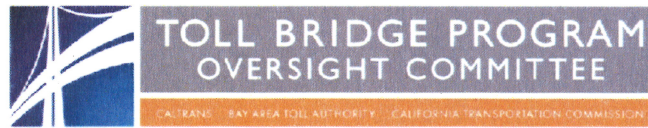


# San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs

**2016 Second Quarter  
Project Progress  
and Financial Update**



Released: September 2016



Toll Bridge Program Oversight Committee  
Department of Transportation  
Office of the Director  
1120 N Street  
P.O. Box 942873  
Sacramento, CA 94273-0001

September 8, 2016

Mr. Daniel Alvarez  
Secretary of the Senate  
State Capitol, Room 3044  
Sacramento, CA 95814

Mr. E. Dotson Wilson  
Chief Clerk of the Assembly  
State Capitol, Room 3196  
Sacramento, CA 95814

Dear Messrs. Alvarez and Wilson:

The Toll Bridge Program Oversight Committee (TBPOC) is pleased to submit the 2016 Second Quarter Project Progress and Financial Update, for the San Francisco Bay Area Toll Bridge Seismic Retrofit and Regional Measure 1 Programs (TBSRP and RM1), prepared pursuant to California Streets and Highways Code Section 30952.

The TBPOC was established by Assembly Bill 144 in 2005 to oversee the delivery of the TBSRP and consists of the Executive Director of the Bay Area Toll Authority (BATA), the Director of the California Department of Transportation (Caltrans), and the Executive Director of the California Transportation Commission (CTC). With the opening of the new east span of the San Francisco-Oakland Bay Bridge to traffic on September 2, 2013, all seven state-owned toll bridges in the Bay Area have now achieved seismic safety, either via retrofit, or replacement of existing structures.

Caltrans is proceeding on a number of contracts to remove the old east span of the SFOBB and complete remaining work on Yerba Buena Island (YBI). The YBI #2 contractor has removed the main cantilever and YBI detour structures and is now in the process of completing the pedestrian/bicycle pathway and site work on the island. A new eastbound on-ramp from the island was opened on June 2, 2016. The pedestrian/bicycle pathway will open to YBI by this fall. The superstructure dismantling contractor has removed the last of five 504' superstructure trusses in August of 2016. With the successful implosion of the old Pier E3 footing with minimal environmental impact, Caltrans is now in the process of seeking final environmental approvals for removal of the remaining marine foundation piers by the implosion process. Additional implosions are scheduled during environmental windows for later this year and in the next two years.

Each contract has a contingency allowance within its budget. The sum of these contingency allowances is compared to the total of capital outlay, capital outlay support and program-wide risks. Any excess of the risks over the contingency allowances represents a potential draw on the program contingency. The program contingency is currently \$67.7 million in

accordance with the TBPOC approved budget. As of the end of the second quarter of 2016, the 50 percent probable draw on program contingency is \$184 million. The potential draw ranges from about \$100 million to \$270 million.

The legislature established the TBSRP to seismically retrofit seven state-owned long span toll bridges and provided an \$8.685 billion budget to accomplish the work. In 2010, the legislature added two additional long span bridges (Antioch & Dumbarton) to the TBSRP and augmented the program's budget by \$750 million, thus creating a nine bridge TBSRP with a \$9.435 billion budget. Based upon successful completion of the Antioch and Dumbarton Bridge seismic retrofits with substantial savings, and projected TBSRP risks for demolition of the old east span, the TBPOC reduced the TBPOC approved program budget by \$483 million, bringing the current TBPOC approved budget to \$8.952 billion. Per the latest (May 2016) forecast, the \$8.952 billion TBPOC approved budget may be insufficient to cover the cost of identified risks and it is likely that BATA will need to allocate toll funds from its reserves to pay for the remaining TBSRP work.

The TBPOC is committed to providing the Legislature and the CTC with comprehensive and timely reporting on the TBSRP. If there are any questions, or if any additional information is required, please do not hesitate to contact the members of the TBPOC.

Sincerely,

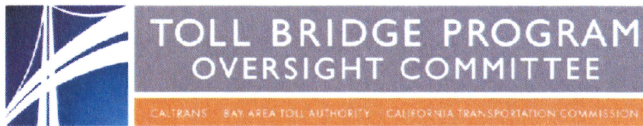


MALCOLM DOUGHERTY  
TBPOC Chair  
Director  
California Department of  
Transportation

STEVE HEMINGER  
Executive Director  
Bay Area Toll Authority



SUSAN BRANSEN  
Executive Director  
California Transportation Commission



Toll Bridge Program Oversight Committee  
Department of Transportation  
Office of the Director  
1120 N Street  
P.O. Box 942873  
Sacramento, CA 94273-0001

September 8, 2016

Mr. Bob Alvarado, Chair  
California Transportation Commission  
1120 N Street, Room 2221  
Sacramento, CA 95814

Ms. Fran Inman, Vice-Chair  
California Transportation Commission  
1120 N Street, Room 2221  
Sacramento, CA 95814

Dear Mr. Alvarado and Ms. Inman:

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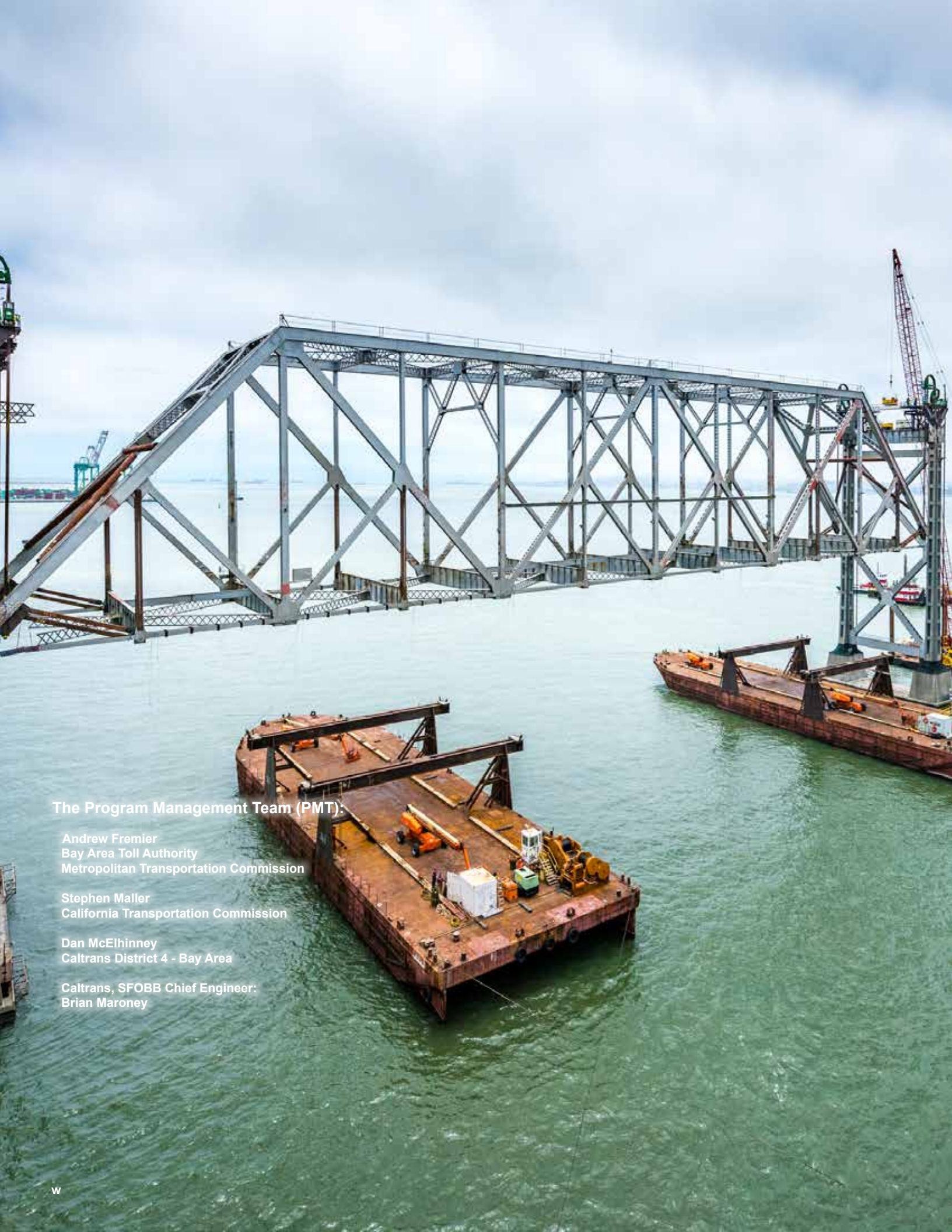
MALCOLM DOUGHERTY  
TBPOC Chair  
Director  
California Department of  
Transportation



STEVE HEMINGER  
Executive Director  
Bay Area Toll Authority



SUSAN BRANSEN  
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**The Program Management Team (PMT):**

Andrew Fremier  
Bay Area Toll Authority  
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Stephen Maller  
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Dan McElhinney  
Caltrans District 4 - Bay Area

Caltrans, SFOBB Chief Engineer:  
Brian Maroney



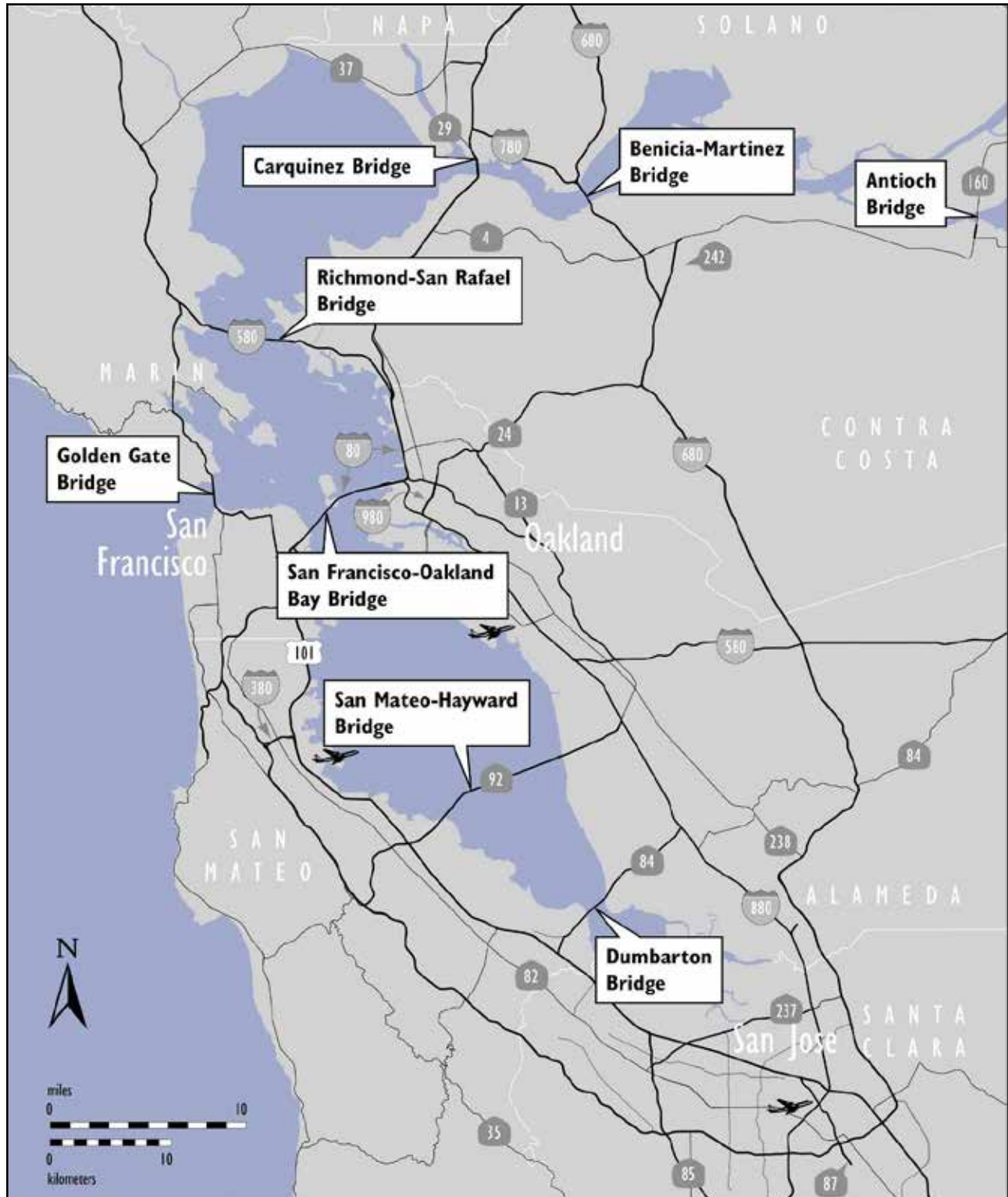
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## Map of Bay Area Toll Bridges



\* The Golden Gate Bridge is owned and operated by the Golden Gate Bridge, Highway and Transportation District.



