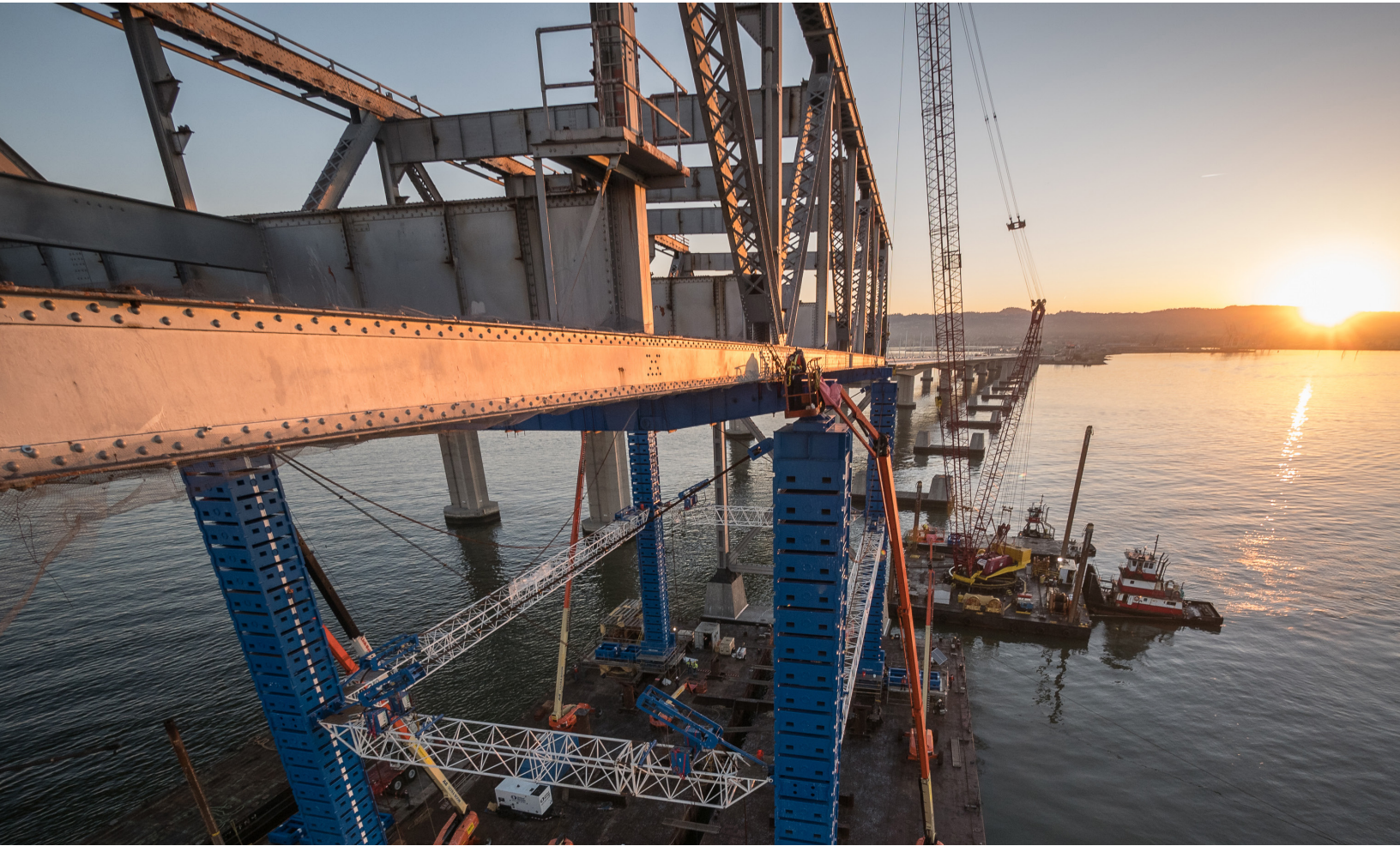
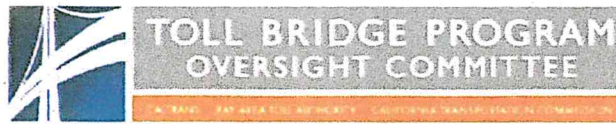


# San Francisco Bay Area Toll Bridge Seismic Retrofit Program 2017 First Quarter Project Progress and Financial Update





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

May 11, 2017

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:

The Toll Bridge Program Oversight Committee (TBPOC) is pleased to submit the 2017 First 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 with 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 opened the pedestrian/bicycle pathway from the self-anchored suspension span to the island on October 23, 2016. A new temporary vista point constructed in cooperation with the San Francisco County Transportation Authority and other stakeholders was opened to the public on Yerba Buena Island on May 2, 2017. Over the last quarter, the superstructure dismantling contractor has completed the removal of all five 504' superstructure trusses and fourteen 288' superstructure trusses. The marine foundation demolition contractor is in the process of preparing the remaining marine foundations for future implosion.

Caltrans has obtained environmental approvals to remove the remaining marine foundations E6 to E18 by implosion and had planned additional implosions over the next two years. However, removal of the superstructure trusses has advanced faster than expected, and provides Caltrans and their marine demolition contractor the opportunity to complete all implosions by the end of this calendar year. Caltrans is still seeking revised environmental approvals to implode all piers this year. Past implosions have proven to have minimal impacts to the bay and environment.

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.

On program 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 \$42 million in accordance with the TBPOC approved budget. As of the end of the first quarter of 2017, the 50 percent probable draw on program contingency is \$123 million. The potential draw ranges from \$50 million to \$200 million. Per the latest (March 2017) 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. Should Caltrans be successful in getting environmental approvals to complete marine demolition this year, the TBPOC expects forecasted risks and costs to be reduced significantly.

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,



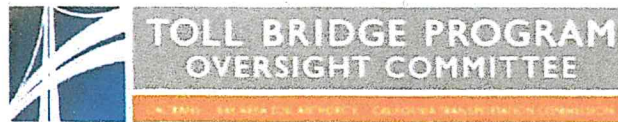
MALCOLM DOUGHERTY  
TBPOC Chair  
Director  
California Department of  
Transportation



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

May 11, 2017

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

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Sincerely,



MALCOLM DOUGHERTY  
TBPOC Chair  
Director  
California Department of  
Transportation



STEVE HEMINGER  
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## Program Management Team

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### Photo Credits:

John Huseby, Caltrans: cover page (bottom), page 15  
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## San Francisco Bay Area Toll Bridges



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



## San Francisco Bay Area Toll Bridges

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. Remaining work on the project is the removal of the old bridge structure.



The new SFOBB East Span and remaining original truss sections, looking west toward Berkeley.

