Toll Bridge Program Report

November 2025

Contents

Introduction

This is the 4th Toll Bridge Program report which presents updates on the conditions of the San Francisco Bay Area's seven state-owned toll bridges. The Bay Area Toll Authority (BATA) and the California Department of Transportation (Caltrans) continuously work together to preserve the functionality and reliability of toll bridges.

BATA manages the toll revenues from the Bay Area's seven state-owned bridges. BATA also manages the region's FasTrak®, the electronic toll payment system on the bridges. Caltrans is the owner of the toll bridges, responsible for the day-to-day maintenance of and the planning and development of rehabilitation projects for the bridges.

Summary of Bridge Evaluation Ratings

The San Francisco Bay Area's seven state-owned toll bridges are monitored continually to determine the need for repair, rehabilitation, or replacement. The conditions of these toll bridges must be constantly evaluated for safety, performance, condition, and vulnerabilities to make good investment decisions. Caltrans' Structure Maintenance and Investigations (SM&I) unit is responsible for inspecting and recording the conditions of the Bay Area's toll bridges according to state and federal regulations.

Federal regulations set the requirements for inspection procedures, frequency, personnel qualifications, reporting, and maintenance of the state bridge inventory. National Bridge Inspection Standards (NBIS) are applied to all structures defined as bridges located on public roads, and Caltrans' SM&I division is responsible for applying these standards and reporting them to the Federal Highway Administration (FHWA). A bridge condition rating is given for each bridge's deck, superstructure, and substructure; the lowest rating of these three determines the bridge's overall "Bridge Condition" rating. If the lowest rating is greater than or equal to 7, the bridge is classified as Good; if it is less than or equal to 4, the classification is Poor. Bridges rated 5 or 6 are classified as Fair. It is important to note that the FHWA bridge condition rating is not a safety rating but a tool to help record and track deterioration and prioritize projects and funding. Safety determinations are made by Caltrans Structure Maintenance personnel who continuously monitor the bridges. Any structural safety deficiency is addressed at time of discovery.

The seven state-owned toll bridges in the Bay Area include 10 separate structures, with the San Francisco-Oakland Bay Bridge, the Benicia-Martinez Bridge, and the Carquinez Bridge each featuring a two-bridge configuration. These structures operate in a challenging marine environment with constant exposure to changing climate and heavy traffic over the years. The current condition of the toll bridges reflects appropriate asset performance given their age, traffic volumes, and marine operating environment. Nine of the 10 bridge structures have been deemed in Fair or better condition, and BATA and Caltrans remain focused on maintaining and preserving these assets. The Bay Area's seven state-owned toll bridges are rated as follows:

Table 1 Overall condition ratings for Bay Area state-owned toll bridges

Bridge	Overall Rating	Bridge Condition
Antioch Bridge	7	Good Condition
Benicia-Martinez Northbound (NB) Bridge	7	Good Condition
Benicia-Martinez Southbound (SB) Bridge	5	Fair Condition
Carquinez Eastbound (EB) Bridge	5	Fair Condition
Carquinez Westbound (WB) Bridge	5	Fair Condition
Dumbarton Bridge	5	Fair Condition
Richmond-San Rafael Bridge	5	Fair Condition
San Francisco Oakland Bay Bridge – East Span	7	Good Condition
San Francisco Oakland Bay Bridge – West Span	5	Fair Condition
San Mateo-Hayward Bridge	4	Poor Condition - *Deterioration on substructure* is *consistent with the age of the structure and the marine environment. Repairs to the concrete trestle are underway and are expected to improve the overall condition when completed.*

It is not unexpected that the bridges need proactive maintenance and rehabilitation and that needs may increase over time. BATA, in collaboration with Caltrans, has developed and budgeted for significant annual maintenance and a detailed rehabilitation program. Currently, BATA has $337 million in the FY 2025-26 BATA Budget for capital rehabilitation work.

Background

The following subsections provide a background on bridge inspection procedures, performance measures, condition ratings, asset management and potential risks.

Bridge Investigations

Caltrans' Structure Maintenance and Investigation (SM&I) unit is responsible for managing the Bay Area's seven state-owned toll bridges. This unit leads the effort for inspecting bridges, recording condition data, performing load rating analysis, and preserving these bridges. The SM&I unit performs routine and specialty inspections according to state and federal guidelines. Bridge inspections are conducted in compliance with:

- The National Bridge Inspection Standards (NBIS) regulation (23 CFR 650, Subpart C)
- FHWA Specifications for the National Bridge Inventory (SNBI)
- FHWA National Bridge Inspection Program (NBIP) Metrics
- AASHTO Inspection, Evaluation and Load Rating procedures
- Internal asset management requirements

Bridge structures undergo regular inspections conducted by SM&I Area Bridge Maintenance Engineers. The comprehensive inspection and reporting process spans a 2-year cycle to ensure thorough evaluation and complete documentation of structural conditions, resulting in the final bridge inspection report. Specialty inspections are performed when the bridge meets specialty criteria, such as when the bridge foundation is too deep to inspect under routine inspection methods and requires specialty underwater inspections. During a routine inspection, a registered engineer performs element-level inspections of all structural members of the deck, superstructure, and substructure of the bridge. The registered engineer will document the condition of each structural member according to the guidelines provided in the Caltrans Bridge Element Inspection Manual. During a specialty inspection, a registered engineer is responsible for performing inspections of those bridge elements identified with specialized requirements. The photographs in Figure 1 show the SM&I team performing inspection activities.

Additionally, hands-on inspections with appropriate Non-Destructive Testing may be performed as part of a specialty inspection. Such inspections may prompt additional testing as required to determine the integrity of bridge structural elements Bridge inspection staff are trained regularly in the best practices for addressing condition defects found during the inspection process. Further inspection activity may occur as needed to determine the condition of the bridge. This may include post-event inspections (i.e., collision damage, earthquake, fire, etc.) where SM&I emergency response plan and damage response protocols are established.

Figure 1 The SM&I team performing Inspection Activities

Figure 1-A: Rope access technique to assess details of paint

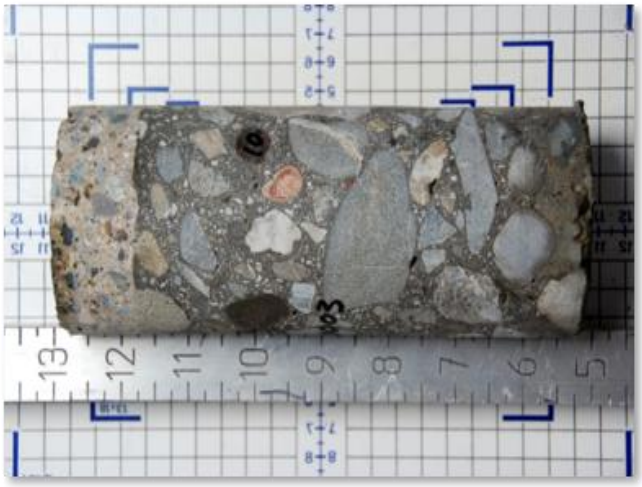


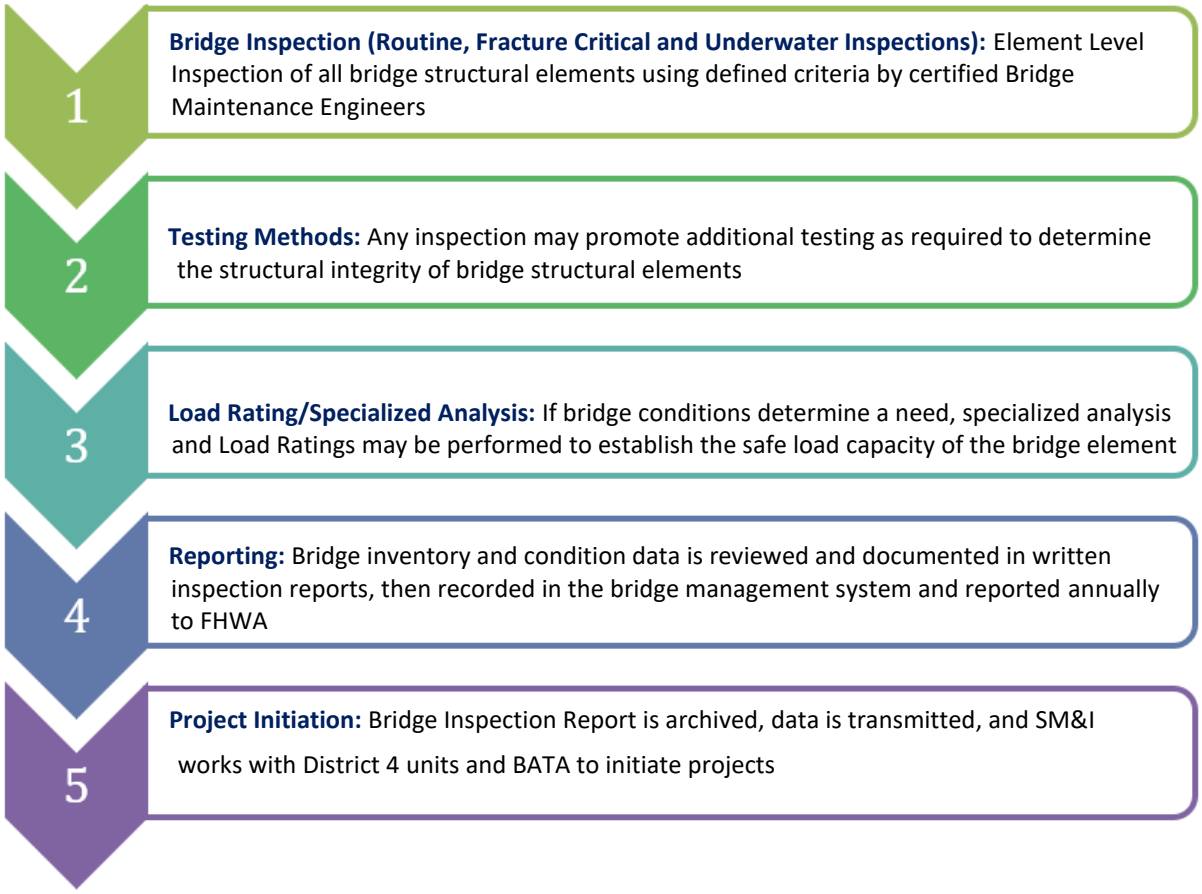
Figure 1-B: Core samples to evaluate concrete reinforcing steel

Figure 1-C: Bridge underwater inspection

Figure 1-D: Physically measuring flatness

The result of every bridge inspection (whether routine or specialty) is documented in a formal Bridge Inspection Report that is signed and sealed (with an engineer's stamp) and archived in the state-managed Bridge Inspection Report Information System for historical purposes. Bridge inspection data is reported annually to the Federal Highway Administration every March, in compliance with mandated inspection and reporting requirements. All data collected during the inspection process is documented and maintained in Caltrans bridge management system. Maintaining quality data is considered the cornerstone to assuring the safety and integrity of these bridges. Based on the inspection data, the SM&I unit makes structure work repair recommendations, which in turn drive maintenance and rehabilitation projects. The SM&I unit also is responsible for supporting plans, specifications and estimates for bridge maintenance projects, and for determining the safe load capacity of all bridges. Figure 2 shows a schematic diagram that summarizes the bridge management process.