## Introduction

In July 2005, Assembly Bill (AB) 144 (Hancock) created the Toll Bridge Program Oversight Committee (TBPOC) to implement a project oversight and project control process for the new Benicia-Martinez Bridge and State Toll Bridge Seismic Retrofit Program (TBSRP) projects. The TBPOC consists of the Director of the California Department of Transportation (Caltrans), the Executive Director of the Bay Area Toll Authority (BATA) and the Executive Director of the California Transportation Commission (CTC). The TBPOC's project oversight and control processes include, but are not limited to, reviewing bid specifications and documents, reviewing and approving significant change orders and claims in excess of \$1 million (as defined by the TBPOC), and keeping the Legislature and others apprised of current project progress and status. In January 2010, Assembly Bill (AB) 1175 (Torlakson) amended the TBSRP to include the Antioch and Dumbarton Bridges seismic retrofit projects. The current TBSRP is as follows:

| Toll Bridge Seismic Retrofit Projects                       | Seismic Safety Status |
|---|-----------------------|
| Dumbarton Bridge Seismic Retrofit                           | Complete              |
| Antioch Bridge Seismic Retrofit                             | Complete              |
| San Francisco-Oakland Bay Bridge East Span Replacement      | Complete*             |
| San Francisco-Oakland Bay Bridge West Approach Replacement  | Complete              |
| San Francisco-Oakland Bay Bridge West Span Seismic Retrofit | Complete              |
| San Mateo-Hayward Bridge Seismic Retrofit                   | Complete              |
| Richmond-San Rafael Bridge Seismic Retrofit                 | Complete              |
| 1958 Carquinez Bridge Seismic Retrofit                      | Complete              |
| 1962 Benicia-Martinez Bridge Seismic Retrofit               | Complete              |
| San Diego-Coronado Bridge Seismic Retrofit                  | Complete              |
| Vincent Thomas Bridge Seismic Retrofit                      | Complete              |

\* The seismic safety opening of the bridge occurred in September 2013. The remaining work to do on the project is the completion of the on-ramps and bicycle/pedestrian path and the removal of the old bridge structure.



## Toll Bridge Seismic Retrofit Program Cost Summary (Millions)

|  | Contract Status | AB 144/<br>SB 66/<br>AB 1175<br>Budget | TBPOC<br>Approved<br>Changes | Current<br>TBPOC<br>Approved<br>Budget<br>(May 2016) | Cost to Date<br>(May 2016) | Current Cost<br>Forecast<br>(May 2016) | Cost<br>Variance | Cost Status |
|--|-----------------|--|------------------------------|--|----------------------------|--|------------------|-------------|
|  |                 | a                                      | b                            | c = a + b  | d                          | e                                      | f = e - c        |             |
| <b>SFOBB East Span Seismic Replacement</b>         |                 |  |                              |  |                            |  |                  |             |
| Capital Outlay Construction                        |                 |  |                              |  |                            |  |                  |             |
| Skyway   | Completed       | 1,293.0                                | (55.8)                       | 1,237.2  | 1,235.6                    | 1,235.7                                | (1.5)            | ●           |
| SAS Marine Foundations                             | Completed       | 313.5                                  | (38.7)                       | 274.8  | 274.8                      | 274.8                                  | -                | ●           |
| SAS Superstructure                                 | Completed       | 1,753.7                                | 293.1                        | 2,046.8  | 1,972.5                    | 2,049.0                                | 2.2              | ●           |
| YBI Detour   | Completed       | 131.9                                  | 341.4                        | 473.3  | 473.3                      | 473.3                                  | -                | ●           |
| YBI Transition Structures (YBITS)                  |                 | 299.3                                  | 0.1                          | 299.4  | 264.4                      | 326.5                                  | 27.1             |             |
| YBITS 1  | Completed       |  |                              | 203.7  | 206.9                      | 204.9                                  | 1.2              | ●           |
| YBITS 2 Cantilever Dismantling                     | Construction    |  |                              | 92.4   | 57.5                       | 118.3                                  | 25.9             | ●           |
| YBITS Landscaping                                  | Design          |  |                              | 3.3  | -                          | 3.3                                    | -                | ●           |
| Oakland Touchdown (OTD)                            |                 | 283.8                                  | 46.8                         | 330.6  | 322.1                      | 329.7                                  | (0.9)            | ●           |
| OTD 1  | Completed       |  |                              | 205.3  | 202.8                      | 205.3                                  | -                | ●           |
| OTD 2  | Completed       |  |                              | 72.6   | 71.2                       | 71.9                                   | (0.7)            | ●           |
| Detour   | Completed       |  |                              | 47.0   | 42.3                       | 46.8                                   | (0.2)            | ●           |
| OTD Electrical Systems                             | Design          |  |                              | -  | -                          | -                                      | -                |             |
| Submerged Electric Cable                           | Completed       |  |                              | 5.7  | 5.7                        | 5.7                                    | -                | ●           |
| Existing Bridge Dismantling                        |                 | 239.2                                  | 80.9                         | 320.1  | 128.2                      | 408.6                                  | 88.5             | ●           |
| Cantilever Section                                 | Construction    |  |                              | 69.0   | 68.5                       | 69.0                                   |                  | ●           |
| 504'/288' Sections                                 | Construction    |  |                              | 103.5  | 42.4                       | 102.3                                  |                  | ●           |
| Marine Foundations                                 | Construction    |  |                              | 147.5  | 17.4                       | 237.3                                  |                  |             |
| Pier E3 Demonstration Project                      |                 |  |                              | 17.5   | 16.7                       | 17.5                                   |                  | ●           |
| Remaining Marine Foundations                       |                 |  |                              | 130.0  | 0.7                        | 219.8                                  |                  | ●           |
| Stormwater Treatment Measures                      | Completed       | 15.0                                   | 3.3                          | 18.3   | 16.9                       | 17.0                                   | (1.3)            | ●           |
| Other Completed Contracts                          | Completed       | 90.4                                   | (0.5)                        | 89.9   | 90.0                       | 90.5                                   | 0.6              | ●           |
| Capital Outlay Support                             |                 | 959.3                                  | 352.2                        | 1,311.5  | 1,297.2                    | 1,394.2                                | 82.7             | ●           |
| Right-of-Way and Environmental Mitigation          |                 | 72.4                                   | -                            | 72.4   | 60.2                       | 70.0                                   | (2.4)            | ●           |
| Other Budgeted Capital                             |                 | 35.1                                   | (32.8)                       | 2.3  | 0.7                        | 2.3                                    | (0.0)            | ●           |
| <b>Total SFOBB East Span Replacement</b>           |                 | <b>5,486.6</b>                         | <b>989.9</b>                 | <b>6,476.5</b>                                       | <b>6,135.7</b>             | <b>6,671.7</b>                         | <b>195.2</b>     |             |
| <b>Antioch Bridge Seismic Retrofit</b>             |                 |  |                              |  |                            |  |                  |             |
| Capital Outlay Construction and Mitigation         | Completed       | -                                      | 24.1                         | 24.1   | 24.1                       | 23.8                                   | (0.3)            | ●           |
| Capital Outlay Support                             |                 | -                                      | 47.0                         | 47.0   | 47.0                       | 47.0                                   | -                | ●           |
| <b>Total Antioch Bridge Seismic Retrofit</b>       |                 | <b>267.0</b>                           | <b>71.1</b>                  | <b>71.1</b>  | <b>71.1</b>                | <b>70.8</b>                            | <b>(0.3)</b>     | <b>●</b>    |
| <b>Dumbarton Bridge Seismic Retrofit</b>           |                 |  |                              |  |                            |  |                  |             |
| Capital Outlay Construction and Mitigation         | Completed       | -                                      | 46.0                         | 46.0   | 47.4                       | 45.4                                   | (0.6)            | ●           |
| Capital Outlay Support                             |                 | -                                      | 66.4                         | 66.4   | 64.6                       | 66.4                                   | -                | ●           |
| <b>Total Dumbarton Bridge Seismic Retrofit</b>     |                 | <b>483.0</b>                           | <b>112.4</b>                 | <b>112.4</b>   | <b>112.0</b>               | <b>111.8</b>                           | <b>(0.6)</b>     | <b>●</b>    |
| Program Completed Projects                         | Completed       | 2,268.4                                | (74.1)                       | 2,194.3  | 2,168.9                    | 2,174.4                                | (19.9)           |             |
| Miscellaneous Program Costs                        |                 | 30.0                                   | -                            | 30.0   | 25.5                       | 30.0                                   | -                | ●           |
| Net Programmatic Risks                             |                 | -                                      | -                            | -  | -                          | 9.8                                    | 9.8              | ●           |
| Program Contingency*                               |                 | 900.0                                  | (832.3)                      | 67.7   | -                          | -                                      | (67.7)           | ●           |
| <b>Total Toll Bridge Seismic Retrofit Program*</b> |                 | <b>9,435.0</b>                         | <b>(483.0)</b>               | <b>8,952.0</b>                                       | <b>8,513.4</b>             | <b>9,068.5</b>                         | <b>116.5</b>     | <b>●</b>    |

\* AB144/SB66 established a funding level of \$8.685 Billion in July 2005 for TBSRP; AB1175 added the retrofitting of the Antioch and Dumbarton Bridges in January 2010, providing another \$750 million in funding, bringing Total Toll Seismic Retrofit Program funding to \$9.435 Billion. Since 2010, \$483 million has been removed from the program, bringing the current TBPOC Approved Budget to \$8.952 Billion. The \$483 million removed consisted of:

Antioch Savings (4/12/10) \$137 million - Dumbarton Savings (9/02/10) \$216 million -  
Program Contingency Redirection (11/05/13) \$130 million, the current TBPOC approved Program Budget is \$8,952 million.

\*\* (Due to the rounding of numbers, the totals above are show within \$0.02).

## Toll Bridge Seismic Retrofit Program Schedule Summary

|  | AB 144/SB<br>66 Project<br>Completion<br>Schedule<br>Baseline<br>(July 2005) | TBPOC<br>Approved<br>Changes<br>(Months) | Current TBPOC<br>Approved<br>Completion<br>Schedule<br>(June 2016) | Current<br>Completion<br>Forecast<br>(June 2016) | Schedule<br>Variance<br>(Months) |   |
|--|--|--|--|--|----------------------------------|---|
|  | g  | h  | i = g + h  | j  | k = j - i                        | l |
| <b>SFOBB East Span Seismic Replacement</b>                 |  |  |  |  |                                  |   |
| Contract Completion  |  |  |  |  |                                  |   |
| Skyway   | Apr 2007   | 8  | Dec 2007   | Dec 2007   | -                                | ● |
| SAS Marine Foundations                                     | Jun 2008   | (5)                                      | Jan 2008   | Jan 2008   | -                                | ● |
| SAS Superstructure   | Mar 2012   | 42                                       | Sep 2015   | Sep 2015   | -                                | ● |
| YBI Detour   | Jul 2007   | 39                                       | Oct 2010   | Oct 2010   | -                                | ● |
| YBI Transition Structures (YBITS)                          | Nov 2013   | 36                                       |  |  | -                                |   |
| YBITS 1  |  |  | Feb 2014   | Feb 2014   | -                                | ● |
| YBITS 2  |  |  | Jun 2017   | Oct 2017   | (4)                              | ● |
| Oakland Touchdown  | Nov 2013   | 10                                       |  |  |                                  |   |
| OTD 1  |  |  | Jun 2010   | Jun 2010   | -                                | ● |
| OTD 2  |  |  | Sep 2015   | Sep 2015   | -                                | ● |
| Submerged Electric Cable                                   |  |  | Jan 2008   | Jan 2008   | -                                | ● |
| Existing Bridge Dismantling                                | Sep 2014   | 51                                       | Dec 2018   | Dec 2018   | -                                | ● |
| Cantilever Section <sup>(2)</sup>                          |  |  |  | Jul 2015   |                                  | ● |
| 504/288 Sections   |  |  | Mar 2018   | Mar 2018   |                                  | ● |
| Marine Foundations   |  |  |  |  |                                  |   |
| E3 Foundation Removal Demo Project                         |  |  | Jan 2016   | Jan 2016   |                                  | ● |
| E4 - E18 Foundation Removal                                |  |  | Dec 2018   | Dec 2018   |                                  | ● |
| Stormwater Treatment Measures                              |  |  | Mar 2008   | Mar 2008   | -                                | ● |
| <b>SFOBB East Span Bridge Opening and Other Milestones</b> |  |  |  |  |                                  |   |
| Westbound Seismic Safety Open                              | Sep 2011   | 24                                       | Sep 2013   | Sep 2013   | -                                | ● |
| Eastbound Seismic Safety Open                              | Sep 2012   | 12                                       | Sep 2013   | Sep 2013   | -                                | ● |
| Bike/Ped Path to Landing                                   |  |  | Dec 2015   | Sep 2016   | (9)                              | ● |
| Eastbound On-Ramp  |  |  | Jun 2016   | Jun 2016   |                                  | ● |

