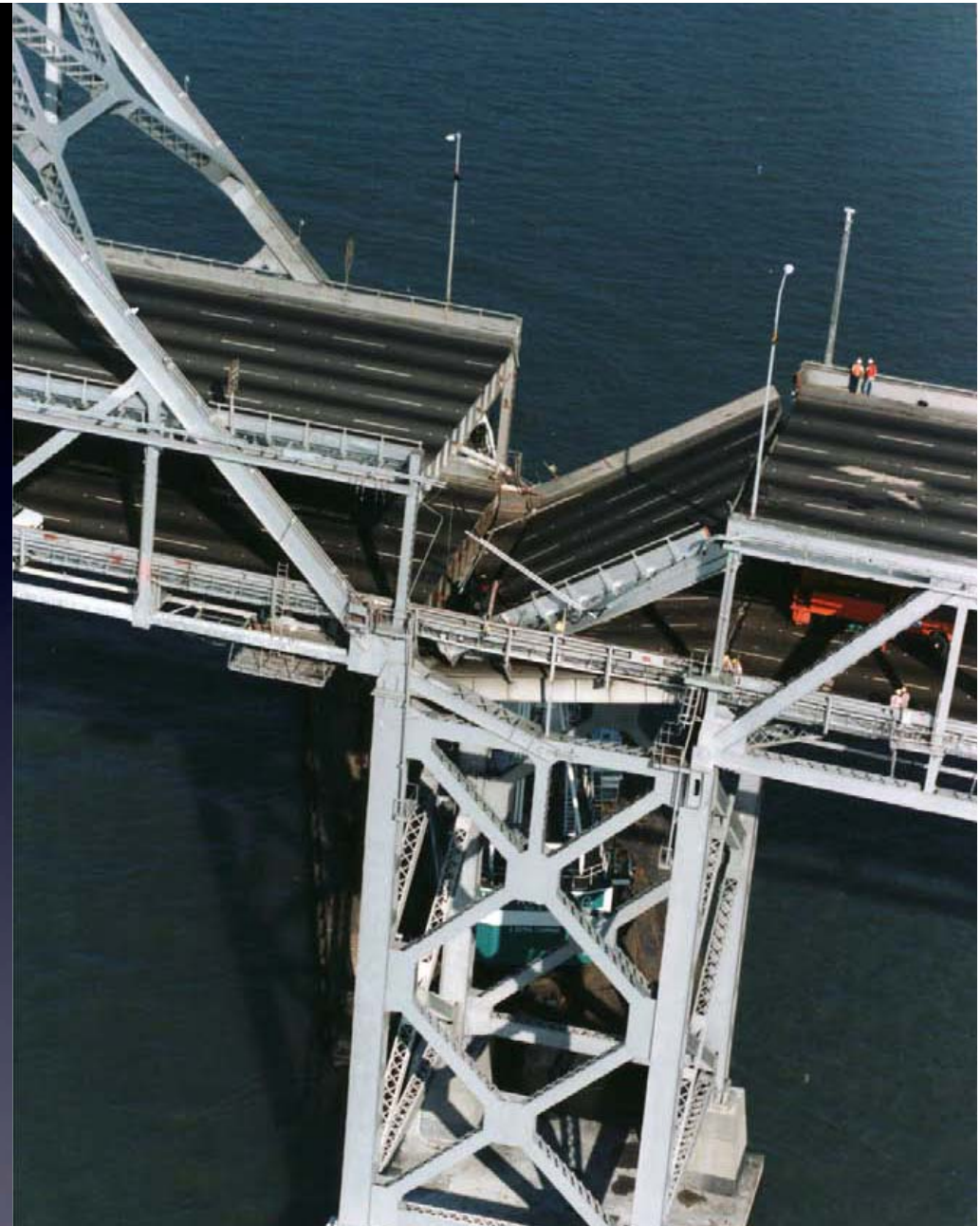
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Bay Bridge Overview

Project Overview

- Largest public works effort in state history
- Bridge damaged in Loma Prieta earthquake
- Entire bridge being retrofitted or replaced
- Opens to westbound traffic in 2012, eastbound traffic in 2013