Figure 2 Bridge Management at Work: Inspection, Reporting, and Project Initiation

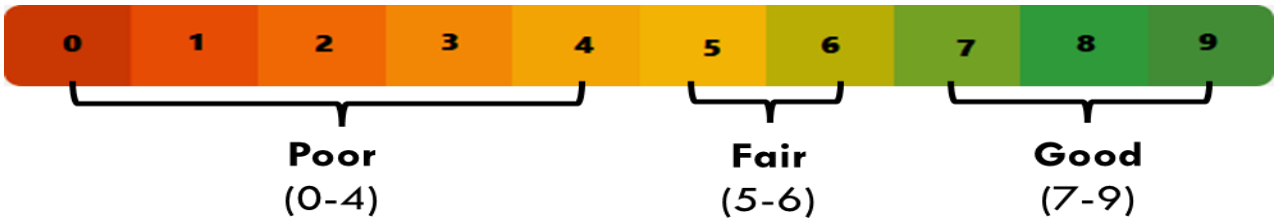


Bridge Performance Measures

Caltrans and local agencies follow FHWA National Bridge Inspection Standards (NBIS) for inspecting all California bridges. Caltrans' Area Bridge Maintenance Engineers who are part of the agency's SM&I unit, perform inspections for all Caltrans bridges and many of California's local agency-owned bridges. Inspectors record overall ratings for a bridge's deck, superstructure, and substructure on a scale from zero (worst condition) to nine (best condition). Caltrans follow the SNBI guidelines to report National Bridge Inventory (NBI) data including bridge condition ratings.

Bridge condition ratings are used to classify a bridge as being in good, fair, or poor condition. The lowest of the three ratings for deck, superstructure, and substructure determines the overall rating of the bridge. If this value is seven or greater, the bridge has minimal wear to minor problems and is classified as being in good condition. If it is five or six, the bridge is classified as being in fair condition and the bridge may show signs of minor deterioration. If the rating is four or less, the bridge is classified as being in poor condition, which indicates that the bridge has advanced deficiencies and may require an accelerated repair or potential immediate action to fix the issue. It is important to note that the FHWA bridge condition rating is not a safety rating, but a tool to help record and track deterioration and prioritize projects and funding. Safety determinations are made by Caltrans maintenance personnel who continuously monitor the bridges. Any structural safety deficiency is addressed at time of discovery. The NBI rating scale and the associated condition states are shown in Figure 3.

Figure 3 NBI Ratings for Bridge Conditions



A graphical depiction of the three bridge components is shown in Figure 4. The bridge deck is the portion of the bridge that directly carries the traffic (i.e., road surface). The substructure is the portion of the bridge that supports the superstructure and transmits all the bridge loads to the ground. The superstructure is the portion of the bridge that supports the deck and connects the substructure parts together as it carries loads from the deck to the substructure. Caltrans performs element-level inspections on all three main bridge components, which provide additional detail on what portions of a bridge may be deteriorated. Examples of these bridge elements include, but are not limited to, deck joints, stringer beams, columns, and piles. The results of the element-level inspections are used to derive the NBI deck, superstructure, and substructure ratings. FHWA occasionally updates the SNBI to incorporate best practices and technological advancements. These updates can influence inspection processes and eventually condition ratings. The implementation of the 2022 SNBI update is currently underway and will be reflected in all subsequent reports. Figure 4 The Three Bridge Main Components.

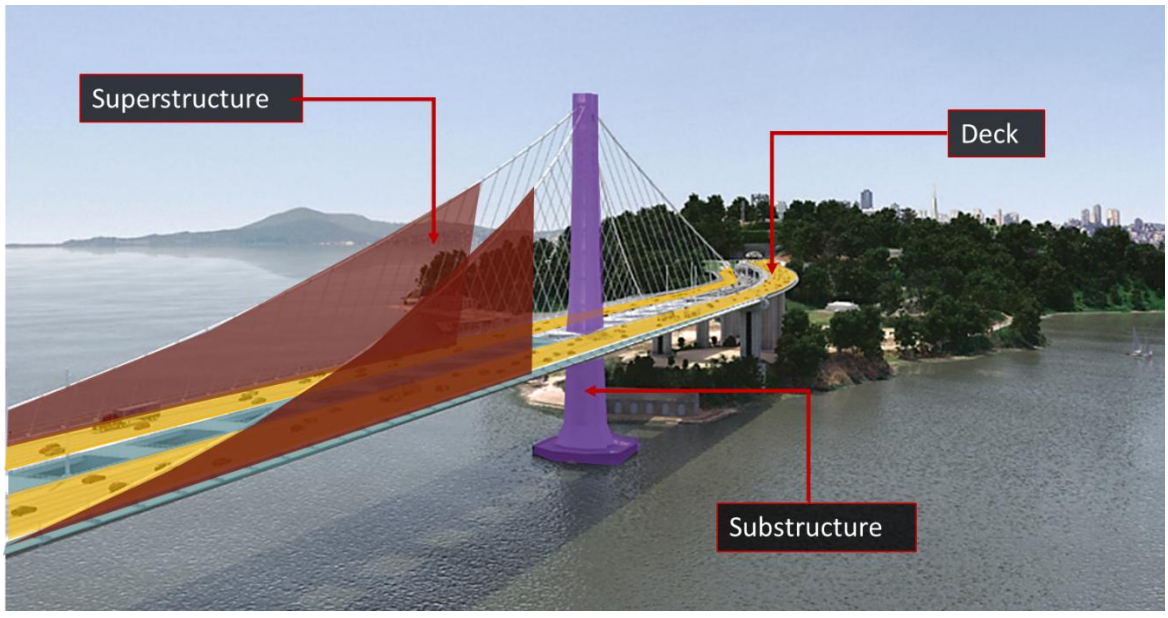


Figure 5 Bridge Main Components

Asset Management

The United States Code (23 U.S. Code § 101) defines transportation asset management as “a strategic and systematic process of operating, maintaining, and improving physical assets, with a focus on both engineering and economic analysis based upon quality information, to identify a structured sequence of maintenance,

preservation, repair, rehabilitation, and replacement actions that will achieve and sustain a desired state of good repair over the lifecycle of the assets at minimum practicable cost."

BATA and Caltrans have long recognized the importance of asset management in maintaining and preserving the toll bridges in the Bay Area to drive investment decisions. In the spring of 2021, BATA and Caltrans joined efforts to develop a Toll Bridge Asset Management Plan (TBAMP) catered to the needs of the toll bridge structures.

The TBAMP will be completed end of 2025 and presented in early 2026. The Life Cycle Cost Analysis (LCCA), a key component of the TBAMP, was presented to the BATA Oversight Committee in July 2025. The analysis compared maintenance and rehabilitation scenarios listed below and identified the Reduce Backlog Scenario as the recommended approach for achieving desired performance targets.

- Scenario 1 - Spot Repair: Fix bridge elements before they fall into very poor conditions.
- Scenario 2 - Reduce Backlog: Fix bridge elements as needed to sustain fair condition. (Recommended approach)
- Scenario 3 - Accelerate Rehab: Fix bridge elements as needed to increase time in good condition.

These scenarios focused on managing the Bay Area toll bridges over the next 50 years, highlighting the tradeoffs between condition levels and costs. The analysis demonstrated that maintaining the toll bridges in fair or better condition under the Reduce Backlog scenario is the most cost-effective strategy. This finding is consistent with the adopted BATA Toll Bridge Asset Management Policy and Objectives[1]. The Reduce Backlog scenario highlights a long-term approach that balances the cost and timing of investments and reflects BATA's asset management principles of using a whole life cycle cost approach and supporting data-driven, risk-based decision-making. Based on the Reduce Backlog scenario, Figure 6 shows the preliminary estimated agency expenditures for bridge preservation across the Bay Area toll bridges over the next 50 years. These estimates, which include toll collection capital costs, indicate significant variation in funding needs over time. The analysis reveals that early higher level of investments, demonstrating proactive maintenance, maximize cost effectiveness and prevent higher future repair costs. Major expenditures are primarily driven by planned work on the San Francisco-Oakland Bay Bridge West Span and Richmond San Rafael Bridge. The analysis also shows that incorporating these results will likely increase planned investments beyond the current $2.3 billion BATA FY 2024-33 Toll Bridge Capital Improvement Plan (CIP). The recently approved toll increase, starting in 2026, will help fund most of the critical bridge preservation work needs as identified in the Reduce Backlog scenario. More information about the toll bridge asset management work is planned to be presented in early 2026 at the meeting of the

[1] BATA Toll Bridge Asset Management Policy and Objectives (2022).
https://mtc.ca.gov/sites/default/files/meetings/attachments/5895/5a_24_0071_3_BATA_Resolution_No_175_Attachment_A.pdf

BATA Oversight Committee. An updated Capital Improvement Plan and the Toll Bridge Program Report is anticipated in late 2026 to reflect more of the asset management work.

