State of California
**DEPARTMENT OF TRANSPORTATION**

Business, Transportation and Housing Agency

# Memorandum

*Flex your power!*
*Be energy efficient!*

**To:** DISTRICT DIRECTORS

**Date:** September 15, 2005

**From:** **RICHARD D. LAND**
Chief Engineer

**Subject:** Engineer Estimates

The California Department of Transportation (Department) and our transportation partners are facing great challenges in delivering up to $4.152 billion dollars worth of vital transportation projects this fiscal year. One of these challenges is providing quality projects with Engineer Estimates that reflect the true cost of construction. Currently, up to 10 percent our of projects statewide are requiring supplemental votes in order to award.

The Federal Highway Administration (FHWA) Guidelines on Preparing Engineer's Estimate, Bid Reviews and Evaluation states,"...the engineer's estimate should be within +/-10 percent of the low bid for at least 50 percent of the projects. If this degree of accuracy is not being achieved over a period of time, such as one year, confidence in the engineer's estimates may decline." For comparison to that target, attached are five-year histories showing for each district the percentage of bids within +/-10 percent of the engineer's estimate and of bids less than 110 percent of the engineer's estimate.

The Project Delivery Toolbox (http://pd.dot.ca.gov/pd_guidance.asp) and the Office Engineer RTL Guide (http://www.dot.ca.gov/hq/esc/oe/specifications/rtl_guide/) provide practices useful to achieve and maintain quality estimates. Practices include, but are not limited to, timely constructability reviews and adherence to change control policy. Following those instructions is the first step toward achieving a quality estimate. The second step is to ensure that each specific estimate is being tailored to the project specific parameters. Application of historic bid prices is not sufficient by itself to ensure quality estimates. Finally, it is necessary to apply prudent Quality Control (QC) and Quality Assurance (QA) practices. Each district or region is responsible for establishing and maintaining a QC/QA process to improve project-estimating practices.

The Division of Engineering Services is in the process of establishing and filling a specialist position to provide district support concerning overall trends in individual item costs statewide. This individual will be in place within 30 days. Regions and/or districts

are to establish similar services within their areas so that individuals estimating projects in those regions/districts can get information on local trends.

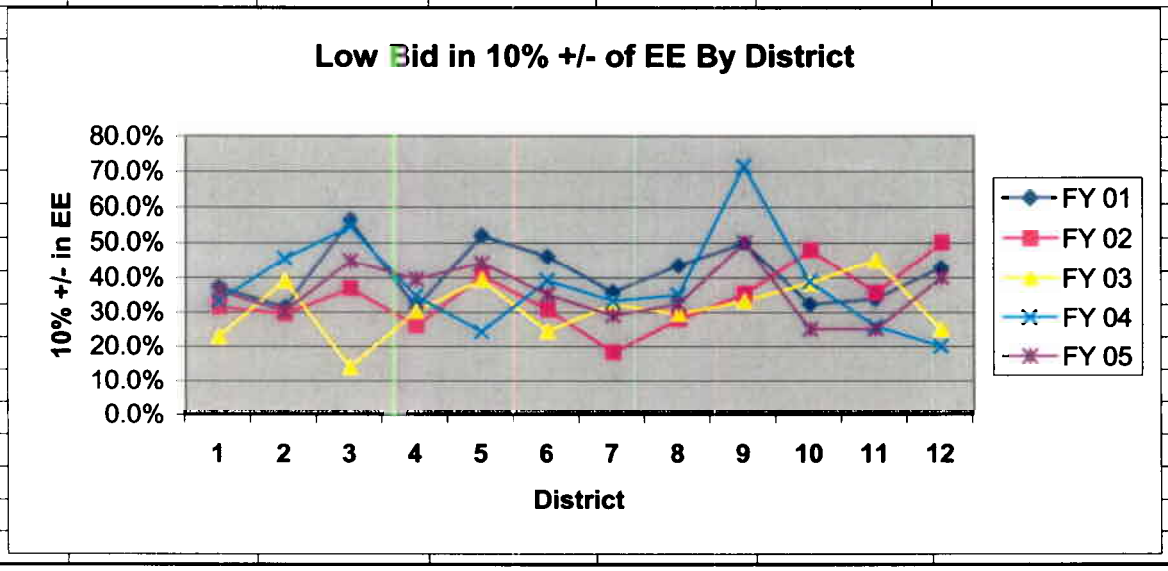
If you have questions concerning estimating please contact John C. McMillan, Deputy Division Chief, Office Engineer, Division of Engineering Services at (916) 227-6300.