● Within approved schedule and budget

● Identified potential project risks that could significantly impact approved schedules and budgets if not mitigated

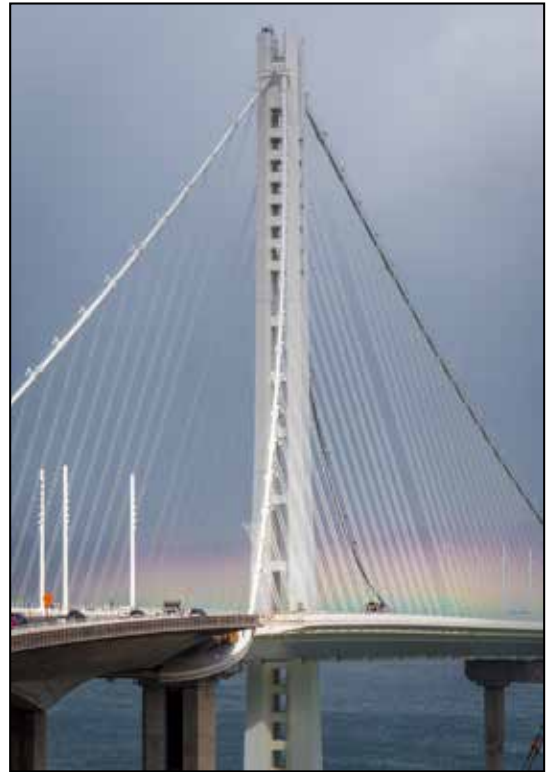
● Known project impacts with forthcoming changes to approved schedules and budgets

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Seismic Retrofit Strategy

Rather than a seismic retrofit, the two-mile long east span of the San Francisco-Oakland Bay Bridge has been completely rebuilt. The new east span consists of several different sections, yet appears as a single streamlined span. The eastbound and westbound lanes of the east span no longer include upper and lower decks. The lanes are side-by-side, providing motorists with expansive views of the bay. These views are also enjoyed by bicyclists and pedestrians, thanks to a new bicycle/pedestrian path on the south side of the bridge that will extend all the way to Yerba Buena Island. The new span features the world's longest Self-Anchored Suspension (SAS) bridge that connects to an elegant roadway supported by piers (Skyway), which gradually slopes down toward the Oakland shoreline (Oakland Touchdown).

The new bridge is now open to traffic and seismically safe. Ongoing work includes the ramps from Yerba Buena Island and removal of the old bridge.



Self-Anchored Suspension Bridge Superstructure



New East Span Consists of Several Different Sections - Appears as a Single Streamlined Span



# TOLL BRIDGE SEISMIC RETROFIT PROGRAM

## San Francisco-Oakland Bay Bridge East Span Replacement Project

### Yerba Buena Island Transition Structures (YBITS)

#### YBITS #2 - Eastbound On-Ramp and Cantilever Dismantling Contract

Approved Capital Outlay Budget:  
\$92.4 M & \$69.0 M

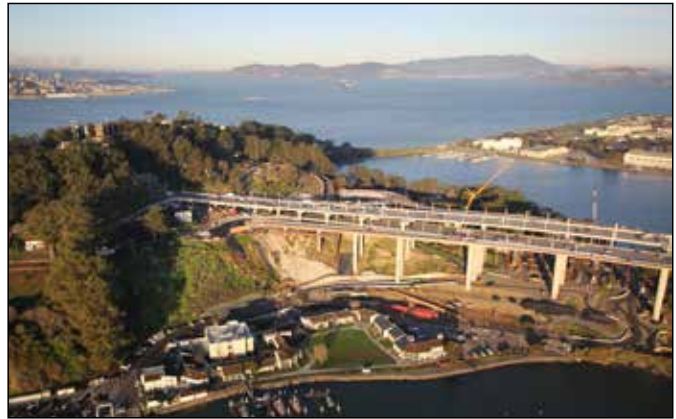
Contractor: CEC & Silverado, JV

Status: 80% Complete as of June 2016

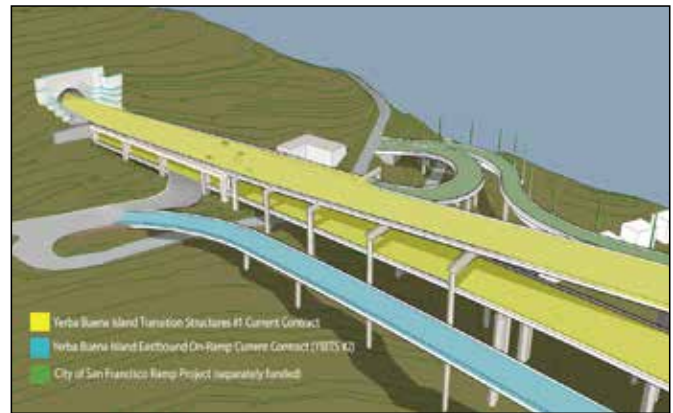
The YBITS #2 contract involves dismantling the detour viaduct, constructing a new eastbound on-ramp to the bridge, completing the bicycle/pedestrian path to Yerba Buena Island, and dismantling of the cantilever.

The contract was awarded to California Engineering Contractors Inc/Silverado Contractors Inc., Joint Venture on November 28, 2012. Initial startup activities and submittals began in March 2013, with actual dismantling starting after the seismic safety opening on Labor Day weekend 2013.

**Status:** Cantilever removal was completed in July 2015. The eastbound on-ramp was opened on June 2, 2016. The opening of the bicycle/pedestrian path to the island has been delayed because of the delay in delivery of the cantilever outrigger beams. The pedestrian/bicycle path is scheduled to be opened in the fall of 2016.



Aerial View of the Old Bridge and Demolition and the Transition Structure



Rendering of the Completed On-Ramps and Structures



Birds-Eye View Simulation of the Yerba Buena Island Transition Structures and the New San Francisco-Oakland Bay Bridge Eastbound On Ramp and Bicycle Path after Dismantling of the Existing Structure



On-ramp and Bicycle/Pedestrian Pathway Progress

# TOLL BRIDGE SEISMIC RETROFIT PROGRAM

## San Francisco-Oakland Bay Bridge East Span Replacement Project

### Former East Span Bridge Dismantling

#### 504'/288' Superstructure Dismantling

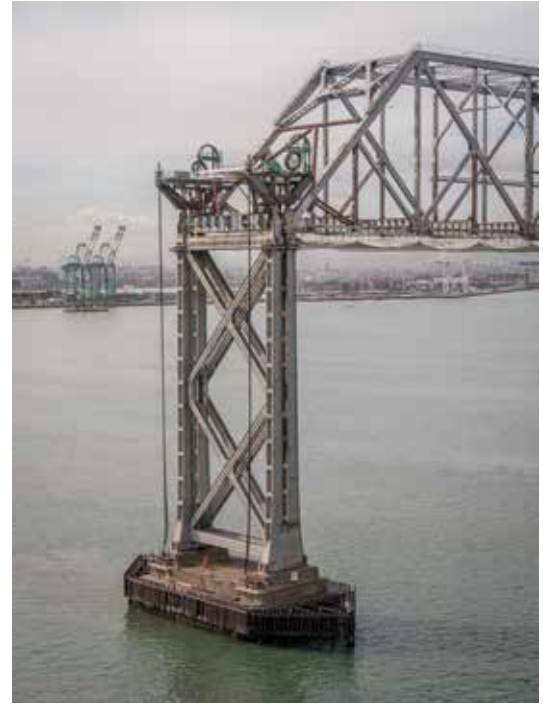
Approved Capital Outlay Budget: \$103.5 M

Contractor: CEC & Silverado JV

Status: 60% Complete as of June 2016

The contractor has sequenced the bridge removal operations into seven phases of dismantling. These phases begin with the upper deck and initial truss removal operations, through the removal of the 504' and 288' steel truss spans, to the removal of the supporting steel columns.

**Status:** The upper deck of the old span has been removed to lighten the bridge. The first 504' main truss (out of five) were lowered down to barges in February 2016, and the last 504' section is scheduled to be lowered in August 2016. The first 288' section is scheduled to be lowered in October 2016.



Dismantling of the Former Superstructure



Dismantling Progress of the Former Superstructure



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Former East Span Bridge Dismantling

#### Marine Foundations Removal

Approved Capital Outlay Budget: \$17.5 M  
for Pier E3

\$130 M for Piers E4 - E18

Contractor: Kiewit/Manson

The original east span of the San Francisco-Oakland Bay Bridge was supported by 21 in-water bridge piers, Piers E2 through E22, along with land based piers at Yerba Buena Island and Oakland. Part of this project is the demolition of Pier E3, which is located 1,535 feet east of Yerba Buena Island and on the east side of a 50-foot deep navigation channel.

The original authorization covered the dismantling of the piers via mechanical means such as saw cutting, flame cutting, mechanical splitting or pulverizing, and hydro-cutting, but did not cover the use of controlled implosion.

Caltrans proposed to remove Pier E3 as a pilot/demonstration project for the effective use of controlled charges to remove the marine foundations of the original SFOBB. Dismantling of Pier E3 used controlled charges and was completed in four phases: 1) mechanical dismantling of pier cap and fender system, 2) drilling of bore holes into caisson and buttress walls and installing a blast attenuation system (BAS), 3) installing charges, activating the BAS and imploding the pier, and 4) management and removal of remaining dismantling pier debris. The pier was removed to -51 feet.

Mechanical dismantling would have required the installation of a cofferdam around Pier E3, which would have required 394 piles of various types. Pile driving alone would take approximately four years, while the four phases of the demonstration project would occur within six months. Using this method is a significant cost risk to the program.

The marine foundation removal is a CMGC (Construction Manager / General Contractor) contract and the selected CMGC contractor is a Kiewit Manson team (KM).

#### Piers E4 - E5:

The contract was awarded to the KM team in April 2016. The schedule for the demolition by implosion for piers E4 and E5 is for October/November of 2016. The PDT team is coordinating permits for the completion for piers E4 - E18 and in parallel, the PDT team is seeking permits from resource agencies for a "retain in place" for pier E2, and E19 through E22.

**Status:** On November 14, 2016, Caltrans successfully removed the old Pier E3 footing by implosion with minimal environmental impact. The implosion process has the least amount of impact on the environment and is less costly. Caltrans is now in the process of seeking environmental approvals for removal of the remaining marine foundation piers by the implosion process and negotiating a contract with the contractor for the work.



Pier E3 Before Implosion



Pier E3 During Implosion

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### San Francisco-Oakland Bay Bridge East Span Replacement Project Self-Anchored Suspension Bridge Superstructure Contract

Approved Capital Outlay Budget: \$2.05 B

Contractor: American Bridge/Fluor Enterprises, JV

Status: 100% Completed

The self-anchored suspension span (SAS) of the bridge is not just another suspension bridge. Rising 525 feet above mean sea level and embedded in bedrock, the single-tower SAS span is designed to withstand a massive earthquake. Traditional main cable suspension bridges have twin cables with smaller suspender cables connected to them. While there appears to be two main cables on the SAS, it is actually a single continuous cable. This single cable is anchored within the eastern end of the roadway, carried over the tower and then wrapped around the two side-by-side decks at the western end.

