

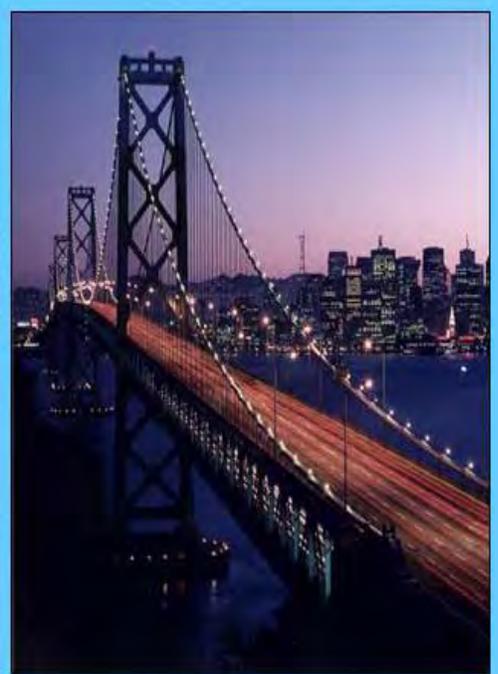
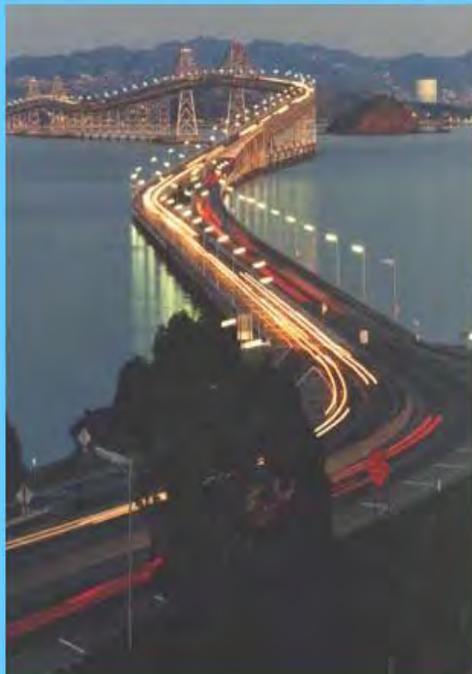


Toll Bridge Seismic Retrofit Program Report

First Quarter Report

Ending March 31, 2005

California Department of Transportation



DEPARTMENT OF TRANSPORTATION

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*Flex your power!
Be energy efficient!*

May 18, 2005

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Legislative Counsel
State Capitol, Room 3021
Sacramento, CA 95814

Mr. Gregory Schmidt
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 Ms. Boyer-Vine and Messrs. Schmidt and Wilson:

I am pleased to transmit the California Department of Transportation's (Department) "Toll Bridge Seismic Retrofit Report – First Quarter – 2005 Fiscal Year Report Ending March 31, 2005," prepared pursuant to California Streets and Highways Code Section 188.5(g).

Distribution to the Legislature has been made by the Department pursuant to Government Code Section 9795.

Sincerely,

A handwritten signature in black ink that reads "Will Kempton".

WILL KEMPTON
Director

Enclosure

c: Senate Transportation and Housing Committee
Assembly Transportation Committee
Senate Budget and Fiscal Review Committee
California Transportation Commission

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Executive Summary

The California Department of Transportation (Department) is submitting the 2005 First Quarter Report for the Toll Bridge Seismic Retrofit Program (TBSRP) in accordance with Assembly Bill (AB) 1717 (Committee on Transportation, Chapter 525, Statutes of 2003) which amended Section 188.5(g) of the Streets and Highways Code. This report provides for the following:

1. Information on the progress of each project in the program.
2. 2001 baseline budget for Capital Outlay (CO) and Capital Outlay Support (COS).
3. Current projected costs for CO and COS.
4. Expenditures to date.
5. Comparison of the 2001 baseline schedule to the March 2005 projected schedule.
6. Summary of the milestones achieved during the quarter.
7. Major risk issues assessment for remaining projects.

The Department is committed to submit this report within 45 days of the end of each quarter until the TBSRP is completed.

The TBSRP continues to reflect substantial progress for the projects that are under construction. Seismic retrofit work for the Richmond-San Rafael Bridge is expected to be complete by August 2005. As of April 2005, the San Francisco-Oakland Bay Bridge (SFOBB) West Approach project is over 44 percent complete and on schedule to be finished in 2009. The East Span Skyway contract is 71 percent complete in 69 percent of time allotted with 24 of 28 bridge piers completed, more than 50 percent of the 452 bridge pre-cast deck segments completed, and 124 of the 452 bridge deck segments erected.

Action by the Legislature regarding the appropriate choice for a design to complete construction of the East Span of the SFOBB and the elements of a funding plan to pay for program cost increases is required to complete the TBSRP. It is imperative that a decision be made expeditiously on the design and the funding for completion of the East Span of the SFOBB. The Department's goal continues to be building a seismically-safe bridge in the shortest time for the most reasonable and manageable cost. Without a consensus on the best course of action going forward, each day of delay on a decision drives up costs and puts the safety of the public at further risk in the event of a major earthquake. The delay costs due to escalation are more than \$400,000 per day.

When the Legislature adjourned in August 2004 without reaching agreement on a funding solution for completion of the East Span of the SFOBB with the Self-Anchored Suspension (SAS) design for the connector section, the Administration directed the Department to review all options for meeting the goal of completing a safe bridge as soon as possible and for the most reasonable cost. Consequently, the Department engaged in an intense consultation process with experts from the construction industry, transportation officials convened by the Federal Highway Administration (FHWA), and other stakeholders. Three basic options - the SAS Alternative design, several cable-stayed suspension alternatives, and a Skyway Extension Alternative - were examined during this process. Based on the input from the various external technical experts, industry input, and internal studies, the Department concluded that the best option for meeting the objectives is to continue with the Skyway design for completion of

the connector section. By continuing the Skyway design, it is possible to complete the East Span of the SFOBB in the same timeframe (or sooner) as the SAS design and with a reduced cost of approximately \$700 million as of the March 2005 estimate.

In the Department's August 2004 TBSRP Report to the Legislature (August 2004 report), the Department reported that current TBSRP funding based on AB 1171 is insufficient to complete the remaining seismic retrofit work. Bechtel Infrastructure Corporation (as consultant to the Metropolitan Transportation Commission / Bay Area Transportation Authority) agreed with this conclusion. At that time, the forecasted costs for the East Span of the SFOBB were based on the assumption that the SAS Alternative contract would be awarded by the end of September 2004. However, without a legislative funding solution being achieved last August, the project was not awarded, and the East Span continues to incur additional cost increases, as detailed in this report.

Based in part on recommendations of the Bureau of State Audits (BSA), the Department committed to developing and implementing an expanded written comprehensive risk management plan for the TBSRP to augment the established risk management protocols that exist and the actions that were being taken. It is anticipated that a fully documented risk management plan will be in place by July 2005. This quarterly report contains an update on identified risks for the remaining TBSRP work.

In summary, the current estimate to complete the TBSRP is \$7.776 billion plus a \$900 million contingency, for a total budget need of \$8.676 billion based on construction of the SAS design. This number represents

a June 2005 advertisement for the project, as costs continue to rise.

The current estimate to complete the TBSRP drops to \$7.211 billion plus a \$709 million contingency, for a total budget need of \$7.920 billion based on construction of a Skyway design for the connector span. This projection assumes a design decision and funding plan approval by June 30, 2005.

Completion of the TBSRP as proposed will result in a \$5.23 billion state contribution to seismic retrofit programs, including both toll bridge and non-toll bridge work.

It should be noted that 72 percent or \$3.76 billion of the total of all State funds for seismic safety (both non-toll and toll bridge) has gone to Bay Area projects. All other areas of California combined have received 28 percent (\$1.47 billion) of the funding.

Program Overview

Seven of the nine state-owned toll bridges were identified for seismic retrofit in the TBSRP:

1. Benicia-Martinez Bridge
2. Carquinez Bridge
3. San Mateo-Hayward Bridge
4. Vincent Thomas Bridge
5. San Diego-Coronado Bridge
6. Richmond-San Rafael Bridge
7. San Francisco-Oakland Bay Bridge (SFOBB)

Seismic retrofit of these complex structures present an extremely difficult engineering challenge and nowhere in the world has a bridge seismic safety program of this size been undertaken.

The first five structures listed above are complete and collectively were completed more than \$48 million under budget.

The Richmond-San Rafael Bridge retrofit is nearing completion (estimated to be finished in August 2005) and it is anticipated that the cost will be below the forecast shown in the August 2004 report.

The SFOBB is broken down into three sections: the Twin Tower West Span Suspension Bridge, the West approach to the SFOBB, and the SFOBB East Span. The West Span project is complete with a total expenditure slightly above the AB 1171 budget. The West Approach to the SFOBB is 44 percent complete and progressing well. Work is proceeding per plan and the Department projects that the project will be completed within the August 2004 estimate.

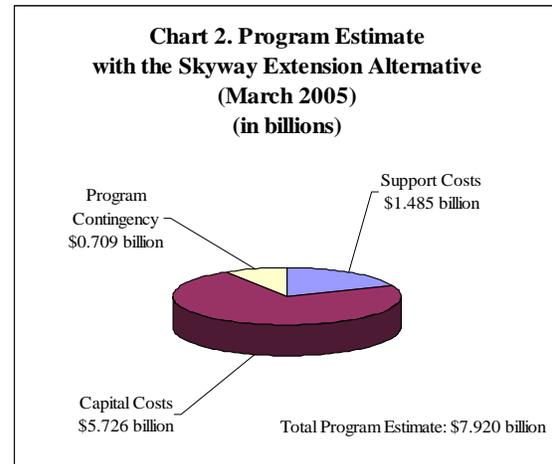
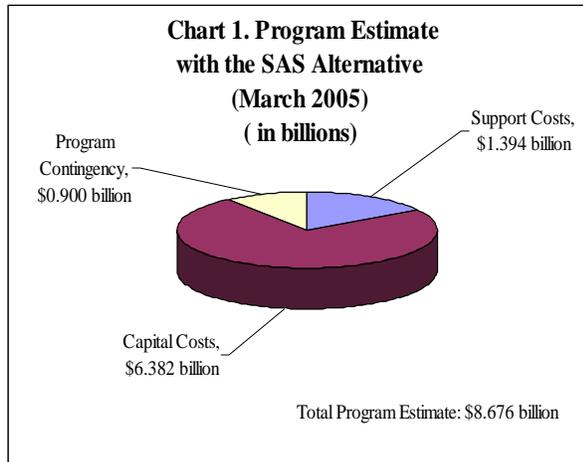
Tolls on two of the bridges (San Diego-Coronado Bridge, and Vincent Thomas Bridge) have been removed, reducing the number of State-owned toll bridges to seven. The Antioch and Dumbarton toll bridges are not included in the TBSRP.

