

# Memorandum

Tab 50

To: CHAIR AND COMMISSIONERS

CTC Meeting: May 18-19, 2016

Reference No.: 4.9  
Information

From: SUSAN BRANSEN  
Executive Director

Subject: **INTERIM REPORT ON THE CAPITAL OUTLAY SUPPORT WORKLOAD FORECASTING  
RECOMMENDATION DEVELOPMENT PROCESS**

## **ISSUE:**

Should the California Transportation Commission (Commission) accept and transmit the attached Interim Report outlining initial conclusions reached by Commission staff for purposes of developing a reasonable forecasting method for estimating Caltrans Capital Outlay Support (COS) workload to the California State Transportation Agency (CalSTA)?

At the request of the CalSTA Secretary, the Commission convened a workgroup of staff from various entities to review current and projected COS staffing levels and the methodology used to arrive at those levels. The primary objective of this effort was to provide advice and recommendations to the Administration and Legislature on a reasonable methodology for forecasting Caltrans' COS staffing workload based on a general consensus of the workgroup.

## **RECOMMENDATION:**

Staff recommends the Commission accept the attached Interim Report outlining initial conclusions reached by Commission staff through the efforts of the COS Workload Forecasting Methodology Workgroup and transmit the report to the CalSTA Secretary.

## **BACKGROUND:**

As part of the 2013-14 budget package, the Legislature adopted supplemental report language directing the Legislative Analyst's Office (LAO) and the Department of Finance (DOF) to work with Caltrans to review its COS program. In response, representatives from the LAO, DOF, and Caltrans met on a regular basis to discuss the COS program during the summer and fall of 2013. Although the review group reached general consensus on initial steps to improve efficiency and accountability, the group was unable to reach consensus on solutions to address many of the issues identified in the review. In the spring of 2014, the Administration made recommendations to address the concerns raised by the Legislature, while the LAO published a report with alternative recommendations. Since that time, there has remained much debate in the Legislature over how to determine the appropriate COS program staffing level.

Neither the Legislature, the Administration, nor the public is well-served by the ongoing dispute over the appropriate level of COS staffing. In its 2015 Annual Report to the Legislature, the Commission recommended that CalSTA continue efforts to develop a workload forecasting process for Caltrans' COS program by convening the appropriate agencies to determine a methodology acceptable to all parties.

On January 22, 2016, CalSTA Secretary Kelly requested that the Commission "lend its help and leadership in resolving this challenging issue due to the fact that the Commission has a well-earned reputation for independence and is often called upon to be a fair arbiter." The CalSTA Secretary's letter is included as Attachment A. Secretary Kelly further requested that the Commission form a workgroup with experts from the Commission, Caltrans, DOF, LAO, the Legislature, and CalSTA to review current and projected COS staffing levels at Caltrans and the methodology used to arrive at those levels. In response to the Secretary's request, Commission staff convened a group of experts from various entities to begin a review of Caltrans' annual COS workload forecasting methodology.

The COS Workload Forecasting Methodology Workgroup (workgroup) has met three times. Attachment B is a list of participants in the workgroup. At the first meeting, the workgroup focused on identifying and agreeing on the problem to be resolved. After much discussion, the workgroup generally agreed that a key objective of the overall effort was to resolve the ongoing concern related to the accuracy of Caltrans' annual COS budget request for staffing. It was agreed that resolution of this issue was necessary before the more substantive policy questions related to Caltrans workload could be addressed. It was also agreed that, following this phase, the workgroup would continue to meet to consider potential ways to improve the existing budget process and develop an alternative process to increase transparency and accountability and thus increase the Legislature's confidence in Caltrans budgeting and reporting. Through a multi-phased effort, the workgroup intends to move the discussion beyond simply a validation of the accuracy of Caltrans budget projections to broader policy questions involving the reasonableness of the methodology to estimate annual staffing needs to deliver the transportation program.

At its second and third meetings, the workgroup received and discussed information presented by Caltrans on the development of its annual COS budget request estimate. This exercise illustrated that Caltrans has worked diligently since the zero-based budget effort in 2013 to improve its workload forecasting process. Driving this improvement is the implementation of the Project Resource and Schedule Management (PRSM) software with which Caltrans is able to more effectively track and project workload for tasks of every phase for every project. With PRSM, Caltrans is able to aggregate significant amounts of data and is now working to improve the quality of this data as well as analyze the data in order to inform future estimating efforts.