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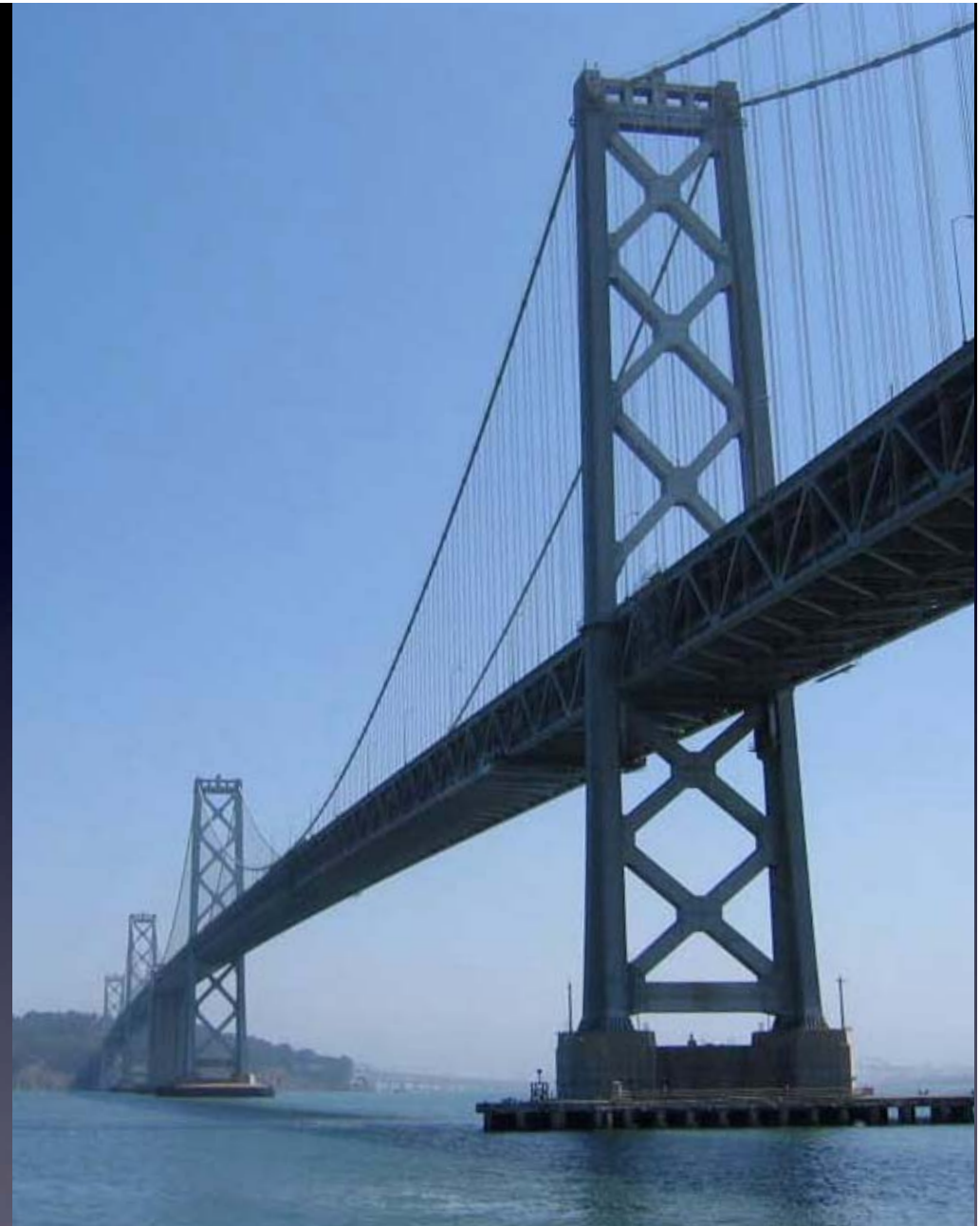
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Bay Bridge Overview

West Span

- Retrofit began in 1999; finished in 2004
- 8,500 tons of structural steel added
- Seismic devices including “shock absorbers” installed
- Entire 3 million-ton span was lifted to install seismic bearings



