

## MEMORANDUM

To: CHAIR AND COMMISSIONERS  
CALIFORNIA TRANSPORTATION COMMISSION

CTC Meeting: June 24-25, 2020

From: STEVEN KECK, Chief Financial Officer

Reference Number: 2.5d.(1), Action Item

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District 07 – Director

Subject: **ALLOCATION FOR PROJECT WITH COSTS THAT EXCEED THE PROGRAMMED AMOUNT BY MORE THAN 20 PERCENT (PPNO 5219/EA 33760) – LOS ANGELES COUNTY – STATE ROUTE 14) RESOLUTION FP-19-88**

### **ISSUE:**

Should the California Transportation Commission (Commission) approve the California Department of Transportation's (Department) allocation request for \$8,719,000 for the State Highway Operation and Protection Program (SHOPP) Replace Drainage System project, on State Route (SR) 14, in Los Angeles County, to advertise the project?

### **RECOMMENDATION:**

The Department recommends that the Commission approve the requested allocation for this SHOPP project.

### **PROJECT DESCRIPTION:**

This project is located on State Route 14 in the County of Los Angeles in the City of Santa Clarita, near southbound offramp to Sierra Highway. The project will replace a 50-year old steel pipe drainage system to restore the system functionality and to protect the integrity of the freeway. The drainage system was damaged by heavy sediments deposited through storm drains. Also, due to the presence of debris, the effects of natural petroleum products in the surrounding soil, and oil contact with the existing metal pipes, an oil collection system was proposed to prevent future seepage and contamination of the stormwater system. The existing 2,910-ft corrugated steel pipe drainage system is being replaced with a 660-ft corrugated steel pipe system and a 2,670-ft reinforced concrete pipe system.

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The project is in a high fire danger zone.; to mitigate the post-fire stormwater abrasive sediment loads resulting in seepage of corrosive oil and brine from the adjacent side slopes within the project area, a change was made to use concrete pipes which will also have a significantly longer lifespan than steel. In addition, a concrete pipe has less chance of leakage at the joints compared to a corrugated steel pipe due to corrosive oil and brine.

**FUNDING AND PROGRAMMING STATUS:**

This project was programmed in 2016 for \$2,719,000 in construction capital and \$1,262,000 in construction support, for construction in 2019-20. The Plan Specifications and Estimate (PS&E) were completed in February 2020, and based on the most recent Engineers Estimate (EE), which was completed in March 2020, the updated construction capital cost of the project is \$6,645,000; an increase of \$3,926,000 or 144 percent over the programmed funds.

The Department is requesting an allocation of \$6,645,000 for construction capital, and \$2,074,000 for support cost. The project was ready to list as of May 29, 2020 and is scheduled for advertising in September 2020 and construction to begin in January 2021. The construction duration is estimated at 250 working days, and to be completed within one construction season.

**REASON FOR COST INCREASE:**

The project initiation document was completed in May 2017 and amended into the 2016 SHOPP in October 2017. The scope of work at time of programming was to replace the existing aging corrugated steel pipes, damaged by sediment transfer and contact with oil and brine, with new steel pipes.

Immediately after programming the project in the SHOPP, the Department requested, and Commission allocated the pre-construction support to commence the Project Approval and Environmental Document phase of the project. During this phase of work, the Department determined that the replacement of the damaged corrugated steel pipes with new corrugated steel pipes were needed to address the leakage in the joints. The oil seepage that has been collected in the existing pipes and the soil around the drainage systems will be treated as contaminated soil, disposed of, and replaced with clean soil for backfill

Although an oil seepage catchment and removal system were planned to be included with the corrugated steel pipes, it was concluded that this would still result in an unacceptably low design life and would be susceptible to damaging debris flows from stormwater after wildland fires. To ensure an acceptable design life of the pipes, the Department chose to change the material of the pipe from corrugated steel to reinforced concrete and still pair that with the oil seepage catchment and removal system.

The presence of natural oil was discovered when a hazardous waste soil investigation was performed after the project was programmed. In October of 2018, an updated cost estimate for construction capital cost was \$5,995,000 and construction support was \$1,315,000.