The workgroup's discussion focused on how Caltrans estimates workload, how the workload informs the budget request, and the challenges of improving the accuracy of the final budget estimate despite the growing precision of Caltrans' estimating process. It became clear that Caltrans' difficulty in developing accurate annual budget estimates is not for lack of effort. Based on its presentations, Caltrans dedicates significant resources attempting to develop the most precise estimates possible. Unfortunately, Caltrans' efforts have not resulted in an accurate representation

of the workload Caltrans staff accomplishes in a given year. The inaccuracy in Caltrans' projected workload forecast is derived from a variety of factors including many that are outside Caltrans' control. These factors include:

- The annual workload estimate is the sum of tens of thousands of inputs.
- The budget request is a moment-in-time snapshot of a twelve-month workload estimate beginning roughly six months after the snapshot is taken. Project schedules inevitably shift, impacting the work actually completed within a fiscal year.
- The basis for building the estimate from the very lowest level (i.e., development of the unit estimate) is not based on uniform data, but instead varies as it is based on the judgment of subject matter experts taking into account a variety of risks and assumptions.
- The nature of project development is very fluid, dependent on a number of relatively unpredictable activities such as the timing of right-of-way purchases and state and federal permitting processes.

Generally, much of the workgroup's discussion centered on the underlying problem that, when comparing the prior year's proposed workload by phase or project to the actual workload accomplished by Caltrans staff, it appears that Caltrans is not doing what it committed to in the workload estimate. The sheer number of variables involved in each individual project prohibits the ability to determine at the end of the year whether the assumptions used to develop the budget estimate were accurate. In its presentation, Caltrans demonstrated that it accurately estimates its needs within a 40 percent range only 38 percent of the time. Clearly, the current method of justifying staffing levels does not work for managing the Department's resources. Without the ability to compare the resources and workload promised with the resources utilized and workload accomplished, the Legislature cannot use the current methodology to hold Caltrans accountable for the development of accurate budget workload estimates.

Some workgroup members also raised concerns about Caltrans' apparent trend of overestimating resource needs. There appears to be no penalty but instead an incentive to overestimate project budgets to avoid requesting supplemental funds. This systemic problem may be another facet the workgroup will attempt to resolve in order to address the ongoing concern related to the accuracy of Caltrans' annual COS budget request.

### **CONCLUSION:**

As the workgroup concluded the first phase of this effort, Commission staff has made two important observations. First, staff concluded that Caltrans has made improvements in its COS workload forecasting methodology since the 2013 zero-based budgeting review. These improvements include:

- Implementing PRSM, integrating task management and enabling the Department to track planned versus expended resources in one system.
- Implementing error reports and quality checks in the system to improve data quality and reduce the number of mistakes in the annual estimate.

- Tracking the initial budget estimate for each phase of each project to better report Caltrans' performance.
- Initiating new change control rules to ensure resource estimates are not arbitrarily changed or manipulated.
- Developing a Resource Staffing Mix Evaluation methodology to evaluate the best use of consultants to accomplish Department work.
- Presenting a plain-language project delivery report to the Commission to be more transparent about Caltrans workload and begin to identify potential issues with projects before they become problems.

Second, while the current process is better than it was in 2013-14 and Caltrans appears committed to continuing its efforts in developing the best possible estimates for annual workload, it is evident to the workgroup that there is a limit to the accuracy of the estimate given the vast number of variables involved in the forecast. A primary hindrance to accuracy is that, while Caltrans manages its workload across budget years through each phase of the project development process, the workload forecast submitted to the Legislature to inform the budget process is based on a projection taken at a point in time. As a result, since project workload forecasts represent a point in time despite the dynamic nature of project workload, the current methodology is not useful for purposes of actual-workload-to-forecast comparisons. Therefore, the current method of forecasting COS workload makes it difficult to hold Caltrans accountable by budget year.

Moving into the second phase of this effort, the workgroup intends to develop recommendations to increase Caltrans' accountability for how it estimates and manages its COS resources. Coupled with this aim, the workgroup may consider strategies to incentivize accurate estimates and reduce the tendency to overestimate needs.

Attachment C is a Draft Interim Report and Transmittal Letter to CalSTA communicating the conclusions reached during the first phase of the COS workload forecasting recommendation development process.