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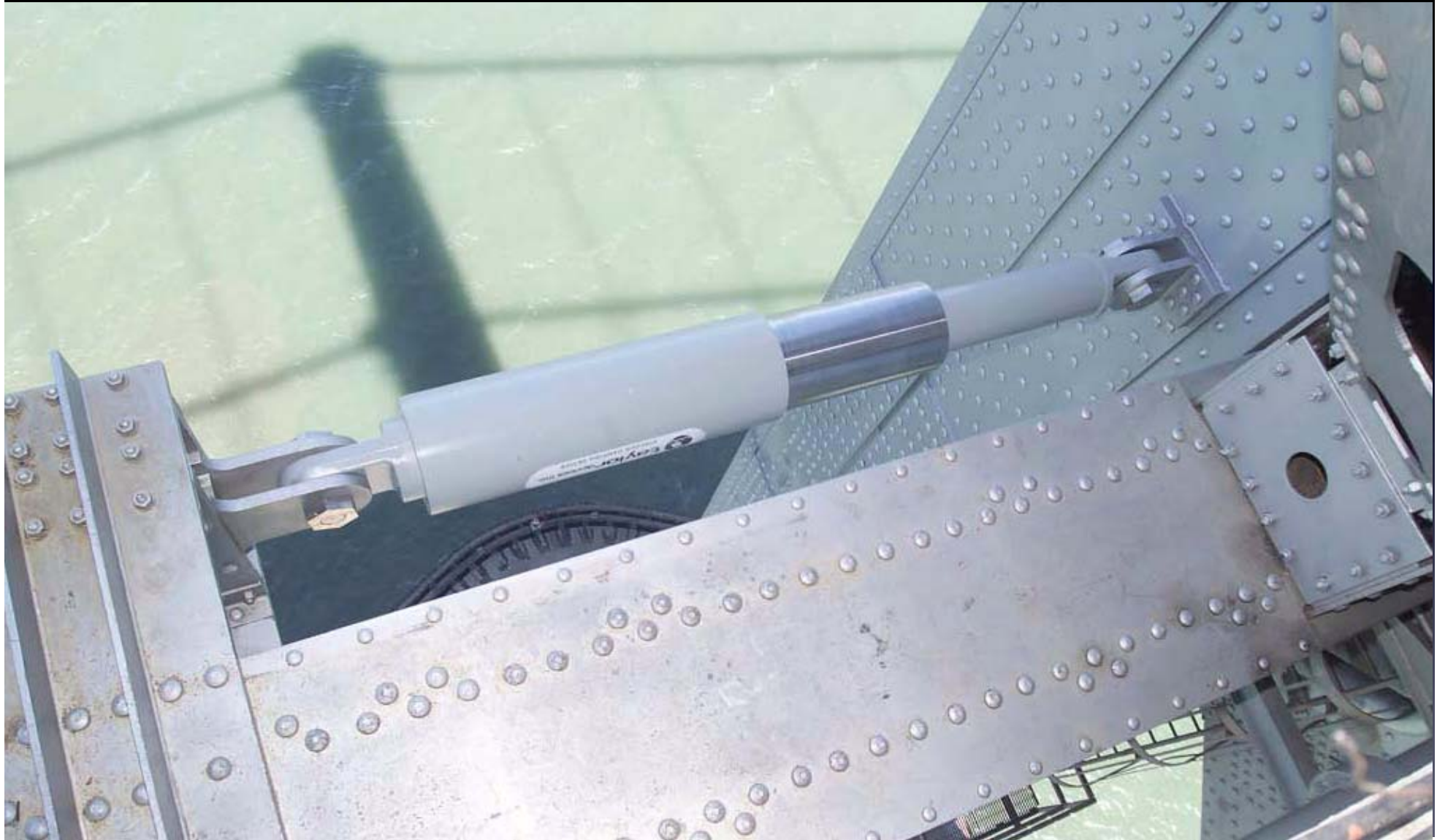
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Bay Bridge Overview

West Approach

- 1-mile stretch of Interstate 80 with 6 on- and off-ramps
- Inches from homes/businesses
- Extremely complex construction project
- Lower deck closed Labor Day weekend 2006
- Completed in early 2009
- Western half of bridge is now seismically safe