SAS Alternative for SFOBB East Span

The total budget outlined in AB 1171 for the TBSRP is \$4.637 billion plus \$448 million in contingency funds. As outlined in the Department's August 2004 report, the current estimated costs to complete the TBSRP exceed the available budget. The August 2004 report forecasted \$6.053 billion for CO, \$1.352 billion for COS and \$900 million for the program contingency for a total of \$8.305 billion.

The estimate was based on the assumption that the SAS contract would be awarded in September 2004. Since this did not occur, costs for the SFOBB East Span have suffered escalation increases in CO and COS. Consequently, the March 2005 estimate reflects an increased TBSRP cost estimate of \$8.676 billion based on a proposed June 2005 advertisement for the SAS and a December 2005 award date (pending legislative approval of a funding plan). The estimate includes \$6.382 billion for CO, \$1.394 billion for COS, and \$900 million for program contingency. Please see *Chart 1 – Program Estimate with the SAS alternative (March 2005)* for an updated program estimate.

If a design decision is not made soon and a funding solution is not reached by June 2005, these costs will continue to rise.



Skyway Extension Alternative for SFOBB East Span

In December 2004, the Governor announced his decision to recommend the Skyway Extension Alternative for the connector span in lieu of the SAS Alternative. This announcement was based on outside experts and industry consultation summarized in the Department's December 8, 2004 Report "Findings and Recommendations for the Completion of the San Francisco-Oakland Bay Bridge East Span". If the decision is to build the Skyway Extension Alternative, then the March 2005 program estimate is reduced to \$7.920 billion, representing a savings of more than \$700 million. This estimate includes \$5.726 billion for CO, \$1.485 billion for COS, and \$709 million for program contingency. This estimate is based on the assumption that a design change is approved and a legislative funding solution is authorized by June 2005. Please see *Chart 2 - Program Estimate with the Skyway Extension Alternative (March 2005)* for the program estimate with this alternative.

Risk Management

The Department has prepared a draft Risk Management Plan (RMP) for the remaining SFOBB projects. The plan outlines steps and methods required to address the findings and recommendations of the BSA Audit Report (2004-140) dated December 2004, entitled, "Department of Transportation: Various Factors Increased Its Cost Estimates for Toll Bridge Retrofits, and Its Program Management Needs" and to further fulfill the commitments of the Department for the development of a comprehensive RMP to be implemented for the design and construction of remaining SFOBB work.

A series of high-level organizational changes have also been implemented to improve the management of the TBSRP. In addition, a dedicated project risk management coordinator has been assigned and a permanent position has been advertised that will be filled by June 2005. Also a recognized consultant firm has been contracted with to provide expertise in risk identification, quantification, and mitigation planning and tracking.

Program Costs

Baseline and Projected Budget

The 2001 AB 1171 CO and COS baseline budget is \$5.085 billion including \$448 million for the program contingency. In the August 2004 report, the program estimate was \$8.305 billion including \$900 million for the program contingency. The March 2005 program estimates are \$8.676 billion for the SAS Alternative and \$7.920 billion for the Skyway Extension Alternative. The majority of the increased estimates since August 2004 are due to escalating costs resulting from lack of a final decision to date on proceeding forward. Please see below *Table 1 - Toll Bridge Seismic Retrofit Program Baseline (AB 1171) and Projected Budget Needs*.

Additional detail of cost estimates and expenditures for the TBSRP is included in Appendix A, and SFOBB East Span only cost estimates and expenditure details are included in Appendix B.

Table 1. Toll Bridge Seismic Retrofit Program Baseline (AB 1171) and Projected Budget Needs

Contracts	AB 1171	August 2004	March 2005		
			SAS Alternative	Skyway Extension Alternative	Expenditures Through March 2005
(Dollars in Millions)					
Benicia-Martinez	\$ 190.00	\$ 180.20	\$ 180.20	\$ 180.20	\$ 177.74
Carquinez	\$ 125.00	\$ 115.10	\$ 115.10	\$ 115.10	\$ 114.03
San Mateo-Hayward	\$ 190.00	\$ 165.10	\$ 165.10	\$ 165.10	\$ 163.41
Vincent Thomas	\$ 62.00	\$ 59.20	\$ 59.20	\$ 59.20	\$ 58.41
San Diego-Coronado	\$ 105.00	\$ 104.80	\$ 104.80	\$ 104.80	\$ 103.22
SFOBB West Span *	\$ 305.00	\$ 307.90	\$ 307.90	\$ 307.90	\$ 308.48
SFOBB West Approach	\$ 395.00	\$ 429.00	\$ 429.00	\$ 429.00	\$ 194.33
Richmond-San Rafael	\$ 665.00	\$ 914.00	\$ 914.00	\$ 914.00	\$ 681.51
SFOBB East Span	\$ 2,600.49	\$ 5,130.10	\$ 5,500.92	\$ 4,935.63	\$ 1,368.53
Subtotal	\$ 4,637.49	\$ 7,405.40	\$ 7,776.22	\$ 7,210.93	\$ 3,169.67
Program Indirect **					\$ 24.58
Program Contingency	\$ 448.00	\$ 900.00	\$ 900.00	\$ 709.00	
Total Program	\$ 5,085.49	\$ 8,305.40	\$ 8,676.22	\$ 7,919.93	\$ 3,194.25

* West Span contract close out expenditures are subject to final accounting adjustments.

** Some overhead charges that are not project specific are accounted for as Program Indirect expenditures.

Program Schedule

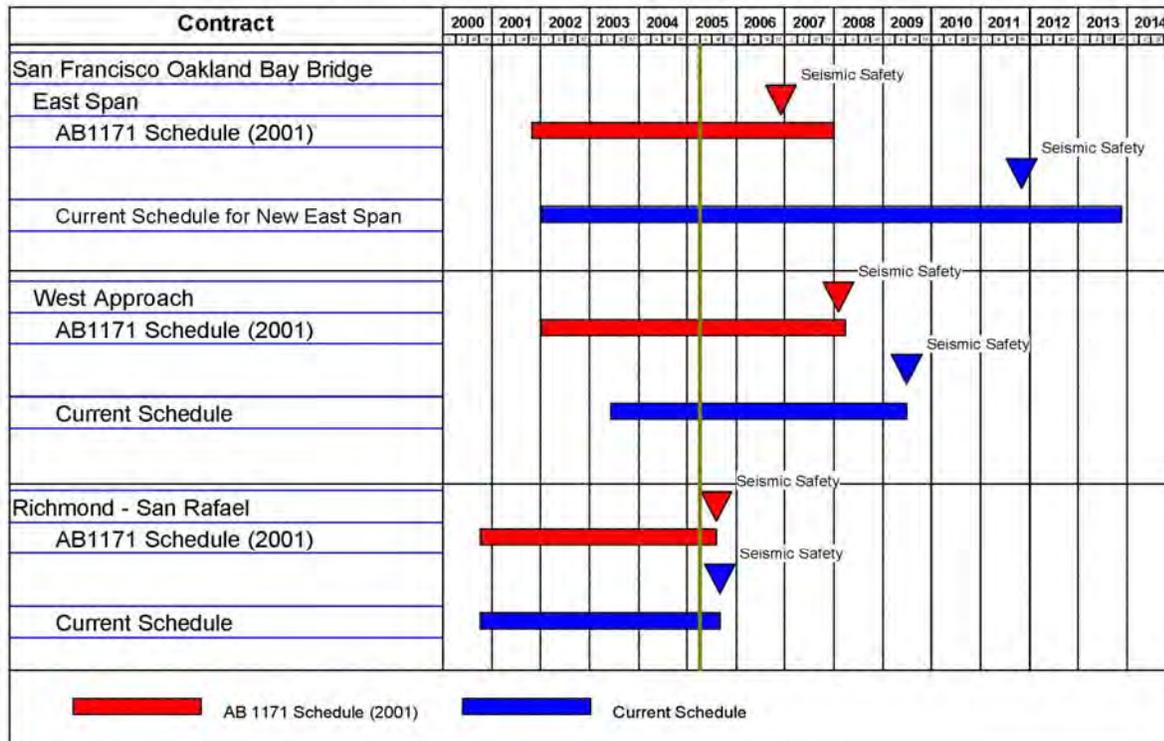
Baseline and Projected Schedule

As reported, the seismic retrofitting on five of the seven toll bridges in the TBSRP is complete. These structures include the Benicia-Martinez, Carquinez, San Mateo-Hayward, Vincent Thomas and San Diego-Coronado bridges. Seismic retrofitting of the SFOBB West Span was completed in June 2004. Construction on the Richmond –San Rafael Bridge, the SFOBB West Approach, and the SFOBB East Span is progressing. The March 2005 schedule calls for achieving seismic safety on the SFOBB East Span when it is open to traffic by late 2011. Completion of the TBSRP will occur in 2014, marked by the planned demolition of the existing SFOBB East Span. These schedules are based on an assumption of re-

advertising the SAS design or having the ability to initiate preliminary design work for the Skyway Extension Alternative by March 2005. Further delays in decisions for the connector section of the SFOBB East Span and a funding plan for the TBSRP will result in extended schedules.

On the SFOBB East Span, the majority of the schedule variation from baseline is due to industry feedback when contracts were advertised during late 2003 and 2004. This feedback concluded that the original construction timeline as proposed in 2001 was too aggressive to complete these multiple marine-based efforts. For the SFOBB West Approach, the majority of the variation from the baseline schedule was due to extensive legal action during a bidder protest delaying the ability to award the contract. Please see *Chart 3 - Toll Bridge Seismic Retrofit Program Schedules, Baseline AB 1171 vs. Projected Schedule.*

**Chart 3. Toll Bridge Seismic Retrofit Program Schedules
Baseline AB1171 vs Projected Schedule**



Program Budget

AB 1171 established a funding level of \$4.637 billion and authorized an additional \$448 million of State Highway Account funds to mitigate cost increases above the estimated 2001 projection to retrofit the State's toll bridges. AB 1171 also permits use of additional toll surcharges for financing purposes and provides for financing costs above the funds specified in the legislation. The table below summarizes the AB 1171 program funding and does not include any financing costs.

As reported in the August 2004 report, an additional \$3.220 billion would have been needed at that time to complete the TBSRP. The assumption used for the August 2004 estimate was that the SAS Alternative would be awarded in September 2004. Since the SAS Alternative was not awarded, the TBSRP costs are revised to reflect this change. See *Table 2 - Program Budget*.