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

	Contract Status	AB 144/ SB 66/ AB 1175 Budget	TBPOC Approved Changes	Current TBPOC Approved Budget (Mar 2017)	Cost to Date (Mar 2017)	Current Cost Forecast (Mar 2017)	Cost 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	1,236.1	(1.1)	●
SAS Tower Anchor Rod Grouting	Construction			12.0	4.9	10.0	(2.0)	●
SAS Marine Foundations	Completed	313.5	(38.7)	274.8	274.8	274.8	-	●
SAS Superstructure	Completed	1,753.7	281.1	2,034.8	1,973.4	2,036.9	2.1	●
YBI Detour	Completed	131.9	341.4	473.3	473.4	473.4	0.1	●
YBI Transition Structures (YBITS)		299.3	8.8	308.1	295.7	319.2	11.1	
YBITS 1	Completed			203.7	203.2	203.8	0.1	●
YBITS 2	Construction			101.1	92.4	113.2	12.1	●
YBITS Landscaping	Design			3.3	-	2.2	(1.1)	●
Oakland Touchdown (OTD)		283.8	46.8	330.6	326.5	326.5	(4.1)	
OTD 1	Completed			205.3	202.8	202.8	(2.5)	●
OTD 2	Completed			72.6	71.2	71.2	(1.4)	●
Detour	Completed			47.0	46.7	46.7	(0.3)	●
OTD Electrical Systems	Design			-	-	-	-	●
Submerged Electric Cable	Completed			5.7	5.7	5.7	-	●
Existing Bridge Dismantling		239.2	80.8	320.0	201.3	373.2	53.2	
Cantilever Section	Completed			69.0	68.5	69.0		●
504/288 Sections	Construction			103.5	69.8	83.5		●
Marine Foundations				147.5	63.1	220.7		
Pier-3 Demonstration Project	Completed			17.5	16.8	16.8		●
Remaining Marine Foundations	Construction			130.0	46.2	203.9		●
Stormwater Treatment Measures	Completed	15.0	3.3	18.3	16.9	16.9	(1.4)	●
Other Completed Projects	Completed	90.4	(0.5)	89.9	90.0	90.0	0.1	●
Capital Outlay Support		959.3	369.2	1,328.5	1,313.5	1,384.7	56.2	●
Right-of-Way and Envir. Mitigation		72.4	-	72.4	60.9	70.0	(2.4)	●
Other Budgeted Capital		35.1	(32.8)	2.3	0.7	0.7	(1.6)	●
<b>Total SFOBB East Span Replacement</b>		<b>5,486.6</b>	<b>1,015.6</b>	<b>6,502.2</b>	<b>6,267.6</b>	<b>6,612.4</b>	<b>110.2</b>	<b>●</b>
<b>Antioch Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Completed	-	24.1	24.1	24.1	24.2	0.1	●
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>71.2</b>	<b>0.1</b>	<b>●</b>
<b>Dumbarton Bridge Seismic Retrofit</b>								
Capital Outlay Construction and Mitigation	Completed	-	46.0	46.0	47.4	47.5	1.5	●
Capital Outlay Support		-	66.4	66.4	64.4	64.7	(1.7)	●
<b>Total Dumbarton Bridge Seismic Retrofit</b>		<b>483.0</b>	<b>112.4</b>	<b>112.4</b>	<b>111.8</b>	<b>112.2</b>	<b>(0.2)</b>	<b>●</b>
<b>Program Completed Projects</b>	<b>Completed</b>	<b>2,268.4</b>	<b>(74.1)</b>	<b>2,194.3</b>	<b>2,168.9</b>	<b>2,174.1</b>	<b>(20.2)</b>	
<b>Miscellaneous Program Costs</b>		<b>30.0</b>	<b>-</b>	<b>30.0</b>	<b>25.5</b>	<b>25.5</b>	<b>(4.5)</b>	<b>●</b>
<b>Net Programmatic Risks</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>37.8</b>	<b>37.8</b>	<b>●</b>
<b>Program Contingency*</b>		<b>900.0</b>	<b>(858.1)</b>	<b>41.9</b>	<b>-</b>	<b>41.9</b>	<b>-</b>	<b>●</b>
<b>Total Toll Bridge Seismic Retrofit Program*</b>		<b>9,435.0</b>	<b>(483.0)</b>	<b>8,952.0</b>	<b>8,645.0</b>	<b>9,033.2</b>	<b>81.1</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 66 Project Completion Schedule Baseline (July 2005)	TBPOC Approved Changes (Months)	Current TBPOC Approved Completion Schedule (Mar 2017)	Current Completion Forecast (Mar 2017)	Schedule Variance (Months)	
	g	h	i=g+h	j	k=j-i	l
<b>SFOBB East Span Seismic Replacement</b>						
<b>Contract Completion</b>						
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 2017	-	●
Cantilever Section <sup>(2)</sup>			Jul 2015	Jul 2015	-	●
504/288 Sections			Mar 2018	Jun 2017	9	●
Marine Foundations						
E3 Foundation Removal Demo Project			Jan 2016	Jan 2016	-	●
E4 - E18 Foundation Removal			Dec 2018	Dec 2017	12	●
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 YBI Landing			Dec 2015	Oct 2016	-	●
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

# San Francisco-Oakland Bay Bridge East Span Replacement Project

## Seismic Retrofit

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).

Bay Bridge East Span Self-Anchored Suspension Bridge (left) and remaining original truss sections (right), looking west.



## 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: 89% Complete as of March 2017

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 June 2, 2016. The pedestrian/bicycle path opened October 2016. Work on YBI Slope Embankment on Yerba Buena Island is ongoing.



Eastbound on-ramp and bicycle/pedestrian path, looking east.

# San Francisco-Oakland Bay Bridge East Span Replacement Project

## Former East Span Bridge Dismantling

### 504'/288' Superstructure Dismantling

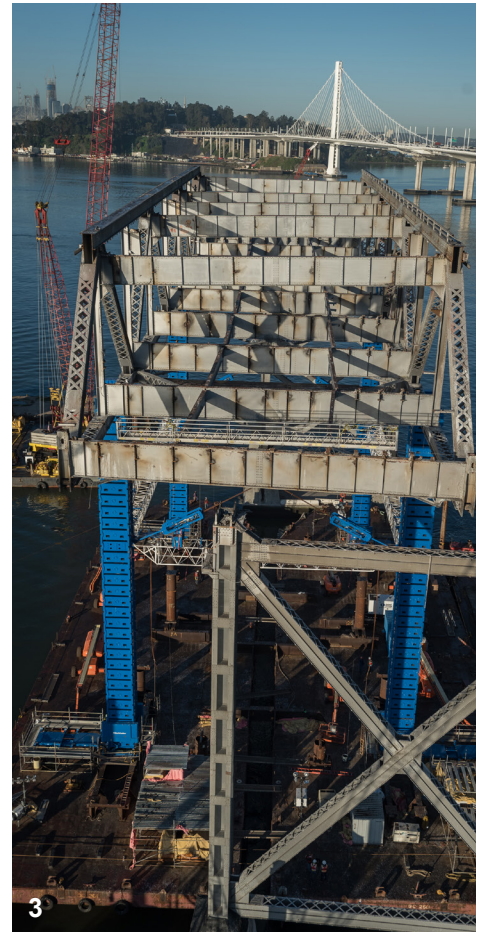
Approved Capital Outlay Budget: \$103.5 M

Contractor: CEC & Silverado JV

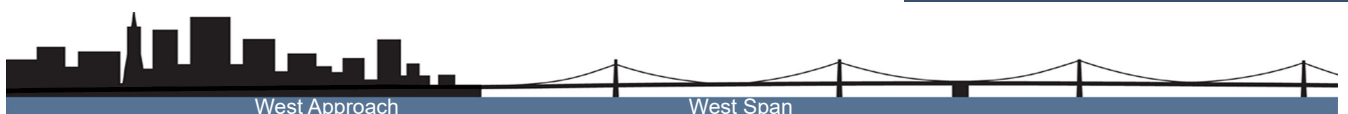
Status: 90% Complete as of March 2017

The contractor 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 was removed to lighten the bridge. The first 504' main truss (out of five) was lowered down to barges in February 2016, and the last 504' section was lowered in August 2016. The first out of fourteen 288' sections was lowered in November 2016 and the last section was lowered in March 2017.



1. View from one of 288' truss supports, looking west.
2. Crews preparing the final 288' truss section for removal, looking west.
3. Looking west, towards Yerba Buena Island, one of the last remaining 288' truss sections being hauled away.



# 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



Lowering 288' truss sections, looking west towards Treasure Island.

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. Marine foundations E5 and E4 were demolished by implosion in October 2016. Caltrans obtained environmental permits to remove marine foundations E4 through E18 by implosion. The removal of the superstructure trusses has advanced faster than expected, and provides Caltrans and their marine demolition contractor the opportunity to complete all implosions by the end of this year. Caltrans is currently seeking environmental approvals to implode all piers this year, and in parallel, is seeking permits from resource agencies for a "retain in place" for Foundations E2, and E19 through E23.