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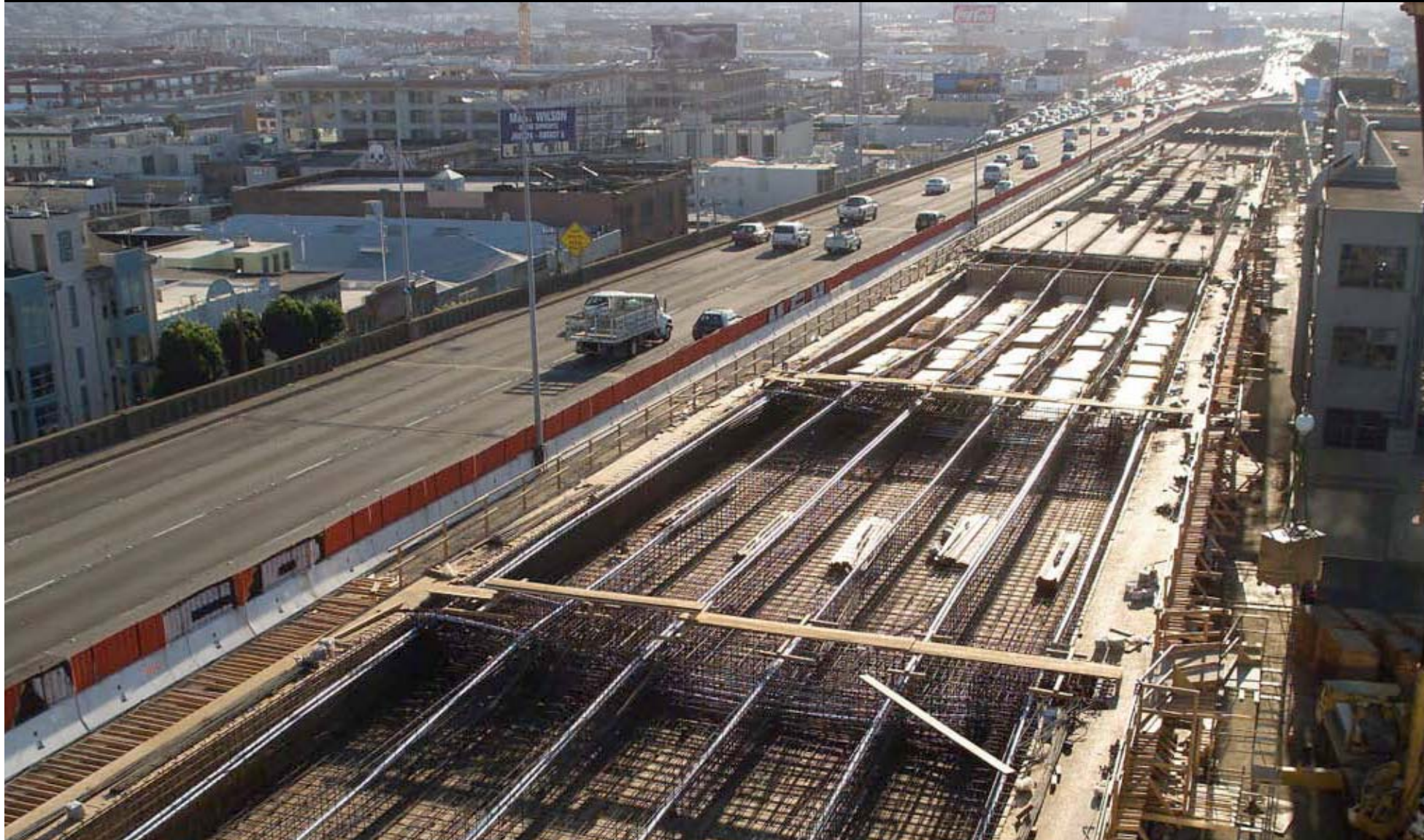
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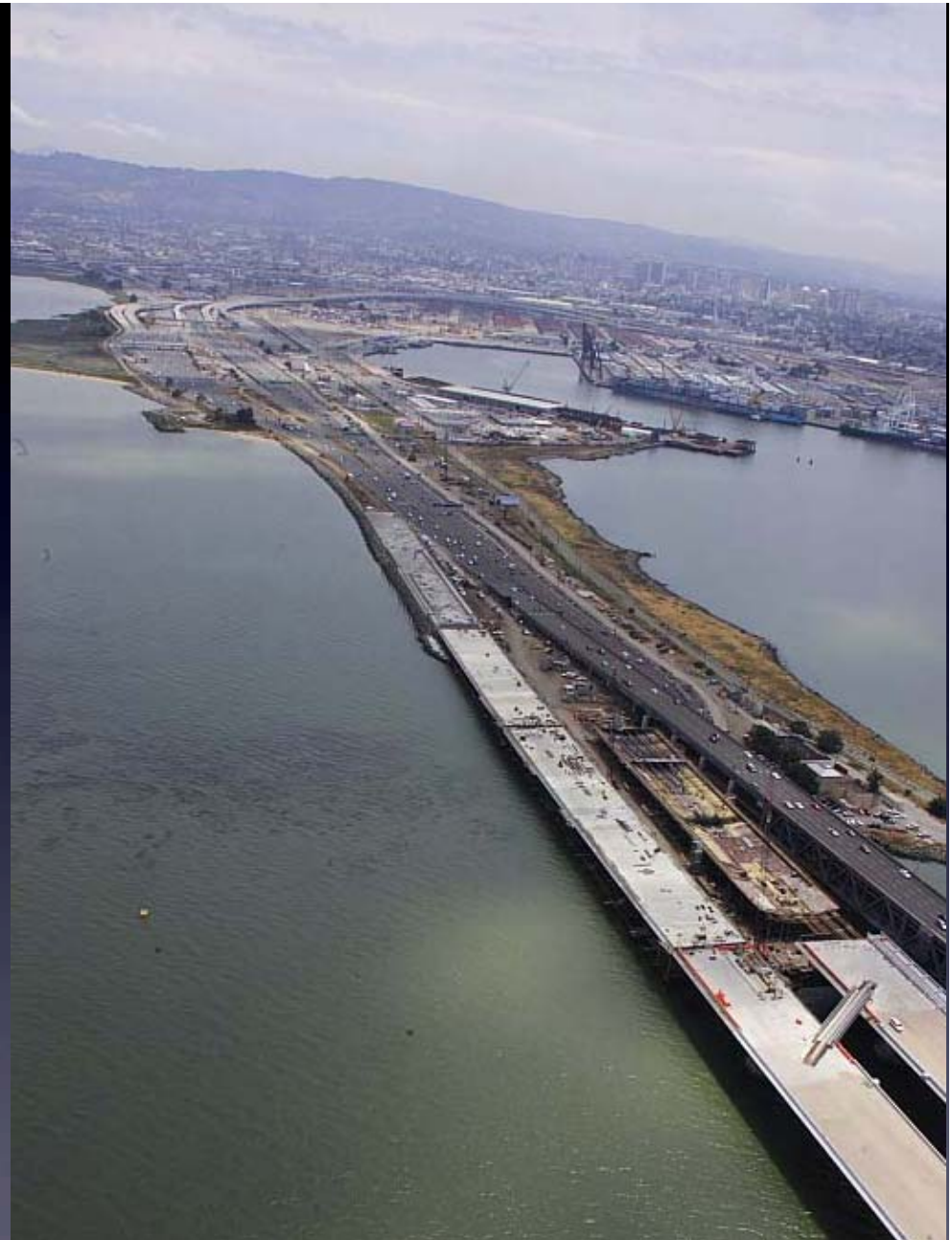
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Oakland Touchdown