c: District Deputy Directors – Project Delivery
Division Chiefs
Deputy Directors

Attachment(s)

# Lowbid in 10% +/- of Engrs Estimate By District

| District | FY 01 | FY 02 | FY 03 | FY 04 | FY 05 | 5 year Ave |
|---|---|---|---|---|---|---|
| 1 | 37.2% | 31.4% | 22.9% | 33.3% | 36.1% | 32.4% |
| 2 | 31.5% | 29.4% | 39.1% | 45.5% | 30.3% | 35.5% |
| 3 | 56.4% | 36.8% | 13.9% | 54.5% | 44.7% | 41.3% |
| 4 | 31.4% | 26.0% | 30.3% | 34.7% | 39.5% | 31.2% |
| 5 | 52.1% | 40.5% | 39.4% | 24.2% | 44.2% | 41.2% |
| 6 | 46.2% | 30.6% | 24.5% | 39.1% | 35.1% | 35.5% |
| 7 | 35.8% | 18.2% | 32.4% | 33.3% | 28.9% | 30.0% |
| 8 | 43.4% | 27.9% | 29.4% | 35.0% | 32.4% | 34.8% |
| 9 | 50.0% | 35.3% | 33.3% | 71.4% | 50.0% | 45.3% |
| 10 | 32.3% | 47.9% | 38.5% | 38.9% | 25.0% | 37.3% |
| 11 | 33.9% | 35.5% | 45.0% | 25.9% | 25.0% | 33.7% |
| 12 | 42.9% | 50.0% | 25.0% | 20.0% | 40.0% | 37.8% |



Engineer's Estimate
9-12-05

## Low Bid Less Than 110% of the Engineer's Estimate By District

| District | FY 01 | FY 02 | FY 03 | FY 04 | FY 05 | 5 year Ave |
|---|---|---|---|---|---|---|
| 1 | 45.6% | 40.0% | 40.0% | 66.7% | 63.9% | 50.6% |
| 2 | 42.6% | 44.1% | 52.2% | 65.9% | 78.8% | 55.5% |
| 3 | 74.4% | 52.6% | 38.9% | 78.8% | 89.5% | 66.8% |
| 4 | 58.5% | 49.0% | 34.2% | 59.7% | 47.4% | 50.7% |
| 5 | 75.0% | 56.8% | 54.5% | 42.4% | 62.8% | 59.8% |
| 6 | 70.8% | 46.8% | 55.1% | 65.2% | 75.4% | 62.7% |
| 7 | 48.1% | 30.3% | 44.6% | 68.3% | 59.2% | 50.0% |
| 8 | 71.1% | 41.9% | 49.0% | 70.0% | 70.3% | 61.1% |
| 9 | 78.6% | 58.8% | 77.8% | 85.7% | 100.0% | 75.5% |
| 10 | 58.1% | 56.3% | 42.3% | 58.3% | 41.7% | 52.0% |
| 11 | 39.0% | 38.7% | 50.0% | 74.1% | 61.1% | 50.3% |
| 12 | 62.9% | 55.9% | 37.5% | 45.0% | 66.7% | 55.2% |
| Average | 60.4% | 47.6% | 48.0% | 65.0% | 68.1% | 57.5% |