The single-steel tower is made up of four separate legs connected by shear link beams, which function much like a fuse in an electrical circuit. These beams will absorb most of the impact from an earthquake, preventing damage to the tower legs

**Status:** The TBPOC authorized Caltrans to close out the Self-Anchored Suspension (SAS) span contract with the joint venture of American Bridge/Fluor (ABF). The contract is to be closed out under the terms and conditions consistent with the findings of the July 2013 TBPOC meeting investigative report that found three parties – the contractor, designer, and Caltrans – responsible for the failure of the high-strength rods on the east pier (E2) of the SAS, and the \$24 million cost of the “saddle retrofit” repair.



Self-Anchored Suspension Bridge Superstructure



## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Risk Management Program Update POTENTIAL DRAW ON PROGRAM RESERVE (PROGRAM CONTINGENCY)

Caltrans continues to implement comprehensive risk management on all TBSRP projects in accordance with AB 144. Risk response efforts continue to focus on mitigating the estimated cost and schedule impacts of identified risks. The “bottom line” of cost risk analysis is whether the Program Contingency remains adequate to cover all identified risks.

Each contract has a contingency allowance within its budget. The sum of these contingency allowances is compared to the total of capital outlay, capital outlay support and program-wide risks. Any excess of the risks over the contingency allowances represents a potential draw on the program contingency. The program contingency is currently \$67.7 million in accordance with the TBPOC approved budget. As of the end of the second quarter of 2016, the 50 percent probable draw on program contingency is \$184 million. The potential draw ranges from about \$100 million to \$ 270 million (refer to Figure 1).

Since 2010, \$483 million was removed from the TBSRP bringing the current TBPOC approved budget to \$8.952 billion. The program contingency is currently insufficient to cover the cost of identified risks and it is likely that BATA will need to allocate additional toll funds from its reserves to pay for the remainder of the work.

#### RISK MANAGEMENT DEVELOPMENTS

##### Self-Anchored Suspension Span Contract

**Contract Close Out:** The SAS contract was accepted on September 24, 2015. The estimate after acceptance included several deductions as credit for issues that Caltrans determined were the responsibility of the contractor. The proposed final estimate was run October 29, 2015. The contractor submitted his exceptions to the proposed final estimate on November 6, 2015. The contractor documented twelve outstanding disputes totaling \$49.2 million in claims. The project team will work with the contractor, the Toll Bridge Oversight Committee (TBPOC) and the California State Transportation Agency to expedite the claims process in an attempt to get to an agreement. This effort could take several quarters to completely address and may need to be addressed in arbitration.

**Repair of Rod Grouting at the Tower Base:** The investigation of the tower base anchor rods is complete and a final report will be issued early in the third quarter of 2016. A scope of work for the repair was developed and on May 12, 2016, the TBPOC approved the procurement of a \$12 million contract to implement the repair. The TBPOC also authorized \$3 million in Construction Outlay Support (COS) costs to inspect and administer that contract.

##### Yerba Buena Island Transition Structure #2 Contract

Southgate Road Realignment Alternative: Meetings between all the stakeholders on Yerba Buena Island have identified a more efficient alternative for routing traffic on Southgate Road. This alternative will significantly increase the level of service of the on-ramp and off-ramps to I-80. The City of Francisco developed this proposal to realign Southgate Road that was approved by the TBPOC on May 12, 2016. The proposal significantly reduced future risks on the YBITS #2 contract.

##### 504'/288' Dismantling Contract

**Successful Removal of Four 504' Trusses:** The successful removal of four spans of the superstructure puts the contractor on schedule to deliver the E4 and E5 footings to the marine foundations removal contractor ahead of the contract milestones.

**Bird Deterrents & Mitigation:** Based on knowledge gained from effective bird exclusion measures developed on the cantilever demolition, a project specification was developed for bird deterrence on the 504'/288' contract. The contractor intends to sequence work so as to remove the steel spans outside the nesting season where practical, and install the deterrents contemplated in the plans as applicable. Should a bird still manage to nest on the bridge, the environmental team has secured a Miscellaneous Permit from USF&W that will allow the project biologist to relocate bird nests and help prevent delays to the work. Once the nests are relocated from the bridge, Caltrans has a service contract with International Bird Rescue (IBR) to transport eggs and young, incubate eggs and foster young as necessary and release birds back into their natural habitat. Successful bird deterrence in the past has resulted in no delays to the SFOBB from bird nesting issues.

**Marine Foundation Removal Contract**

Award of E4-E18 Construction Manager/General Contractor (CMGC) Contract: The project team successfully negotiated and awarded its second CMGC contract for \$130 million, well under the engineer’s estimate of \$166 million.

**RISK MANAGEMENT LOOK AHEAD**

**Self-Anchored Suspension Span Contract**

The contract close-out effort will continue. The support cost budget will continue to be spent until final close-out is achieved.

**Yerba Buena Island Transition Structure #2 Contract**

**Southgate Road Realignment Alternative:** The project team will negotiate the deletion of a portion of the contract to accommodate the new Southgate Road alignment. Actual contract completion should be brought forward by five months from the current scheduled completion date as a result of this significant change. This change will help mitigate any future delays of the YBITS #2 contract.

**504’/288’ Dismantling Contract**

Removal of last 504’ Span: The removal of the last 504’ span is scheduled for the third quarter of 2016. A timely completion of this work will allow the contractor to successfully complete the transfer of piers to the marine structures dismantling contractor, in accordance with the 504’/288’ dismantling contract milestones.

**Marine Foundations Removal Contract**

Permit Acquisition for Remainder of Contract: The project team needs to secure a permit for implosion as the removal method for all the piers. The results of Pier E3 demonstration have had a strong impact on reducing the cost and schedule risks of the remaining piers. The project team has used the data from the successful E3 implosion to help develop the permit application that was submitted to the resource agencies in the second quarter of 2016. Approval of the permit is needed by early September 2016 in order to avoid a delay in the work going forward.

**SFOBB East Span Capital Outlay Support**

Budget Increase: The current approved budget of \$1.312 million for the SFOBB East Span COS will be depleted early in the fourth quarter of 2016. In the third quarter of 2016, the TBPOC will need to approve the 2016/17 COS allocation and implement an increase in the overall SFOBB East Span COS budget.

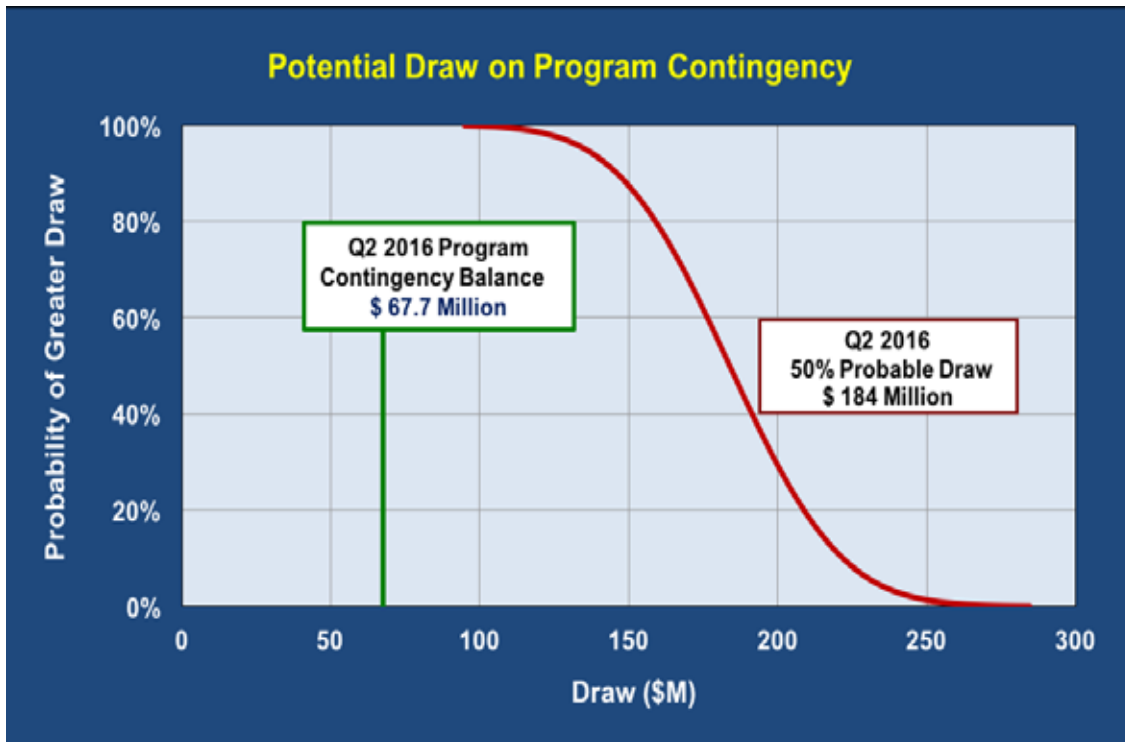


Figure 1 – Potential Draw on Program Contingency\*

\*Figure 1 Notes:

1. Proposed architectural enhancements and project improvements are excluded unless approved by the TBPOC.



Bicycle/Pedestrian Pathway Progress Looking West toward Yerba Buena Island and Downtown San Francisco

## TOLL BRIDGE SEISMIC RETROFIT PROGRAM

### Program Funding Status

AB 144 established a funding level of \$8.685 billion for the TBSRP. As of January 1, 2010, seismic retrofitting of Antioch and Dumbarton Bridges became part of the Toll Bridge Seismic Retrofit Program with the passage of AB 1175, which provided another \$750 million bringing the total funding to \$9.435 billion. On April 9, 2010, the TBPOC approved a \$137 million reduction in the TBSRP program budget as a result of savings from the Antioch Bridge Retrofit. On September 2, 2010, the TBPOC approved a \$216 million reduction in the TBSRP program budget as a result of savings from the Dumbarton Bridge Retrofit. And finally, on November 5, 2013, the TBPOC approved a \$130 million reduction in the TBSRP program budget as a result of a reduction in the program contingency, bringing the current approved TBSRP budget to \$8.952 billion (see Appendix A-1). The program funding sources are shown in Table 1 - Program Budget.

| <b>Table 1 - Program Budget as of May 31, 2015</b>  |                           |   |
|---|---------------------------|---|
|   | <b>Budgeted</b>           | <b>Funding Available<br/>&amp; Contribution</b> |
| <b>Financing</b>  |                           |   |
| Seismic Surcharge Revenue AB 1171   | 2,282.0                   | 2,282.0   |
| Seismic Surcharge Revenue AB 144  | 2,150.0                   | 2,150.0   |
| Seismic Surcharge Revenue AB 1175 <sup>(2)</sup>  | 750.0                     | 750.0   |
| BATA Consolidation  | 820.0                     | 820.0   |
| Subtotal - Financing  | 6,002.0                   | 6,002.0   |
| <b>Contributions</b>  |                           |   |
| Proposition 192   | 790.0                     | 789.0   |
| San Diego Coronado Toll Bridge Revenue Fund   | 33.0                      | 33.0  |
| Vincent Thomas Bridge   | 15.0                      | 6.9   |
| State Highway Account <sup>(1)</sup>  | 745.0                     | 745.0   |
| Public Transportation Account <sup>(1)</sup>  | 130.0                     | 130.0   |
| ITIP/SHOPP/Federal Contingency <sup>(3)</sup>   | 448.0                     | 448.0   |
| Federal Highway Bridge Replacement and Rehabilitation (HBRR) <sup>(3)</sup>   | 642.0                     | 642.0   |
| SHA - East Span Dismantling   | 300.0                     | 300.0   |
| SHA - "Efficiency Savings"  | 130.0                     | 130.0   |
| Redirect Spillover  | 125.0                     | 125.0   |
| Motor Vehicle Account   | 75.0                      | 75.0  |
| Subtotal - Contribution   | 3,433.0                   | 3,423.9   |
| <b>Total Funding</b>  | <b>9,435.0</b>            | <b>9,425.9</b>                                  |
| <b>Encumbered to Date</b>   |                           | <b>8,795.5</b>                                  |
| <b>Remaining Unallocated</b>  |                           | <b>630.4</b>                                    |
| <b>Expenditures :</b>   |                           |   |
| Capital Outlay  |                           | 6,653.8   |
| State Operations  |                           | 1,845.0   |
| Antioch and Dumbarton Expenditures by BATA  |                           | 14.6  |
|   | <b>Total Expenditures</b> | <b>8,513.4</b>                                  |
| <b>Encumbrances :</b>   |                           |   |
| Capital Outlay  |                           | 278.3   |
| State Operations  |                           | 3.9   |
|   | <b>Total Encumbrances</b> | <b>282.2</b>                                    |
| <b>Total Expenditures and Encumbrances</b>  |                           | <b>8,795.5</b>                                  |
| <sup>(1)</sup> The California Transportation Commission adopted a new schedule and changed the PTA/SHA split on December 15, 2005.  |                           |   |
| <sup>(2)</sup> As of January 1, 2010, seismic retrofitting of Antioch and Dumbarton Bridges became part of the Toll Bridge Seismic Retrofit Program with the passage of AB 1175.  |                           |   |
| <sup>(3)</sup> The Skyway contract is the only contract in the San Francisco-Oakland Bay Bridge East Span Seismic Safety Project with federal funds. The Federal Aid Project No. is 0801(090) for the amount of \$321,645,209.22. |                           |   |

## Summary of the Toll Bridge Oversight Committee (TBPOC) Expenses

Pursuant to Streets and Highways Code Section 30952.1 (d), expenses incurred by Caltrans, BATA, and the California Transportation Commission (CTC) for costs directly related to the duties associated with the TBPOC are to be reimbursed by toll revenues. Table 3 -Toll Bridge Program Oversight Committee Estimated Expenses: July 1, 2005, through May 31, 2016, shows expenses through May 31, 2016, for TBPOC functioning, support, and monthly and quarterly reporting.