- Connects Interstate 80 to East Span
- Constructed in two phases



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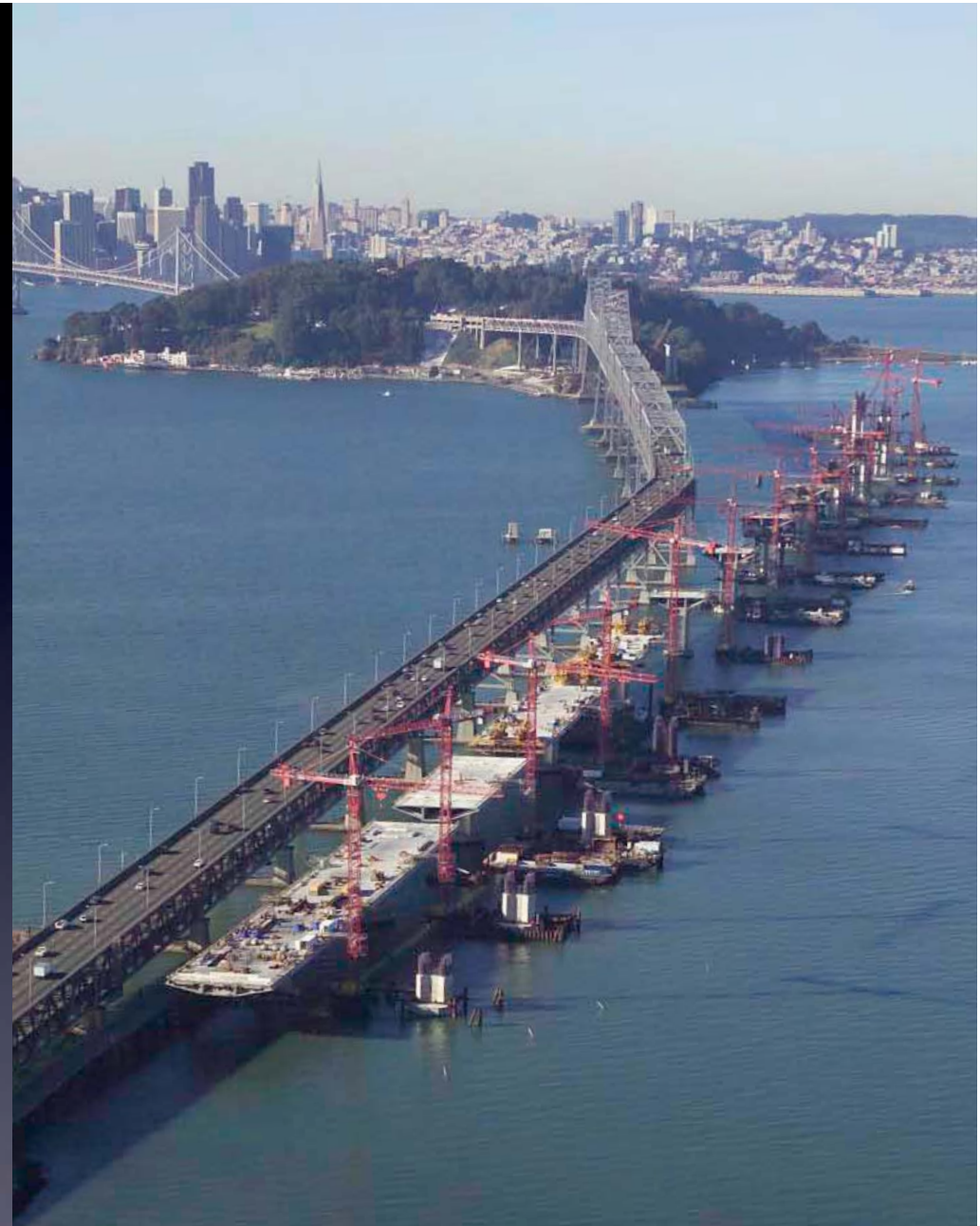
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Bay Bridge Overview

Skyway

- Parallel roadways replace existing double-deck
- 1.2 miles long
- Completed in early 2008
- 452 pre-cast concrete segments
- Seismic innovations in design



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Self-Anchored Suspension Span

- Iconic
- Longest self-anchored suspension bridge in the world (2,047 feet)
- Single 525-foot-tall tower
- Unique design
- Deck sections arrive this summer



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Self-Anchored Suspension Span



