

# Memorandum

To: CHAIR AND COMMISSIONERS

CTC Meeting: February 19, 2009

Reference No.: 2.1c.(1c)  
Action Item

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Subject: **CMIA PROJECT BASELINE AMENDMENT**  
**RESOLUTION CMIA-PA-0809-009**

## **RECOMMENDATION:**

The Department of Transportation (Department) recommends the California Transportation Commission (Commission) approve a baseline agreement (Resolution CMIA-PA-0809-009) for the Route 24 Caldecott Tunnel Fourth Bore project, programmed in the Corridor Mobility Improvement Account (CMIA) and the State Transportation Improvement Program, to split and reprogram the original CMIA project into four segments. This project is also programmed in the Traffic Congestion Relief Program (TCRP #15), which funded project support.

## **ISSUE:**

The Department is requesting an amendment to the CMIA baseline agreement for the Caldecott Tunnel Fourth Bore project (PPNO 0057A) in Alameda and Contra Costa Counties to split the original project into four segments, as follows:

- Segment 1 – Construct 2-lane fourth bore (PPNO 0057A).
- Segment 2 – Realign westbound Route 24 to northbound Route 13 Connector (0057G).
- Segment 3 – Improvements to Kay Street Overcrossing (0057I).
- Segment 4 – Highway planting and environmental enhancements (0057J).

## **BACKGROUND:**

The project is located on Route 24 in Alameda and Contra Costa Counties. The proposed project will:

- a. Construct a 2-lane fourth bore for the Caldecott Tunnel, north of the existing third bore.
- b. Modify two interchanges and one intersection.
- c. Construct retaining and soundwalls.
- d. Construct tunnel cross passages.
- e. Demolish the existing operations and maintenance control (OMC) building.
- f. Construct a new OMC building.

This project will reduce congestion, enhance safety of the traveling public and maintenance crews, and improve overall traffic operations along the corridor by providing continuous lanes of traffic through tunnels in each direction.

### **Increase in PS&E and R/W Budgets**

The plans, specifications, and estimate (PS&E) budget has increased from \$31,100,000 to \$33,450,000, an increase of \$2,350,000. This increase is due the following unexpected events:

- Expansion of the contractor outreach program to include posting the draft PS&E on the project website to obtain contractor input.
- Incorporation of the City of Oakland settlement agreement items.
- Revisions to the OMC building for fire suppression, windows, and other architectural details as a result of recently completed review of the PS&E package by the State Fire Marshall.
- Design of a new microwave tower in lieu of relocating the current tower, as originally planned.
- Additional work on project specifications to integrate an emergency response plan for all systems.
- Additional design efforts for environmental enhancement projects.

This \$2,350,000 increase in the PS&E budget will be funded with Regional Measure 2 funds from the project contingency fund which is currently programmed as part of the construction capital.

The right of way support budget has increased from \$200,000 to \$300,000, an increase of \$100,000. The original right of way support budget did not assume any condemnation would be required for any of the 14 parcels. In order to cover unanticipated condemnation expenditures for five parcels, the right of way support budget has to be increased. The additional expenditures relate to right of way engineering and appraisal of the five parcels, which will be covered by transferring \$100,000 IIP funds from construction support to right of way support. Right of way is currently programmed solely with interregional improvement program (IIP) funds. The local funds from the project contingency will be used to backfill construction support shortfall.

### **Increase in Construction Support Budget**

The construction support budget has been increased from \$22,400,000 to \$43,600,000, an increase of \$21,200,000, which will be funded from Measure J funds and RIP shares.

The current construction support budget was set in mid-2007 when the capital cost estimate for the project was about \$225 million. The assumption used at the time was that the support/construction ratio should be ten percent, the ratio used for large roadway projects. Based on recently completed project information (such as the number of bid items [320], the engineer's estimate, and the expected construction schedule for the various activities), it has been determined that the current budget of \$22.4 million is not sufficient to cover the construction management/inspection and the anticipated design support needed during construction. A bottoms-up estimate was developed, and it was determined that \$43.6 million, which represents 15 percent of the capital cost, would be a more adequate amount for the tunnel construction support budget. The budget was reviewed and revised by taking into consideration the following:

- Discussions with other agencies with similar projects regarding the recommended support/construction ratio, e.g. SoundTransit in Seattle.
- Analysis of staffing needs for another tunnel project in the Bay Area, the Devil's Slide project.
- Assumption that the contractor will be performing the tunneling operations from both ends. This operation will be done 24 hours a day, seven days a week for 30 months, therefore requiring oversight staffing for three shifts.
- Unlike most roadway and bridge projects, tunnel projects have a very high chance for the contractor to encounter unanticipated conditions during tunneling operation. The 30-month tunneling operation has the highest risk for potential claims, therefore it is critical to fully staff the project to appropriately document the operation. In addition to specialized field inspectors and tunnel and geotechnical staff, claims specialists, schedulers, and project controls staff are needed.
- Commitment in the Paleontology Monitoring Plan to have two full-time paleontologists during the tunneling operations.
- Commitment with the City of Oakland to have a full time public information officer.