**Table 2—CTC Toll Bridge Seismic Retrofit Program Contributions Adopted December 2005  
Schedule of Contributions to the Toll Bridge Seismic Retrofit Program (\$ Millions)**

| Source     | Description   | 2005-06<br>(Actual) | 2006-07<br>(Actual) | 2007-08<br>(Actual) | 2008-09<br>(Actual) | 2009-10<br>(Actual) | 2010-11<br>(Actual) | 2011-12<br>(Actual) | 2012-13<br>(Actual) | 2013-14<br>(Actual) | Total       |
|------------|---|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|-------------|
| AB<br>1171 | SHA   | 290                 |                     |                     |                     |                     |                     |                     |                     |                     | 290         |
|            | PTA   | 80                  | 40                  |                     |                     |                     |                     |                     |                     |                     | 120         |
|            | Highway<br>Bridge<br>Replacement<br>and<br>Rehabilitation<br>(HBRR) | 100                 | 100                 | 100                 | 42                  |                     |                     |                     |                     |                     | 342         |
|            | Contingency   |                     |                     |                     | 1                   | 99                  | 100                 | 100                 | 148                 |                     | 448         |
| AB 144     | SHA*  | 2                   | 8                   |                     |                     |                     | 53                  | 50                  | 17                  |                     | 130         |
|            | Motor Vehicle<br>Account<br>(MVA)                                   | 75                  |                     |                     |                     |                     |                     |                     |                     |                     | 75          |
|            | Spillover   |                     | 125                 |                     |                     |                     |                     |                     |                     |                     | 125         |
|            | SHA**   |                     |                     |                     |                     |                     |                     |                     |                     | 300                 | 300         |
|            | <b>Total</b>  | <b>547</b>          | <b>273</b>          | <b>100</b>          | <b>43</b>           | <b>99</b>           | <b>153</b>          | <b>150</b>          | <b>165</b>          | <b>300</b>          | <b>1830</b> |

\* Caltrans Efficiency Savings

\*\* SFOBB East Span Dismantling Cost. The last contribution of \$300 million from SHA was made in October 2013 as scheduled.

**Table 3—Toll Bridge Program Oversight Committee  
Estimated Expenses: July 1, 2005 through May 31, 2016 (\$ Millions)**

| Agency/Program Activity | Expenses    |
|-------------------------|-------------|
| <b>BATA</b>             | <b>3.0</b>  |
| <b>Caltrans</b>         | <b>3.4</b>  |
| <b>CTC</b>              | <b>3.3</b>  |
| <b>Reporting</b>        | <b>5.9</b>  |
| <b>Total Program</b>    | <b>15.6</b> |

# TOLL BRIDGE SEISMIC RETROFIT PROGRAM

## Quarterly Environmental Compliance Highlights

Overall environmental compliance for the San Francisco-Oakland Bay Bridge (SFOBB) East Span Seismic Safety (SFOBB) Project has been a success during the second quarter of 2016. The tasks for the current quarter are focused on mitigation, monitoring, and environmental permitting. Key successes in this quarter are as follows:

Bird monitoring has been conducted seven days a week since February 1st, corresponding with the start of the 2016 bird nesting season. The goal of this monitoring is to document potential impacts to birds and their nests from construction activities. Monitors did not observe any indication that birds were disturbed due to the east span construction activities. To date, over 10 occupied nests have been removed from the SFOBB project site under the Caltrans' U.S. Fish and Wildlife Service occupied nest take permit.

Throughout the second quarter of 2016, installation of nesting bird impact avoidance management measures for the 2016 nesting season continued for the 504/288 dismantling contract. The contractor installed bird deterrents on the 504-foot trusses, 288-foot trusses, and tower legs. Meetings have been held weekly throughout the quarter between Caltrans and the 504/288 contractor to discuss bird nesting issues and the ongoing strategy for installation of nesting bird impact avoidance management measures during the 2016 nesting season.

In compliance with Special Condition II.A.1 of the San Francisco Bay Conservation and Development Commission (BCDC) Permit No. 2001.008, the environmental team obtained plan review approval from BCDC for the 504/288 contract tower 4 to 16 dismantling plans on April 7, 2016. The environmental team also supported 504-foot truss span removal operations throughout the second quarter of 2016.

The SFOBB Pier E3 Implosion Demonstration Project Report was finalized in May 2016 and was submitted to all applicable resource agencies on May 13, 2016. This report summarized the pier E3 Demonstration Project hydroacoustic monitoring, fisheries monitoring, marine mammal monitoring, bird monitoring, and water quality monitoring results.

The environmental team held teleconferences and meetings with BCDC, National Marine Fisheries Service (NMFS), United States Army Corps of Engineers (USACE), US Coast Guard (USCG), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Boards (RWQCB) throughout the second quarter of 2016 to discuss regulatory approvals for the removal of piers E4 to E18.

The environmental team coordinated a stakeholder meeting with representatives from Golden Gate Audubon Society, Sierra Club, Bay Keeper, and the Marine Mammal Center on June 8, 2016. The purpose of this meeting was to present project stakeholders with a summary of the results of the Pier E3 Demonstration Project, explain the proposed Pier E4 to E18 removal strategy, and hear the field stakeholder comments regarding the blasting program.

The environmental team worked closely with the project management team to prepare and submit packages to BCDC, NMFS, USACE, CDFW, and the RWQCB requesting approval to remove Piers E4 to E18 using controlled blasting. An Incidental Harassment Authorization request to NMFS Office of Protected Resources and a Biological Assessment to NMFS was submitted during the first quarter of 2016.

During the second quarter of 2016, the environmental team submitted an amendment request for pre-blast activities to BCDC on April 4, 2016, a Letter of Modification (LOM) request for pre-blast activities to USACE on April 4, 2016, an Incidental Take Permit application to CDFW on April 8, 2016, an amendment request for blasting to BCDC on May 12, 2016, a LOM request for blasting to USACE on May 6, 2016, and a SWPPP to the RWQCB on May 16, 2016. Authorizations were received from BCDC and USACE for pre-blast activities on June 21, 2016 and June 27, 2016, respectively. On June 27, 2016, BCDC Plan

Approval for pre-blast activities for Piers E4 to E18 was issued. The RWQCB approved the Pier E4 to E18 Storm Water Pollution Prevention Plan (SWPPP) on June 22, 2016. The environmental team will continue to work closely with the regulatory agencies to obtain necessary approvals for the removal of Piers E4 to E18 throughout the third quarter of 2016.

At the request of BATA and the TBPOC, the environmental team discussed the potential retention of Piers E2 and Piers E19 to E23 of the SFOBB original east span with project regulators during the second quarter of 2016. It was clarified by BCDC that the Caltrans would need to propose a justification for pier retention, a conceptual plan, and possible mitigation to offset the in-water fill that the project is required to remove under its current permit as mitigation for new fill in the Bay from construction of the SFOBB new east span.

Caltrans held meetings with BATA and the Project Management Team (PMT) to discuss how best to proceed. Public access has been proposed as the justification for pier retention. Caltrans has indicated that to retain the piers, additional work would be required that may include, development of a conceptual design for public access, an analysis of environmental impacts from pier retention, a re-opening of the project's current Final Environmental Impact Statement or a separate National Environmental Policy Act/California Environmental Quality Act process, and analysis of potential off-site fill removal projects or mechanisms to satisfy in-kind mitigation should it be required.

## APPENDICES

- A. TBSRP AB 144/SB 66/ AB 1175 Baseline Budget, Forecasts and Expenditures through May 31, 2016 (A-1 and A-2)
- B. TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2016
- C. Project Photos
- D. Glossary of Terms

## Appendix A-1: TBSRP AB 144/SB 66/AB 1175 Baseline Budget, Forecasts and Expenditures through May 31, 2016 (\$ Millions)

| Contract  | AB 144/SB 66/AB 1175 | Approved Changes | Current Approved Budget (05/2016) | Cost to Date (05/2016) | Cost Forecast (05/2016) | At-Completion Variance |
|---|----------------------|------------------|-----------------------------------|------------------------|-------------------------|------------------------|
| a   | c                    | d                | e = c + d                         | f                      | g                       | h = g - e              |
| <b>SFOBB East Span Replacement Project</b>          |                      |                  |                                   |                        |                         |                        |
| Capital Outlay Support                              | 959.3                | 352.2            | 1,311.5                           | 1,297.0                | 1,394.2                 | 82.7                   |
| Capital Outlay Construction                         | 4,492.2              | 670.5            | 5,162.7                           | 4,838.0                | 5,275.2                 | 112.5                  |
| Other Budgeted Capital                              | 35.1                 | (32.8)           | 2.3                               | 0.7                    | 2.3                     | -                      |
| <b>Total</b>  | <b>5,486.6</b>       | <b>989.9</b>     | <b>6,476.5</b>                    | <b>6,135.7</b>         | <b>6,671.7</b>          | <b>195.2</b>           |
| <b>SFOBB West Approach Replacement</b>              |                      |                  |                                   |                        |                         |                        |
| Capital Outlay Support                              | 120.0                | (0.5)            | 119.5                             | 119.4                  | 119.4                   | (0.1)                  |
| Capital Outlay Construction                         | 309.0                | 31.0             | 340.0                             | 333.0                  | 338.1                   | (1.9)                  |
| <b>Total</b>  | <b>429.0</b>         | <b>30.5</b>      | <b>459.5</b>                      | <b>452.4</b>           | <b>457.5</b>            | <b>(2.0)</b>           |
| <b>SFOBB West Span Retrofit</b>                     |                      |                  |                                   |                        |                         |                        |
| Capital Outlay Support                              | 75.0                 | (0.2)            | 74.8                              | 74.8                   | 74.8                    | -                      |
| Capital Outlay Construction                         | 232.9                | (2.4)            | 230.5                             | 230.5                  | 230.5                   | -                      |
| <b>Total</b>  | <b>307.9</b>         | <b>(2.6)</b>     | <b>305.3</b>                      | <b>305.3</b>           | <b>305.3</b>            | <b>-</b>               |
| <b>Richmond-San Rafael Bridge Retrofit*</b>         |                      |                  |                                   |                        |                         |                        |
| Capital Outlay Support                              | 134.0                | (7.0)            | 127.0                             | 126.7                  | 127.0                   | -                      |
| Capital Outlay Construction                         | 780.0                | (94.9)           | 685.1                             | 668.1                  | 668.2                   | (16.9)                 |
| <b>Total</b>  | <b>914.0</b>         | <b>(101.9)</b>   | <b>812.1</b>                      | <b>794.8</b>           | <b>795.2</b>            | <b>-</b>               |
| <b>Benicia-Martinez Bridge Retrofit</b>             |                      |                  |                                   |                        |                         |                        |
| Capital Outlay Support                              | 38.1                 | -                | 38.1                              | 38.1                   | 38.1                    | -                      |
| Capital Outlay Construction                         | 139.7                | -                | 139.7                             | 139.7                  | 139.7                   | -                      |
| <b>Total</b>  | <b>177.8</b>         | <b>-</b>         | <b>177.8</b>                      | <b>177.8</b>           | <b>177.8</b>            | <b>-</b>               |
| <b>Carquinez Bridge Retrofit</b>                    |                      |                  |                                   |                        |                         |                        |
| Capital Outlay Support                              | 28.7                 | 0.1              | 28.8                              | 28.8                   | 28.8                    | -                      |
| Capital Outlay Construction                         | 85.5                 | (0.1)            | 85.4                              | 85.4                   | 85.4                    | -                      |
| <b>Total</b>  | <b>114.2</b>         | <b>-</b>         | <b>114.2</b>                      | <b>114.2</b>           | <b>114.2</b>            | <b>-</b>               |
| <b>San Mateo-Hayward Retrofit</b>                   |                      |                  |                                   |                        |                         |                        |
| Capital Outlay Support                              | 28.1                 | -                | 28.1                              | 28.1                   | 28.1                    | -                      |
| Capital Outlay Construction                         | 135.4                | (0.1)            | 135.3                             | 135.3                  | 135.3                   | -                      |
| <b>Total</b>  | <b>163.5</b>         | <b>(0.1)</b>     | <b>163.4</b>                      | <b>163.4</b>           | <b>163.4</b>            | <b>-</b>               |
| <b>Vincent Thomas Bridge Retrofit (Los Angeles)</b> |                      |                  |                                   |                        |                         |                        |
| Capital Outlay Support                              | 16.4                 | -                | 16.4                              | 16.4                   | 16.4                    | -                      |
| Capital Outlay Construction                         | 42.1                 | -                | 42.1                              | 42.0                   | 42.0                    | (0.1)                  |
| <b>Total</b>  | <b>58.5</b>          | <b>-</b>         | <b>58.5</b>                       | <b>58.4</b>            | <b>58.4</b>             | <b>(0.1)</b>           |
| <b>San Diego-Coronado Bridge Retrofit</b>           |                      |                  |                                   |                        |                         |                        |
| Capital Outlay Support                              | 33.5                 | -                | 33.5                              | 33.2                   | 33.2                    | (0.3)                  |
| Capital Outlay Construction                         | 70.0                 | -                | 70.0                              | 69.4                   | 69.4                    | (0.6)                  |
| <b>Total</b>  | <b>103.5</b>         | <b>-</b>         | <b>103.5</b>                      | <b>102.6</b>           | <b>102.6</b>            | <b>(0.9)</b>           |