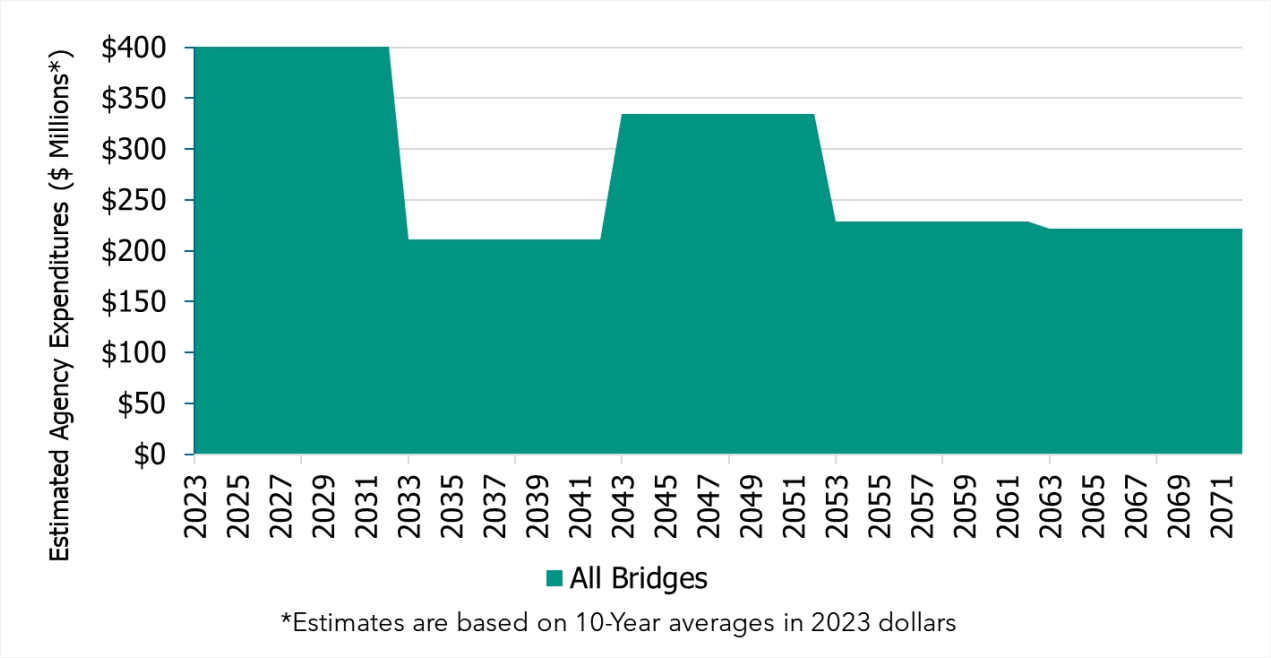


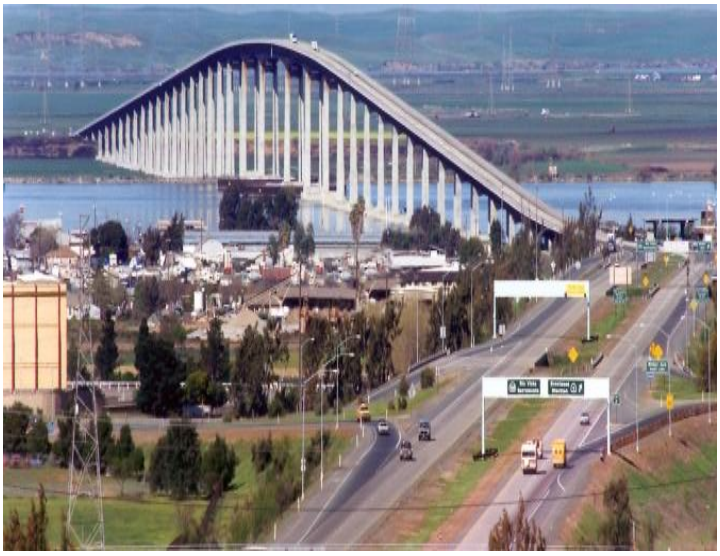
Figure 6 Average Annual Cost for Reduce Backlog Scenario Over 50 Years (Preliminary)

The following sections of the report present each of the Bay Area's seven state-owned toll bridges, and include a description, a status, NBIS Structural Health Summary and a list of planned key projects.

Antioch Bridge

Overview

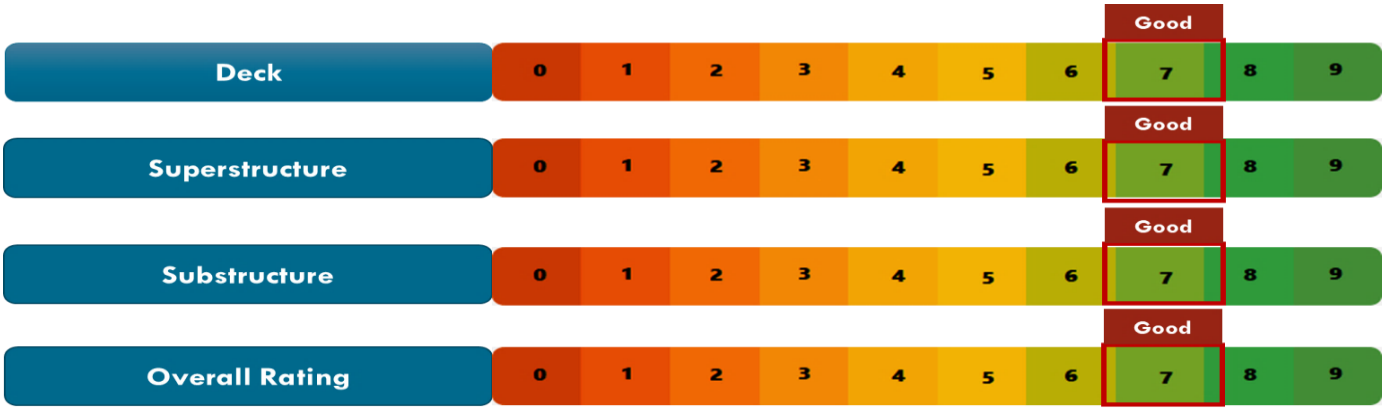
Location	State Route 160 between Contra Costa and Sacramento counties
Structure	Deck on Steel Plate Girder
Length	1.8 miles
Year Opened	Original structure: 1926 New structure: 1978
Last Seismic Retrofit	2013



Description

The Antioch Bridge spans the San Joaquin River, connecting northeastern Contra Costa County with Sacramento County. The 1.8-mile bridge features a concrete deck atop a steel plate girder system and opened to traffic in 1978. After Caltrans and the Bay Area Toll Authority evaluated the seismic safety of the Antioch Bridge, a 2013 seismic retrofit project was competed to make the bridge safer during a major earthquake.

NBIS Structural Health Summary



Status

The structural components of the Antioch bridge are in good overall condition. The bridge deck is in good condition with minor signs of typical wear to the concrete surface. The deck surface was treated in 2002 with

methacrylate to seal the cracks. A deck rehabilitation project consisting of a polyester concrete overlay is currently programmed for FY 2033-34. The bridge substructure is in good condition, with deterioration limited to surface cracks. The bridge's superstructure, constructed of weathering steel, is in similarly good condition. Several elements of the bridge superstructure were replaced, and an additional substructure bracing was added as part of the 2013 seismic retrofitting contract. The main bridge is constructed out of weathering steel, which does not require any paint. The only elements that will need to be painted are the steel tower braces that were placed as part of the 2012 seismic retrofit. The fender system is in fair to good condition with various stages of deterioration. A fender rehabilitation project to address these issues is planned for FY 2027-28. The following table summarizes the planned projects according to the updated BATA 10-Year Toll Bridge Capital Improvement Plan (CIP) for FY 2024-33:

Planned Projects (Per CIP)

Project Description	Capital Spending Begin	Budget (Includes Support Cost)
Replace fender system*	FY 2027-28	$3.1 Million
Navigational lights- upgrade to LED	FY 2032-33	$0.6 Million
Substations upgrade (2 Locations)*	FY 2027-28	$3.9 Million
Replace power cable (480V)	FY 2032-33	$2.9 Million
Traffic Operation System (TOS) elements	FY 2032-33	$0.7 Million

Projects in Construction

None

* Tentative update per Caltrans project information. All planned project information subject to change in next CIP update.

Benicia-Martinez Bridge

Overview

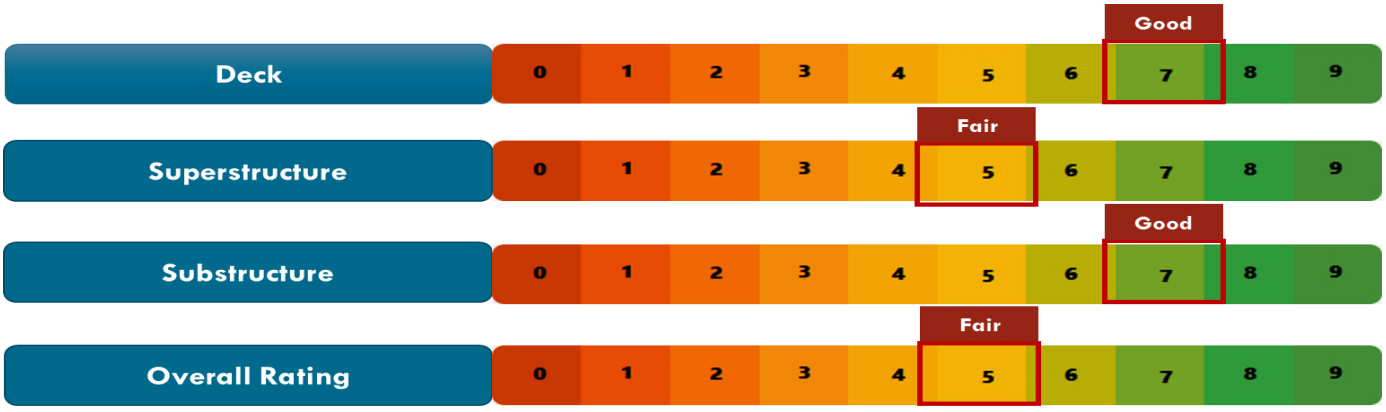
Location	Interstate 680 between Solano and Contra Costa counties
Structure	Southbound - Deck on Steel Truss
	Northbound - Concrete Cast-in-Place Segmental
Length	1.2 miles
Year Opened	Southbound - 1962
	Northbound - 2007
Last Seismic Retrofit	Southbound - 2009