Table 2. Program Budget
As of March 31, 2005
(Dollars in Millions)

Fund	Budgeted	Allocated
Proposition 192	\$790	\$789.00
Toll Bridge Seismic Retrofit Account (TBSRA)	\$3,205	\$2,587.50
· Seismic Surcharge Revenue (2nd toll dollar)	\$2,282	
· San Diego Coronado Toll Bridge Revenue Fund	\$33	
· Vincent Thomas Bridge	\$15	
· State Highway Account ⁽¹⁾	\$795	
· Public Transportation Account ⁽²⁾	\$80	
Federal Highway Bridge Replacement and Rehabilitation (HBRR)	\$642	\$635.50
Total	\$4,637	\$4,012.00

⁽¹⁾ To date, \$354.6 million has been transferred from the SHA to the TBSRP. An additional \$104 million has been expended directly from the account. The Department anticipates transfer of the remaining balance in Fiscal Years 2005-06 and 2006-07. These transfers are subject to appropriation by the Legislature.

⁽²⁾ To date, \$10 million has been transferred from the PTA to the TBSRP. Approximately \$70 million remains to be transferred. The Department anticipates transfer of the remaining balance in Fiscal Years 2005-06 and 2006-07. These transfers are subject to appropriation by the Legislature.

Program Funds

The program's financial status of revenues and expenditures is summarized in the table below, *Table 3 - Program Revenues, Expenditures and Encumbrances*. The figures include the surcharge revenues collected, transfers from the State Highway Account (SHA) and the Public Transportation Account (PTA), and expenditures from the Toll Bridge Seismic

Retrofit Account (TBSRA) and the Seismic Retrofit Bond Act of 1996 (Proposition 192). Through March 2005, the \$790 million provided by Proposition 192 has been fully allocated by the California Transportation Commission (CTC).

Table 3. Program Revenues, Expenditures and Encumbrances
Toll Bridge Seismic Retrofit Program Financial Status
As of March 31, 2005
(Dollars in Millions)

Revenues:	
Toll Surcharge ⁽¹⁾	\$687.90
Surplus Money Investment Fund Interest	\$80.19
Bond Revenue (Seismic Bond of 1996)	\$790.00
Bond Revenue (Toll Revenue Bonds)	\$1,062.00
San Diego-Coronado Toll Revenue Fund	\$33.00
Vincent Thomas	\$6.90
Federal Highway Bridge Replacement and Rehabilitation	\$300.00
Transfers to TBSRA:	
State Highway Account ⁽²⁾	\$458.76
Public Transportation Account ⁽³⁾	\$10.00
	Total Revenues and Transfers
	\$3,428.75
Expenditures:	
Capital Outlay	\$2,414.91
State Operations	\$779.34
	Total Expenditures
	\$3,194.25
Encumbrances:	
Capital Outlay ⁽⁴⁾	\$791.41
State Operations	\$26.34
	Total Encumbrances
	\$817.75
Total Expenditures and Encumbrances:	\$4,012.00

⁽¹⁾ The Toll Surcharge is dedicated to repayment of bonds beginning September 1, 2003. Toll Surcharge shown here is only toll revenue collected prior to that date.

⁽²⁾ To date, \$354.6 million has been transferred from the SHA to the TBSRA. An additional \$104 million has been expended directly from the account. The Department anticipates transfer of the remaining balance in Fiscal Years 2005-06 and 2006-07. These transfers are subject to appropriation by the Legislature.

⁽³⁾ To date, \$10 million has been transferred from the PTA to the TBSRA. Approximately \$70 million remains to be transferred. The Department anticipates transfer of the remaining balance in Fiscal Years 2005-06 and 2006-07. These transfers are subject to appropriation by the Legislature.

⁽⁴⁾ Capital outlay encumbrances represent the balance of unexpended capital allocations.

Project Status

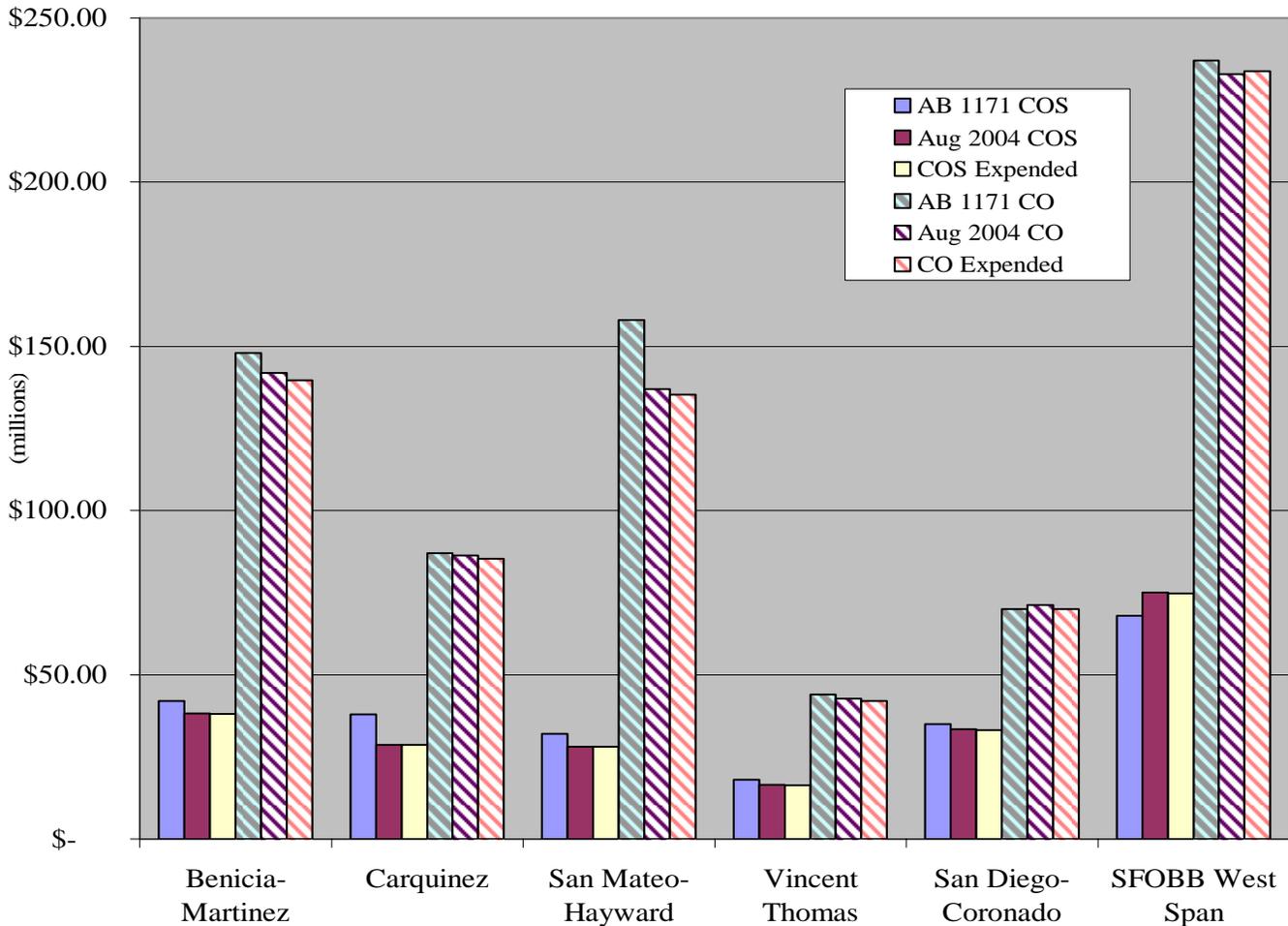
Completed Projects

Seismic retrofit has been completed on the Benicia-Martinez, Carquinez, San Mateo-Hayward, Vincent Thomas, San Diego-Coronado and SFOBB West Span toll bridges. The CO and COS budgets for these 5 toll bridge retrofits and the SFOBB West span in AB 1171 are \$744 million and \$233 million, respectively. The total CO and COS expenditures for these six completed projects as of the end of March 2005 are \$706 million and \$219 million, respectively, which is a total project savings to date of \$52 million. This is an increase in savings from the past

reports. The comparison of the AB 1171 budget, the August 2004 report estimates, and the direct expenditures to date of these completed projects are shown in *Chart 4 - Cost Comparison AB 1171, August 2004 Report Estimate and Expenditures Through March 2005 for Completed Bridges*.

Total expenditures for the Benicia-Martinez, Carquinez, San Mateo-Hayward, Vincent Thomas and San Diego-Coronado are within the AB 1171 baseline budget. The West Span final project costs are within 0.5 percent of the August 2004 report estimates.

Chart 4. Cost Comparison AB 1171 (2001), August 2004 Report Estimate and Expenditures Through March 2005 for Completed Bridges



On-going Construction Projects

Richmond-San Rafael

The Richmond-San Rafael Bridge retrofit work is progressing with an estimated construction completion date of August 2005. Currently, the seismic retrofit is more than 95 percent complete. The current project cost estimate is \$914 million, an increase of \$249 million over the AB 1171 baseline budget. The increase in CO and COS costs are projected to be \$210 million and \$39 million, respectively. The cost forecast in the August 2004 report estimate has not changed. Negotiations with the contractor regarding construction disputes and with the environmental permitting agencies have not progressed sufficiently to warrant the Department to modify the August 2004 forecast. However, there are indicators that the project will close out under the \$914 million projected in the August 2004 report. See *Table 4 - Baseline and Estimated TBSRA Budget Need for Richmond-San Rafael Bridge*.

	AB 1171 Budget (\$ million)	August 2004 Review (\$ million)	Difference (\$ million)
COS	95	134	39
CO	570	780	210
Total	665	914	249

Table 4. Baseline and Estimated TBSRA Budget Need for Richmond-San Rafael Bridge.

Project Funding

In addition to funding from the TBSRA, the project also includes non-seismic work funded by the State Highway Operation and Protection Plan (SHOPP) and the Bay Area

Toll Authority (BATA). There are \$58 million in SHOPP funds for the trestle replacement and fender work and \$55 million in BATA toll revenue contribution for joint and deck repair work on the bridge. The total of all fund types applied to the Richmond-San Rafael is \$1.027 billion. See *Table 5 - Richmond-San Rafael Funding*.

Table 5 - Richmond-San Rafael Funding.