## Appendix A-1: TBSRP AB 144/SB 66/AB 1175 Baseline Budget, Forecasts and Expenditures through May 31, 2016 (\$ Millions) Cont.

| Contract  | AB 144/SB<br>66/AB 1175 | Approved<br>Changes | Current<br>Approved<br>Budget<br>(05/2016) | Cost to Date<br>(05/2016) | Cost<br>Forecast<br>(05/2016) | At-<br>Completion<br>Variance |
|---|-------------------------|---------------------|--|---------------------------|-------------------------------|-------------------------------|
| a   | c                       | d                   | e = c + d                                  | f                         | g                             | h = g - e                     |
| <b>Antioch Bridge</b>                             |                         |                     |  |                           |                               |                               |
| Capital Outlay Support                            | -                       | 24.1                | 24.1                                       | 17.4                      | 23.8                          | (0.3)                         |
| Capital Outlay Support by BATA                    |                         |                     |  | 6.7                       |                               |                               |
| Capital Outlay Construction                       | -                       | 47.0                | 47.0                                       | 47.0                      | 47.0                          | -                             |
| Total   | 267.0                   | 71.1                | 71.1                                       | 71.1                      | 70.8                          | (0.3)                         |
| <b>Dumbarton Bridge</b>                           |                         |                     |  |                           |                               |                               |
| Capital Outlay Support                            | -                       | 46.0                | 46.0                                       | 39.5                      | 45.4                          | (0.6)                         |
| Capital Outlay Support by BATA                    |                         |                     |  | 7.9                       |                               |                               |
| Capital Outlay Construction                       | -                       | 66.4                | 66.4                                       | 64.6                      | 66.4                          | -                             |
| Total   | 483.0                   | 112.4               | 112.4                                      | 112.0                     | 111.8                         | (0.6)                         |
| Subtotal Capital Outlay Support                   | 1,682.9                 | 165.0               | 1,847.8                                    | 1,834.1                   | 1,929.2                       | 81.4                          |
| Subtotal Capital Outlay                           | 6,787.1                 | 217.2               | 7,004.2                                    | 6,653.1                   | 7,097.2                       | 93.0                          |
| Subtotal Other Budgeted Capital                   | 35.1                    | (32.8)              | 2.3  | 0.7                       | 2.3                           | -                             |
| Miscellaneous Program Costs                       | 30.0                    | -                   | 30.0                                       | 25.5                      | 30.0                          | -                             |
| Subtotal Toll Bridge Seismic Retrofit Program     | 8,535.0                 | 349.3               | 8,884.3                                    | 8,513.4                   | 9,058.7                       | 174.4                         |
| Net Programmatic Risks                            | -                       | -                   | -  | -                         | 9.8                           | 9.8                           |
| Program Contingency                               | 900.0                   | (832.3)             | 67.7                                       | -                         | -                             | (67.7)                        |
| Total Toll Bridge Seismic Retrofit Program **     | 9,435.0                 | (483.0)             | 8,952.0                                    | 8,513.4                   | 9,068.5                       | 116.5 ***                     |
| Forecast Deficit to Current TBPOC Approved Budget |                         |                     |  |                           | (116.5)                       |                               |
| Forecast Surplus to Total TBPOC Budget            | 366.5                   |                     |  |                           |                               |                               |
| Forecast Deficit to Current TBPOC Approved Budget |                         | (116.5)             |  |                           |                               |                               |

\* Budget for Richmond-San Rafael Bridge includes \$16.9 million of deck joint rehabilitation work that considered to be eligible for seismic retrofit program funding.

\*\* AB144/SB66 established a funding level of \$8.685 Billion in July 2005 for TBSRP, AB1175 added the retrofitting of the Antioch and Dumbarton Bridges in January 2010, providing another \$750 million in funding, bringing Total Toll Seismic Retrofit Program funding to \$9.435 Billion. Since 2010, \$483 million has been removed from the program, bringing the current TBPOC Approved Budget to \$8.952 Billion. The \$483 million removed consisted of:

Antioch Savings (4/12/10) \$137 million

Dumbarton Savings (9/02/10) \$216 million

Program Contingency Redirection (11/05/13) \$130 million, the current TBPOC approved Program Budget is \$8,952 million.

\*\*\* (Due to the rounding of numbers, the totals above are show within \$0.02).

## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2016 (\$ Millions)

| Bridge  | AB 144 Baseline Budget | TBPOC Current Approved Budget | Expenditures to date and encumbrances as of (05/2016) see Note (1) | Estimated costs not yet spent or encumbered as of (05/2016) | Total Forecast as of (05/2016) |
|---|------------------------|-------------------------------|--|---|--------------------------------|
| a   | b                      | c                             | d  | e   | f = d + e                      |
| <b>Other Completed Projects</b>               |                        |                               |  |   |                                |
| Capital Outlay Support                        | 144.9                  | 144.9                         | 144.6  | -   | 144.6                          |
| Capital Outlay                                | 472.6                  | 472.5                         | 471.9  | (0.1)   | 471.8                          |
| <b>Total</b>                                  | <b>617.5</b>           | <b>617.4</b>                  | <b>616.5</b>   | <b>(0.1)</b>  | <b>616.4</b>                   |
| <b>Richmond-San Rafael</b>                    |                        |                               |  |   |                                |
| Capital Outlay Support                        | 134.0                  | 127.0                         | 126.8  | 0.2   | 127.0                          |
| Capital Outlay                                | 698.0                  | 685.1                         | 667.5  | 0.7   | 668.2                          |
| Project Reserves                              | 82.0                   | -                             | -  | -   | -                              |
| <b>Total</b>                                  | <b>914.0</b>           | <b>812.1</b>                  | <b>794.3</b>   | <b>0.9</b>  | <b>795.2</b>                   |
| <b>West Span Retrofit</b>                     |                        |                               |  |   |                                |
| Capital Outlay Support                        | 75.0                   | 74.8                          | 74.8   | -   | 74.8                           |
| Capital Outlay                                | 232.9                  | 230.5                         | 227.4  | 3.1   | 230.5                          |
| <b>Total</b>                                  | <b>307.9</b>           | <b>305.3</b>                  | <b>302.2</b>   | <b>3.1</b>  | <b>305.3</b>                   |
| <b>West Approach</b>                          |                        |                               |  |   |                                |
| Capital Outlay Support                        | 120.0                  | 119.5                         | 119.5  | (0.1)   | 119.4                          |
| Capital Outlay                                | 309.0                  | 340.0                         | 332.2  | 5.9   | 338.1                          |
| <b>Total</b>                                  | <b>429.0</b>           | <b>459.5</b>                  | <b>451.7</b>   | <b>5.8</b>  | <b>457.5</b>                   |
| <b>SFOBB East Span - Skyway</b>               |                        |                               |  |   |                                |
| Capital Outlay Support                        | 197.0                  | 181.2                         | 181.2  | -   | 181.2                          |
| Capital Outlay                                | 1,293.0                | 1,237.2                       | 1,235.6  | 0.1   | 1,235.7                        |
| <b>Total</b>                                  | <b>1,490.0</b>         | <b>1,418.4</b>                | <b>1,416.8</b>   | <b>0.1</b>  | <b>1,416.9</b>                 |
| <b>SFOBB East Span - SAS - Superstructure</b> |                        |                               |  |   |                                |
| Capital Outlay Support                        | 214.6                  | 488.1                         | 512.4  | 5.4   | 517.8                          |
| Capital Outlay                                | 1,753.7                | 2,046.8                       | 2,046.9  | 2.1   | 2,049.0                        |
| <b>Total</b>                                  | <b>1,968.3</b>         | <b>2,534.9</b>                | <b>2,559.3</b>   | <b>7.5</b>  | <b>2,566.8</b>                 |
| <b>SFOBB East Span - SAS - Foundations</b>    |                        |                               |  |   |                                |
| Capital Outlay Support                        | 62.5                   | 37.6                          | 37.6   | -   | 37.6                           |
| Capital Outlay                                | 339.9                  | 301.3                         | 301.3  | -   | 301.3                          |
| <b>Total</b>                                  | <b>402.4</b>           | <b>338.9</b>                  | <b>338.9</b>   | <b>-</b>  | <b>338.9</b>                   |
| <b>Small YBI Projects</b>                     |                        |                               |  |   |                                |
| Capital Outlay Support                        | 10.6                   | 10.2                          | 10.2   | 0.4   | 10.6                           |
| Capital Outlay                                | 15.6                   | 15.2                          | 15.2   | 0.5   | 15.7                           |
| <b>Total</b>                                  | <b>26.2</b>            | <b>25.4</b>                   | <b>25.4</b>  | <b>0.9</b>  | <b>26.3</b>                    |
| <b>YBI Detour</b>                             |                        |                               |  |   |                                |
| Capital Outlay Support                        | 29.5                   | 87.7                          | 87.9   | (0.2)   | 87.7                           |
| Capital Outlay                                | 131.9                  | 473.3                         | 473.4  | (0.1)   | 473.3                          |
| <b>Total</b>                                  | <b>161.4</b>           | <b>561.0</b>                  | <b>561.3</b>   | <b>(0.3)</b>  | <b>561.0</b>                   |
| <b>YBI- Transition Structures</b>             |                        |                               |  |   |                                |
| Capital Outlay Support                        | 78.7                   | 127.5                         | 134.6  | 30.0  | 164.6                          |
| Capital Outlay                                | 299.4                  | 299.4                         | 302.8  | 23.7  | 326.5                          |
| <b>Total</b>                                  | <b>378.1</b>           | <b>426.9</b>                  | <b>437.4</b>   | <b>53.7</b>   | <b>491.1</b>                   |

## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2016 (\$ Millions) Cont.