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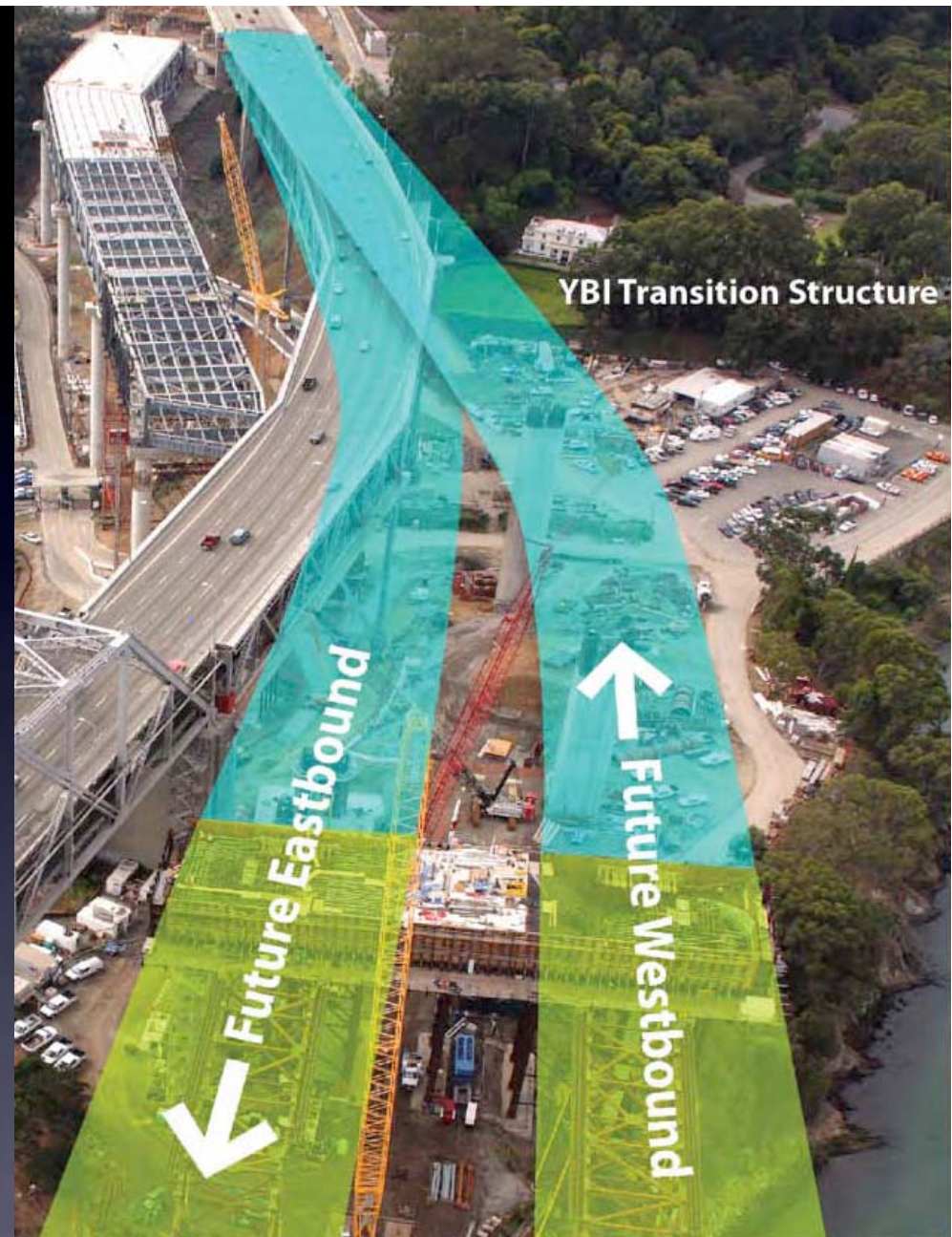
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Yerba Buena Island Transition Structure

- Transitions parallel decks to double decks
- Foundations completed in earlier contract