## 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.



Self Anchored Suspension Bridge Superstructure, looking east.

**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. The contract was accepted in September 2015 and is currently under the Public Works Arbitration Program, where the contractor’s claim will be reviewed.

In May 2016, the Toll Bridge Program Oversight Committee (TBPOC) approved the re-grouting of the tower anchor rods based on recommendations from Caltrans and the peer review group. A contract for \$8.5 million was expeditiously awarded to the apparent low bidder on October 10, 2016, work is progressing in the field.



## 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. Cost 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, as of the first quarter 2017, is currently \$41.94 million in accordance with the TBPOC approved budget. As of the end of the first quarter of 2017, the 50 percent probable draw on program contingency is \$123 million. The potential draw ranges from about \$50 million to \$200 million (refer to Figure 1). The \$123 million

probable draw on program contingency gives a forecast deficit of \$81.1 million at program completion to the current approved program budget. This represents a \$16 million improvement in the program’s bottom line since last quarter. The bottom line trend has been improving for the last five quarters, with the forecast deficit decreasing by \$62 million (43%) since it peaked at \$143.2 million in the third quarter of 2015.

Since 2010, the TBPOC has approved the removal of \$483 million from the TBSRP budget (consisting of Antioch Savings (4/12/10) \$137 million, Dumbarton Savings (9/02/10) \$216 million and Program Contingency Redirection (11/05/13) \$130 million), bringing the current approved program 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.

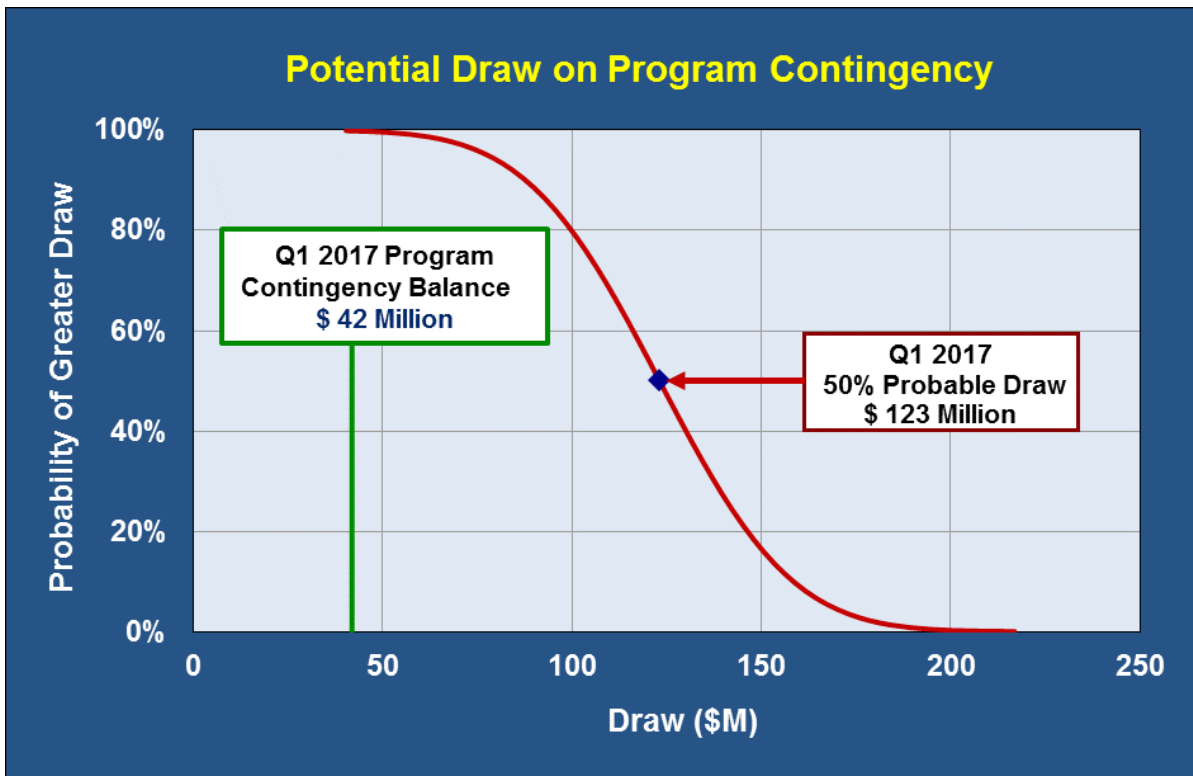


Figure 1 – Potential Draw on Program Contingency<sup>1</sup>

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

## RISK MANAGEMENT DEVELOPMENTS

### SFOBB East Span COS Budget

**Budget to Completion:** The first quarter 2017 COS forecast to completion is \$1,384.6 million, which results in a cost variance of \$56.1 million to the current budget. This is a \$6.8 million improvement over the last quarter and a \$20.2 million improvement over the fourth quarter 2015 forecast, when the COS forecast peaked at \$1,404.8 million. The current approved budget of \$1,328.5 million for SFOBB East Span COS will fund the program COS through the end of the 2016/17 fiscal year.

### Expenditures vs. Budget for first nine months 2016/17

**Fiscal Year:** On September 8, 2016, the TBPOC approved a total COS budget of \$23.0 million for the 2016/17 fiscal year, an additional \$1 million COS budget for advancement of the Marine Foundation removal work was approved by the TBPOC on February 7, 2017, bringing the final COS budget for 16/17 fiscal year to \$24 million. Actual expenditures for the nine months of 2016/17 are estimated at \$13.1 million. Expenditures through March 31, 2017 were within the approved budget of \$18.0 million for this first nine months of fiscal year 2016/17.

### 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 forwarded to the contractor on November 5, 2015 and since the total amount paid exceeded the amount due by \$8.5 million, the contractor owed a payment to the Department for that amount. 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 and filed for arbitration on May 23, 2016. The claims are now subject to the Public Works Contract Arbitration Program and could take many quarters to reach a conclusion.



### SAS Tower Anchor Rod Grouting Contract

**Award of Contract:** The scope of work for the repair of the Tower Anchor Rod Grouting was approved by the TBPOC on May 12, 2016. The TBPOC authorized \$12 million in Capital funds and \$3 million in COS costs to inspect and administer that contract. Caltrans procured the contract with a low bid Director's Order which helps

expedite the work, yet achieves the best price possible. A contract for \$8.5 million was expeditiously awarded to the apparent low bidder on October 10, 2016. As of March 31, 2017 the project has successfully water-jetted 50% and re-grouted 30% of the rods, work is progressing well in the field.

### Yerba Buena Island Transition Structure #2 Contract

**Unstable Slopes:** During the winter of 2015/16, the YBITS #2 contractor began constructing some of the YBITS #2 slope work and encountered two significant slope failures. The work on these slopes was affected by the late winter and the slope failures. The project had identified several risks to the construction of the project's slope stabilization (e.g. unstable slopes, extra SWPPP required, differing site conditions) that could potentially increase the costs of this work.

The implementation of the new Southgate Road Realignment alternative has significantly reduced this risk by deleting the large retaining wall work from this contract and transferring it to the San Francisco Ramps project.

Because of recent storm drain improvements made on YBI, the project team has been successful in preventing water from outside the Goat Slope getting to the slope this season, and thus avoided the likelihood of slope stability issues this year.

### 504'/288' Dismantling Contract

**Successful Removal of Last Truss:** The successful removal of the last superstructure span puts the contractor on schedule to deliver all the footings to the Marine Foundations Removal contractor ahead of the project milestones. It gives the program the opportunity to remove piers E4 to E18 by implosion in 2017. It is likely

the contractor will be finished with construction early in the third quarter of 2017 instead of the contractual date in the first quarter of 2018. This will allow the program to achieve significant COS savings on the 504'/288' Dismantling Contract and also potentially advance the Marine Foundation Removal E4 to E18 contract to completion in the first half of 2018.