Since this project is proposed to be split into four construction contracts, \$500,000 programmed in the regional improvement program (RIP) is proposed to be transferred from construction capital to construction support for two of the projects where construction will be funded entirely from RIP shares.

### **Split the project into four segments and remove the landscaping and environmental enhancements portion from CMIA reporting requirements**

The project is proposed to be delivered as four separate construction contracts. An early delivery of a portion of the project scope – Segment 2 and Segment 3 – will improve traffic flow in the vicinity of the exiting tunnels prior to the start of the construction of the fourth bore – Segment 1. In addition, because landscaping projects have long establishment periods, the planting replacement portion – Segment 4 - is proposed to be split from the parent project and will be funded solely with local funds. The Segment 4 also includes environmental enhancements, resulting from a January 23, 2009 settlement with the Fourth Bore Coalition, solely funded with local funds. It is further proposed to remove this landscaping and the environmental enhancements portion from the CMIA regular reporting requirements since completion is several years after completion of the main contract.

**Existing Baseline - overall project (PPNO 0057A)** - On State Route (SR) 24, from SR 13 in Alameda County to Gateway Boulevard in Contra Costa County. The project will a) construct a 2-lane fourth bore for the Caldecott Tunnel, north of the existing third bore; b) modify two interchanges and one intersection; c) construct retaining walls and soundwalls; d) construct tunnel cross passages; e) demolish existing operations and maintenance control (OMC) building; and f) construct a new OMC building.

x1000

Funding source	FY (Prior)				FY 08/09	FY 08/09	Totals
	PAED	PS&E	RW Sup	RW	CON Sup	CON	
CMIA					17,600	157,400	175,000
IIP	9,000	5,200	200	800	2,800		18,000
RIP (Alameda)						2,000	2,000
RIP (Contra Costa)		2,000				29,000	31,000
TCRP	10,000	10,000					20,000
Federal Demo						1,000	1,000
Regional Measure 2	1,500	13,500			900	34,100	50,000
Measure J		400			1,100	121,500	123,000
<b>Totals</b>	<b>20,500</b>	<b>31,100</b>	<b>200</b>	<b>800</b>	<b>22,400</b>	<b>345,000</b>	<b>420,000</b>

**Amended Baseline - overall project (PPNO 0057A)** - On State Route (SR) 24, from SR 13 in Alameda County to Gateway Boulevard in Contra Costa County. The project will a) construct a 2-lane fourth bore for the Caldecott Tunnel, north of the existing third bore; b) modify two interchanges and one intersection; c) construct retaining walls and soundwalls; d) construct tunnel cross passages; e) demolish existing operations and maintenance control (OMC) building; and f) construct a new OMC building.

x1000

Funding source	FY (Prior)				FY 08/09	FY 08/09	Totals
	PAED	PS&E	RW Sup	RW	CON Sup	CON	
CMIA					17,600	157,400	175,000
IIP	9,000	5,200	<b>300</b>	800	<b>2,700</b>		18,000
RIP (Alameda)						2,000	2,000
RIP (Contra Costa)		2,000			<b>500</b>	<b>28,500</b>	31,000
TCRP	10,000	10,000					20,000
Federal Demo						1,000	1,000
Regional Measure 2	1,500	<b>15,850</b>			<b>0</b>	<b>32,650</b>	50,000
Measure J		400			<b>22,800</b>	<b>99,800</b>	123,000
<b>Totals</b>	<b>20,500</b>	<b>33,450</b>	<b>300</b>	<b>800</b>	<b>43,600</b>	<b>321,350</b>	<b>420,000</b>

**Segment #1 (PPNO 0057A EA 04-29491)** - On State Route (SR) 24, from SR 13 in Alameda County to Gateway Boulevard in Contra Costa County. Construct a 2-lane fourth bore for the Caldecott Tunnel, north of the existing third bore; construct retaining walls and soundwalls; construct tunnel cross passages; demolish existing operations and maintenance control (OMC) building; construct a new OMC building; and widen westbound and eastbound on-ramps for Fish Road (Interchange #1). (Concurrent allocation request.)

x1000

Funding source	FY (Prior)				FY 08/09	FY 08/09	Totals
	PAED	PS&E	RW Sup	RW	CON Sup	CON	
CMIA					17,600	157,400	175,000
IIP	9,000	5,200	270	795	2,700		17,965
RIP (Alameda)						2,000	2,000
RIP (Contra Costa)		2,000				23,700	25,700
TCRP	9,993	9,985					19,978
Federal Demo						1,000	1,000
Regional Measure 2	1,490	15,485				30,500	47,475
Measure J					21,700	96,100	117,800
Totals	20,483	32,670	270	795	42,000	310,700	406,918