Fund Type	Estimated Budget Needs (\$ million)
Toll Bridge Seismic Retrofit Account (TBSRA)	914
SHOPP - Trestle Replacement	58
BATA - Joint Repair	55
Total	1,027

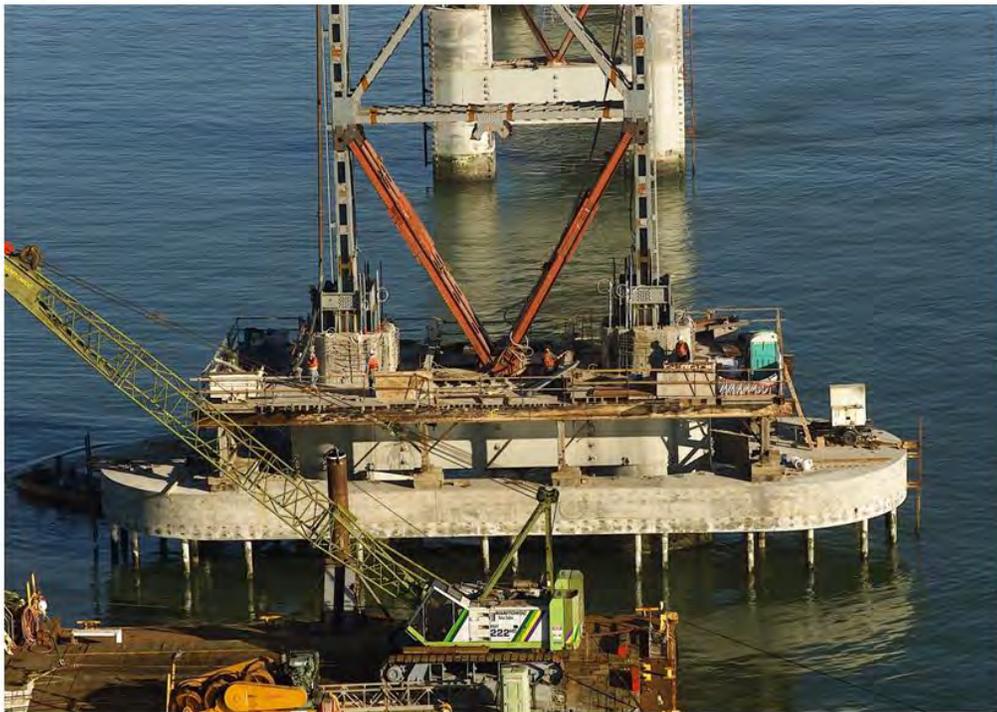
As of March 2005, the total TBSRA expenditure is \$681 million, including \$565 million for CO and \$116 million for COS.

Major Risk Issues

To close out the contract, the Department faces potential exposures in two areas. The first area is environmental mitigation for negative impact on fish, currently being discussed with regulatory agencies. The second area is the settlement of outstanding claims filed by the contractor and its foundation subcontractor. Consultant claims experts have been brought on board to facilitate the financial analysis and negotiation process with the contractor.

Milestones Achieved

All 64 girder spans of the concrete trestle for the Richmond-San Rafael Bridge were installed as of February 2005. In addition 696 joints throughout the main structure have been repaired and work on all 60 of the deck sections will be complete in May 2005.



Fender and foundation retrofit for one of the Richmond-San Rafael Bridge piers.

SFOBB West Approach

The SFOBB West Approach seismic retrofit project will remove and replace the West Approach to the SFOBB, which includes all of the westbound mainline and most of the Eastbound Mainline from 4th Street to the SFOBB West Anchorage, and all of the connecting entrance and exit ramps.

The construction work, which began in June 2003, is 44 percent complete. Completion of this project is scheduled for mid-2009 as previously reported.

Upon completion of the retrofit project, the West Approach mainline and ramps will have the same number of lanes with improved geometrics. The mainline eastbound and westbound structures will be adjacent to each other at 4th Street and transition to an outrigger configuration from Rincon Hill to the Anchorage in order to tie into the SFOBB. The new mainline structures will be concrete box girders and will have independent foundations of cast-in-drilled-hole piles.

Project Funding

The AB 1171 baseline budget is \$395 million with \$309 million for CO and \$86 million for COS. The August 2004 report, increased that estimate to \$429 million, and the project is currently within that estimate.

Due to complexities associated with the project, including the demolition and construction work near the S.F. anchorage, there may be financial implications to the CO costs of the project. See *Table 6 - Baseline and Estimated Budget Need for SFOBB West Approach*.

	AB 1171 Budget (\$ million)	August 2004 Review (\$ million)	Expenditures As of March 2005 (\$ million)
COS	86	120	61
CO	309	309	133
Total	395	429	194

Table 6 - Baseline and Estimated Budget Need for SFOBB West Approach

Major Risk Issues

The West Approach project is in the initial development phase of a comprehensive risk management plan. Based on the current assessment, the high risks which may have potential cost and schedule implications are:

- Complexities associated with demolition procedures at bridge frames 7 and 8.
- Pile driving difficulties.
- Complexities associated with the lower deck retrofit.
- Unknown buried objects.
- The extent of the costs required by the Contractor Controlled Insurance Program (CCIP), which is a function of the total project costs.

The risk response plans (risk description, qualitative analysis, and response strategy-including costs) for the identified high risks are being developed.

Milestones Achieved

On April 1, 2005, the Department completed construction of the new permanent Fremont Street off-ramp. This off-ramp is the major connector to downtown San Francisco and the south of Market Area from westbound Interstate 80.

In addition to its direct connection to northbound Fremont Street, the new off-ramp provides a direct, two-lane connection to North Beach, Fisherman's Wharf, and Chinatown through Folsom Street. The City and County of San Francisco sponsored this segment of the ramp.



Looking East at the new Route 80 prior to concrete deck pour.



The new Fremont/Folsom Street off-ramp.



The new West Approach bridge columns for the upper deck.



Replacing the Route 80 SFOBB West Approach in San Francisco.

SFOBB East Span

The SFOBB East Span consists of 16 construction contracts. Seven contracts are complete:

- Interim Retrofit (Existing Bridge)
- East Span Retrofit (Existing Bridge)
- Pile Installation Demonstration
- Oakland Touchdown Geofill
- Yerba Buena Island (YBI) Archaeology
- USCG Road Relocation
- SAS Alternative Land Foundations (W2)

Four contracts are under construction:

- Skyway contract (71 percent complete).
- YBI Electrical Substation (95 percent complete).
- South/South Detour (20 percent complete).
- SAS Alternative Marine Foundations (E2/T1) (Contract is in suspended termination. Termination was initiated on January 5, 2005. However, the termination process was suspended as of March 14, 2005, and is incurring suspension costs each month until a decision is made regarding the connector span.)

Five contracts are in design:

- Oakland Touchdown design (90 percent complete).
- YBI Transition Structure design (50 to 80 percent complete depending on the decision for the connector span).
- Stormwater Treatment Measures design (60 percent complete).
- Existing Bridge Demolition design (10 percent complete).

- Connector Span (SAS Alternative-100 percent complete, Skyway Extension Alternative 5 percent complete).

Project Funding

Baseline and Projected Budget and Schedule

The AB 1171 baseline budget for the SFOBB East Span is \$2.6 billion. In August 2004, the Department, with the assistance of Bechtel Infrastructure Corporation, updated the cost of completing the East Span. This forecast, however, was based on the assumption that the SAS Alternative contract's single bid would be awarded in September 2004. Without a funding solution, the May 2004 bid expired on September 30, 2004. As of March 2005, the projected cost for the East Span has risen to \$5.501 billion for the re-advertised SAS Alternative and \$4.936 billion for the Skyway Extension Alternative. These numbers do not include program contingencies. This forecast will continue to increase due to escalation if a bridge type decision for the connector span and funding to support the decision is not reached by June 2005.

The AB 1171 baseline schedule in 2001 slated completion of the East Span in 2007. In 2001, the YBI/SAS Alternative was originally planned to be administered as one single construction contract. In response to the lack of a Federal Buy America Waiver for the SAS Alternative, the need to reduce the size of the contract to ease performance bond requirements, and the need to facilitate competitive bidding, the Department split the single contract into eight separate contracts in the summer of 2002.

During the contract bidding for the SAS Alternative, from February 2003 to May

2004, the corridor schedule was extended in an effort to attract more bidders. The comparison of the AB 1171 baseline schedule and the current projected schedule is shown in the Appendices on *Chart 5 - SFOBB East Span Corridor Schedule, Baseline AB 1171 vs. Current Projected*.

Currently without a legislative funding solution, the East Span continues to be impacted by delays. These delays affect the completion date of the bridge and the cost to complete the project continues to escalate.

Major Risk Issues

Decision on Connector Span

Bridge Type Selection (Legislative Action) and Adjacent Project Interface

In December 2004, the Business, Transportation and Housing Agency and the Department announced the Administration's intention to complete the connector span of the SFOBB East Span by extending the Skyway Extension Alternative to Yerba Buena Island. Legislation to fund the connector span completion and a change in the approved bridge type is required. Failure to make these decisions represents a sizable cost and schedule risk to the TBSRP. Currently, the SAS Alternative Marine Foundation (E2/T1) contract is in a state of suspension pending a decision on the connector span bridge type. There is a daily cost associated with that contract that is realized every day a decision remains outstanding on the type selection. In addition, every day that a decision remains outstanding is another day of escalation for overall capital and support costs.

Potential Cost and Schedule Impacts: Until the legislature acts, it is difficult for the Department to predict the potential schedule

impact to the program. Preliminary estimates suggest that millions in additional costs are incurred for every month a decision remains outstanding.

Mitigation to Date: The Department has developed plans for alternative methods of procurement that might be used and is ready to implement these plans once a legislative decision is made. In addition, the Department is managing the SFOBB corridor design and construction activities using a critical path methodology and has developed optional strategies associated with the potential bridge type alternatives.

SAS Alternative and Skyway Extension Alternative Cost and Schedule Comparison

In terms of cost, the Department's December 8, 2004, report "Findings and Recommendations for the Completion of San Francisco-Oakland Bay Bridge East Span," states, "all construction projects have some degree of cost growth, but...the potential for cost growth during construction is greater for the SAS Alternative than the Skyway Extension Alternative." In summary, that report, if closely examined, provides ample support for the decision to proceed with the Skyway Extension Alternative and clearly identifies the potential for cost increases and schedule delays associated with the SAS Alternative design.

From a schedule perspective, the March 2005 timelines for the SAS Alternative and the Skyway Extension Alternative forecast the new bridge construction to be completed by Fall of 2011. In the Appendix, see *Chart 6a - San Francisco-Oakland Bay Bridge East Span - Skyway Extension Alternative Corridor Schedule and Chart 6b - San Francisco-Oakland Bay Bridge East Span - SAS Alternative Corridor Schedule*.

However, shown in Chart 6b, the schedule for the SAS Alternative includes a two-year contingency to reflect the concerns that have been expressed above relative to constructability issues and the high risk of schedule delays. In Chart 6a, the Skyway Extension Alternative schedule reflects a year in schedule contingency and approximately 22 months to accomplish the necessary environmental review, permit revisions and design required for that alternative. The timelines for both alternatives reflect a standard "design-bid-build" approach to the procurement of a design and construction team. As the Skyway Extension Alternative has not yet been finalized, the Department assumes there is a significant opportunity to compress the schedule if additional authorization, which has been requested from the Legislature, is granted to the Department to employ an innovative approach to the procurement process. This ultimately could result in additional time savings and earlier completion of a seismically safe bridge.