#### **Marine Foundation Removal Contract (E4 to E18)**

##### **Opportunity to Finish Work in the 2017 Implosion Season:**

The early completion of the 504/288 contract gives the Marine Structures Dismantling contract the opportunity to deliver the contract a year early. Negotiations with the Marine Structure Dismantling contractor have determined that they will be able to complete all the work in the 2017 season if they were allowed to begin mechanical dismantling by March 1, 2017 and implode multiple footings during the 2017 three-month window.

#### **Marine Foundation Removal Contract (E2, E19 to E22)**

##### **Discussions with Environmental Agencies on the retention of the footings:**

The Environmental team has begun discussions with the Environmental Agencies on the feasibility of retaining the remaining marine foundations. Initial discussions indicate that the Army Corp of Engineers will require a new environmental impact assessment if the footings are to be left in place, a new environmental document could take several years to complete. Per the TBPOC's request, the project team is developing an advanced planning study to show the possibilities of incorporating the old piers into a public access facility to the Bay. The goal is to develop a plan that results in net savings over the cost of removing all the piers, but it is likely that the cost of retaining piers E18 to E22 on the Oakland side will exceed the cost of removing the piers, while the cost of retaining the E2 will likely be a lot less than removing that pier.

## **RISK MANAGEMENT LOOK AHEAD**

#### **SFOBB East Span COS Budget**

**Budget Increase:** The current approved budget of \$1,328.5 million for SFOBB East Span COS will run out by the end of 2017. In the second quarter of 2017, the BATA board will need to approve the TBPOC approved 2017/18 COS allocation and an increase in the overall SFOBB East Span COS budget by a commensurate amount. Additional budget adjustments from program contingency will be required for each fiscal year through program completion.

#### **Self-Anchored Suspension Span Contract**

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

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

**Completion of the Slope Work:** Contract and CCO #44 slope work represent the biggest risk to the project going forward, work will continue through the summer and into the fall of 2017, project plans to complete the contractual and added work by October 30th 2017.

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

**Close Out of the Project:** All work in the field will be complete by the end of the second quarter of 2017. Project close out will follow soon thereafter. The project team expects to expedite close out as no claims are expected to be outstanding on the project by the end of the second quarter of 2017.



#### **Marine Foundation Removal Contract (E4 to E18)**

##### **Advancing All Implosions (E6 through E18) into 2017:**

The demolition work to date has been completed well and offers opportunities for the remaining piers to be removed from the waters of the bay with environmental stewardship and efficiency. Current contract condition schedule the implosions of Piers E6 through E11 during September 1, 2017 through November 30, 2017 and Piers E12 through E18 during September 1, 2018 through November 30, 2018. These dates were established based on the contracted date for the 504-288 contractor to deliver the last pier to the State in March 2018. With the high level of success on the demolition of the old bridge to date, a new opportunity has become available to complete the work imploding Piers E6 through E18 an entire year early. The project team will work with the Contractor, the environmental agencies and the TBPOC to avail of this opportunity that will significantly reduce COS costs going forward.

#### **Marine Foundation Removal Contract (E2, E19 to E22)**

##### **Complete Advanced Planning Study:**

The project team will complete an advanced planning study to show the possibilities of incorporating the old piers into a public access facility to the Bay. Once a feasible plan is developed it will need to be approved by the TBPOC prior to submitting to the Environmental agencies for consideration.

## 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 March 31, 2017</b>	<b>Budgeted</b>	<b>Funding Available &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>8,826.1</b>
<b>Remaining Unallocated</b>		<b>599.8</b>
<b>Expenditures :</b>		
Capital Outlay		6,768.8
State Operations		1,861.6
Antioch and Dumbarton Expenditures by BATA		14.6
	<b>Total Expenditures</b>	<b>8,645.0</b>
<b>Encumbrances :</b>		
Capital Outlay		179.0
State Operations		2.1
	<b>Total Encumbrances</b>	<b>181.0</b>
<b>Total Expenditures and Encumbrances</b>		<b>8,826.1</b>
<p><sup>(1)</sup> The Vincent Thomas Bridge state funds contribution was finalized in legislation and statutes to be \$6.9 million and no additional funds were identified. The program has identified an opportunity for an additional funding of \$14.8 million from Toll Bridge excess right of way sales, which will be credited to be program in the coming quarters.</p> <p><sup>(2)</sup> The California Transportation Commission adopted a new schedule and changed the PTA/SHA split on December 15, 2005.</p> <p><sup>(3)</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.</p> <p><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. No other federal funds will be used on this project in the future.</p>		

## 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 March 31, 2017, 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 (Actual)	2006-07 (Actual)	2007-08 (Actual)	2008-09 (Actual)	2009-10 (Actual)	2010-11 (Actual)	2011-12 (Actual)	2012-13 (Actual)	2013-14 (Actual)	Total
AB 1171	SHA	290									290
	PTA	80	40								120
	Highway Bridge Replacement and Rehabilitation (HBRR)	100	100	100	42						342
	Contingency				1	99	100	100	148		448
AB 144	SHA*	2	8				53	50	17		130
	Motor Vehicle Account (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.  
 \*\*\* Actual as of March 2017

**Table 3—Toll Bridge Program Oversight Committee  
Estimated Expenses: July 1, 2005 through March 31, 2017 (\$ Millions)**

Agency/Program Activity	Expenses
<b>BATA</b>	<b>3.0</b>
<b>Caltrans</b>	<b>3.6</b>
<b>CTC</b>	<b>3.3</b>
<b>Reporting</b>	<b>5.9</b>
<b>Total Program</b>	<b>15.8</b>

## Quarterly Environmental Compliance Highlights

Overall environmental compliance for the San Francisco-Oakland Bay Bridge East Span Seismic Safety Project (SFOBB Project) has been a major success during the first quarter of 2017. The tasks for the current quarter were focused on compliance, monitoring, and environmental permitting.

### Key Successes

Bird monitoring was conducted weekly in compliance with the project's Bird Monitoring Plans. The goal of this monitoring was to document potential impacts to birds from construction activities. Monitors did not observe any indication that birds were disturbed due to the original east span dismantling activities. There were no delays to work as a result of bird-related issues.

Bird deterrents were installed on the SFOBB original east span in the 504/288 contract and Marine Foundation contract areas throughout the first quarter of 2017. Meetings have been held periodically throughout the quarter with the Caltrans biologists, resident engineer, and construction contractors to discuss bird management issues and the ongoing strategy for the installation of nesting bird impact avoidance management measures.

In early April 2017, after removal of the last 504'/288' steel span, several Double Crested Cormorants have been observed frequenting the roosting platforms built on the Skyway project. The cormorants are exhibiting nesting behavior and it is hoped the colony will now take up residence there this nesting season. The environmental team will update further developments in the Q2 2017 report.

In compliance with the regulatory requirements associated with permits and approvals authorizing the implosion of Piers E4 and E5, Caltrans submitted the SFOBB Project Marine Foundation Removal Project Piers E4 and E5 Annual Environmental Post-Implosion Report to all applicable resource agencies on February 2, 2017. The environmental team worked closely with the project team to assemble the report, and no significant compliance issues were noted in the report.

An inter-agency meeting was held with San Francisco Bay Conservation and Development Commission (BCDC), United States Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), United States Army Corps of Engineers (USACE), United States Coast Guard (USCG), California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB) and other project stakeholders on March 1, 2017 to present the results of the Pier E4 and E5 implosions and

request agency feedback on Caltrans' upcoming pier removal and retention strategy. A summary was given of the pier implosions and clean-up activities. Caltrans presented preliminary hydroacoustic monitoring, fisheries monitoring, marine mammal monitoring, bird monitoring, and water quality monitoring results.

