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October 3, 2014

California Transportation Commission
1120 N Street, Room 2221 (MS-52)
Sacramento, CA 95814

Dear Chair and Commissioners:

The California Department of Transportation (Caltrans) recognizes the important role of project cost estimating in the programming and budgeting of projects. Project and Program budgeting necessitates balancing the amount of risk in estimates to assure the right number of appropriate projects are delivered to utilize all available funds. As a part of this risk taking, Caltrans must occasionally move forward with requests for additional funds. The amount of project requests for additional funds in the past 6 years is less than 3 percent of the total number of projects. The enclosed document titled "Managing Construction Capital Project Budgets" outlines Caltrans efforts to balance estimating risk, and provides an overview of the current track record with regards to project budgets.

At the October 2014 Commission meeting, Karla Sutliff, Caltrans Chief Engineer will be presenting an item related to this subject on Cost Estimate Performance.

Should you have further questions or concerns you may contact Karla Sutliff at (916) 654-6490.

Sincerely,

MALCOLM DOUGHERTY
Director

Enclosure

MANAGING CONSTRUCTION CAPITAL PROJECT BUDGETS

In managing construction capital project budgets, the California Department of Transportation (Caltrans) is balancing risk in project budgeting with the need to ensure that the appropriate mix of projects are brought forward in sufficient quantities to use all available funds. Complete and reasonable estimates are necessary to avoid undesired consequences, including loss of federal funds. Prior to presenting any budget change requests to the Commission, Caltrans engages in a robust critical examination of each request. As a result fewer than 3% of projects have required supplemental funding.

Actual construction costs are based on construction contract bid

Projects are budgeted and programmed based on the Project Initiation Document (PID). The PID provides a rough cost estimate, scope, and schedule that are used for initial programming of projects. Typically, projects are programmed to begin pre-construction activities one to four years before they are ready for construction allocation. Caltrans cost estimates are used to secure funding for a project, and reflect the fair and reasonable price the state expects to pay for each item of work based on current cost data. The *actual* fair market construction cost is determined by the competitive bidding process. Contractors submit binding bids to perform the work, not an estimate. Their bid is based on the contractor's unique means and methods intended to perform the work as well as market-driven competitive factors. Contractor's bids are based on the cost for labor, equipment, materials, and any specialty subcontractor work needed to complete the work for each bid item or set of bid items. Contractors consider the basis for their bids to be closely guarded trade secrets for competitive reasons.

Caltrans actively manages project changes

Caltrans has implemented a series of best practices and policies to assist in developing more accurate cost estimates including:

- estimates are certified by the District Director prior to being allocated by the Commission
- a quality control/quality assurance process is in place for estimates
- quarterly cost estimating forums within Caltrans staff

Caltrans continually monitors and revises estimating policies to develop complete and accurate cost estimates, while minimizing the cost to efficiently prepare those estimates.

During the design phase of a project, more information and risks will become apparent. Depending on the complexities of an individual project, this may lead to adjustments in scope, schedule or budget from the originally contemplated project programmed from the PID. Any requests to change the scope, cost, or schedule of a project are scrutinized by a formal management review prior to approval. Projects are then submitted for a construction allocation when they are ready to be advertised to contractors. Infrequently, additional project funds may be required at the time of allocation as part of the initial vote, or as supplemental allocations after the initial vote.

Large increases to project costs are atypical

At time of allocation of the initial vote, if a requested allocation is greater than 120 percent of the programmed amount, Caltrans requests a "greater than 120 percent" allocation for the project. In 2008-09 through 2013-14, Caltrans requested allocation of 2,022 projects and only 7 projects (0.35%) were for "greater than 120 percent." This small percentage indicates Caltrans has been tremendously successful in documenting and managing changes during the project's life cycle.

Additional Funds Requested at Vote for 2008-09 through 2013-14	
Projects allocated	2,022
Greater than 120% Requests	7
Percentage of Total	0.35%

Allocations requested for amounts greater than 110% that occur after the initial vote are "supplemental funds requests." Occasionally, bids received on individual projects are higher than the funding available for the project. In such cases, supplemental funds may be necessary to award the contract. Similarly, during the construction phase, a project may need additional funds due to changes not contemplated at time of award. These changes could include issues such as regulatory permit requirements, material quantities, differing site conditions, owner-caused delays to the contractor, etc. Finally, supplemental funds may be needed after the construction project is completed to settle claims and pay arbitration to the contractor.