SAS Marine Foundation (E2/T1) Costs

Based on the Department's December 8, 2004 "Findings and Recommendations for the Completion of San Francisco-Oakland Bay Bridge East Span," the Governor announced the decision to re-design the connector span to a Skyway Extension Alternative bridge. As a result, the Department began the termination process for the SAS Marine Foundation contract on January 5, 2005. Should the Department be directed to construct the SAS Alternative, this termination action will result in an added cost to the TBSRP. With construction of the SAS span, work will have to be restarted. The re-start will either be through a change order with the current contractor, re-bidding the contract, or adding the work to the SAS Superstructure Alternative contract. Without

an expedited design decision and a legislative funding solution, the cost of these options will continue to increase. On March 14, 2005, the termination of the Marine Foundation contract was suspended. The added cost and delay impacts of this action are currently being evaluated.

The March 2005 cost estimate forecast includes an estimate for the cost of the termination of the SAS Marine Foundation contract for both the SAS Alternative and the Skyway Extension Alternative. See *Appendix B*.

Other Identified Risks

Bonding and Insurance Market Constraints and Competitive Bids

The magnitude of the SAS Alternative project limits the number of contractors who have the resources and technical ability to perform the work. At present there is only a handful of marine equipment available in the world market that is capable of lifting the extremely large bridge segments that this project will require. This equipment constraint will limit project competition.

Bonding capacity has constrained the bonding market since September 11, 2001. Major bonding companies have severely reduced the amount of exposure they will carry for a single project. While this constraint has eased in recent times, today's market will only support about \$350 million of work for a major construction company. Thus, a contractor or consortium of contractors may need to enter into multiple contracts with different insurance and bonding companies to secure the necessary bonding capacity for a project of this size.

Finally, the fact that the current contractor on the SFOBB East Span Skyway contract is mobilized and more readily capable of constructing the remainder of the east span might preclude other bidders from participating in a new round of bidding due to a perceived advantage that the existing contractor already appears to have.

Potential Cost and Schedule Impacts: Should only one contractor bid on the east span connector span contract, the potential bidder may likely bid the maximum price that it believes the Department can bear. If there is only one bidder, it is likely that several months will be needed to review the bid or a single bid may require re-advertising the project resulting in up to one year of delay.

Mitigation to Date: By increasing the number of bid packages on the original SAS Alternative/YBI single package to eight separate contracts, the Department reduced the magnitude of bonding requirements and reduced insurance risks since the liability was spread over a broader range of surety writers. Payment bonding requirements were reduced to improve a contractor's ability to obtain bonding. In addition the Department has engaged in outreach consultations with the surety groups to focus on finding ways to reduce cost and lower risks going forward.

The Department has developed plans for different methods of procurement and innovative contractual provisions that might be selected and is ready to implement those plans once a decision on bridge type is made. The Department is assessing with FHWA the option of project de-federalization for the SFOBB East Span connector section only and the resulting potential of enhancing competition and lowering bids.

Delay and Escalation Costs

Adjustments to project costs have been made to account for escalation to the anticipated "mid-point of construction" of January 2009 at the rate of 5 percent compounded. This is the "best estimate" of probability for increases in labor, equipment and materials during the course of construction. However, the costs of construction materials have accelerated at extraordinary levels in the past two years as a result of highly volatile commodity markets. Since these prices are still low (inflation adjusted) by historical standards, it is possible that an extrapolation of recent cost increases could continue and would result in escalation costs substantially higher than the 5 percent incorporated into present estimates.

Potential Cost and Schedule Impacts: Escalation costs are notoriously hard to predict. However, should recent material costs increases continue to occur it is possible that escalation could increase dramatically.

Mitigation to date: The Department has little control over the increasing cost of construction. However, the Department is ready to move ahead with either design alternative chosen. If the decision is the Skyway design, an innovative procurement process is ready, or if the decision is the SAS design a contract package is ready to advertise within 10 days.

Welding Issues on the Skyway Contract

Please note that although these issues have occurred after the end of the first quarter of 2005, we have provided an update in this report. An investigation by the Federal Bureau of Investigation has been initiated due to allegations of faulty welds in the foundations of the on-going Skyway

construction project. Concrete placement on the four incomplete foundations has been placed on hold.

The Department is working closely with the FHWA and the Contractor to bring this investigation to an expeditious resolution.

Based on the more than 300,000 sheets of welding related documents, the extensive Quality Control/Quality Assurance (QC/QA) processes for welding, and independent testing to date, there is no evidence of deficient welds. Although the FHWA's independent consultant has completed the destructive and non-destructive tests, at the time this report was prepared, Caltrans had not received any indication from FHWA in regard to the results of the tests.

Milestones Achieved

The SFOBB East Span Skyway construction is 71 percent complete in 69 percent of the contract time. Pile driving for the foundation is 100 percent complete. The footing boxes are 82 percent complete. In addition, pier columns are 71 percent complete; pier tables are 32 percent complete; 265 pre-cast segments out of 452 castings in Stockton are complete (60 percent); and 124 segments have been erected (28 percent).



Skyway Contract - Pier tables for eastbound roadway.



The new San Francisco-Oakland Bay Bridge East Span.



San Francisco-Oakland Bay Bridge
East Span W2 Land Foundations
Completed in October 2004.

Quarterly Environmental Compliance Highlights

SFOBB East Span environmental tasks for the current quarter are focused on mitigation monitoring. All weekly, monthly and annual compliance reports to resource agencies have been delivered on time with no comments from receiving agencies. Key successes this quarter include:

- The Fisheries and Hydroacoustic Monitoring Report Addendum is in the final editing process and will be submitted to the appropriate regulatory agencies in May 2005. When accepted by reviewing agencies, the Department Fisheries and Hydroacoustic Monitoring Program requirements will have been fulfilled and no further monitoring will be required. This will be a major milestone for environmental compliance monitoring.
- All participating agencies have approved the North Basin Pilot Eelgrass Program, which is a key component of the project's environmental mitigation package. After consultation with Bay Conservation and Development Commission (BCDC), construction has begun on the pilot project. Assuming the pilot project is successful, 13 acres of eelgrass habitat will be planted at North Basin.
- Consistent with project mitigation requirements, the Department awarded grant funds as required by the National Oceanic and Atmospheric Administration (NOAA) to fisheries through the National Fish and Wildlife Foundation (NFWF) as

part of the Central Bay mitigation program for stream restoration.

- The peregrine falcon is nesting undisturbed on the existing East Span after hatching chicks. Mitigation commitments to ensure that project construction does not interfere with nesting have been successful and no delays to project construction have resulted.
- Mitigation commitments to address storm water runoff are moving forward. Interagency meetings conducted during the quarter resulted in general agreement with the concept and the project is moving forward to final design.



Skyway Progress – the new eastbound Route 80.

Program Considerations

Funding Status

In 2001, AB 1171 established a funding level of \$4.673 billion for the TBSRP and authorized the Department to utilize up to an additional \$448 million of State Highway Account funds as program contingency. Through March 31, 2005, \$4.012 billion has been allocated and \$3.194 billion expended for TBSRP projects. To complete the TBSRP, additional funds are required.

Other Toll Bridges

Although these bridges are not funded in the TBSRP, the Department is continuing work on seismic vulnerability studies for the Antioch and Dumbarton toll bridges to assess the potential for necessary retrofit work. At this time, no seismic retrofit is planned for the Antioch Bridge or the Dumbarton Bridge.

Appendices

- A. TBSRP All Bridges Baseline Budget, August 2004 Estimate, and March 2005 Estimate Comparison (A-1, A-2, A-3).**
- B. TBSRP East Span Only Baseline Budget, August 2004 Estimate, and March 2005 Estimate Comparison.**
- C. Chart 5. San Francisco-Oakland Bay Bridge East Span Corridor Schedule Baseline AB 1171 vs. Current Projected.**
- D. Chart 6a. San Francisco-Oakland Bay Bridge East Span Skyway Extension Alternative Corridor Schedule.**
- E. Chart 6b. San Francisco-Oakland Bay Bridge East Span Self-Anchored Suspension Alternative Corridor Schedule.**

Toll Bridge Seismic Retrofit Program
Baseline Budget, August 2004 Report Estimate, March 2005 Projection and Expenditures Through March 2005

(Dollars in millions)

Bridge	AB1171 Budget	August 2004 Report	Skyway Extension Assume Funding Approved in June 2005	SAS Assume Award in December 2005	Expenditures Through March 2005
Benicia-Martinez					
Capital Outlay Support	\$42.00	\$38.20	\$38.20	\$38.20	\$38.09
Capital Outlay	\$148.00	\$142.00	\$142.00	\$142.00	\$139.64
Total	\$190.00	\$180.20	\$180.20	\$180.20	\$177.73
Carquinez					
Capital Outlay Support	\$38.00	\$28.70	\$28.70	\$28.70	\$28.62
Capital Outlay	\$87.00	\$86.40	\$86.40	\$86.40	\$85.41
Total	\$125.00	\$115.10	\$115.10	\$115.10	\$114.03
San Mateo-Hayward					
Capital Outlay Support	\$32.00	\$28.10	\$28.10	\$28.10	\$28.09
Capital Outlay	\$158.00	\$137.00	\$137.00	\$137.00	\$135.32
Total	\$190.00	\$165.10	\$165.10	\$165.10	\$163.41
Vincent Thomas					
Capital Outlay Support	\$18.00	\$16.50	\$16.50	\$16.50	\$16.37
Capital Outlay	\$44.00	\$42.70	\$42.70	\$42.70	\$42.04
Total	\$62.00	\$59.20	\$59.20	\$59.20	\$58.41
San Diego-Coronado					
Capital Outlay Support	\$35.00	\$33.50	\$33.50	\$33.50	\$33.20
Capital Outlay	\$70.00	\$71.30	\$71.30	\$71.30	\$70.02
Total	\$105.00	\$104.80	\$104.80	\$104.80	\$103.22
Richmond-San Rafael					
Capital Outlay Support	\$95.00	\$134.00	\$134.00	\$134.00	\$116.11
Capital Outlay	\$570.00	\$780.00	\$780.00	\$780.00	\$565.40
Total	\$665.00	\$914.00	\$914.00	\$914.00	\$681.51
West Span Retrofit					
Capital Outlay Support	\$68.00	\$75.00	\$75.00	\$75.00	\$74.75
Capital Outlay	\$237.00	\$232.90	\$232.90	\$232.90	\$233.73
Total	\$305.00	\$307.90	\$307.90	\$307.90	\$308.48
West Approach					
Capital Outlay Support	\$86.00	\$120.00	\$120.00	\$120.00	\$60.97
Capital Outlay	\$309.00	\$309.00	\$309.00	\$309.00	\$133.37
Total	\$395.00	\$429.00	\$429.00	\$429.00	\$194.34
SFOBB East Span					
Capital Outlay Support	\$381.69	\$878.40	\$1,010.50	\$919.80	\$319.10
Capital Outlay	\$2,218.80	\$4,251.70	\$3,925.13	\$4,581.13	\$1,049.43
Total	\$2,600.49	\$5,130.10	\$4,935.63	\$5,500.92	\$1,368.53
Subtotal Capital Outlay Support	\$795.69	\$1,352.40	\$1,484.50	\$1,393.80	\$715.30
Subtotal Capital Outlay	\$3,841.80	\$6,033.00	\$5,726.43	\$6,282.43	\$2,454.37
Subtotal Toll Seismic Retrofit	\$4,637.49	\$7,405.40	\$7,210.93	\$7,776.22	\$3,169.67
Program Contingency	\$448.00	\$900.00	\$709.00	\$900.00	\$24.58
Program Indirect					
Total Toll Seismic Retrofit Program	\$5,085.49	\$8,305.40	\$7,919.93	\$8,676.22	\$3,194.25
Additional COS for BATA Reimbursement Program (60.93%) - See Notes:		\$150-\$155	\$150-\$165	\$130-\$155	