Description

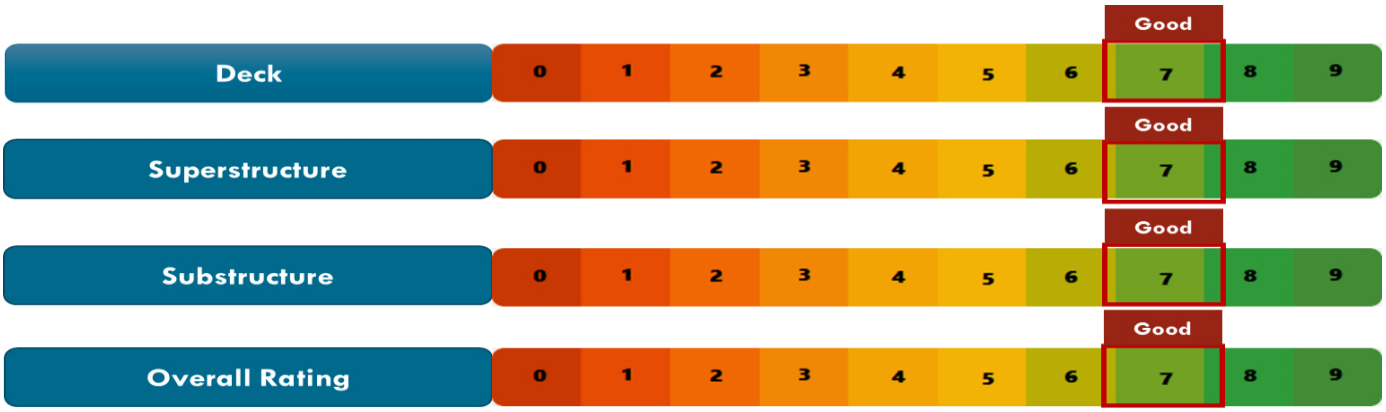
The Benicia-Martinez Bridge traverses the Carquinez Strait, carrying Interstate 680 between Solano and Contra Costa Counties. The 1.2-mile-long deck on steel truss structure was built in 1962, widened in 1991 and converted to southbound only traffic in 2009. In 2007, a second span was constructed adjacent to the original bridge to carry northbound only traffic.

NBIS Structural Health Summary

Southbound (1962 Benicia-Martinez Bridge)



Northbound (2007 Benicia-Martinez Bridge)



Status

The structural components of both the northbound and southbound Benicia-Martinez Bridge structures generally are in fair to good condition. The bridge deck, in the southbound direction, is in good condition with signs of spalling and delamination which are being monitored and repaired as part of the ongoing routine maintenance work. The bridge deck in the northbound direction is in good condition with minor signs of typical wear to the concrete surface. The bridge's substructure is in overall good condition with some shrinkage cracks in the bridge towers.

While the superstructure of the northbound bridge is in good condition, the southbound superstructure is in fair condition, with the deck truss along the floor beams showing signs of deterioration which is being closely monitored. The southbound bridge truss accounts for approximately 1.8 million square feet of paint. Caltrans Paint Crews are performing the painting work over the next 10 years. The fender system is in good condition for both bridge structures. The following table summarizes the planned projects according to the updated BATA 10-Year Toll Bridge CIP for FY 2024-33:

Planned Projects (Per CIP)

Project Description	Capital Spending Begin	Budget (Includes Support Cost)
Replace joint seals (1962) and expansion joints repair, reconstruct seismic joints (new bridge), bearing repair, approach bent cap repair	FY 2025-26	$8.4 Million
Modify existing garage fence and repair fireproofing material*	FY 2026-27	$1.6 Million
Upgrade toll plaza, parking and roadway lighting to LED	FY 2032-33	$1.9 Million
Replace 480V power cable, utility transformers and utility panels (1962 Benicia Martinez Bridge)	FY 2026-27	$6.6 Million
Traffic Operation System (TOS) Elements	FY 2032-33	$4.5 Million
Install 6G Hz Radio Licensed Links at Benicia Toll Plaza	FY 2029-30	$0.7 Million
Repair 12kv transfer scheme and connect it with supervisory control and data acquisition (SCADA) for remote control and monitoring*	FY 2026-27	$1.0 Million

Projects in Construction

None

Carquinez Bridge

Overview

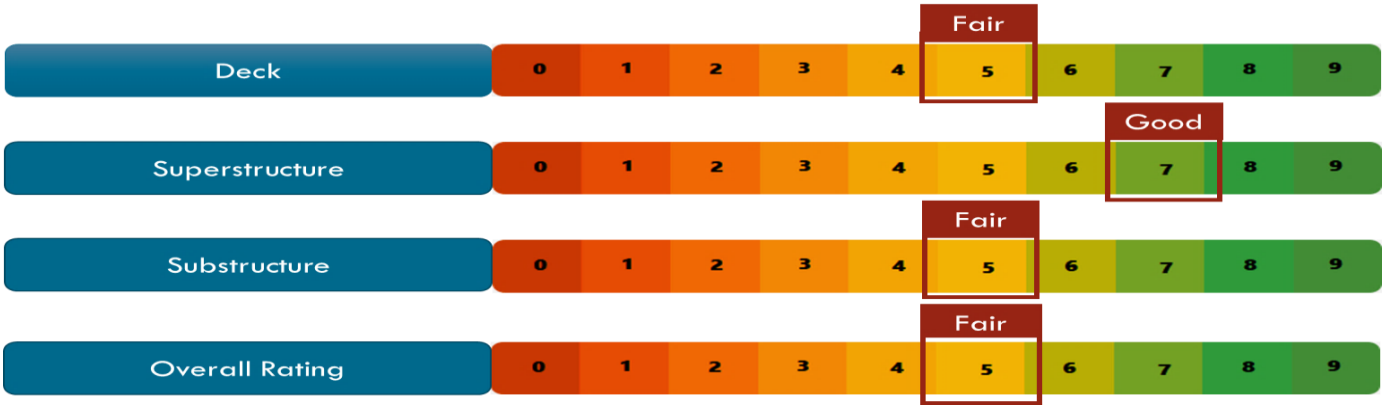
Location	Interstate 80 between Solano and Contra Costa counties
Structure	Eastbound - Steel cantilever through truss
	Westbound - Suspension span with concrete towers
Length	Eastbound - 0.8 miles
	Westbound - 0.7 miles
Year Opened	Original: 1927 (replaced)
	Eastbound: 1958
	Westbound: 2003
Last Seismic Retrofit	Eastbound - 2001

Description

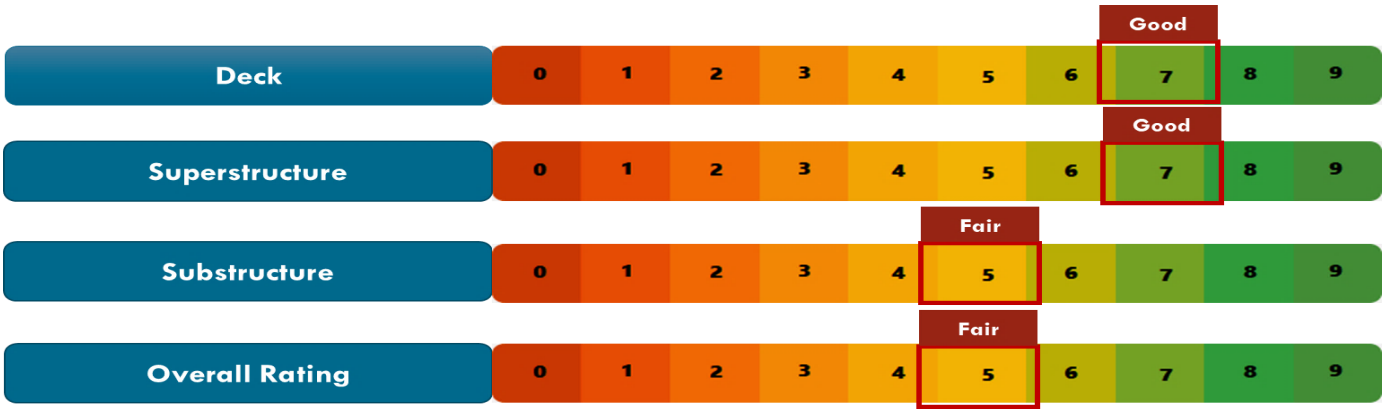
The Carquinez Bridge is a two-bridge system, measuring 0.7 and 0.8 miles long, respectively that carries Interstate 80 between Contra Costa and Solano counties, the original crossing opened in 1927. Due to the increase in traffic flow, Caltrans opened a parallel steel cantilever truss bridge for eastbound traffic in 1958. The 1927 original westbound span was replaced in 2003 with a cable suspension span for westbound traffic as part of the seismic retrofit program.