**Segment #2 (PPNO 0057G, EA 04-29492)** - Realign westbound Route 24 to northbound Route 13 Connector (Interchange #2). (Concurrent allocation request.)

x1000

Funding source	FY (Prior)				FY 08/09	FY 08/09	Totals
	PAED	PS&E	RW Sup	RW	CON Sup	CON	
IIP			5				5
RIP (Contra Costa)					400	4,300	4,700
TCRP	5	10					15
Regional Measure 2		10					10
Totals	5	20	5	0	400	4,300	4,730

**Segment #3 (PPNO 0057I, EA 04-29493)** - Widen Caldecott Lane at Kay Street Overcrossing and install traffic signal at Broadway and Kay Street intersection (Intersection #1). (Concurrent allocation request.)

x1000

Funding source	FY (Prior)				FY 08/09	FY 08/09	Totals
	PAED	PS&E	RW Sup	RW	CON Sup	CON	
IIP			25	5			30
RIP (Contra Costa)					100	500	600
TCRP	2	5					7
Regional Measure 2		5					5
Totals	2	10	25	5	100	500	642

**Segment #4 (PPNO 0057J, EA 04-29494)** - Establish highway planting and environmental enhancements in Alameda and Contra Costa Counties from East Temescal (Oakland) Separation to Gateway Boulevard Overcrossing (Orinda).

Funding source	x1000						Totals
	FY (Prior) PAED	FY 12/13 PS&E**	- RW Sup	- RW	FY 13/14 CON Sup	FY 13/14 CON**	
Regional Measure 2	10	350				2,150	2,510
Measure J		400			1,100	3,700	5,200
Totals	10	750	0	0	1,100	5,850	7,710

\*\* The environmental enhancement projects are to be funded in FY 08/09.

### Project delivery

The main project scope consisting of Segment 1, Segment 2, and Segment 3 will be delivered in accordance with baseline schedule. Major construction milestones for all four segments are listed below.

Segment # (PPNO)	Scope of Work	Begin Const.	End Const.	Begin Closeout	End Closeout
#1 (0057A)	Main Bore	Aug. 2009	Feb. 2014	Mar. 2014	Dec. 2014
#2 (0057G)	WB 24/ NB13 Connector	Apr. 2009	July 2010	Aug. 2010	Oct. 2010
#3 (0057I)	Broadway/Kay St. Intersection	Apr. 2009	Sept. 2009	Oct. 2010	Dec. 2009
#4 (0057J)	Follow-up Landscape <sup>++</sup> and Environmental Enhancements*	Mar. 2014	July 2020	Aug. 2020	Oct. 2020

<sup>++</sup> Follow-up landscape project schedule includes five-year plant establishment period.

\* A detailed schedule will be developed pending a cooperative agreement with the City of Berkeley.

The Engineer's Estimate for Segment 1 is less than the programmed budget. Consequently, the remaining \$11,043,000 CMIA (63 percent) and \$6,557,000 Measure J (37 percent) funds are to be held in reserve for unforeseen cost increases during construction. Upon contract award, the reserve will be adjusted in the same proportion to ensure that it is commensurate with the contract allotment.

Upon the approval of the allocation request, the project contingency fund will cease to exist. In the event that the amount needed to award the construction contracts is less than the total funds available for construction, as documented in this amendment, the award savings shall remain committed and available to complete Segment 1. Any proposal to redirect any award savings from construction of Segment 1 shall require approval by the Commission.

The Executive Steering Committee (ESC), comprised of Caltrans District 4 Director, the Executive Directors for the Contra Costa Transportation Authority and the Alameda County Congestion Management Agency will continue to insure that strong project cost controls are in place to monitor and control both support and capital expenditures. The project controls effort will include updating the current project staffing plan after the contract is awarded and the contractor's schedule is approved, also as the project progresses into different construction phases. The ESC will provide CTC staff with semi-annual updates of the project progress and financial status.

**RESOLUTION CMIA-PA-0809-009:**

Be it Resolved, that the California Transportation Commission does hereby amend the Corridor Mobility Improvement Account (CMIA) baseline agreement for the Route 24 Caldecott Tunnel project (PPNO 0057A) in Alameda and Contra Costa Counties to split the project into four segments--Segment 1 (PPNO 0057A), Segment 2 (PPNO 0057G), Segment 3 (PPNO 0057I), and Segment 4 (0057J)--with the scope, funding, and schedules adjusted, as described above and in accordance with the executed baseline agreements.