Notes:

This is an estimate of additional funds required for the TBSRP if it becomes a BATA reimbursed program. The current project overhead rate for State resources is 38.59% in the estimates above, but the rate is 60.93% if the TBSRP becomes a BATA reimbursed program to include administrative overhead. (Due to the rounding of numbers, the totals above are shown within \$0.02).

Appendix A-1.

2005 First Quarter Report - Toll Bridge Seismic Retrofit Program

Toll Bridge Seismic Retrofit Program - Skyway Extension Alternative
Baseline Budget, August 2004 Report Estimate, March 2005 Projection and Expenditures Through March 2005

Bridge	Column B	Column C	Column D	Column E	Column F	Column G
	AB1171 Budget	Expenditures to date and Encumbrances As of March 31, 2005 See Note (1)	Estimated Costs not yet Spent or Encumbered As of March 31, 2005	Total Forecast (Skyway Extension) As of March 2005 Pending Approval in June 2005 (Columns C +D)	Allocation of the Program Contingency Reserve By Others in August 2004 See Note (2)	Total with Program Contingency As of March 2005 See Note (2) (Columns E +F)
(Dollars in millions)						
Other Completed Projects						
Capital Outlay Support	\$165.00	\$144.55	\$0.45	\$145.00		\$145.00
Capital Outlay	\$507.00	\$480.34	-\$0.94	\$479.40		\$479.40
Total	\$672.00	\$624.89	-\$0.49	\$624.40		\$624.40
Richmond-San Rafael						
Capital Outlay Support	\$95.00	\$118.74	\$15.26	\$134.00	\$9.00	\$143.00
Capital Outlay	\$570.00	\$635.07	\$144.93	\$780.00	\$45.00	\$825.00
Total	\$665.00	\$753.81	\$160.19	\$914.00	\$54.00	\$968.00
West Span Retrofit						
Capital Outlay Support	\$68.00	\$75.12	-\$0.12	\$75.00		\$75.00
Capital Outlay	\$237.00	\$233.73	-\$0.83	\$232.90		\$232.90
Total	\$305.00	\$308.85	-\$0.95	\$307.90		\$307.90
West Approach						
Capital Outlay Support	\$86.00	\$61.66	\$58.34	\$120.00	\$6.00	\$126.00
Capital Outlay	\$309.00	\$262.08	\$46.92	\$309.00	\$28.00	\$337.00
Total	\$395.00	\$323.75	\$105.25	\$429.00	\$34.00	\$463.00
SFOBB East Span -Skyway						
Capital Outlay Support	\$129.60	-\$99.04	-\$97.96	\$197.00	\$38.00	\$235.00
Capital Outlay	\$796.00	\$1,188.46	\$104.54	\$1,293.00	\$191.00	\$1,484.00
Total	\$925.60	\$1,287.50	\$202.50	\$1,490.00	\$229.00	\$1,719.00
SFOBB East Span Skyway Extension						
Capital Outlay Support			\$336.00	\$336.00	\$76.00	\$412.00
Capital Outlay			\$1,426.20	\$1,426.20	\$192.00	\$1,618.20
Total			\$1,762.20	\$1,762.20	\$268.00	\$2,030.20
SFOBB East Span -SAS- Superstructure						
Capital Outlay Support	\$92.40	\$15.12	-\$0.12	\$15.00		\$15.00
Capital Outlay	\$589.10	\$0.01	-\$0.01			\$0.00
Total	\$681.50	\$15.13	-\$0.13	\$15.00		\$15.00
SFOBB East Span -SAS- Foundations						
Capital Outlay Support	\$20.10	\$16.93	\$2.57	\$19.50		\$19.50
Capital Outlay	\$128.40	\$216.75	-\$114.87	\$101.88		\$101.88
Total	\$148.50	\$233.68	-\$112.30	\$121.38		\$121.38
Small YBI Projects						
Capital Outlay Support	\$2.79	\$9.82	-\$0.72	\$9.10		\$9.10
Capital Outlay	\$14.80	\$18.60	-\$2.80	\$15.80		\$15.80
Total	\$17.59	\$28.42	-\$3.52	\$24.90		\$24.90
South/South Detour						
Capital Outlay Support	\$14.00	\$11.91	\$16.09	\$28.00	\$2.00	\$30.00
Capital Outlay	\$89.50	\$90.07	\$16.83	\$106.90	\$9.00	\$115.90
Total	\$103.50	\$101.98	\$32.92	\$134.90	\$11.00	\$145.90
YBI - Transition Structures						
Capital Outlay Support	\$24.10	\$7.42	\$73.43	\$80.85	\$8.00	\$88.85
Capital Outlay	\$154.00	\$0.06	\$272.94	\$273.00	\$39.00	\$312.00
Total	\$178.10	\$7.48	\$346.37	\$353.85	\$47.00	\$400.85
Oakland Touchdown						
Capital Outlay Support	\$67.70	\$17.44	\$56.06	\$73.50	\$8.00	\$81.50
Capital Outlay	\$170.60	\$0.23	\$274.87	\$275.10	\$38.00	\$313.10
Total	\$238.30	\$17.66	\$330.94	\$348.60	\$46.00	\$394.60
East Span Other Small Project						
Capital Outlay Support	\$6.00	\$191.72	-\$18.92	\$172.80		\$172.80
Capital Outlay	\$152.50	\$80.93	\$116.07	\$197.00		\$197.00
Total	\$158.50	\$272.65	\$97.15	\$369.80		\$369.80
Existing Bridge Demolition						
Capital Outlay Support	\$25.00	\$0.18	\$78.57	\$78.75	\$3.00	\$81.75
Capital Outlay	\$123.90	\$0.00	\$236.25	\$236.25	\$17.00	\$253.25
Total	\$148.90	\$0.18	\$314.82	\$315.00	\$20.00	\$335.00
Total Capital Outlay Support (3)	\$795.69	\$805.67	\$678.83	\$1,484.50	\$150.00	\$1,634.50
Total Capital Outlay	\$3,841.80	\$3,206.33	\$2,520.10	\$5,726.43	\$559.00	\$6,285.43
Program Total	\$4,637.49	\$4,012.00	\$3,198.93	\$7,210.93	\$709.00	\$7,919.93

(1) Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 04/05.

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

This column is subject to revision upon completion of Department's risk assessment update in June 2005.

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

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

Appendix A-2.

2005 First Quarter Report - Toll Bridge Seismic Retrofit Program

Toll Bridge Seismic Retrofit Program - SAS Alternative
Baseline Budget, August 2004 Report Estimate, March 2005 Projection and Expenditures Through March 2005

Bridge	Column B	Column C	Column D	Column E	Column F	Column G
	ABI171 Budget	Expenditures to date and Encumbrances As of March 31, 2005 See Note (1)	Estimated Costs not yet Spent or Encumbered As of March 31, 2005	Total Forecast (SAS Alternative) As of March 2005 Pending Approval in June 2005 (Columns C + D)	Allocation of the Program Contingency Reserve By Others in August 2004 See Note (2)	Total with Program Contingency As of March 2005 See Note (2) (Columns E + F)
Other Completed Projects						
Capital Outlay Support	\$165.00	\$144.55	\$0.45	\$145.00		\$145.00
Capital Outlay	\$507.00	\$480.34	-\$0.94	\$479.40		\$479.40
Total	\$672.00	\$624.89	-\$0.49	\$624.40		\$624.40
Richmond-San Rafael						
Capital Outlay Support	\$95.00	\$118.74	\$15.26	\$134.00	\$9.00	\$143.00
Capital Outlay	\$570.00	\$635.07	\$144.93	\$780.00	\$45.00	\$825.00
Total	\$665.00	\$753.81	\$160.19	\$914.00	\$54.00	\$968.00
West Span Retrofit						
Capital Outlay Support	\$68.00	\$75.12	-\$0.12	\$75.00		\$75.00
Capital Outlay	\$237.00	\$233.73	-\$0.83	\$232.90		\$232.90
Total	\$305.00	\$308.85	-\$0.95	\$307.90		\$307.90
West Approach						
Capital Outlay Support	\$86.00	\$61.66	\$58.34	\$420.00	\$6.00	\$126.00
Capital Outlay	\$309.00	\$262.08	\$46.92	\$309.00	\$28.00	\$337.00
Total	\$395.00	\$323.75	\$105.25	\$429.00	\$34.00	\$463.00
SFOBB East Span -Skyway						
Capital Outlay Support	\$129.60	\$99.04	\$97.96	\$197.00	\$38.00	\$235.00
Capital Outlay	\$796.00	\$1,188.46	\$104.54	\$1,293.00	\$491.00	\$1,484.00
Total	\$925.60	\$1,287.50	\$202.50	\$1,490.00	\$229.00	\$1,719.00
SFOBB East Span -SAS- Superstructure						
Capital Outlay Support	\$92.40	\$15.12	\$199.50	\$214.63	\$70.00	\$284.63
Capital Outlay	\$589.10	\$0.01	\$1,840.03	\$1,840.04	\$349.00	\$2,189.04
Total	\$681.50	\$15.13	\$2,039.54	\$2,054.66	\$419.00	\$2,473.66
SFOBB East Span -SAS- Foundations						
Capital Outlay Support	\$20.10	\$16.93	\$47.07	\$64.00	\$6.00	\$70.00
Capital Outlay	\$128.40	\$216.75	\$123.16	\$339.91	\$30.00	\$369.91
Total	\$148.50	\$233.68	\$170.23	\$403.91	\$36.00	\$439.91
Small YBI Projects						
Capital Outlay Support	\$2.79	\$9.82	-\$0.72	\$9.10		\$9.10
Capital Outlay	\$14.80	\$18.60	-\$2.80	\$15.80		\$15.80
Total	\$17.59	\$28.42	-\$3.52	\$24.90		\$24.90
South/South Detour						
Capital Outlay Support	\$14.00	\$11.91	\$17.59	\$29.50	\$2.00	\$31.50
Capital Outlay	\$89.50	\$90.07	\$21.33	\$111.40	\$9.00	\$120.40
Total	\$103.50	\$101.98	\$38.92	\$140.90	\$11.00	\$151.90
YBI - Transition Structures						
Capital Outlay Support	\$24.10	\$7.42	\$73.43	\$80.85	\$8.00	\$88.85
Capital Outlay	\$154.00	\$0.06	\$272.94	\$273.00	\$39.00	\$312.00
Total	\$178.10	\$7.48	\$346.37	\$353.85	\$47.00	\$400.85
Oakland Touchdown						
Capital Outlay Support	\$67.70	\$17.44	\$56.06	\$73.50	\$8.00	\$81.50
Capital Outlay	\$170.60	\$0.23	\$274.87	\$275.10	\$38.00	\$313.10
Total	\$238.30	\$17.66	\$330.94	\$348.60	\$46.00	\$394.60
East Span Other Small Project						
Capital Outlay Support	\$6.00	\$191.72	-\$19.25	\$173.47		\$172.47
Capital Outlay	\$152.50	\$80.93	\$115.70	\$196.63		\$196.63
Total	\$158.50	\$272.65	\$96.45	\$369.10		\$369.10
Existing Bridge Demolition						
Capital Outlay Support	\$25.00	\$0.18	\$78.57	\$78.75	\$3.00	\$81.75
Capital Outlay	\$123.90	\$0.00	\$236.25	\$236.25	\$17.00	\$253.25
Total	\$148.90	\$0.18	\$314.82	\$315.00	\$20.00	\$335.00
Reserve						
Total Capital Outlay Support (3)	\$795.69	\$805.67	\$588.13	\$1,393.80	\$150.00	\$1,543.80
Total Capital Outlay	\$3,841.80	\$3,206.33	\$3,176.10	\$6,382.43	\$746.00	\$7,128.43
Program Total	\$4,637.49	\$4,012.00	\$3,764.22	\$7,776.22	\$900.00	\$8,676.22

