

M e m o r a n d u m

To: CHAIR AND COMMISSIONERS
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: May 17-18, 2017

Reference No.: 2.5d.(1) - **REPLACEMENT ITEM**
Action Item

From: NORMA ORTEGA
Chief Financial Officer

Prepared by: Rihui Zhang
District 3 - Director (Acting)

Subject: **ALLOCATION FOR PROJECT WITH COSTS THAT EXCEED THE PROGRAMMED AMOUNT BY MORE THAN 20 PERCENT (PPNO 03-5959) RESOLUTION FP-16-33**

ISSUE

Should the California Transportation Commission (Commission) approve the California Department of Transportation’s (Department’s) allocation request for \$37,400,000 for the State Highway Operations Protection Program (SHOPP) Bridge Major Rehabilitation project (PPNO 5959) on State Route (SR) 12 in Sacramento and Solano Counties?

RECOMMENDATION

The Department recommends that the Commission approve an allocation of \$37,400,000 for the SHOPP Bridge Major Rehabilitation project (PPNO 5959) on SR 12 in Sacramento and Solano Counties.

RESOLUTION

Resolved, that \$37,400,000 be allocated from the Budget Act of 2017, Budget Act Items 2660-001-0890, 2660-302-0042, and 2660-302-0890 to provide funds to advertise the following project.

	Construction Component	Programmed Amount	Program Adjustment	Funds Request	% Over Programmed Amount
Dist-Co-Rte 03-Sac-12	Capital	\$32,000,000	\$ 0	\$32,000,000	0%
	Support	\$ 3,900,000	\$1,500,000	\$ 5,400,000	38.5%
Total Allocation Request				\$37,400,000	

PROJECT DESCRIPTION

This project is located on SR 12, near the city of Rio Vista, at the Sacramento River Bridge (Bridge No. 23-0024) between Sacramento and Solano Counties. This bridge is a half mile long

drawbridge on a two lane conventional highway which accommodates over 20,000 vehicles per day. The scope of the project work includes cleaning and repainting the steel surfaces to maintain and preserve the steel structural members of the bridge.

This project proposes to install scaffolding and 100 percent containment system required for the surface preparation and painting operations. Clean all surfaces by pressure washing all steel surfaces to remove oil, dirt, and contaminants. Spot blast the rust areas to bare metal and apply a coat of waterborne primer. Apply a full coat of waterborne primer and two full coats of waterborne aluminum finish coat paint to all steel surfaces. Total estimated capital cost is \$32,000,000. However, an increase of \$1,500,000 is needed to the current programmed amount of \$3,900,000 for a total of \$5,400,000 for Construction Support.

REASON FOR INCREASE

The increase for Construction Support is due to the increase in working days (WD) and the additional required biological inspections.

Increase in Working Days due to the change in the Traffic Management Plan (67 percent of the Support Cost Increase)

The original Construction Support cost was based on a Traffic Management Plan (TMP) that proposed 24/7 one way reversible traffic control during the painting of the fixed portions of the bridge, and a full bridge closure (closed to vehicles, open for boats) during the painting of the lift span and the two 200 foot towers. This would allow the entire structure to be painted in approximately 480 working days. It was noted as a risk, however, that there were potential public safety concerns that could impact the local community.

The first, and most significant, concern with this TMP was regarding public safety and emergency services such as police, fire, ambulance, postal service, school buses. The slowing or prohibition of these vital public services across the bridge posed very significant public safety risks. In addition to the impact to public safety, the 24/7 one way reversible traffic control would cause very long traffic delays. The full bridge closure would require a 90 minute detour on the shortest route. There are no detour routes at all for boats that need to go under the bridge.

In order to mitigate these impacts, the Department selected a TMP which only allows lane closures at night, and requires that the contractor allow the lift span to be raised a minimum of twice per day during construction for boats and ships. This resulted in the ability to maintain public safety and emergency services across the bridge, and much more manageable vehicular and maritime traffic impacts, but had a significant impact on the construction cost and schedule.

In May 2016, when this change was first identified, a SHOPP Amendment (16H-001) was approved by the Commission increasing the Construction Capital from \$19,220,000 to \$32,000,000 and increasing the Construction Support from \$2,328,000 to \$3,900,000. The Construction Support increase was based on the new 712 working day estimate (48 percent higher than the original estimate of 480 days).

During the Plans, Specifications & Estimate (PS&E) phase, which spanned from May 2016 to December 2016, the Department conducted a 95 percent complete constructability review of the PS&E package. This review included Department's internal functional units and an external contractors' outreach to obtain feedback on the constructability of the project. Based on the review comments and recommendations, the Department re-evaluated the working day estimate and determined that this project will take longer than 712 working days to construct under the revised TMP. As a result, when the PS&E package was finalized in December 2016, the working day estimate was increased again from 712 to 1,000 (40 percent increase). This will add at least one, and possibly two, more construction seasons. Approximately \$1,000,000 of this additional request is a result of the increased construction administration and inspection effort required because of the increased working days.

Additional Biological Inspections due to the protected birds found on the structure
(33 percent of the Support Cost Increase)

During the Project Approval & Environmental Studies (PA&ED) phase, nesting swallows were found on the underside of the bridge, and protected peregrine falcons were found on the top of the two towers. In order to protect these birds, and remain compliant with the law during construction, the environmental document required that routine inspections be made by a qualified biologist throughout construction. This initial PA&ED estimate for biological inspections was not adjusted as part of the May 2016 SHOPP amendment because the design was approximately 30 percent complete and the final biological inspection costs were still not known. In December 2016, during a 95 percent complete constructability review of the PS&E package, it was determined that an additional \$500,000 was needed to perform biological inspections for the entire 1,000 working days.

RISK ANALYSIS

The PS&E phase Risk Register states that "Nesting birds, protected from harassment under the Migratory Bird Treaty Act, may delay construction during the nesting season." The additional funding for the additional biological inspection is intended to mitigate this risk, however there remains a certain level of uncertainty due to the sensitive biological habitat.

Additionally, due to the non-standard nature of this project and resulting lack of historical cost and schedule data, there remains a risk that bids could come in higher than expected, or the construction schedule could not be completed as planned.

The Department believes the probability of these two risks being realized is low.

EXPECTED IMPACTS

If the contractor cannot hold to the working days as planned because of vehicular traffic, maritime traffic, environmental, or other constraints, there is the potential that additional Construction Support funds may be needed at a later date for the increased working days that could result.

If the nesting birds end up requiring more inspection and/or exclusionary effort than what is expected, there is the potential that additional Construction Support funds may be needed at a later date for additional exclusionary measures or additional biological inspections.

CONSEQUENCES

The Department has determined that if this allocation request for \$37,400,000 is not approved, the Department will not be able to advertise this Bridge Major Rehabilitation project and construction will be delayed.

Attachment