NBIS Structural Health Summary

Eastbound (1958 Carquinez Bridge)



Westbound (2003 Carquinez Bridge)



Status

The structural components of the Carquinez Bridge generally are in fair to good condition. The eastbound bridge deck is in fair condition. A deck rehabilitation project was completed in 2016, placing a polyester concrete overlay on the concrete deck to improve the drivability and long-term performance (EA 04-3G4034). The westbound bridge deck is in good condition, with signs of wear and rutting in the asphalt overlay. The deck overlay is planned for replacement in FY 2025-26 (EA 04-1Y7004). The fender system is in good condition for both bridge structures. In the eastbound structure, the substructure condition rating changed from good to fair in the past two years due to an increased observation of corrosion. A painting project is scheduled for FY 2027-28 (EA 04-3X210) to address the deteriorating paint condition. The eastbound steel truss covers approximately 2.5 million square feet of paint with a condition range from good in most areas to fair where the initial signs of paint distress can be seen in the forms of freckled rust, crevice corrosion, and peeling paint. The westbound suspension bridge covers approximately 1.5 million square feet of paint which is in good condition. The exterior of the box girder was painted recently. The following table summarizes the planned projects according to the updated BATA 10-Year Toll Bridge CIP for FY 2024-33:

Planned Projects (Per CIP)

Project Description	Capital Spending Begin	Budget (Includes Support Cost)
Replace and upgrade navigational lights to LED and connect it with SCADA for more remote monitoring	FY 2030-31	$2.9 Million
Upgrade radar beacons and connect it with SCADA for remote control*	FY 2026-27	$1.4 Million
Retention cable band bolts investigation	FY 2029-30	$3.2 Million
Upgrade cable-lighting to LED (Both Bridges)	FY 2030-31	$5.4 Million
Upgrade toll plaza, parking, and roadway lighting to LED (CARQ Zampa)	FY 2032-33	$1.9 Million
Replace SCADA communication cable with fiber, upgrade SCADA	FY 2032-33	$4.6 Million
TOS Elements	FY 2032-33	$3.9 Million
Structural steel painting	FY 2027-28	$115.3 Million
Seismic Transmission Unit (STU) replacement*	FY 2026-27	$1.2 Million
Asphalt overlay (Al Zampa)*	FY 2025-26	$5.4 Million

Projects in Construction

None

Dumbarton Bridge

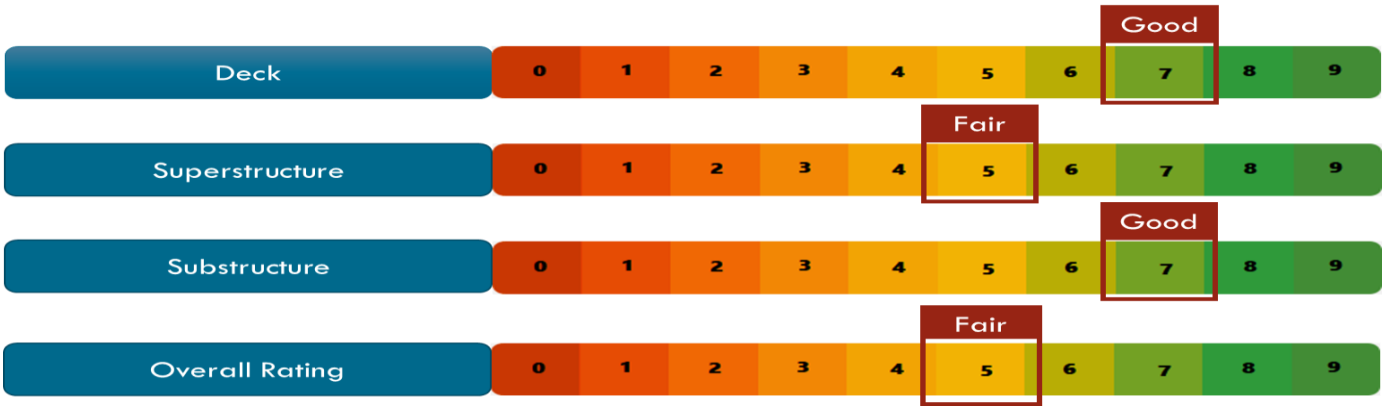
Overview

Location	State Route 84 between San Mateo and Alameda counties
Structure	Steel box girder main span and pre-stressed concrete approach spans
Length	1.6 miles
Year Opened	Original: 1927 (replaced) New structure: 1982
Last Seismic Retrofit	2013

Description

The Dumbarton Bridge carries State Route 84 for 1.6 miles between San Mateo and Alameda counties, with an eastern touchdown near Newark in Alameda County and a western landing near East Palo Alto in San Mateo County. The steel box girder main span and pre-stressed concrete approach spans were seismically retrofitted in 2013 to make the bridge safer during a major earthquake.

NBIS Structural Health Summary



Status

The structural components of the Dumbarton Bridge generally are in fair to good condition. The bridge deck is in good condition, with small cracks. The bridge's substructure is in good condition, with minor shrinkage cracks in the concrete surface. The superstructure elements also are in fair condition, with some signs of deterioration.

The fender system is in good condition with signs of minor deterioration. The following table summarizes the planned projects according to the updated BATA 10-Year Toll Bridge CIP for FY 2024-33:

Planned Projects (Per CIP)

Project Description	Capital Spending Begin	Budget (Includes Support Cost)
Substations upgrade	FY 2025-26	$4.0 Million
Updating Existing Radio Links from District Office to San Leandro Hill and from San Leandro Hill to Dumbarton	FY 2032-33	$0.8 Million
Replace Power Cable (480V)	FY 2032-33	$4.1 Million
TOS Elements	FY 2032-33	$3.5 Million
Replace SCADA communication cable with fiber cables, upgrade SCADA	FY 2026-27	$3.5 Million

Projects in Construction

None

Richmond-San Rafael Bridge

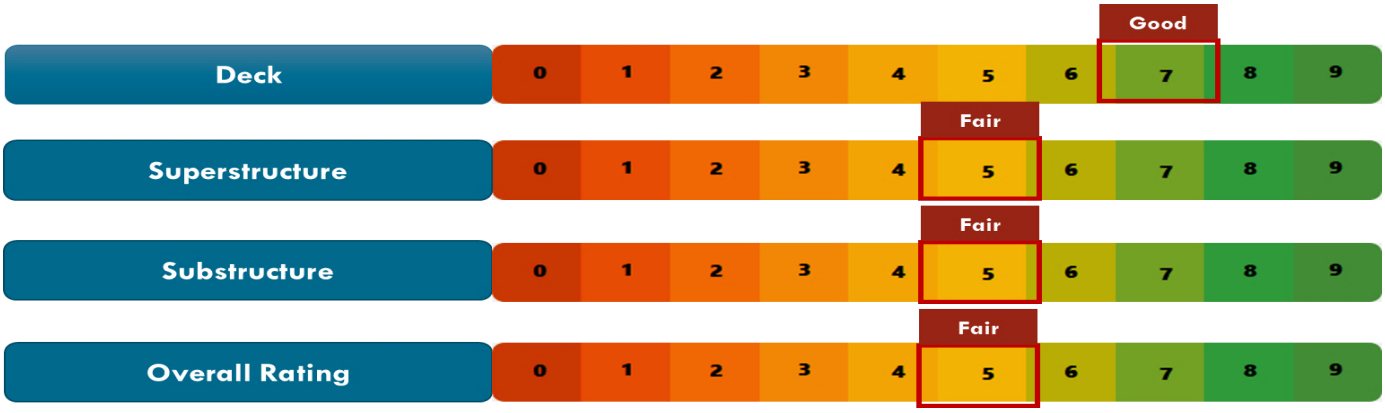
Overview

Location	Interstate 580 between Contra Costa and Marin counties
Structure	Steel cantilever main spans with connecting girder and truss spans and a concrete approach trestle
Length	5.5 miles (including approaches)
Year Opened	1956
Last Seismic Retrofit	2005

Description

The Richmond-San Rafael Bridge has been a vital link for North Bay travelers for over 69 years. This 5.5 mile double-deck structure features two cantilever spans traversing two navigational channels.

NBIS Structural Health Summary



Status

The structural components of the Richmond-San Rafael Bridge are in overall fair to good condition. The bridge deck is in good condition with signs of delamination and spalls on the surface. In 2024, a District Directors Order (DDO) was issued to repair deteriorated sections of the bridge's steel girder and steel truss deck components. Following additional deterioration identified during routine inspections and ongoing construction activities, a second DDO was approved in January 2025. As of October 2025, all previously identified deck repairs have been completed. The bridge's current condition assessment shows the substructure in fair condition with visible

deterioration present. The superstructure is also rated as fair condition, with both steel truss spans and steel girder spans exhibiting signs of deterioration. Bridge deck joints were replaced during the structural steel painting project. All upper and lower deck truss pier joints were replaced in 2024. The fender system is in good condition where the plastic sheathing was replaced as a part of rehabilitation contract in 2009. This bridge has around 8.4 million square feet of paint. There is a multi-phase plan to target painting areas of urgent need. As of now, Phases I and II have been completed which targeted truss spans and lower deck floor systems. Phase III (EA 04-2Y2204) will complete the lower deck floor systems in the cantilever spans, upper deck in the truss spans, and the steel substructure (i.e. towers). Phase IV is anticipated to target the upper deck floor system and portion of the truss. Phase V is anticipated to paint the truss sections above the roadway. The following table summarizes the planned projects on Richmond San Rafael Bridge according to the updated BATA 10-Year Toll Bridge CIP for FY 2024-33:

Planned Projects (Per CIP)

Project Description	Capital Spending Begin	Budget (Includes Support Cost)
Structural steel painting (Tower) 3rd Phase	FY 2026-27	$111 Million
Structural steel paint Phase 4&5, superstructure and upper towers	FY 2030-31	$98 Million
Replace existing damper	FY 2026-27	$7.1 Million
Upgrade radar beacons and connect it with SCADA for remote control	FY 2026-27	$10 Million
Replace and upgrade navigational lights to LED and connect it with SCADA for remote monitoring	FY 2030-31	$10 Million
Replace aircraft beacon and upgrade to LED, and connect to SCADA for monitoring	FY 2030-31	$1.1 Million
Upgrade fog horns and connect with SCADA for remote control	FY 2030-31	$1.7 Million
Concrete column repair	FY 2031-32	$10 Million
Replace SCADA communication cable with fiber, upgrade SCADA	FY 2032-33	$6.8 Million
TOS Elements	FY 2032-33	$3.4 Million
Upgrade lower deck, Toll plaza and building lighting to LED	FY 2032-33	$2.4 Million

Projects in Construction

Project Description	Budget (Includes Support Cost)	2022	2023	2024	2025	2026	2027
Upgrade electrical substations and power cables	$35 Million						
Repair bridge deck section	$1.2 Million						