(1). Funds allocated to project or contract for Capital Outlay and Support needs includes Capital Outlay Support total allocation for FY 04/05.
(2). BSA provided a distribution of program contingency in December 2004 based on Bechtel Infrastructure Corporation input.
This column is subject to revision upon completion of Department's risk assessment update in June 2005.
(3). Total Capital Outlay Support includes program indirect costs.
(Due to the rounding of numbers, the totals above are shown within \$0.02).

Appendix A-3.

Toll Bridge Seismic Retrofit Program - SFOBB East Span Only
Baseline Budget, August 2004 Report Estimate, March 2005 Projection and Expenditures Through March 2005

(Dollars in millions)

Bridge	AB1171 Budget	August 2004 Report	Skyway Extension Assume Funding Approved in June 2005	SAS Assume Award in December 2005	Expenditures Through March 2005
SFOBB East Span - Skyway					
Capital Outlay Support	\$129.60	\$197.00	\$197.00	\$197.00	\$95.70
Capital Outlay	\$796.00	\$1,293.00	\$1,293.00	\$1,293.00	\$816.57
Total	\$925.60	\$1,490.00	\$1,490.00	\$1,490.00	\$912.28
SFOBB East Span Skyway Extension					
Capital Outlay Support			\$336.00		
Capital Outlay			\$1,426.20		
Total			\$1,762.20		
SFOBB East Span - SAS - Superstructure					
Capital Outlay Support	\$92.40	\$202.00	\$15.00	\$214.63	\$13.24
Capital Outlay	\$589.10	\$1,682.00		\$1,840.04	
Total	\$681.50	\$1,884.00	\$15.00	\$2,054.66	\$13.24
SFOBB East Span - SAS - W2 Foundations					
Capital Outlay Support	\$4.10	\$11.50	\$11.50	\$11.50	\$9.09
Capital Outlay	\$26.40	\$26.40	\$26.40	\$26.40	\$25.68
Total	\$30.50	\$37.90	\$37.90	\$37.90	\$34.76
SFOBB East Span - SAS - E2/T1 Foundations					
Capital Outlay Support	\$16.00	\$45.00	\$8.00	\$52.50	\$6.08
Capital Outlay	\$102.00	\$211.00	\$75.48	\$313.51	\$61.96
Total	\$118.00	\$256.00	\$83.48	\$366.01	\$68.04
YBI/SAS (Archeology)					
Capital Outlay Support	\$0.67	\$1.10	\$1.10	\$1.10	\$1.08
Capital Outlay	\$1.20	\$1.20	\$1.20	\$1.20	\$1.14
Total	\$1.87	\$2.30	\$2.30	\$2.30	\$2.21
YBI - USCG Rd Relocation					
Capital Outlay Support	\$0.42	\$3.00	\$3.00	\$3.00	\$2.62
Capital Outlay	\$2.70	\$3.00	\$3.00	\$3.00	\$3.60
Total	\$3.12	\$6.00	\$6.00	\$6.00	\$6.22
YBI - Substation & Viaduct					
Capital Outlay Support	\$1.70	\$5.00	\$5.00	\$5.00	\$5.91
Capital Outlay	\$10.90	\$11.60	\$11.60	\$11.60	\$10.27
Total	\$12.60	\$16.60	\$16.60	\$16.60	\$16.18
South/South Detour					
Capital Outlay Support	\$14.00	\$22.00	\$28.00	\$29.50	\$10.67
Capital Outlay	\$89.50	\$91.90	\$106.90	\$111.40	\$16.93
Total	\$103.50	\$113.90	\$134.90	\$140.90	\$27.59

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

Appendix B.

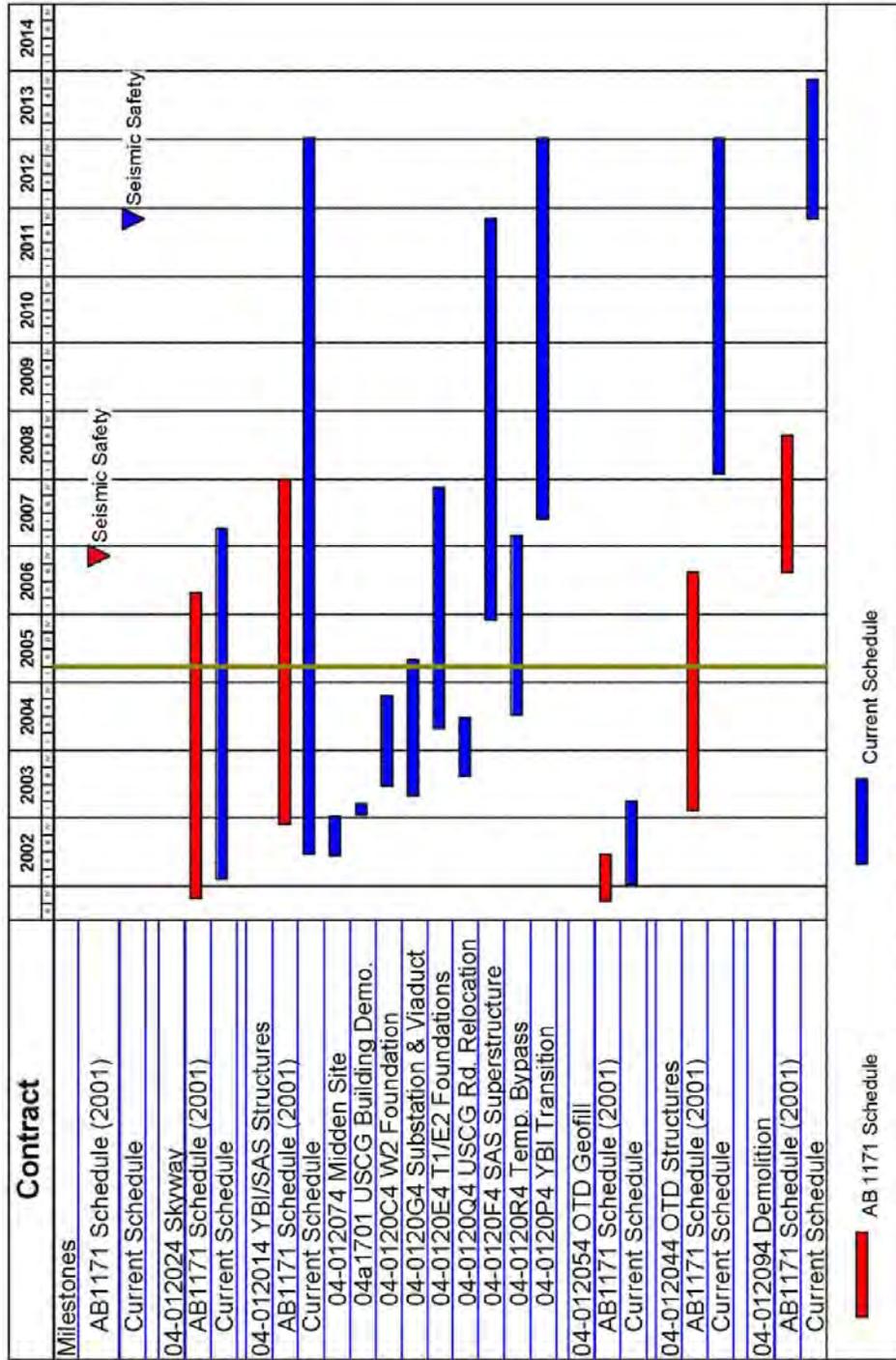
Toll Bridge Seismic Retrofit Program - SFOBB East Span Only
Baseline Budget, August 2004 Report Estimate, March 2005 Projection and Expenditures Through March 2005