The environmental team worked with the overall project team to continue developing a plan for early completion of marine foundation removal contract during the 4th quarter of 2016. The environmental team analyzed potential impacts on listed species that may result from activities associated with the early completion proposal. Teleconferences were held with natural resource agencies (i.e., NMFS, USACE, CDFW, BCDC, and RWQCB) to discuss the proposal. The environmental team prepared materials in support of Caltrans' determination that there would be no effect to listed species from the proposed activities and submitted to NMFS.

The environmental team assembled the Incidental Harassment Authorization (IHA) application package for submittal to the NMFS Office of Protected Resources throughout the 1st quarter of 2017. This IHA will authorize limited take of marine mammals resulting from implosion activities in 2017. The final permit application will be submitted to NMFS in early April 2017.

The environmental team, at the request of BATA and the TBPOC, continued to support the analysis associated with retention of Piers E2 and Piers E19 to E23 of the SFOBB original east span during the 1st quarter of 2017. Staff attended meetings and started an analysis of the design alternatives in support of the Advanced Planning Study for Piers E2 and E19 to E23.

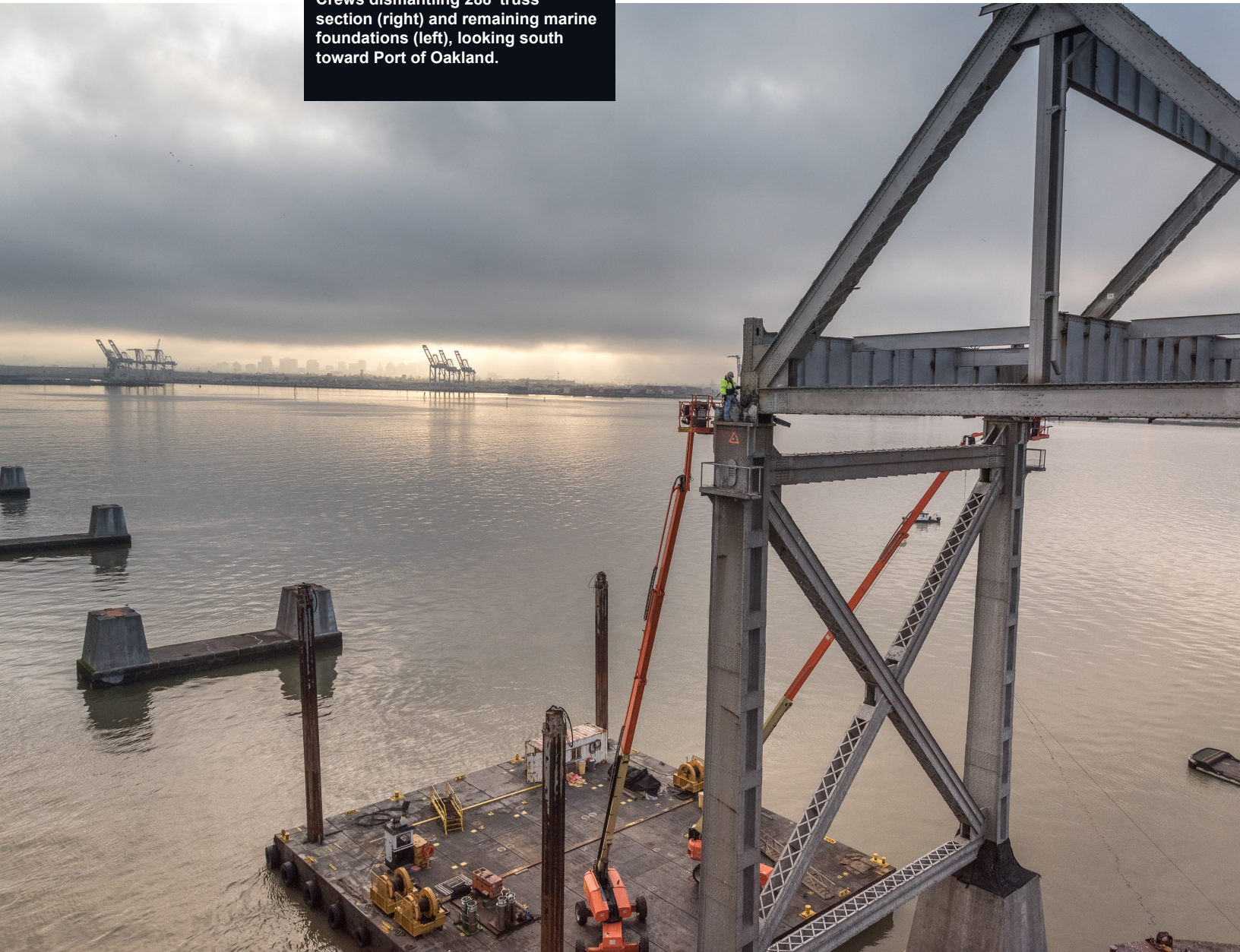
The environmental team coordinated a meeting with the East Bay Regional Park District (EBRPD) on February 14, 2017 to discuss opportunities to satisfy the SFOBB Project shorebird roosting habitat mitigation requirement through a funding transfer for improvements to existing shorebird habitat in Hayward Regional Shoreline. The environmental team will continue to coordinate the fund transfer with EBRPD and other project partners, including BCDC and the Sierra Club, in the 2nd quarter of 2017.



Cormorants moving into their new home under the new SFOBB East Span.



Crews dismantling 288' truss section (right) and remaining marine foundations (left), looking south toward Port of Oakland.







## APPENDICES

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B. TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures through March 31, 2017.....	22
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## Appendix A-1: TBSRP AB 144/SB 66/AB 1175 Baseline Budget, Forecasts and Expenditures Through March 31, 2017, by bridge including program contingency (\$ Millions)

Contract	AB 144/SB 66/AB 1175	Approved Changes	Current Approved Budget (3/2017)	Cost to Date (3/2017)	Cost Forecast (3/2017)	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	369.2	1,328.5	1,313.5	1,384.6	56.2
Capital Outlay Construction	4,492.2	679.2	5,171.4	4,953.4	5,226.9	55.6
Other Budgeted Capital	35.1	(32.8)	2.3	0.7	0.7	(1.6)
<b>Total</b>	<b>5,486.6</b>	<b>1,015.6</b>	<b>6,502.2</b>	<b>6,267.6</b>	<b>6,612.2</b>	<b>110.0</b>
<b>SFOBB West Approach Replacement</b>						
Capital Outlay Support	120.0	(0.5)	119.5	119.4	119.5	-
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>457.6</b>	<b>(1.9)</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	126.7	(0.3)
Capital Outlay Construction	698.0	(94.9)	685.1	668.1	668.1	(17.0)
<b>Total</b>	<b>914.0</b>	<b>(101.9)</b>	<b>812.1</b>	<b>794.8</b>	<b>794.8</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>114.1</b>	<b>-</b>	<b>114.2</b>	<b>114.2</b>	<b>114.2</b>	<b>-</b>
<b>San Mateo-Hayward Bridge 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 Cont. Through March 31, 2017, by bridge including program contingency (\$ Millions)