San Francisco-Oakland Bay Bridge

Overview

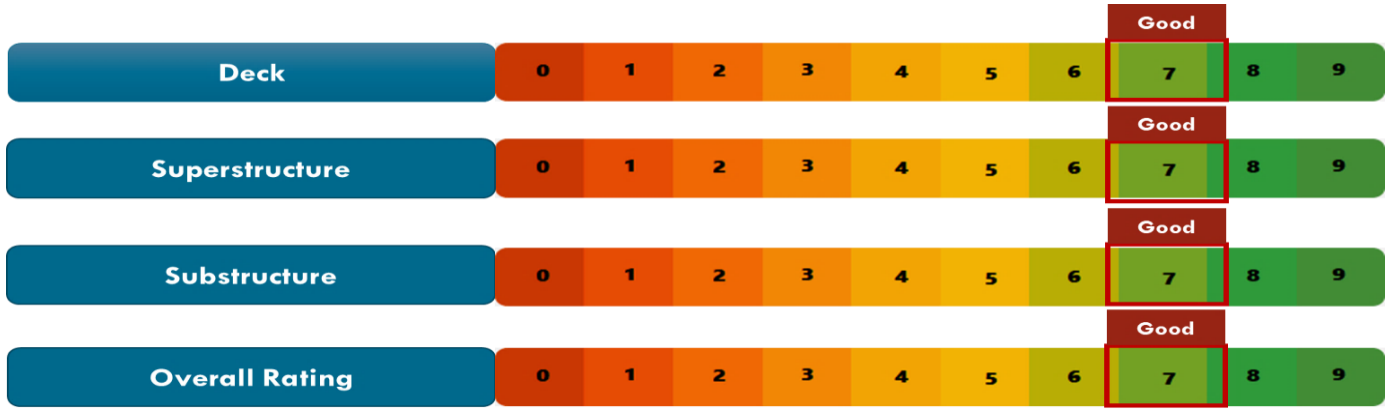
Location	Interstate 80, between San Francisco and Alameda counties
Structure	West spans – Adjoined Steel Double Deck Suspension Spans East Span – Parallel Steel Self Anchored Span and Concrete Pre-cast Segmental Approach
Length	8.4 miles (including approaches & toll plaza)
Year Opened	West Span: 1936 East Span: 2013
Last Seismic Retrofit	West Span: 2004

Description

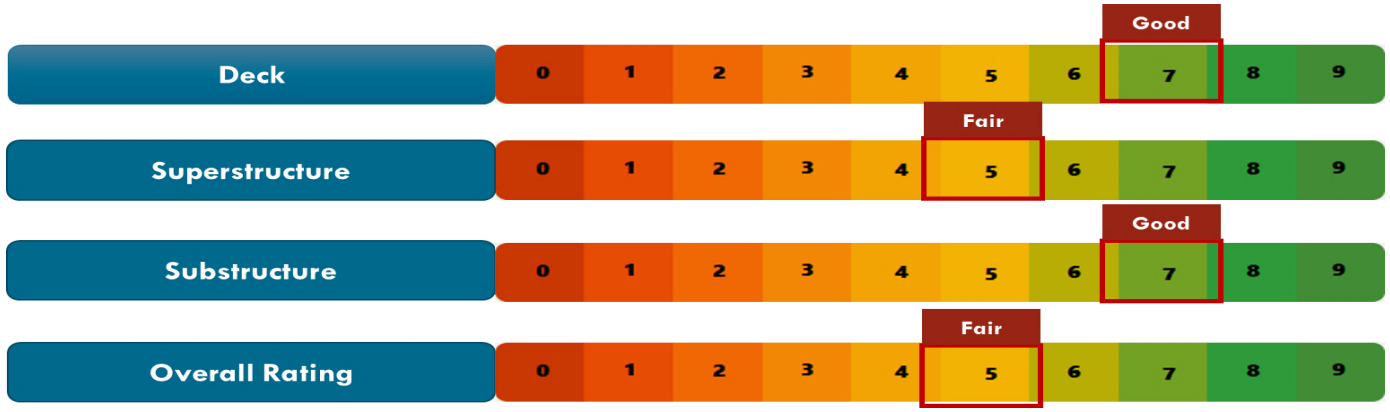
The San Francisco-Oakland Bay Bridge is the region's workhorse bridge, carrying more than a third of the total traffic on the Bay Area's seven state-owned toll bridges. The Bay Bridge's 89-year-old West Span is a jewel along the San Francisco waterfront. The new East Span, which opened in 2013, has become another Bay Area icon. The 2.2-mile East Span between Oakland and Yerba Buena Island includes a concrete skyway structure; a single-tower, self-anchored suspension bridge; and a transition structure that connects the side-by-side roadway decks with the double-deck tunnel through Yerba Buena Island. The 2.2-mile West Spans are adjoining double-deck steel suspension bridges with a center anchorage connecting Yerba Buena Island with downtown San Francisco. A seismic retrofit of the West Spans was completed in 2004.

NBIS Structural Health Summary

East Span



West Span



Status

The newer East Span of the Bay Bridge is in good overall condition with slight signs of deterioration to its deck, structural components, and paint. No major rehabilitation projects are planned for the next 10 years. The older West Span, which is in fair condition, is the focal point for rehabilitation work. Current projects are dedicated to preventative maintenance and preservation. The West Span of the San Francisco-Oakland Bay Bridge contains 8.7 million square feet of structural steel surface. The current strategy is to split painting with Caltrans Paint Crews and contract work. A multiphase plan for contract work is anticipated targeting the areas of urgent need, primarily the floor system and truss webs followed by contract work for the towers and cables. Paint work contracts have been advertised in August 2025. The East Span of the bridge contains around 2 million square feet of paint which is in good condition. Recent updates to health regulations in California, which lowered the permissible exposure limit for lead in the workplace, may significantly impact the cost of painting projects on all toll bridges.

The West Span bridge deck remains in good condition, displaying only light to moderate cracking and delamination. Targeted repairs to select deteriorated areas will be addressed under an upcoming superstructure paint contract. Despite the significant age difference between the 89-year-old West Span and the 15-year-old East Span, both structures maintain good deck and substructure conditions due to consistent preservation

efforts and strategic maintenance interventions over their respective lifespans. The West Span's longevity demonstrates the effectiveness of proactive repair programs and protective treatments that have been applied throughout its service life.

The majority of the fenders and concrete skirts on the west span were installed during the original construction of the structure. These components have remained in service since that time and are now approaching the end of their useful life. To address this, a project is scheduled for advertisement in Fiscal Year 2025/2026 to replace the existing fender system and concrete skirts.

A $37 million contract for comprehensive cable investigation work, which includes non-destructive wedging and inspection of the main cable, as well as destructive testing of the secondary suspension ropes, completed construction in September 2025. The final report detailing the findings of the cable investigation is scheduled for April 2026. The following table summarizes the planned projects on the San Francisco-Oakland Bay Bridge according to the updated BATA 10-Year Toll Bridge CIP for FY 2024-33:

Planned Projects (Per CIP)

Project Description	Capital Spending Begin	Budget (Includes Support Cost)
Structural steel painting, floor system, deck, towers and deck rehabilitation projects	FY 2024-25	$102 Million
Structural steel paint (Towers)	FY 2030-31	$75 Million
Replace fender system and skirt modifications	FY 2025-26	$150 Million
Install traveler at Self Anchored Suspension (SAS) main cable	FY 2031-32	$55.8 Million
Replace cable lighting and upgrade to LED (North and South)	FY 2031-32	$4.5 Million
Replace utility stations and armored cables on West Span	FY 2031-32	$5.3 Million
Replace West Span (Upper Deck) LED lighting	FY 2031-32	$3.4 Million
Replace West Span (Lower Deck) LED lighting	FY 2031-32	$3.4 Million
Replace communication cable (SCADA 50 Pair Cable) West Span	FY 2031-32	$1.8 Million
Replace generators	FY 2029-30	$3.4 Million
TOS elements	FY 2031-32	$3.5 Million
Replace air compressors and air lines at YBI and Sterling	FY 2026-27	$16.5 Million

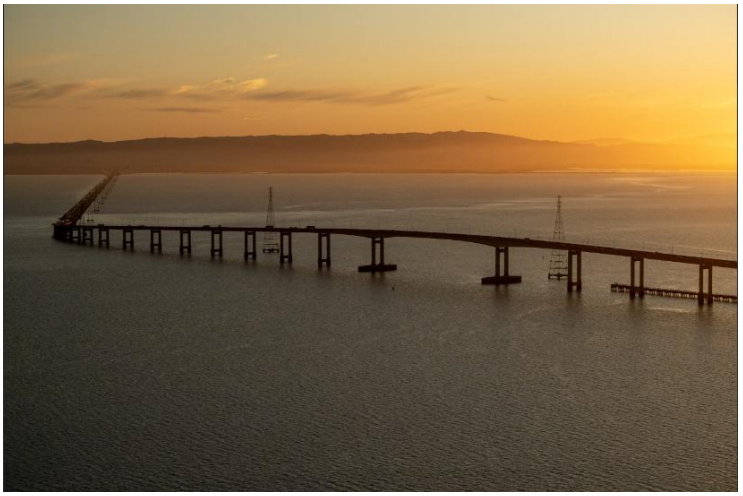
Projects in Construction

Project Description	Budget (includes support cost)	2024	2025	2026	2027	2028	2029	2030	2031
Main cable investigations and replace suspender ropes	$37 Million								
Armor Joint Reconstruction and Joint Seal Replacement- Project Advertised for Construction	$20 Million								
Structural Steel Paint and Miscellaneous Repairs- Project Advertised for Construction	$215 Million								