Attachment A – Letter from CalSTA to the Commission

Attachment B – List of COS Workload Forecasting Workgroup Members

Attachment C – Draft Interim Report and Transmittal Letter to CalSTA

BOB ALVARADO, Chair  
YVONNE B. BURKE  
LUCETTA DUNN  
JAMES EARP  
JAMES C. GHIEMMETTI  
CARL GUARDINO  
FRAN INMAN  
CHRISTINE KEHOE  
JAMES MADAFFER  
JOSEPH TAVAGLIONE

STATE OF CALIFORNIA

EDMUND G. BROWN Jr., Governor

SENATOR JIM BEALL, Ex Officio  
ASSEMBLY MEMBER JIM FRAZIER, Ex Officio  
SUSAN BRANSEN, Executive Director



## CALIFORNIA TRANSPORTATION COMMISSION

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May 20, 2016

Secretary Brian Kelly  
California State Transportation Agency  
915 Capitol Mall, Suite 350B  
Sacramento, CA 95814

Re: Interim Report - Initial Conclusions to Inform the Capital Outlay Support Workload  
Forecasting Development Process

Dear Secretary Kelly:

The California Transportation Commission (Commission) completed the enclosed Interim Report related to the Department of Transportation's (Caltrans) capital outlay support (COS) workload forecasting methodology development process. The Interim Report, prepared in response to your January 22, 2016 request, outlines initial conclusions related to Caltrans' COS workload forecasting methodology. The Commission intends to submit a final report within sufficient time for your use in informing the 2017-18 budget development process.

The Interim Report, prepared by Commission staff, was informed by a workgroup of experts from various entities formed to review current and projected COS staffing levels at Caltrans and the methodology used to arrive at those levels. Addressing the ongoing concern related to the accuracy of Caltrans' annual COS budget request was a key objective of the workgroup.

For this initial phase, the workgroup's primary attention centered on the underlying problem that, when comparing the prior year proposed workload to the actual workload accomplished, it appears that Caltrans is not performing the work committed to in the workload estimate. At the

Secretary Brian Kelly

May 20, 2016

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end of the year it is not possible to assess the accuracy or reasonableness of the budget assumptions given the sheer number of variables involved in carrying out individual projects. Without the ability to compare the resources and workload promised with the resources utilized and workload accomplished, the Legislature cannot use the current methodology to hold Caltrans accountable for the development of accurate budget workload estimates.

Of additional concern, Caltrans informed the workgroup that it accurately estimates its needs within a 40 percent range only 38 percent of the time. This information demonstrates that the current method of justifying staffing levels is not useful for managing the Department's resources. Concerns were also raised about Caltrans' apparent trend of overestimating resource needs. There appears to be no penalty for overestimating resource needs, but instead an incentive to overestimate project budgets to avoid requesting supplemental funds.

Through a multi-phased effort, the Commission intends to reconvene the workgroup for purposes of delivering recommendations for your consideration to increase Caltrans' accountability for how it estimates and manages its COS resources. This effort will move the discussion beyond simply a validation of the accuracy of Caltrans' budget projections to broader policy questions involving the reasonableness of the methodology to estimate annual staffing needs to deliver the transportation program. The potential methods to improve the existing budget process including whether an alternative process would serve to increase transparency and accountability to increase the Legislature's confidence in Caltrans budgeting and reporting will be discussed. The workgroup may also consider strategies to recommend for incentivizing accurate estimates and reducing the tendency to overestimate needs.

As always, do not hesitate to contact Executive Director Susan Bransen at (916) 654-4245 if you have any questions.

Sincerely,

BOB ALVARADO

Chair

Enclosure: Interim Report – Initial Conclusions to Inform the COS Workload Forecasting  
Development Process

c: California Transportation Commissioners  
Malcolm Dougherty, Director, California Department of Transportation

# CALIFORNIA TRANSPORTATION COMMISSION

## INTERIM REPORT

### INITIAL CONCLUSIONS TO INFORM THE CAPITAL OUTLAY SUPPORT WORKLOAD FORECASTING DEVELOPMENT PROCESS

May 19, 2016

As part of the 2013-14 budget package, the Legislature adopted supplemental report language directing the Legislative Analyst's Office (LAO) and the Department of Finance (DOF) to work with the Department of Transportation (Caltrans) to review its Capital Outlay Support (COS) program. In response, representatives from the LAO, DOF, and Caltrans met on a regular basis to discuss the COS program during the summer and fall of 2013. Although the review group reached general consensus on initial steps to improve efficiency and accountability, the group was unable to reach consensus on solutions to address many of the issues identified in the review. In the spring of 2014, the Administration made recommendations to address the concerns raised by the Legislature, while the LAO published a report with alternative recommendations. Since that time, there has remained much debate in the Legislature over how to determine the appropriate COS program staffing level.

Neither the Legislature, the Administration, nor the public is well-served by the ongoing dispute over the appropriate level of Caltrans' COS staffing. In its 2015 Annual Report to the Legislature, the California Transportation Commission (Commission) recommended that the California State Transportation Agency (CalSTA) continue efforts to develop a workload forecasting process for Caltrans' COS program by convening the appropriate agencies to determine a methodology acceptable to all parties.