Contract	AB 144/SB 66/AB 1175	Approved Changes	Current Approved Budget (3/2017)	Cost to Date (3/2017)	Cost Forecast (3/2017)	At-Completion Variance
a	c	d	e = c + d	f	g	h = g - e
<b>Antioch Bridge</b>						
Capital Outlay Support	0.0	24.1	24.1	17.4	24.2	0.1
Capital Outlay Support by BATA	0.0			6.7		
Capital Outlay Construction	0.0	47.0	47.0	47.0	47.0	-
<b>Total</b>	<b>267.0</b>	<b>71.1</b>	<b>71.1</b>	<b>71.1</b>	<b>71.2</b>	<b>0.1</b>
<b>Dumbarton Bridge</b>						
Capital Outlay Support	0.0	46.0	46.0	39.5	47.5	1.5
Capital Outlay Support by BATA	0.0			7.9		
Capital Outlay Construction	0.0	66.4	66.4	64.4	64.7	(1.7)
<b>Total</b>	<b>483.0</b>	<b>112.4</b>	<b>112.4</b>	<b>111.8</b>	<b>112.2</b>	<b>(0.2)</b>
Subtotal Capital Outlay Support	1,682.9	182.0	1,864.8	1,850.5	1,922.0	57.2
Subtotal Capital Outlay	6,787.1	225.9	7,013.0	6,768.3	7,047.2	34.3
Subtotal Other Budgeted Capital	35.1	(32.8)	2.3	0.7	0.7	(1.6)
Miscellaneous Program Costs	30.0	-	30.0	25.5	25.5	(4.5)
Subtotal Toll Bridge Seismic Retrofit Program	8,535.0	375.0	8,910.0	8,645.0	8,995.3	85.3
Net Programmatic Risks**	0.0	-	-	-	37.8	37.8
Program Contingency	900.0	(858.1)	42.0	-	-	-
<b>Total Toll Bridge Seismic Retrofit Program***</b>	<b>9,435.0</b>	<b>(483.0)</b>	<b>8,952.0</b>	<b>8,645.0</b>	<b>9,033.2</b>	<b>81.1</b>
Forecast Deficit To Current TBPOC Approved Budget:					(81.1)	
Forecast Surplus To Total TBSRP Budget	401.9					
Forecast Deficit To Current TBPOC Approved Budget:			(81.1)			

\* 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.

\*\* Programmatic Risks: Consists of \$20.9 million in Q4 2016 Program Risk Register costs plus, \$16.9 in Richmond-San Rafael (R/SR) Bridge project contingency used for R/SR deck joint replacement.

\*\*\* 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.

(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 March 31, 2017, by major contract, without program contingency (\$ Millions)

Bridge	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances as of (3/2017) see Note (1)	Estimated costs not yet spent or encumbered as of (3/2017)	Total Forecast as of (3/2017)
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	472.6	471.9	(0.1)	471.8
<b>Total</b>	<b>617.5</b>	<b>617.5</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	(0.1)	126.7
Capital Outlay	698.0	685.1	667.5	0.6	668.1
Project Reserves	82.0	-	-	-	-
<b>Total</b>	<b>914.0</b>	<b>812.1</b>	<b>794.3</b>	<b>0.5</b>	<b>794.8</b>
<b>West Span Retrofit</b>					
Capital Outlay Support	75.0	74.8	74.9	(0.1)	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>302.3</b>	<b>3.0</b>	<b>305.3</b>
<b>West Approach</b>					
Capital Outlay Support	120.0	119.5	119.5	-	119.5
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>5.9</b>	<b>457.6</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	1,237.3	(1.2)	1,236.1
<b>Total</b>	<b>1,490.0</b>	<b>1,418.4</b>	<b>1,418.5</b>	<b>(1.2)</b>	<b>1,417.3</b>
<b>SFOBB East Span -SAS- Superstructure</b>					
Capital Outlay Support	214.6	489.1	512.4	4.5	516.9
Capital Outlay	1,753.7	2,034.8	2,046.9	(10.0)	2,036.9
<b>Total</b>	<b>1,968.3</b>	<b>2,523.9</b>	<b>2,559.3</b>	<b>(5.5)</b>	<b>2,553.8</b>
<b>SFOBB East Span -SAS- Tower Anchor Rod Grouting</b>					
Capital Outlay Support	0.0	3.0	1.3	2.0	3.3
Capital Outlay	0.0	12.0	9.2	0.8	10.0
<b>Total</b>	<b>0.0</b>	<b>15.0</b>	<b>10.5</b>	<b>2.8</b>	<b>13.3</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	-	10.2
Capital Outlay	15.7	15.2	15.2	-	15.2
<b>Total</b>	<b>26.2</b>	<b>25.4</b>	<b>25.4</b>	<b>-</b>	<b>25.4</b>
<b>YBI Detour</b>					
Capital Outlay Support	29.5	87.7	87.9	-	87.9
Capital Outlay	131.9	473.3	473.4	-	473.4
<b>Total</b>	<b>161.4</b>	<b>561.0</b>	<b>561.3</b>	<b>-</b>	<b>561.3</b>

## Appendix A-2: TBSRP AB 144/SB 66 Baseline Budget, Forecasts and Expenditures Cont.

Through March 31, 2017, by major contract, without program contingency (\$ Millions)

Contract	AB 144 Baseline Budget	TBPOC Current Approved Budget	Expenditures to date and encumbrances as of (3/2017) see Note (1)	Estimated costs not yet spent or encumbered as of (3/2017)	Total Forecast as of (3/2017)
a	b	c	d	e	f = d + e
<b>YBI - Transition Structures</b>					
Capital Outlay Support	78.7	140.5	138.8	23.2	162.0
Capital Outlay	299.4	308.1	309.0	10.2	319.2
<b>Total</b>	<b>378.0</b>	<b>448.6</b>	<b>447.8</b>	<b>33.4</b>	<b>481.2</b>
<b>Oakland Touchdown</b>					
Capital Outlay Support	74.4	119.4	118.2	0.8	119.0
Capital Outlay	283.8	330.6	325.4	1.1	326.5
<b>Total</b>	<b>358.2</b>	<b>450.0</b>	<b>443.6</b>	<b>1.9</b>	<b>445.5</b>
<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	135.9
<b>Total</b>	<b>383.1</b>	<b>339.2</b>	<b>324.4</b>	<b>10.3</b>	<b>334.7</b>
<b>Existing Bridge Demolition</b>					
	0.0				
Capital Outlay Support	79.7	61.9	30.1	38.6	68.7
Capital Outlay	239.2	320.0	293.0	80.2	373.2
<b>Total</b>	<b>318.9</b>	<b>381.9</b>	<b>323.1</b>	<b>118.8</b>	<b>441.9</b>
<b>Antioch Bridge</b>					
Capital Outlay Support	0.0	24.1	17.4	0.1	17.5
Capital Outlay Support by BATA	0.0		6.7	-	6.7
Capital Outlay	0.0	47.0	47.0	-	47.0
<b>Total</b>	<b>267.0</b>	<b>71.1</b>	<b>71.1</b>	<b>0.1</b>	<b>71.2</b>
<b>Dumbarton Bridge</b>					
Capital Outlay Support	0.0	46.0	39.6	-	39.6
Capital Outlay Support by BATA	0.0		7.9	-	7.9
Capital Outlay	0.0	66.4	64.7	-	64.7
<b>Total</b>	<b>483.0</b>	<b>112.4</b>	<b>112.2</b>	<b>-</b>	<b>112.2</b>
Miscellaneous Program Costs	30.0	30.0	25.5	-	25.5
Total Capital Outlay Support <sup>(2)</sup>	1,712.9	1,894.8	1,878.4	69.0	1,947.4
Total Capital Outlay	6,822.1	7,015.3	6,947.7	101.2	7,048.9
<b>Program Total</b>	<b>8,535.0</b>	<b>8,910.1</b>	<b>8,826.1</b>	<b>170.2</b>	<b>8,996.3</b>

(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 March 31, 2017 (\$ Millions)