| Contract                              | AB 144<br>Baseline<br>Budget | TBPOC Current<br>Approved Budget | Expenditures to<br>date and<br>encumbrances<br>as of (05/2016)<br>see Note (1) | Estimated costs<br>not yet spent or<br>encumbered as of<br>(05/2016) | Total Forecast<br>as of (05/2016) |
|---------------------------------------|------------------------------|----------------------------------|--|--|-----------------------------------|
| a                                     | b                            | c                                | d  | e  | f = d + e                         |
| <b>Oakland Touchdown</b>              |                              |                                  |  |  |                                   |
| Capital Outlay Support                | 74.4                         | 119.4                            | 118.2  | 1.2  | 119.4                             |
| Capital Outlay                        | 283.8                        | 330.6                            | 325.4  | 4.3  | 329.7                             |
| Total                                 | 358.2                        | 450.0                            | 443.6  | 5.5  | 449.1                             |
| <b>East Span Other Small Projects</b> |                              |                                  |  |  |                                   |
| Capital Outlay Support                | 212.3                        | 197.9                            | 197.9  | (0.1)  | 197.8                             |
| Capital Outlay                        | 170.8                        | 141.3                            | 126.5  | 10.4   | 136.9                             |
| Total                                 | 383.1                        | 339.2                            | 324.4  | 10.3   | 334.7                             |
| <b>Existing Bridge Dismantling</b>    |                              |                                  |  |  |                                   |
| Capital Outlay Support                | 79.7                         | 61.9                             | 23.1   | 54.4   | 77.5                              |
| Capital Outlay                        | 239.2                        | 320.1                            | 292.6  | 116.0  | 408.6                             |
| Total                                 | 318.9                        | 382.0                            | 315.7  | 170.4  | 486.1                             |
| <b>Antioch Bridge</b>                 |                              |                                  |  |  |                                   |
| Capital Outlay Support                | -                            | 24.1                             | 17.4   | 0.2  | 17.6                              |
| Capital Outlay Support by BATA        | -                            | -                                | 6.2  | -  | 6.2                               |
| Capital Outlay                        | -                            | 47.0                             | 47.0   | -  | 47.0                              |
| Total                                 | 267.0                        | 71.1                             | 70.6   | 0.2  | 70.8                              |
| <b>Dumbarton Bridge</b>               |                              |                                  |  |  |                                   |
| Capital Outlay Support                | -                            | 46.0                             | 39.6   | (0.2)  | 39.4                              |
| Capital Outlay Support by BATA        | -                            | -                                | 6.0  | -  | 6.0                               |
| Capital Outlay                        | -                            | 66.4                             | 64.7   | 1.7  | 66.4                              |
| Total                                 | 483.0                        | 112.4                            | 110.3  | 1.5  | 111.8                             |
| Miscellaneous Program Costs           | 30.0                         | 30.0                             | 25.5   | 4.5  | 30.0                              |
| Total Capital Outlay Support          | 1,712.9                      | 1,877.8                          | 1,863.5  | 95.8   | 1,959.3                           |
| Total Capital Outlay                  | 6,822.1                      | 7,006.6                          | 6,930.3  | 168.5  | 7,098.8                           |
| Program Total <sup>1</sup>            | 8,535.0                      | 8,884.4                          | 8,793.8  | 264.3  | 9,058.1                           |

(1) Total Capital Outlay Support includes program indirect costs.

(2) BSA provided a distribution of program contingency in December 2004 based on Bechtel Infrastructure Corporation input.

(3) Construction administration of the OTD Detour is under the YBITS1 contract. Encumbrance is included in YBITS1 contract.

(4) Construction administration of the cantilever segment is under the YBITS2 contract. Encumbrance is included in YBITS2 contract.

(Due to the rounding of numbers, the totals above are shown within \$0.02)

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2016 (\$ Millions)

| Contract   | AB 144 / SB 66 Budget (07/2005) | Approved Changes | Current Approved Budget (05/2016) | Cost to Date (05/2016) | Cost Forecast (05/2016) | At-Completion Variance |
|--|---------------------------------|------------------|-----------------------------------|------------------------|-------------------------|------------------------|
| a  | c                               | d                | e = c + d                         | f                      | g                       | h = g - e              |
| San Francisco-Oakland Bay Bridge East Span Replacement Project |                                 |                  |                                   |                        |                         |                        |
| East Span - SAS Superstructure                                 |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   | 214.6                           | 273.5            | 488.1                             | 509.7                  | 517.8                   | 29.7                   |
| Capital Outlay Construction                                    | 1,753.7                         | 293.1            | 2,046.8                           | 1,972.5                | 2,049.0                 | 2.2                    |
| Total  | 1,968.3                         | 566.6            | 2,534.9                           | 2,482.2                | 2,566.8                 | 31.9                   |
| SAS W2 Foundations   |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   | 10.0                            | (0.8)            | 9.2                               | 9.2                    | 9.2                     | -                      |
| Capital Outlay Construction                                    | 26.4                            | 0.1              | 26.5                              | 26.5                   | 26.5                    | -                      |
| Total  | 36.4                            | (0.7)            | 35.7                              | 35.7                   | 35.7                    | -                      |
| YBI South/South Detour   |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   | 29.4                            | 58.3             | 87.7                              | 87.9                   | 87.7                    | -                      |
| Capital Outlay Construction                                    | 131.9                           | 341.4            | 473.3                             | 473.3                  | 473.3                   | -                      |
| Total  | 161.3                           | 399.7            | 561.0                             | 561.2                  | 561.0                   | -                      |
| East Span - Skyway   |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   | 197.0                           | (15.8)           | 181.2                             | 181.2                  | 181.2                   | -                      |
| Capital Outlay Construction                                    | 1,293.0                         | (55.8)           | 1,237.2                           | 1,235.6                | 1,235.7                 | (1.5)                  |
| Total  | 1,490.0                         | (71.6)           | 1,418.4                           | 1,416.8                | 1,416.9                 | (1.5)                  |
| East Span - SAS E2/T1 Foundations                              |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   | 52.5                            | (24.1)           | 28.4                              | 28.4                   | 28.4                    | -                      |
| Capital Outlay Construction                                    | 313.5                           | (38.7)           | 274.8                             | 274.8                  | 274.8                   | -                      |
| Total  | 366.0                           | (62.8)           | 303.2                             | 303.2                  | 303.2                   | -                      |
| YBI Transition Structures (see notes below)                    |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   | 78.7                            | 48.8             | 127.5                             | 132.7                  | 164.6                   | 37.1                   |
| Capital Outlay Construction                                    | 299.3                           | 0.1              | 299.4                             | 264.4                  | 326.5                   | 27.1                   |
| Total  | 378.0                           | 48.9             | 426.9                             | 397.1                  | 491.1                   | 64.2                   |
| * YBI- Transition Structures                                   |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   |                                 |                  | 16.4                              | 16.4                   | 16.4                    | -                      |
| Capital Outlay Construction                                    |                                 |                  | -                                 | -                      | -                       | -                      |
| Total  |                                 |                  | 16.4                              | 16.4                   | 16.4                    | -                      |
| * YBI- Transition Structures Contract No. 1                    |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   |                                 |                  | 72.1                              | 69.8                   | 69.8                    | (2.3)                  |
| Capital Outlay Construction                                    |                                 |                  | 203.7                             | 206.9                  | 204.9                   | 1.2                    |
| Total  |                                 |                  | 275.8                             | 276.7                  | 274.7                   | (1.1)                  |
| * YBI- Transition Structures Contract No. 2                    |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   |                                 |                  | 38.0                              | 46.3                   | 77.4                    | 39.4                   |
| Capital Outlay Construction                                    |                                 |                  | 92.4                              | 57.5                   | 118.3                   | 25.9                   |
| Total  |                                 |                  | 130.4                             | 103.8                  | 195.7                   | 65.3                   |
| * YBI- Transition Structures Contract No. 3 Landscape          |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support   |                                 |                  | 1.0                               | 0.2                    | 1.0                     | -                      |
| Capital Outlay Construction                                    |                                 |                  | 3.3                               | -                      | 3.3                     | -                      |
| Total  |                                 |                  | 4.3                               | -                      | 4.3                     | -                      |

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2016 (\$ Millions) Cont.

| Contract  | AB 144 / SB<br>66 Budget<br>(07/2005) | Approved<br>Changes | Current<br>Approved<br>Budget<br>(05/2016) | Cost to Date<br>(05/2016) | Cost<br>Forecast<br>(05/2016) | At-<br>Completion<br>Variance |
|---|---------------------------------------|---------------------|--|---------------------------|-------------------------------|-------------------------------|
| a   | c                                     | d                   | e = c + d                                  | f                         | g                             | h = g - e                     |
| <b>Oakland Touchdown (see notes below)</b>      |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          | 74.4                                  | 45.0                | 119.4                                      | 119.0                     | 119.4                         | -                             |
| Capital Outlay Construction                     | 283.8                                 | 46.8                | 330.6                                      | 322.1                     | 329.7                         | (0.9)                         |
| <b>Total</b>                                    | <b>358.2</b>                          | <b>91.8</b>         | <b>450.0</b>                               | <b>441.1</b>              | <b>449.1</b>                  | <b>(0.9)</b>                  |
| <b>* OTD Prior-to-Split Costs</b>               |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          |                                       |                     | 21.7                                       | 20.0                      | 20.1                          | (1.6)                         |
| Capital Outlay Construction                     |                                       |                     | -  | -                         | -                             | -                             |
| <b>Total</b>                                    |                                       |                     | <b>21.7</b>                                | <b>20.0</b>               | <b>20.1</b>                   | <b>(1.6)</b>                  |
| <b>* OTD Submarine Cable(1)</b>                 |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          |                                       |                     | 0.9  | 0.9                       | 0.9                           | -                             |
| Capital Outlay Construction                     |                                       |                     | 5.7  | 5.7                       | 5.7                           | -                             |
| <b>Total</b>                                    |                                       |                     | <b>6.6</b>                                 | <b>6.6</b>                | <b>6.6</b>                    | <b>-</b>                      |
| <b>* OTD No. 1 (Westbound)</b>                  |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          |                                       |                     | 51.3                                       | 51.2                      | 51.2                          | (0.1)                         |
| Capital Outlay Construction                     |                                       |                     | 205.3                                      | 202.8                     | 205.3                         | -                             |
| <b>Total</b>                                    |                                       |                     | <b>256.6</b>                               | <b>254.0</b>              | <b>256.5</b>                  | <b>(0.1)</b>                  |
| <b>* OTD No. 2 (Eastbound)</b>                  |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          |                                       |                     | 35.9                                       | 38.1                      | 37.6                          | 1.7                           |
| Capital Outlay Construction                     |                                       |                     | 72.6                                       | 71.2                      | 71.9                          | (0.7)                         |
| <b>Total</b>                                    |                                       |                     | <b>108.5</b>                               | <b>109.3</b>              | <b>109.5</b>                  | <b>1.0</b>                    |
| <b>* OTD Touchdown 2 Detour(2)</b>              |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          |                                       |                     | 8.1  | 8.0                       | 8.1                           | -                             |
| Capital Outlay Construction                     |                                       |                     | 47.0                                       | 42.3                      | 46.8                          | (0.2)                         |
| <b>Total</b>                                    |                                       |                     | <b>55.1</b>                                | <b>50.3</b>               | <b>54.9</b>                   | <b>(0.2)</b>                  |
| <b>* OTD Electrical Systems</b>                 |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          |                                       |                     | 1.5  | 0.8                       | 1.5                           | -                             |
| Capital Outlay Construction                     |                                       |                     | -  | -                         | -                             | -                             |
| <b>Total</b>                                    |                                       |                     | <b>1.5</b>                                 | <b>0.8</b>                | <b>1.5</b>                    | <b>-</b>                      |
| <b>Existing Bridge Dismantling</b>              |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          | 79.7                                  | (17.8)              | 61.9                                       | 21.0                      | 77.5                          | 15.6                          |
| Capital Outlay Construction                     | 239.2                                 | 80.9                | 320.1                                      | 128.2                     | 408.6                         | 88.5                          |
| <b>Total</b>                                    | <b>318.9</b>                          | <b>63.1</b>         | <b>382.0</b>                               | <b>149.2</b>              | <b>486.1</b>                  | <b>104.1</b>                  |
| <b>* Bridge Dismantling Prior-to-Split Cost</b> |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          |                                       |                     | 3.9  | 3.9                       | 3.9                           |                               |
| Capital Outlay Construction                     |                                       |                     | -  | -                         | -                             |                               |
| <b>Total</b>                                    |                                       |                     | <b>3.9</b>                                 | <b>3.9</b>                | <b>3.9</b>                    |                               |
| <b>* Cantilever Section</b>                     |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          |                                       |                     | 17.0                                       | 1.6                       | 1.6                           |                               |
| Capital Outlay Construction                     |                                       |                     | 69.0                                       | 68.5                      | 69.0                          |                               |
| <b>Total</b>                                    |                                       |                     | <b>86.0</b>                                | <b>70.1</b>               | <b>70.6</b>                   |                               |
| <b>* 504/288 Sections</b>                       |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                          |                                       |                     | 21.0                                       | 6.9                       | 23.0                          |                               |
| Capital Outlay Construction                     |                                       |                     | 103.5                                      | 42.4                      | 102.3                         |                               |
| <b>Total</b>                                    |                                       |                     | <b>124.5</b>                               | <b>49.3</b>               | <b>125.3</b>                  |                               |