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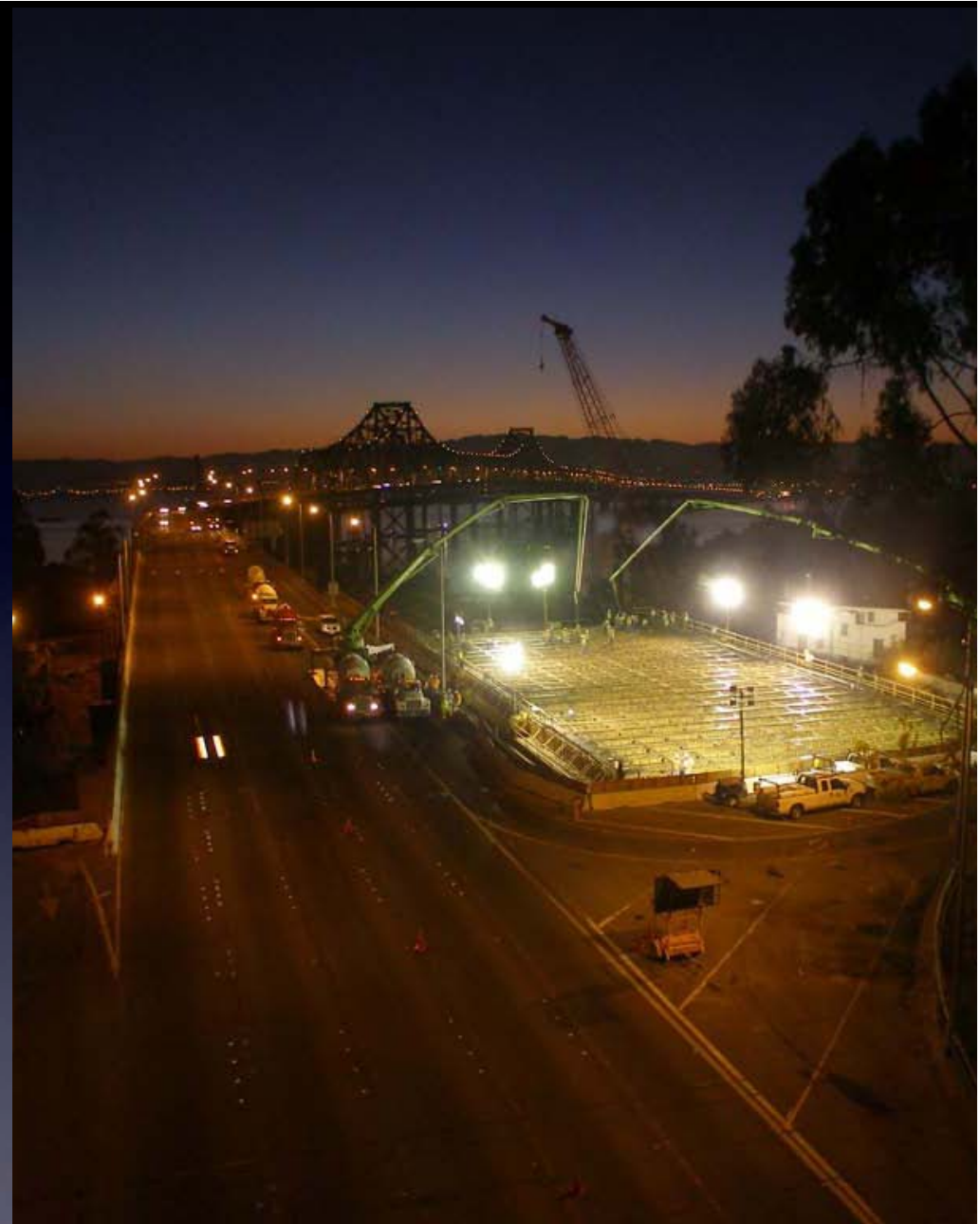
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Bay Bridge Overview

Labor Day Weekend 2007

- Closed entire bridge
- Removed and replaced 350 foot, 6,500 ton section of roadway
- Bridge reopened 11 hours ahead of schedule



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Labor Day Weekend 2007



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Labor Day Weekend 2007 Timelapse



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Labor Day Weekend 2009

- Closing entire bridge
- Cutting out 350-foot long, 3,300 ton section of bridge
- Sliding in 3,600 ton segment to connect East Span to bypass
- Work will occur 150 feet in the air
- Traffic will use bypass until new East Span opens



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Labor Day Weekend 2009



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Labor Day Weekend 2009 Simulation