San Mateo-Hayward Bridge

Overview

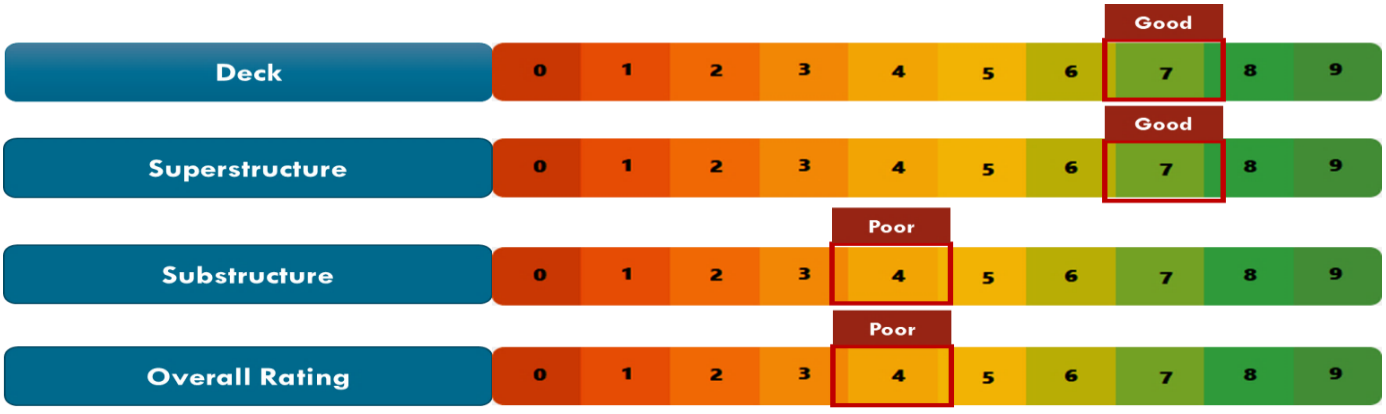
Location	State Route 92 between San Mateo and Alameda counties
Structure	Steel box girder main span and concrete trestle approach spans
Length	High-rise steel girder spans 1.9 miles, low-rise trestle portion 5.1 miles
Year Opened	1967 Widened 2003
Last Seismic Retrofit	2000



Description

The San Mateo-Hayward Bridge carries State Route 92 between San Mateo and Alameda counties. The 1.9-mile high-rise section uses steel girder construction. The 5.1-mile low-rise portion of the bridge is made of parallel concrete trestle approach spans. Once one of the most congested evening commutes in the Bay Area, the San Mateo-Hayward Bridge saw enormous improvements in traffic flow with the completion of the 2003 concrete trestle for westbound traffic that allowed the conversion of the 1967 concrete trestle to eastbound only traffic. The seismic safety of the bridge was improved by Caltrans' 2000 completion of a retrofit project.

NBIS Structural Health Summary



Status

While the superstructure and deck of the San Mateo-Hayward Bridge are rated as good on the NBIS scale, Caltrans identified, in 2016, spalling concrete on the pile caps of the older 1967 low-rise trestle section that resulted in a poor substructure and overall bridge condition rating. The spalling is due to the age of the structure, exposure to the bay environment and normal wear and tear. The poor rating does not mean the bridge is unsafe for the traveling public. The design of the trestle provides redundancy in the structural system, and the identified conditions do not indicate a safety risk. A $45 million Phase 1 construction contract for rehabilitating the bridge piers was successfully completed in early 2025. Caltrans is now preparing for Phase 2 of the rehabilitation effort, which is estimated to cost approximately $170 million, in capital outlay, and is expected to go out for bid late 2025. Upon completion of Phase 2, the bridge's substructure component rating is anticipated to improve to fair. The bridge fenders are in good condition. The San Mateo-Hayward Bridge has approximately 4.2 million square feet of paint, which is currently in overall good condition. The painted steel structural elements are primarily located within the steel box girders and towers of the bridge's high-rise section. The following tables summarizes the planned projects on the San Mateo Hayward Bridge according to the updated BATA 10-Year Toll Bridge CIP for FY 2024-33:

Planned Projects (Per CIP)

Project Description	Capital Spending Begin	Budget (Includes Support Cost)
Replace booster pump and fire pump controllers	FY 2029-30	$2.7 Million
Replace power cable (480V)	FY 2025-26	$4.6 Million
TOS Elements	FY 2032-33	$4.4 Million
Replace utility stations	FY 2032-33	$3.1 Million
Replace generators	FY 2032-33	$3.4 Million
Upgrade SCADA	FY 2031-32	$3.3 Million
Upgrade water Service pump at Pier	FY 2032-33	$1.0 Million
Paint facility maintenance	FY 2032-33	$1.0 Million
Air compressor replacement	FY 2025-26	$2.8 Million
Upgrade SCADA (Software and Hardware)	FY 2025-26	$3.3 Million
Replace booster pump and fire pump controllers	FY 2029-30	$2.7 Million

Projects in Construction

Project Description	Budget (Includes Support Cost)	2023	2024	2025	2026	2027	2028
Spandrel beam and pier cap repair Ph1	$53 Million						
Spandrel beam and pier cap repair Ph2- Project Advertised for Construction	$182 Million						

Various Bridges

Overview

This section outlines projects, both planned and underway, that address shared needs across multiple Bay Area toll bridges, such as security systems, maintenance systems, bridge inspection, and asset management. It is important to note that Caltrans has identified significant bridge needs including deck rehabilitation work on several bridges such as the Richmond-San Rafael, the West Span of the San Francisco Oakland Bay Bridge, and the southbound Benicia-Martinez Bridge. BATA and Caltrans have allocated $500k to further investigate and scope these needs into actual projects. Future CIPs will include detailed scope, cost, and timing for major deck work following completion of asset management studies. Caltrans and BATA will continue working together towards maintaining the toll bridges in the desired state of good repair and updating that information in this report.

Planned Projects on Various Bridges (Per CIP)

Project Description	Capital Spending Begin	Budget (Includes Support Cost)
Replace existing conduits and cables with armored Cables (ANT, BM, CAR, DUM, RSR & SMH)	FY 2032-33	$9.1 Million
SCADA training	FY 2031-32	$1.1 Million
Deck Rehabilitation Study*	FY 2030-31	$3.5 Million
TBD paint	FY 2023-24	$32.7 Million
USGS monitoring station	FY 2023-24	$0.6 Million
Upgrade existing water Line system, air compressor and Air lines-South Bridges	FY 2031-32	$19.3 Million
Upgrade existing water Line system, air compressor and Air lines-North Bridges	FY 2031-32	$11 Million

Projects on Various Bridges

Project Description	10-Year Authorized Budget (Includes Support Cost)
Non-Destructive Testing of T-1 steel connections	$21 Million
Caltrans capital coordination	$23.7 Million
Structural steel paint by state forces	$290.1 Million
Caltrans ETC traffic operations support	$13.5 Million
Caltrans program contingency and Project Initiation Documents (PID)	$63.3 Million
Toll bridge inspections	$148.9 Million
Toll bridge asset management	$3.9 Million
Upgrade base security systems	$84 Million

Appendices

i. Appendix A: Abbreviations and Definitions
ii. Appendix B: Routine Inspections by Bridge and Date
iii. Appendix C: Projects in Construction
iv. Appendix D: BATA Resolution 166 revised, Attachment C-2 Toll Bridge Rehabilitation Capital Program (10 Year Plan)

Appendix A: Abbreviations and Definitions

Bay Area Toll Authority (BATA) – The Bay Area Toll Authority manages the toll revenues from the Bay Area's seven state-owned bridges. BATA also manages the Bay Area's FasTrak® electronic toll payment system.

Bridge Condition Rating – Bridge Condition is determined by the lowest rating of National Bridge Inventory (NBI) condition ratings for Item 58 (Deck), Item 59 (Superstructure), Item 60 (Substructure), or Item 62 (Culvert). If the lowest rating is greater than or equal to 7, the bridge is classified as Good; if it is less than or equal to 4, the classification is Poor. Bridges rated 5 or 6 are classified as Fair.

California Department of Transportation (Caltrans) – The California Department of Transportation owns the seven state-owned toll bridges in the Bay Area. Caltrans is also responsible for designing, building, and maintaining the state's highway system.

Metropolitan Transportation Commission (MTC) – The Metropolitan Transportation Commission is the transportation planning, financing, and coordinating agency for the nine-county San Francisco Bay Area.

National Bridge Inventory (NBI) – The aggregation of structure inventory and appraisal data collected to fulfill the requirements of the federal National Bridge Inspection Standards (NBIS).

Specifications for the National Bridge Inventory (SNBI)- An updated system designed to enhance the way bridge data collected, managed, and evaluated. It is expected to replace the existing NBI.

National Bridge Inspection Standards (NBIS) – Federal regulations establishing requirements for inspection procedures, frequency of inspections, qualifications of personnel, inspection reports, and preparation and maintenance of a state bridge inventory. The NBIS applies to all structures defined as bridges located on all public roads.

Structurally Deficient (SD) – A bridge condition rating used by the Federal Highway Administration to indicate deteriorated physical conditions of a bridge's structural elements (primarily deck, superstructure, and substructure) and reduced load capacity.

A classification of "structurally deficient" does not imply that bridges are unsafe. When an inspection reveals a safety problem, the bridge is posted for reduced loads, scheduled for repairs, or in unusual situations, closed until repairs can be completed. Structural deficiency is one of the many factors that are used for project ranking or selection.

Desired State of Good Repair (DSGR)- the condition in which a capital asset can operate at a full level of performance.

Construction Management and General Contracting (CMGC)- are two primary project delivery methods used in delivering construction projects.

Appendix B: Routine Inspection by Bridge and Date

Bridge	Bridge Component(s)	Last Inspection Report	Inspection Cycle (years)	Next Inspection Report
Antioch Bridge	All	Mar-25	2	Mar-27
Benicia-Martinez Bridge (SB)	All	Sep-25	2	Sep-27
Benicia-Martinez Bridge (NB)	All	Aug-25	2	Aug-27
Carquinez Bridge (EB)	All	Sep-25	2	July-27
Carquinez Bridge (WB)	All	Oct-25	2	Oct-27
Dumbarton Bridge	All	Jun-25	2	Jun-27
Richmond-San Rafael Bridge	All	Dec-24	2	Dec-26
San Francisco-Oakland Bay East Span Bridge	All	Sep-25	2	Sep-27
San Francisco-Oakland Bay West Span Bridge	All	Dec-24	2	Dec-26
San Mateo-Hayward Bridge	All	Dec-24	2	Dec-26

Appendix C: Projects in Construction

This appendix provides more details about some of the construction projects on the Bay Area's toll bridges. These projects present rehabilitation work that is ongoing or has been completed recently.

Richmond-San Rafael Bridge:

Contract No. 04-4X030: Repair Bridge Deck Section

This contract will remove cracked and unsound concrete, replace compromised reinforcement as necessary at various deck sections and replace it with polyester concrete.