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2016 (\$ Millions) Cont.

| Contract  | AB 144 / SB 66 Budget (07/2005) | Approved Changes | Current Approved Budget (05/2016) | Cost to Date (05/2016) | Cost Forecast (05/2016) | At-Completion Variance |
|---|---------------------------------|------------------|-----------------------------------|------------------------|-------------------------|------------------------|
| a   | c                               | d                | e = c + d                         | f                      | g                       | h = g - e              |
| <b>*Marine Foundations</b>                      |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          |                                 |                  | 20.0                              | 8.6                    | 49.0                    |                        |
| Capital Outlay Construction                     |                                 |                  | 147.5                             | 17.4                   | 237.3                   |                        |
| Total   |                                 |                  | 167.5                             | 26.0                   | 286.3                   |                        |
| Sunk Cost for Marine Foundation                 |                                 |                  | -                                 | 5.3                    | 5.3                     |                        |
| <b>Pier-3 Demonstration Project</b>             |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          |                                 |                  | -                                 | 3.0                    | 3.7                     |                        |
| Capital Outlay Construction                     |                                 |                  | 17.5                              | 16.7                   | 17.5                    |                        |
| Total   |                                 |                  | 17.5                              | 19.7                   | 21.2                    |                        |
| <b>Remaining Marine Foundations<sup>2</sup></b> |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          |                                 |                  | -                                 | 0.3                    | 39.8                    |                        |
| Capital Outlay Construction                     |                                 |                  | 130.0                             | 0.7                    | 219.8                   |                        |
| Total   |                                 |                  | 130.0                             | 1.0                    | 259.6                   |                        |
| <b>Pier-E4 to Pier-E18</b>                      |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          |                                 |                  | -                                 | 0.3                    | 31.5                    |                        |
| Capital Outlay Construction                     |                                 |                  | 130.0                             | 0.7                    | 174.8                   |                        |
| Total   |                                 |                  | 130.0                             | 1.0                    | 206.3                   |                        |
| <b>Pier-E2 and Pier-E19 to Pier-E22</b>         |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          |                                 |                  | -                                 | 0.1                    | 8.3                     |                        |
| Capital Outlay Construction                     |                                 |                  | -                                 | -                      | 45.0                    |                        |
| Total   |                                 |                  | -                                 | 0.1                    | 53.3                    |                        |
| <b>YBI/SAS Archeology</b>                       |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          | 1.1                             | -                | 1.1                               | 1.1                    | 1.1                     | -                      |
| Capital Outlay Construction                     | 1.1                             | -                | 1.1                               | 1.1                    | 1.1                     | -                      |
| Total   | 2.2                             | -                | 2.2                               | 2.2                    | 2.2                     | -                      |
| <b>YBI - USCG Road Relocation</b>               |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          | 3.0                             | (0.3)            | 2.7                               | 2.7                    | 3.0                     | 0.3                    |
| Capital Outlay Construction                     | 3.0                             | (0.2)            | 2.8                               | 2.8                    | 3.0                     | 0.2                    |
| Total   | 6.0                             | (0.5)            | 5.5                               | 5.5                    | 6.0                     | 0.5                    |
| <b>YBI - Substation and Viaduct</b>             |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          | 6.5                             | (0.1)            | 6.4                               | 6.4                    | 6.5                     | 0.1                    |
| Capital Outlay Construction                     | 11.6                            | (0.3)            | 11.3                              | 11.3                   | 11.6                    | 0.3                    |
| Total   | 18.1                            | (0.4)            | 17.7                              | 17.7                   | 18.1                    | 0.4                    |
| <b>Oakland Geofill</b>                          |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          | 2.5                             | -                | 2.5                               | 2.5                    | 2.5                     | -                      |
| Capital Outlay Construction                     | 8.2                             | -                | 8.2                               | 8.2                    | 8.2                     | -                      |
| Total   | 10.7                            | -                | 10.7                              | 10.7                   | 10.7                    | -                      |
| <b>Pile Installation Demonstration Project</b>  |                                 |                  |                                   |                        |                         |                        |
| Capital Outlay Support                          | 1.8                             | -                | 1.8                               | 1.8                    | 1.8                     | -                      |
| Capital Outlay Construction                     | 9.3                             | (0.1)            | 9.2                               | 9.3                    | 9.3                     | -                      |
| Total   | 11.1                            | (0.1)            | 11.0                              | 11.1                   | 11.1                    | -                      |

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through May 31, 2016 (\$ Millions) Cont.

| Contract   | AB 144 / SB<br>66 Budget<br>(07/2005) | Approved<br>Changes | Current<br>Approved<br>Budget<br>(05/2016) | Cost to Date<br>(05/2016) | Cost<br>Forecast<br>(05/2016) | At-<br>Completion<br>Variance |
|--|---------------------------------------|---------------------|--|---------------------------|-------------------------------|-------------------------------|
| a  | c                                     | d                   | e = c + d                                  | f                         | g                             | h = g - e                     |
| <b>Stormwater Treatment Measures</b>             |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                           | 6.0                                   | 2.2                 | 8.2  | 8.2                       | 8.2                           | -                             |
| Capital Outlay Construction                      | 15.0                                  | 3.3                 | 18.3                                       | 16.9                      | 17.0                          | (1.3)                         |
| Total  | 21.0                                  | 5.5                 | 26.5                                       | 25.1                      | 25.2                          | (1.3)                         |
| <b>Right-of-Way and Environmental Mitigation</b> |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                           | -                                     | -                   | -  | -                         | -                             | -                             |
| Capital Outlay & Right-of-Way                    | 72.4                                  | -                   | 72.4                                       | 60.2                      | 70.0                          | (2.4)                         |
| Total  | 72.4                                  | -                   | 72.4                                       | 60.2                      | 70.0                          | (2.4)                         |
| <b>Sunk Cost - Existing East Span Retrofit</b>   |                                       |                     |  |                           |                               |                               |
| Capital Outlay Support                           | 39.5                                  | -                   | 39.5                                       | 39.5                      | 39.5                          | -                             |
| Capital Outlay Construction                      | 30.8                                  | -                   | 30.8                                       | 30.8                      | 30.8                          | -                             |
| Total  | 70.3                                  | -                   | 70.3                                       | 70.3                      | 70.3                          | -                             |
| <b>Other Capital Outlay Support</b>              |                                       |                     |  |                           |                               |                               |
| Environmental Phase                              | 97.7                                  | 0.1                 | 97.8                                       | 97.8                      | 97.7                          | (0.1)                         |
| Pre-Split Project Expenditures                   | 44.9                                  | -                   | 44.9                                       | 44.9                      | 44.9                          | -                             |
| Non-Project Specific Costs                       | 20.0                                  | (16.8)              | 3.2  | 3.2                       | 3.2                           | -                             |
| Total  | 162.6                                 | (16.7)              | 145.9                                      | 145.9                     | 145.8                         | (0.1)                         |
| <b>Subtotal Capital Outlay Support</b>           |                                       |                     |  |                           |                               |                               |
| Subtotal Capital Outlay Support                  | 959.3                                 | 352.2               | 1,311.5                                    | 1,297.0                   | 1,394.2                       | 82.7                          |
| <b>Subtotal Capital Outlay Construction</b>      |                                       |                     |  |                           |                               |                               |
| Subtotal Capital Outlay Construction             | 4,492.2                               | 670.5               | 5,162.7                                    | 4,838.0                   | 5,275.2                       | 112.5                         |
| <b>Other Budgeted Capital</b>                    |                                       |                     |  |                           |                               |                               |
| Other Budgeted Capital                           | 35.1                                  | (32.8)              | 2.3  | 0.7                       | 2.3                           | -                             |
| <b>Total SFOBB East Span Replacement Project</b> |                                       |                     |  |                           |                               |                               |
| Total SFOBB East Span Replacement Project        | 5,486.6                               | 989.9               | 6,476.5                                    | 6,135.7                   | 6,671.7                       | 195.2                         |

(1) Current contract allotment to install two submarine electrical cables is \$11.5 million. Additional non-program funding to support this allocation beyond the \$9.6 million of available programs funds has been made available by the Treasure Island Development Authority.

(2) Construction administration of the OTD Detour is under the YBITS#1 contract.

(3) Construction administration of the Cantilever segment is under the YBITS#2 contract.

(Due to the rounding of numbers, the totals above are shown within \$0.02).

## Self-Anchored Suspension Bridge (SAS)





## Yerba Buena Island Transition Structure (YBITS)



## Dismantling of Former San Francisco/Oakland Bay Bridge



## Appendix: Glossary of Terms

# Glossary of Terms

**AB 144/SB 66 BUDGET:** The planned allocation of resources for the Toll Bridge Seismic Retrofit Program, or subordinate projects or contracts, as provided in Assembly Bill 144 and Senate Bill 66, signed into law by Governor Schwarzenegger on July 18, 2005, and September 29, 2005, respectively.

**AB 144/SB 66/AB1175 PROJECT COMPLETE BASELINE:** The planned completion date for the Toll Bridge Seismic Retrofit Program or subordinate projects or contracts.

**APPROVED CHANGES:** For cost, changes to the AB 144/SB 66 Budget or BATA Budget as approved by the Bay Area Toll Authority Commission. For schedule, changes to the AB 144/SB 66 Project Complete Baseline approved by the Toll Bridge Program Oversight Committee, or changes to the BATA Project Complete Baseline approved by the Bay Area Toll Authority Commission.

**AT COMPLETION VARIANCE or VARIANCE (cost):** The mathematical difference between the Cost Forecast and the Current Approved Budget.

**BATA BUDGET:** The planned allocation of resources for the Regional Measure 1 Program, or subordinate projects or contracts as authorized by the Bay Area Toll Authority as of June 2005.

**BATA PROJECT COMPLETE BASELINE:** The planned completion date for the Regional Measure 1 Program or subordinate projects or contracts.

**CAPITAL OUTLAY SUPPORT (COS):** Cost of developing and administering a capital project.

**COST FORECAST:** The current forecast of all of the costs that are projected to be expended so as to complete the given scope of the program, project, or contract.

**COST TO DATE:** The actual expenditures incurred by the program, project or contract as of the month and year shown.

**CURRENT APPROVED BUDGET:** The sum of the AB 144/SB 66 Budget or BATA Budget and Approved Changes.

**HINGE PIPE BEAMS:** Pipes between roadway sections designed to move within their sleeves during expansion or contraction of the decks during minor events, such as changes in temperature. The beams are designed to absorb the energy of an earthquake by deforming in their middle or "fuse" section. Hinge pipe beams are also found at the western piers where the SAS connects to the YBITS (Hinge "K" pipe beams).

**PROJECT COMPLETE CURRENT APPROVED SCHEDULE:** The sum of the AB 144/SB 66 Project Complete Baseline or BATA Project Complete Baseline and Approved Changes.

**PROJECT COMPLETE SCHEDULE FORECAST:** The current projected date for the completion of the program, project, or contract.

**SCHEDULE VARIANCE or VARIANCE (schedule):** The mathematical difference expressed in months between the Project Complete Schedule Forecast and the Project Complete Current Approved Schedule.

**% COMPLETE:** % Complete is based on an evaluation of progress on the project, expenditures to date, and schedule.



*Government code Section 755. This document is one of a series of reports prepared for the Bay Area Toll Authority (BATA)/Metropolitan Transportation Commission (MTC) on the Toll Bridge Seismic Retrofit and Regional Measure 1 Programs.*

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