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (3/2017) e = c + d	Cost to Date (3/2017) f	Cost Forecast (3/2017) g	At- Completion Variance h = g - e
<b>San Francisco-Oakland Bay Bridge East Span Replacement Project</b>						
<b>East Span - SAS Superstructure</b>						
Capital Outlay Support	214.6	274.5	489.1	511.7	516.9	27.8
Capital Outlay Construction	1,753.7	281.1	2,034.8	1,973.4	2,036.9	2.1
<b>Total</b>	<b>1,968.3</b>	<b>555.6</b>	<b>2,523.9</b>	<b>2,485.1</b>	<b>2,553.8</b>	<b>29.9</b>
<b>SAS Tower Anchor Rod Grouting</b>						
Capital Outlay Support	0.0	-	3.0	0.9	3.3	0.3
Capital Outlay Construction	0.0	-	12.0	4.9	10.0	(2.0)
<b>Total</b>	<b>0.0</b>	<b>-</b>	<b>15.0</b>	<b>5.8</b>	<b>13.3</b>	<b>(1.7)</b>
<b>SAS W2 Foundations</b>						
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	-
<b>Total</b>	<b>36.4</b>	<b>(0.7)</b>	<b>35.7</b>	<b>35.7</b>	<b>35.7</b>	<b>-</b>
<b>YBI South/South Detour</b>						
Capital Outlay Support	29.5	58.3	87.7	87.9	87.9	0.2
Capital Outlay Construction	131.9	341.4	473.3	473.4	473.4	0.1
<b>Total</b>	<b>161.4</b>	<b>399.7</b>	<b>561.0</b>	<b>561.3</b>	<b>561.3</b>	<b>0.3</b>
<b>East Span - Skyway</b>						
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	1,236.1	(1.1)
<b>Total</b>	<b>1,490.0</b>	<b>(71.6)</b>	<b>1,418.4</b>	<b>1,416.8</b>	<b>1,417.3</b>	<b>(1.1)</b>
<b>East Span - SAS E2/T1 Foundations</b>						
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	-
<b>Total</b>	<b>366.0</b>	<b>(62.8)</b>	<b>303.2</b>	<b>303.2</b>	<b>303.2</b>	<b>-</b>
<b>YBI Transition Structures (see notes below)</b>						
Capital Outlay Support	78.7	61.8	140.5	136.9	162.0	21.5
Capital Outlay Construction	299.4	8.8	308.1	295.7	319.2	11.1
<b>Total</b>	<b>378.0</b>	<b>70.6</b>	<b>448.6</b>	<b>432.6</b>	<b>481.2</b>	<b>32.6</b>
<b>* YBI- Transition Structures</b>						
Capital Outlay Support			16.4	16.4	16.4	-
Capital Outlay Construction			-	-	-	-
<b>Total</b>			<b>16.4</b>	<b>16.4</b>	<b>16.4</b>	<b>-</b>
<b>* YBI- Transition Structures Contract No. 1</b>						
Capital Outlay Support			72.1	69.9	70.7	(1.4)
Capital Outlay Construction			203.7	203.2	203.8	0.1
<b>Total</b>			<b>275.8</b>	<b>273.1</b>	<b>274.5</b>	<b>(1.3)</b>
<b>* YBI- Transition Structures Contract No. 2</b>						
Capital Outlay Support			51.0	50.3	73.9	22.9
Capital Outlay Construction			101.1	92.4	113.2	12.1
<b>Total</b>			<b>152.1</b>	<b>142.7</b>	<b>187.1</b>	<b>35.0</b>
<b>* YBI- Transition Structures Contract No. 3 Landscape</b>						
Capital Outlay Support			1.0	0.3	1.0	-
Capital Outlay Construction			3.3	-	2.2	(1.1)
<b>Total</b>			<b>4.3</b>	<b>-</b>	<b>3.2</b>	<b>(1.1)</b>

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures

Through March 31, 2017 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (3/2017)	Cost to Date (3/2017)	Cost Forecast (3/2017)	At- Completion 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	119.0	(0.4)
Capital Outlay Construction	283.8	46.8	330.6	326.5	326.5	(4.1)
<b>Total</b>	<b>358.2</b>	<b>91.8</b>	<b>450.0</b>	<b>445.5</b>	<b>445.5</b>	<b>(4.5)</b>
<b>* OTD Prior-to-Split Costs</b>						
Capital Outlay Support			20.1	20.0	20.0	(0.1)
Capital Outlay Construction			-	-	-	-
<b>Total</b>			<b>20.1</b>	<b>20.0</b>	<b>20.0</b>	<b>(0.1)</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			51.2	51.2	51.2	-
Capital Outlay Construction			205.3	202.8	202.8	(2.5)
<b>Total</b>			<b>256.5</b>	<b>254.0</b>	<b>254.0</b>	<b>(2.5)</b>
<b>* OTD No. 2 (Eastbound)</b>						
Capital Outlay Support			37.6	38.1	38.1	0.5
Capital Outlay Construction			72.6	71.2	71.2	(1.4)
<b>Total</b>			<b>110.2</b>	<b>109.3</b>	<b>109.3</b>	<b>(0.9)</b>
<b>* OTD Touchdown 2 Detour<sup>(2)</sup></b>						
Capital Outlay Support			8.1	8.0	8.0	(0.1)
Capital Outlay Construction			47.0	46.7	46.7	(0.3)
<b>Total</b>			<b>55.1</b>	<b>54.7</b>	<b>54.7</b>	<b>(0.4)</b>
<b>* OTD Electrical Systems</b>						
Capital Outlay Support			1.5	0.8	0.8	(0.7)
Capital Outlay Construction			-	-	-	-
<b>Total</b>			<b>1.5</b>	<b>0.8</b>	<b>0.8</b>	<b>(0.7)</b>
<b>Existing Bridge Dismantling</b>						
Capital Outlay Support	79.7	(17.8)	61.9	30.4	68.7	6.8
Capital Outlay Construction	239.2	80.8	320.0	201.3	373.2	53.2
<b>Total</b>	<b>318.9</b>	<b>63.0</b>	<b>381.9</b>	<b>231.7</b>	<b>441.9</b>	<b>60.0</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			1.6	1.6	1.6	
Capital Outlay Construction			69.0	68.5	69.0	
<b>Total</b>			<b>70.6</b>	<b>70.1</b>	<b>70.6</b>	
<b>* 504/288 Sections</b>						
Capital Outlay Support			21.0	8.9	14.8	
Capital Outlay Construction			103.5	69.8	83.5	
<b>Total</b>			<b>124.5</b>	<b>78.7</b>	<b>98.3</b>	

## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures

Through March 31, 2017 (\$ Millions) Cont.

Contract	AB 144 / SB 66 Budget (07/2005)	Approved Changes	Current Approved Budget (3/2017)	Cost to Date (3/2017)	Cost Forecast (3/2017)	At- Completion Variance
a	c	d	e = c + d	f	g	h = g - e
			35.4	16.0	48.4	
*Marine Foundations			147.5	63.1	220.7	
Capital Outlay Support			182.9	79.1	269.1	
Capital Outlay Construction			-	5.8	5.8	
Total						
Sunk Cost for Marine Foundation			-	4.0	4.0	
Pier-3 Demonstration Project			17.5	16.8	16.8	
Capital Outlay Support			17.5	20.8	20.8	
Capital Outlay Construction						
Total			-	6.3	38.7	
Remaining Marine Foundations <sup>2</sup>			130.0	46.2	203.9	
Capital Outlay Support			130.0	52.5	242.6	
Capital Outlay Construction						
Total			-	5.8	25.8	
Pier-E4 to Pier-E18			130.0	46.2	159.0	
Capital Outlay Support			130.0	52.0	184.8	
Capital Outlay Construction						
Total			-	0.5	12.9	
Pier-E2 and Pier-E19 to Pier-E22			-	-	44.9	
Capital Outlay Support			-	0.5	57.8	
Capital Outlay Construction						
Total			-	1.1	1.1	-
YBI/SAS Archeology			-	1.1	1.1	-
Capital Outlay Support	1.1	-	2.2	2.2	2.2	-
Capital Outlay Construction	1.1					
Total	2.1	(0.3)	2.7	2.7	2.7	-
YBI - USCG Road Relocation		(0.2)	2.8	2.8	2.8	-
Capital Outlay Support	3.0	(0.5)	5.5	5.5	5.5	-
Capital Outlay Construction	3.0					
Total	6.0	(0.1)	6.4	6.4	6.4	-
YBI - Substation and Viaduct		(0.3)	11.3	11.3	11.3	-
Capital Outlay Support	6.5	(0.4)	17.7	17.7	17.7	-
Capital Outlay Construction	11.6					-
Total	18.1	-	2.5	2.5	2.5	-
Oakland Geofill		-	8.2	8.2	8.2	-
Capital Outlay Support	2.5	-	10.7	10.7	10.7	-
Capital Outlay Construction	8.2					
Total	10.7	-	1.8	1.8	1.8	-
Pile Installation Demonstration Project		(0.1)	9.2	9.3	9.3	-
Capital Outlay Support	1.8	(0.1)	11.0	11.1	11.1	-
Capital Outlay Construction	9.2	0.0	9.2	9.3	9.3	0.0
Total	11.0	0.0	11.0	11.0	11.0	0.0