Approved Capital Outlay Budget: $0.5 Million

Contractor: American Civil Constructors (ACC)

Construction Begins: July 2025

Construction Ends: October 2025

Percent of Work Completed: 100%

Contract No. 04-3X150: Repair Communication Wire and Foghorn System

This project will restore the navigation and foghorn systems at Pier 48, which are currently inoperable due to damaged conduit and wiring. It will also involve the replacement of wiring that has been compromised as a result of theft and vandalism

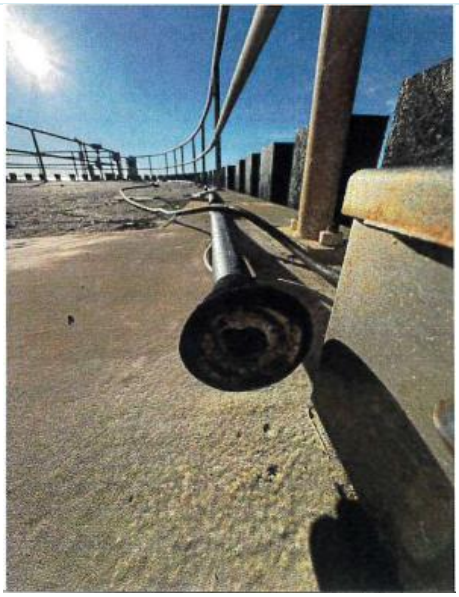
Approved Capital Outlay Budget: $1 Million

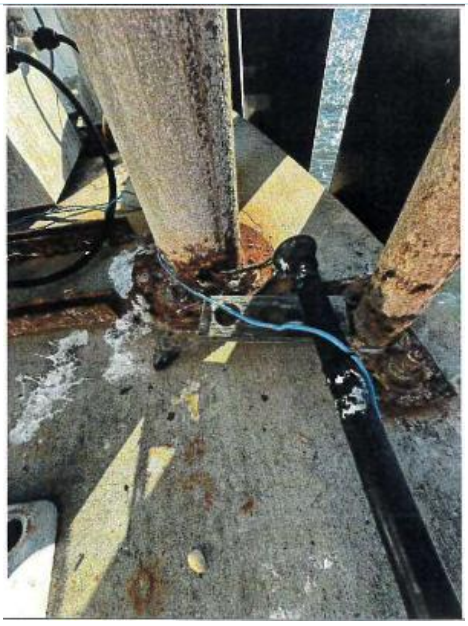
Contractor: Studebaker Electric, Inc.

Construction Began: February 2025

Construction Ends: April 2025

Percent of Work Completed: 100%





Contract No. 04-3G364: Upgrade Electrical Substations and Power Cables

This project will upgrade the 4 existing electrical substations, upgrade the existing 5kV power supply to 12kV, and replace existing main communication cables feeding the substations.

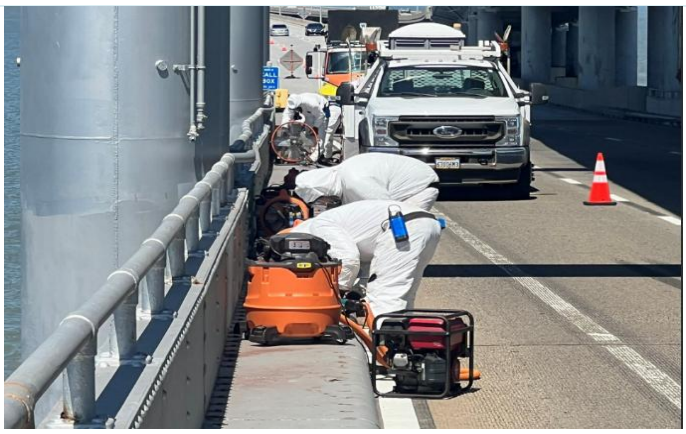
Approved Capital Outlay Budget: $35 Million

Contractor: Studebaker Electric, Inc.

Construction Began: March 2024

Construction Ends: December 2026

Percent of Work Completed: 33%



San Francisco-Oakland Bay Bridge (SFOBB):

Contract No. 04-3G444: Main Cable Investigation and Suspender Rope Replacement

This project is to systematically inspect the main cable of the west span of the San Francisco Oakland Bay Bridge. The main cable will be opened at 10 different locations along the west span and lab testing will be performed on a representative sample of the cable wires. The main goal of this project is to identify any issues that may impact the safe and the reliable performance of the bridge.

Approved Capital outlay budget: $28 Million

Contractor: American Bridge Company

Construction Began: April 2024

Construction Ends: September 2025

Percent Completed: 100%

Contract No. 04-3G487: Structural Steel Paint and Miscellaneous Repairs

This project involves cleaning and painting selected exterior and interior steel surfaces on both the lower and upper decks of the western span of the San Francisco-Oakland Bay Bridge (SFOBB). The scope includes work on a total of 331 panels across various spans. In addition to surface treatment, the project addresses a range of miscellaneous structural repairs such as replacement of rivets and bolts, restoration of navigational lighting systems and concrete repair in the upper deck soffit.

Approved Capital outlay budget: $180 Million

Contractor: To Be Determined

Construction Began: To Be Determined

Construction Ends: To Be Determined

Percent Completed: 0%

Contract No. 04-1Y720: Armor Joint Reconstruction and Joint Seal Replacement Project

This project will rehabilitate deck joints, replace joint seals, deck expansion joint seals and reconstruct the lower deck armor joints.

Approved Capital outlay budget: $14 Million

Contractor: To Be Determined

Construction Began: To Be Determined

Construction Ends: To Be Determined

Percent Completed: 0%

Contract No. 04-3G4544: Spandrel Beam Reconstruction and Pier Cap Repair-Phase 1

Spandrel beam and pier cap structural repairs on the high-rise section of the bridge from Piers 12 to 29 (excluding piers 19 and 20), and pier cap and girder repairs on Trestle Section from Piers 286 to the east abutment.

Approved Capital outlay budget: $45 Million

Contractor: Golden State Bridge, Inc.

Construction Begins: March 2020

Construction Ends: January 2025

Percent Completed: 100%

San Mateo Hayward Bridge:

Contract No. 04-1Y690: Spandrel Beam Reconstruction and Pier Cap Repair-Phase 2

This project is a continuation of 04-3G4544 project (Phase 1) to repair cracked and spalled concrete on the substructure of the San Mateo Hayward bridge.

Approved Capital outlay budget: $187 Million

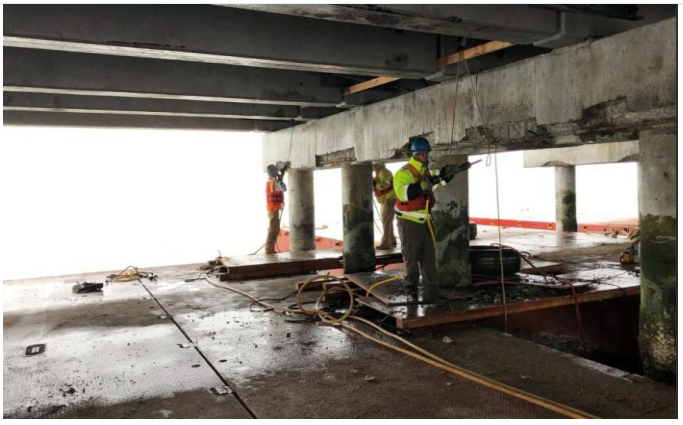
Contractor: To Be Determined

Construction Begins: To Be Determined

Construction Ends: To Be Determined

Percent Completed: 0%

*Shown pictures are from phase 1



Benicia, San Mateo Hayward and Carquinez Bridges:

Contract No. 04-3Y410: Perform Non-Destructive Testing on T1 Steel Welds

This project will perform Non-Destructive Testing on T1 Steel welds at various locations on the old Carquinez, San Mateo Hayward, and Benicia Bridges. The main goal of this project is to identify any issues that may impact the safe and the reliable performance of these bridges that contain this type of butt welds.

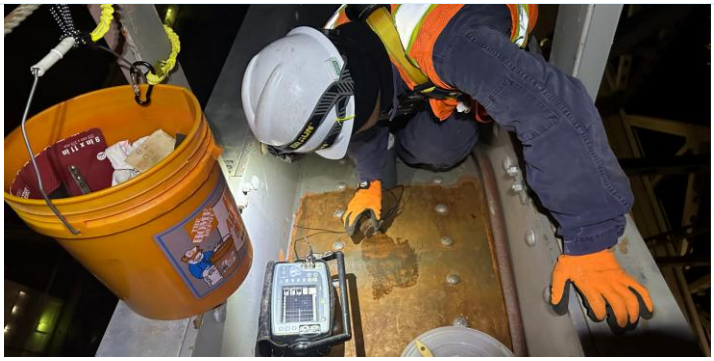
Approved Capital outlay budget: $21 Million

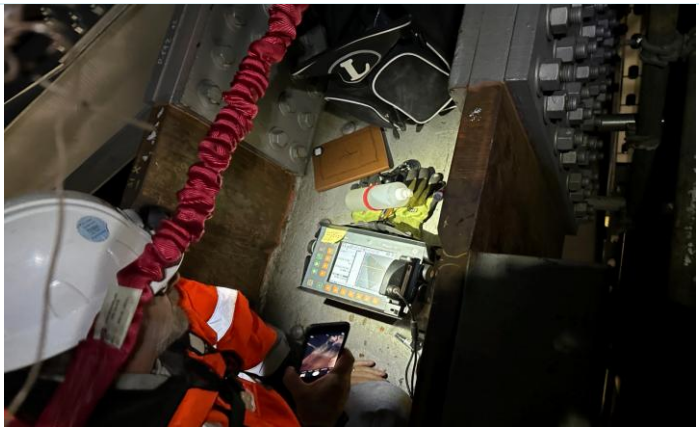
Contractor: Golden State Bridge, Inc.

Construction Begins: December 2023

Construction Ends: December 2025

Percent Completed: 80%





Appendix D: BATA Capital Improvement Plan (CIP)

A direct link to the most recent BATA CIP (as of January 8, 2025)

- BATA Resolution No. 166 - BATA 10-Year Toll Bridge Capital Improvement Plan Revised for FY 2024-33