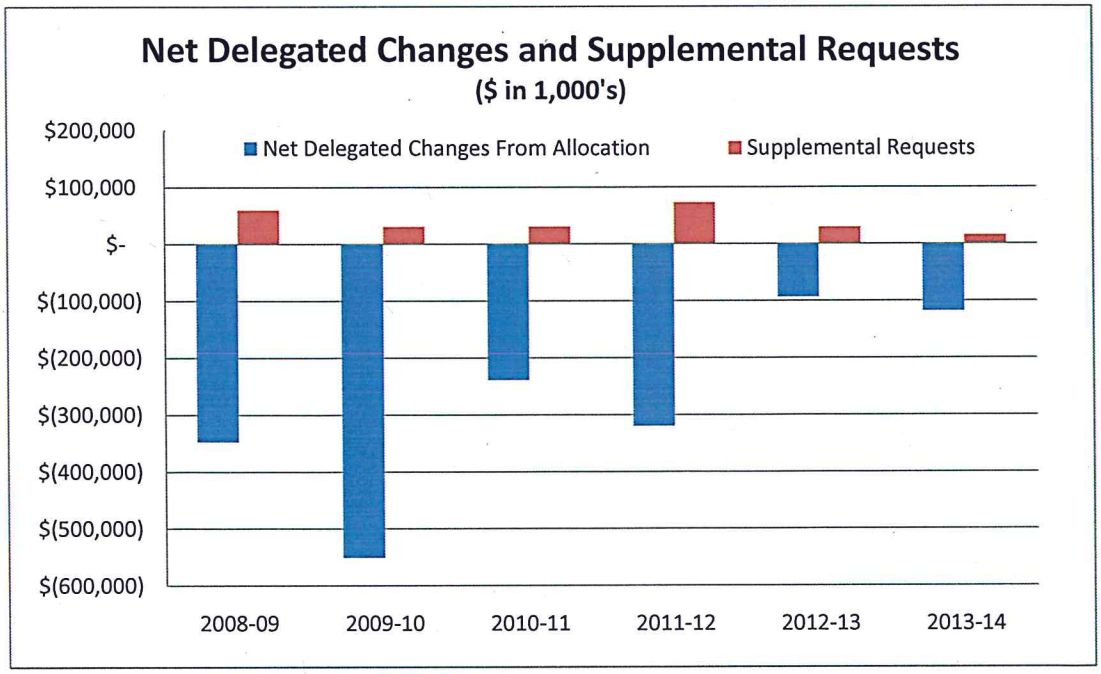
Before a request for supplemental funds is presented to the Commission, the request is carefully reviewed by Caltrans's Supplemental Funds Executive Committee. The Committee reviews appropriate documentation justifying the need for supplemental funds and options are scrutinized to determine if other solutions are possible. Only projects that have no other options are brought forward for Commission consideration. In the past six years, of the 3,333 state-administered projects achieving Construction Contract Acceptance, only 96 or 2.9% have requested supplemental funds (see table below). For additional information by District see Attachment A.

Supplemental Funds Requests for 2008-09 through 2013-14		
	Number of Projects	Dollar Value ($ in 1,000's)
Projects Achieving CCA	3,333	$15,537,576
Supplemental Funds Requests	96	$240,503
Percentage of Total	2.9%	1.5%

As illustrated, supplemental and greater than 120 percent allocation requests are exceptions to the normal estimating, programming, and allocation processes and are relatively rare.

Net savings from delegated adjustments far outweigh requested increases

In the past six years, net delegated changes to project costs have resulted in $1.67 billion in overall program savings from total allocation. During the same time period, approximately $240 million in Supplemental Funds Requests were submitted for 96 projects. The table below illustrates the information graphically and shows that budget decreases far outweigh requests for additional funds. Note that the conspicuously large savings in 2008-09 and 2009-10 are a result of the economic changes commensurate with the "Great Recession."



Risk-averse estimating leads to undesirable consequences

If Caltrans does not balance the risks associated with project budgeting, including the need to request additional funds from the Commission, unintended consequences can adversely impact the mutual interests of transportation stakeholders in the following ways:

- Overly conservative estimates tie up valuable capacity that could be made available for other projects. This results in savings being realized at vote or project award. Unlike the private world, "savings" do not remain in the state's bank account. Federal funds not utilized in the federal fiscal year are permanently lost to the state. When projects come forward for allocation below the programmed amount and/or are awarded below the allocation, additional projects must then be quickly programmed to capture allocation savings and avoid losing time-sensitive federal funds. These "hurry-up" projects may not be of the highest priority, but serve only as an insipid alternative to the loss of federal funds.
- Risk-averse project development teams may not be incentivized to make sound project financial decisions. This could result in potential project savings released from the project later than desired and/or the best transportation solution not moving forward in an efficient manner.

The overwhelming majority of the Caltrans construction projects are completed well within project allocations. Over 97% of projects are delivered within the allowable budget. Less than 3% of projects request supplemental funds, and project savings have outweighed supplemental costs. Caltrans seeks continual improvement to its processes to balance the need to develop complete and accurate estimates at reasonable cost, and the need to ensure that sufficient projects are made available to appropriately utilize all available funding.

Attachment A

Supplemental Funds Requests for 2008-09 through 2013-14 ($ in 1,000's)						
	Projects Achieving CCA (6-year period)		Supplemental Funds Requests (6-year period)		% Comparison	
Dist	Total Number	Total Value	Number of Requests	Amount of Request	Contracts	Amount /Total Value
1	233	$611,755	7	$4,087	3.0%	0.7%
2	228	$736,007	5	$5,694	2.2%	0.8%
3	356	$1,784,805	9	$18,717	2.5%	1.0%
4	499	$4,378,860	17	$75,186	3.4%	1.7%
5	238	$679,843	8	$9,738	3.4%	1.4%
6	300	$988,779	8	$7,125	2.7%	0.7%
7	468	$1,752,948	11	$50,114	2.4%	2.9%
8	324	$1,345,858	10	$26,207	3.1%	1.9%
9	84	$212,612	2	$1,320	2.4%	0.6%
10	225	$703,950	8	$32,268	3.6%	4.6%
11	214	$1,722,214	7	$4,727	3.3%	0.3%
12	164	$619,945	4	$5,320	2.4%	0.9%
Total	**3,333**	**$15,537,576**	**96**	**$240,503**	**2.9%**	**1.5%**