## Appendix B: TBSRP (SFOBB East Span Only) AB 144/SB 66 Baseline Budget, Forecasts and Expenditures

Through March 31, 2017 (\$ Millions) Cont.

Contract a	AB 144 / SB 66 Budget (07/2005) c	Approved Changes d	Current Approved Budget (3/2017) e = c + d	Cost to Date (3/2017) f	Cost Forecast (3/2017) g	At- Completion Variance 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	16.9	(1.4)
Total	21.0	5.5	26.5	25.1	25.1	(1.4)
<b>Right-of-Way and Environmental Mitigation</b>						
Capital Outlay Support	0.0	-	-	-	-	-
Capital Outlay & Right-of-Way	72.4	-	72.4	60.9	70.0	(2.4)
Total	72.4	-	72.4	60.9	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	97.8	-
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	145.9	-
<b>Subtotal Capital Outlay Support</b>						
	959.3	369.2	1,328.5	1,313.5	1,384.6	56.2
<b>Subtotal Capital Outlay Construction</b>						
	4,492.2	679.2	5,171.4	4,953.4	5,226.9	55.6
<b>Other Budgeted Capital</b>						
	35.1	(32.8)	2.3	0.7	0.7	(1.6)
<b>Total SFOBB East Span Replacement Project</b>						
	5486.6	1,015.6	6,502.2	6,267.6	6,612.2	110.0

(1) Current contract allotment to install two submarine electrical cables is \$5.7 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).



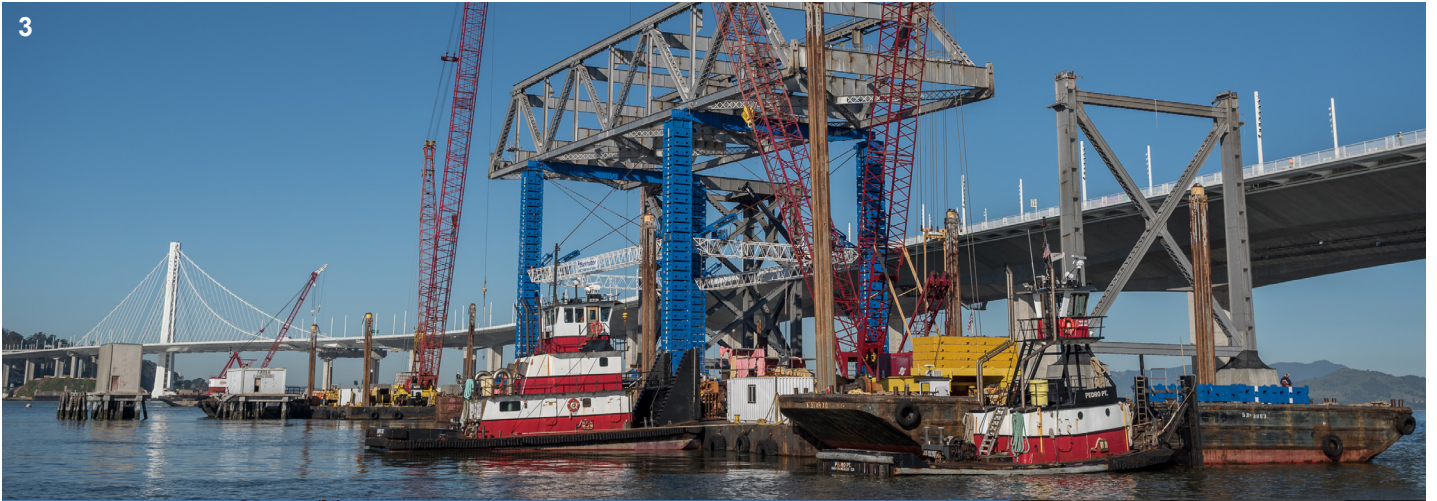
1

1. Crews preparing a 288' truss section for removal.
2. Looking west, towards Yerba Buena Island, one of the last remaining 288' truss sections being hauled away.
3. Looking west, 288' truss section removed.
4. Looking south, crews begin lowering 288' truss section.
5. Looking west, 288' truss section being hauled away.



2

3

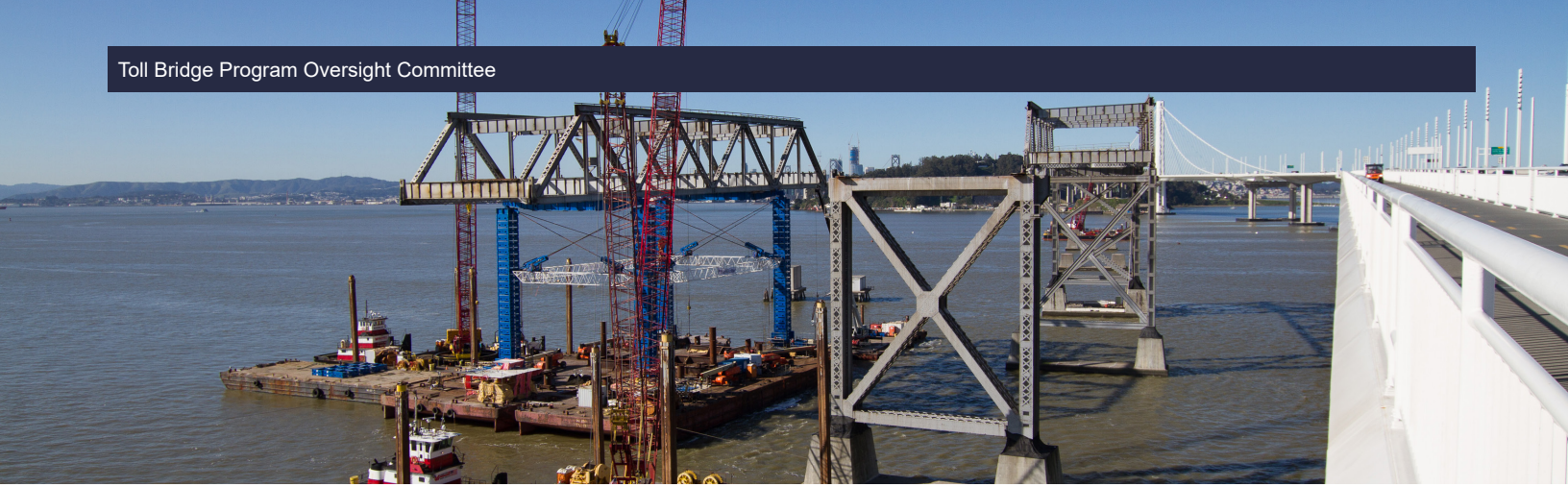


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## Appendix: Glossary of Terms

### 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 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.*