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Current construction capital cost is higher than originally programmed, and it was not updated in the SHOPP through the amendment process. The District is conducting annual project phase updates to avoid similar issues in the future. As such, the Department is requesting the current cost for this project with this construction allocation.

**Capital Cost Increase:**

The construction capital increase of \$3,926,000 is mainly due to disposing of contaminated soil, importing clean soil for backfill, additional traffic control, reconstructing roadway and concrete barrier due to the change of construction method, and the higher cost of concrete pipes over the cheaper, originally planned, corrugated steel pipes. The increase is also due to cost of the enhanced oil seepage catchment and recovery system and the overall increase for mobilization and contingencies amounts which are based on overall project cost.

**Support Cost Increase:**

The construction support increase of \$812,000, or 64 percent over the programmed budget, is due to the increased number of working days from the initial project with steel pipe to the longer-lasting concrete pipe, and the expected challenges that come with construction in soil infused with oil and brine. The increase in working days reflects the longer time required for constructing the pipes across freeway lanes with limited work window and requiring excavation, shoring, traffic closure, reconstructing the pavement section, concrete barriers, and working next to live traffic.

The project originally planned to jack and bore a segment of pipe across the freeway. The proposed jack and bore method was not suitable because of the close proximity to the freeway slope and not having sufficient space for the bore pit. Since complete freeway closures are not allowed within the project limits, the excavation and replacing the pipe process will need to occur within different work segments, which will prolong the duration of the construction working days.

The project is consistent with the performance measures, goals, and objectives in the Commission-adopted Transportation Asset Management Plan. Concrete pipe culverts provide better and longer-lasting service life than corrugated steel pipes, and an overall better freeway drainage system.

**CONSEQUENCES:**

If additional funds are not approved, the Department will not be able to advertise for the construction of this safety project.

The Department has determined that the additional funds requested is in the best interest of the State to improve the safety of the Department's maintenance workers.

**FINANCIAL RESOLUTION:**

Resolved, that \$6,645,000 be allocated from the Budget Act of 2019, Budget Act Item 2660-302-3290 for construction capital, and \$2,074,000 for construction engineering, to provide funds to advertise the project.

Attachment

**2.5 Highway Financial Matters**

Project No.	Location	PPNO Program/Year Phase	Budget Year	Amount by
Allocation Amount	Project Description	Prgm'd Amount	Item # Fund Type	Fund Type
County	Project Support Expenditures	Project ID	Program Code	
Dist-Co-Rte		Adv Phase		
Postmile		EA		

**2.5d.(1) Allocations for Projects with Cost Increase Greater than 20 percent** **Resolution FP-19-88**

1 \$8,719,000	In Santa Clarita, from 0.8 mile to 0.5 mile south of Golden Valley Road. <u>Outcome/Output:</u> Replace and upgrade culverts and construct an oil collection system for oil seepage. This project will replace deteriorated 50-year-old steel culverts with fire-resistant reinforced concrete culverts.	07-5219 SHOPP/19-20 CON ENG \$1,262,000 CONST \$2,719,000 0717000036	505-3290 RMRA 20.10.201.151 2019-20 302-3290 RMRA 20.20.201.151	\$2,074,000 \$6,645,000
Los Angeles 07-LA-14 R28.9/R29.2				
Preliminary		4		
<u>Engineering</u>		33760		
PA&ED	<u>Budget</u> \$556,000	<u>Expended</u> \$396,637		
PS&E	\$1,881,000	\$1,138,930		
R/W Sup	\$23,000	\$5,419		

(CEQA - CE, 5/30/2018; Re-validation 2/18/2020)  
 (NEPA - CE, 5/30/2018; Re-validation 2/18/2020)

Performance Measure: Culverts (Planned: 1, Actual: 17 Each)					
	<u>Unit</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>	<u>Quantity</u>
Existing Condition	Linear feet	616.4	1,897.5	892.1	3,406.0
Post Condition	Linear feet	3,406.0	0.0	0.0	3,406.0