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Risk Management

- On-time, on-budget
- Hailed as national example



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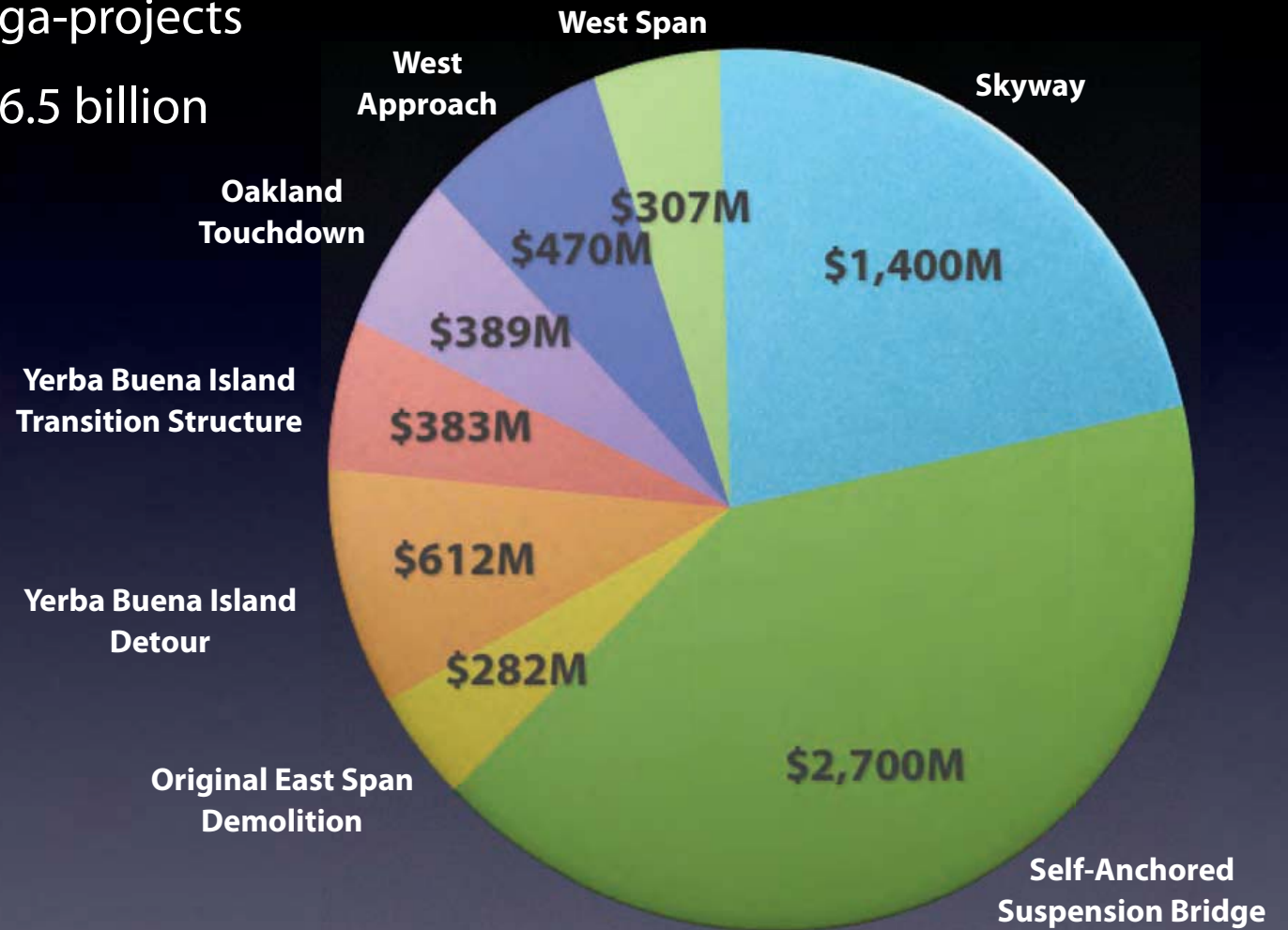
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Financials

- Retrofit is many mega-projects
- Total project cost: \$6.5 billion



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Environment

- Team of dedicated environmental professionals
- “Bubble curtain” used to minimize impact on marine life during Construction
- Created new bird nesting habitat under Skyway
- Monitoring and protecting water quality



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Environment



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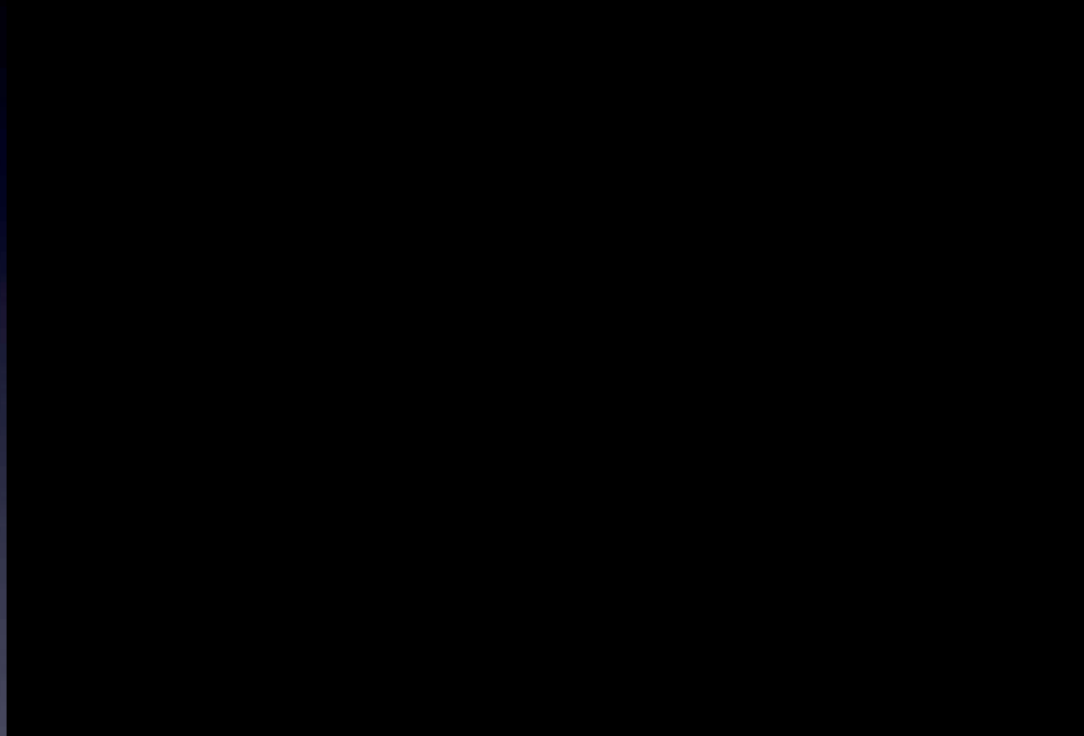
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East Span Flythrough



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We're making history.



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