On January 22, 2016, the CalSTA Secretary requested that the Commission "lend its help and leadership in resolving this challenging issue due to the fact that the Commission has a well-earned reputation for independence and is often called upon to be a fair arbiter." Secretary Kelly further requested that the Commission form a workgroup with experts from the Commission, Caltrans, DOF, LAO, the Legislature, and CalSTA to review current and projected COS staffing

levels at Caltrans and the methodology used to arrive at those levels. In response to the Secretary's request, Commission staff convened a group of experts from various entities to begin a review of Caltrans' annual COS workload forecasting methodology. Appendix A is a list of participants in the workgroup.

The COS Workload Forecasting Methodology Workgroup (workgroup) has met three times. At the first meeting, the workgroup focused on identifying and agreeing on the problem to be resolved. After much discussion, the workgroup generally agreed that a key objective of the overall effort was to resolve the ongoing concern related to the accuracy of Caltrans' annual COS budget request for staffing. It was agreed that resolution of this issue was necessary before the more substantive policy questions related to Caltrans workload could be addressed. It was also agreed that, following this phase, the workgroup would continue to meet to consider potential ways to improve the existing budget process and develop an alternative process to increase transparency and accountability and thus increase the Legislature's confidence in Caltrans budgeting and reporting. Through a multi-phased effort, the workgroup intends to move the discussion beyond simply a validation of the accuracy of Caltrans budget projections to broader policy questions involving the reasonableness of the methodology to estimate annual staffing needs to deliver the transportation program.

At its second and third meetings, the workgroup received and discussed information presented by Caltrans on the development of its annual COS budget request estimate. This exercise illustrated that Caltrans has worked diligently since the zero-based budget effort in 2013 to improve its workload forecasting process. Driving this improvement is the implementation of the Project Resource and Schedule Management (PRSM) software with which Caltrans is able to more effectively track and project workload for tasks of every phase for every project. With PRSM, Caltrans is able to aggregate significant amounts of data and is now working to improve the quality of this data as well as analyze the data in order to inform future estimating efforts.

The workgroup's discussion focused on how Caltrans estimates workload, how the workload informs the budget request, and the challenges of improving the accuracy of the final budget estimate despite the growing precision of Caltrans' estimating process. It became clear that



Caltrans' difficulty in developing accurate annual budget estimates is not for lack of effort. Based on its presentations, Caltrans dedicates significant resources attempting to develop the most precise estimates possible. Unfortunately, Caltrans' efforts have not resulted in an accurate representation of the workload Caltrans staff accomplishes in a given year. The inaccuracy in Caltrans' projected workload forecast is derived from a variety of factors including many that are outside Caltrans' control. These factors include:

- The annual workload estimate is the sum of tens of thousands of inputs. This is based on the fact that Caltrans is working on more than 2,900 active projects at any given time.
- The budget request is a moment-in-time snapshot of a twelve-month workload estimate beginning roughly six months after the snapshot is taken. Project schedules inevitably shift, impacting the work actually completed within a fiscal year.
- The basis for building the estimate from the very lowest level (i.e., development of the unit estimate) is not based on uniform data, but instead varies as it is based on the judgment of subject matter experts taking into account a variety of risks and assumptions.
- The nature of project development is fluid, dependent on a number of relatively unpredictable activities such as the timing of right-of-way purchases and state and federal permitting processes.

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## **CONCLUSION:**

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## Appendix A

### COS Workload Forecasting Methodology Workgroup Members As of May 2016

Daniel Ballon	Assembly Republican Caucus
Farra Bracht	Senate Budget and Fiscal Review Committee
Susan Bransen	California Transportation Commission
Russia Chavis	California State Transportation Agency
Jim Davis	California Department of Transportation
Janet Dawson	Assembly Transportation Committee
Christian Griffith	Assembly Budget Committee
James Hacker	Department of Finance
Steven Keck	California Department of Transportation
Paul Jacobs	Legislative Analyst's Office
Ted Link-Oberstar	Senate Office of Research
Stephen Maller	California Transportation Commission
Erin Matalka	Department of Finance
Mark Monroe	Department of Finance
Ted Morley	Senate Republican Caucus
Jessica Peters	Legislative Analyst's Office
Suzanne Smith	Sonoma County Transportation Authority
Karla Sutliff	California Department of Transportation
Eric Thronson	California Transportation Commission
Steve Wells	Department of Finance
Heather White	Senate Republican Caucus