Bridge	AB1171 Budget	August 2004 Report	Skyway Extension Assume Funding Approved in June 2005	SAS Assume Award in December 2005	Expenditures Through March 2005
(Dollars in millions)					
YBI - Transition Structures					
Capital Outlay Support	\$24.10	\$74.00	\$80.85	\$78.65	\$5.78
Capital Outlay	\$154.00	\$260.00	\$273.00	\$276.35	\$0.06
Total	\$178.10	\$334.00	\$353.85	\$355.00	\$5.84
Oakland Touchdown					
Capital Outlay Support	\$67.70	\$70.00	\$73.50	\$74.40	\$16.96
Capital Outlay	\$170.60	\$262.00	\$275.10	\$278.48	\$0.02
Total	\$238.30	\$332.00	\$348.60	\$352.88	\$16.98
Oakland Geofill					
Capital Outlay Support	\$3.50	\$2.40	\$2.40	\$2.40	\$2.47
Capital Outlay	\$9.30	\$9.00	\$9.00	\$9.00	\$8.22
Total	\$12.80	\$11.40	\$11.40	\$11.40	\$10.69
Pile Installation Demonstration Project					
Capital Outlay Support	\$2.50	\$1.80	\$1.80	\$1.80	\$1.79
Capital Outlay	\$9.20	\$11.60	\$11.60	\$11.60	\$9.25
Total	\$11.70	\$13.40	\$13.40	\$13.40	\$11.04
Existing Bridge Demolition					
Capital Outlay Support	\$25.00	\$75.00	\$78.75	\$79.72	\$0.18
Capital Outlay	\$123.90	\$225.00	\$236.25	\$239.15	\$0.00
Total	\$148.90	\$300.00	\$315.00	\$318.87	\$0.18
Stormwater Treatment Measures					
Capital Outlay Support	\$0.00	\$6.00	\$6.00	\$6.00	\$1.76
Capital Outlay	\$0.00	\$10.00	\$10.00	\$10.00	\$0.00
Total	\$0.00	\$16.00	\$16.00	\$16.00	\$1.76
Right-of-way and Environmental Mitigation					
Capital Outlay Support	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Capital Outlay	\$42.00	\$70.00	\$82.40	\$72.40	\$25.47
Total	\$42.00	\$70.00	\$82.40	\$72.40	\$25.47
Sunk Cost - Existing East Span Retrofit					
Total	\$92.00	\$84.00	\$84.00	\$84.00	\$70.26
Environmental Phase (Expended)					
Capital Outlay Support		\$97.70	\$97.70	\$97.70	\$97.67
Project Expenditures, Pre-splits					
Capital Outlay Support		\$44.90	\$44.90	\$44.90	\$44.88
Non-project Specific Costs					
Capital Outlay Support		\$20.00	\$20.00	\$20.00	\$3.23
Subtotal East Span Capital Outlay Support					
Subtotal East Span Capital Outlay and Sunk Costs	\$381.69	\$878.40	\$1,010.50	\$919.80	\$319.10
Total SFOBB East Span					
	\$2,600.49	\$5,130.10	\$4,935.63	\$5,500.93	\$1,368.53

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

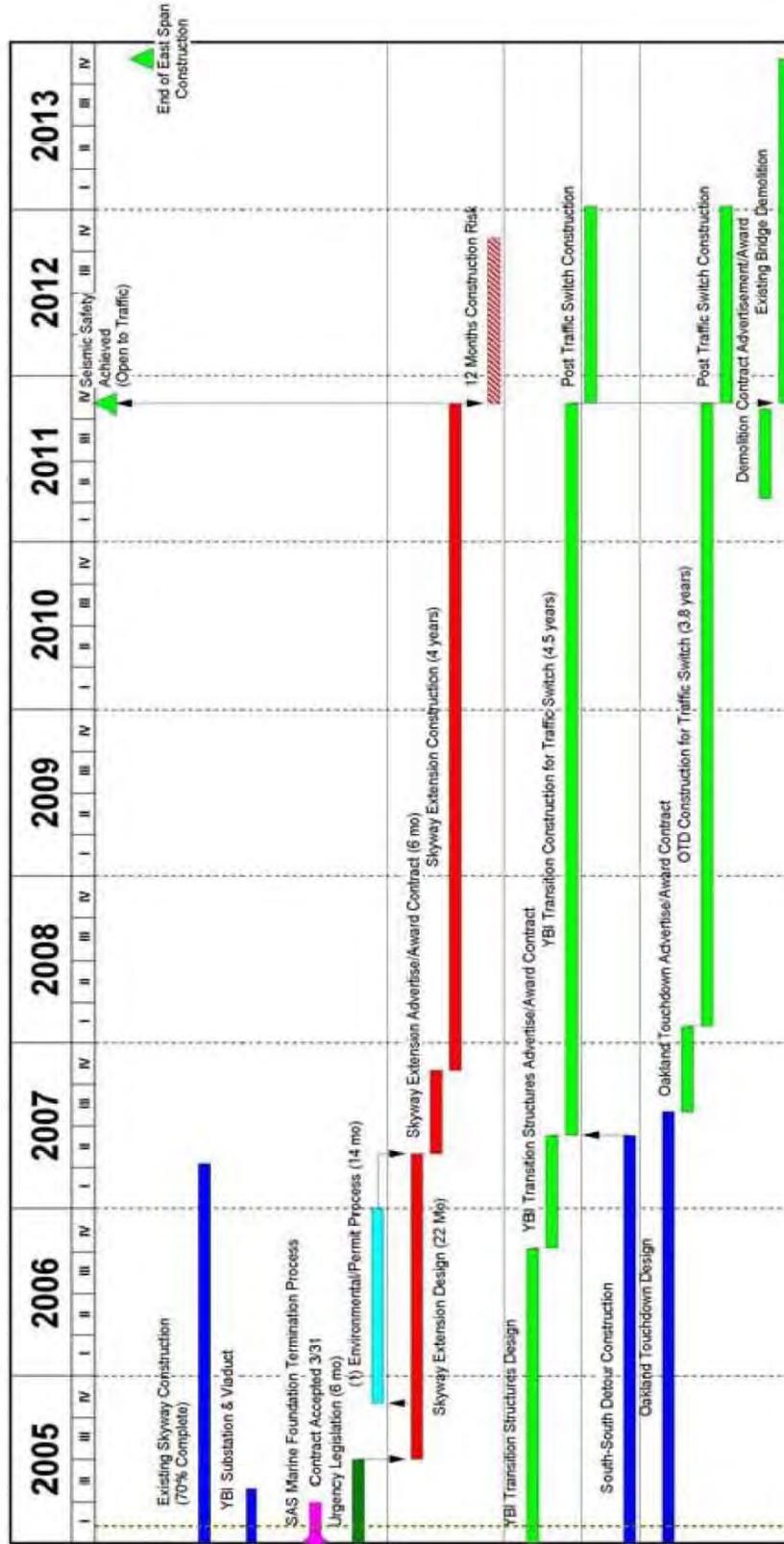
Appendix B.

**Chart 5. San Francisco-Oakland Bay Bridge East Span Corridor Schedule
Baseline AB 1171 vs. Current Projected**



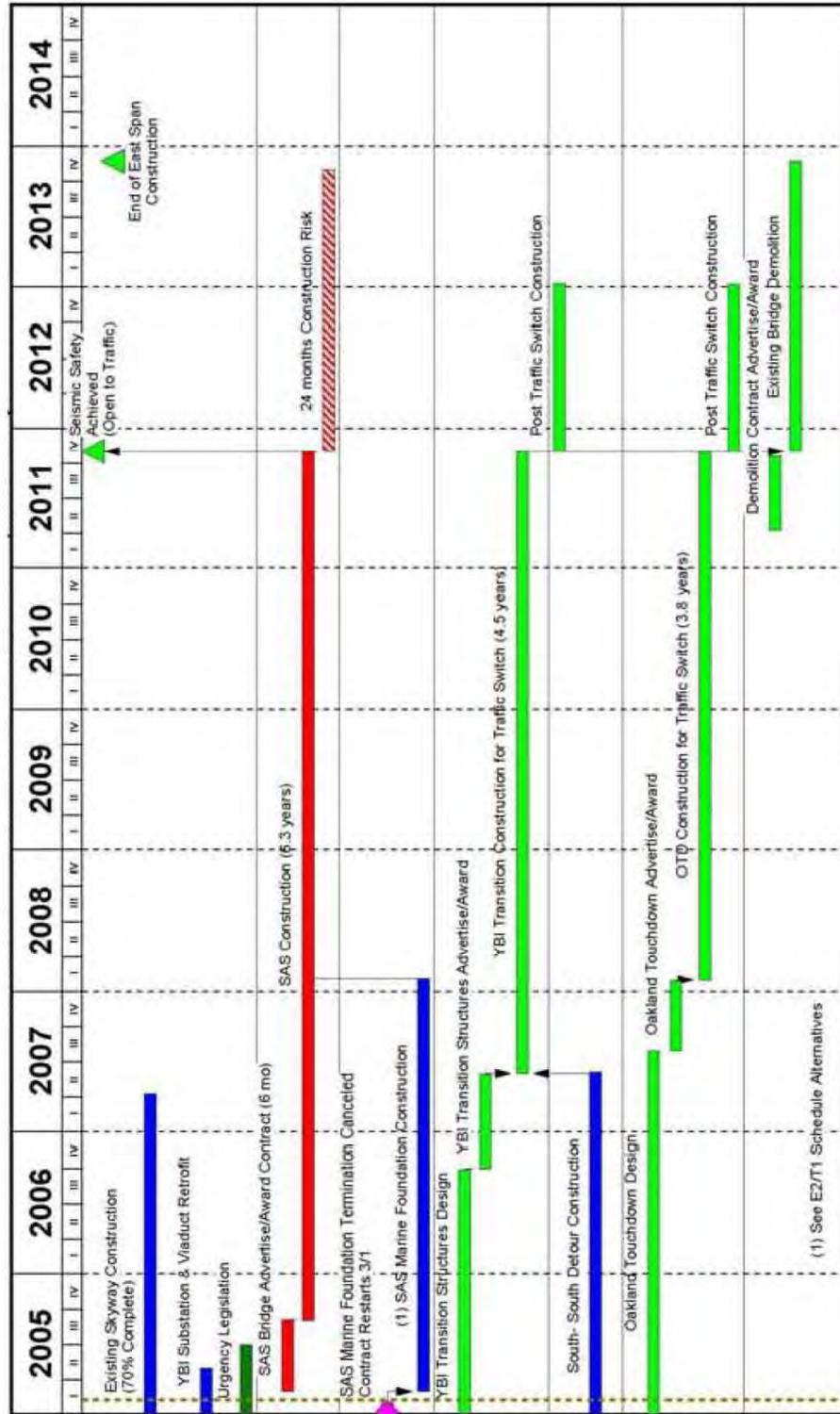
Appendix C.

**Chart 6a. San Francisco-Oakland Bay Bridge East Span
Skyway Extension Alternative Corridor Schedule**



Appendix D.

Chart 6b. San Francisco-Oakland Bay Bridge East Span Self-Anchored Suspension Alternative Corridor Schedule



Appendix E.