

Reprinted from
May-July 2013

The journal of record for
public-private partnerships
and infrastructure finance,
since 1988.

FINANCING™ PUBLIC WORKS

PWF Viewpoint: Who Will Fix Caltrans?

With San Francisco's Presidio Parkway project achieving financial close—and surviving a series of legal challenges—during 2012, transportation agencies across California are upping their hopes for PPP-based delivery of key projects. Still, there is nothing akin to a template yet for transportation PPPs in the state.

Presidio was a complex project: the first PPP attempted under new state enabling legislation. Procurement was accelerated to meet the desire of then-Governor Schwarzenegger to reach commercial close before leaving office. Contract documents from an availability pay PPP in Florida were used as the starting point for Presidio, with poor results. Contractor-developer issues and stakeholder complexity have resulted in a slow start to construction.

As a Caltrans project, the PPP requires state-level participation and action. The Presidio Trust, a federal entity, controls land use and deliberates slowly. The project has benefited from intense executive-level attention at both Caltrans District 4 and the local agency (SFCTA). This has fostered functional staff-level relationships and strengthened the credibility of commitments amongst agencies.

Replacing the seismically-deficient Doyle Drive was a local priority, carefully orchestrated by SFCTA, which had led project planning and the environmental process over the course of nearly two decades. This experience proved crucial as the project navigated a web of public stakeholder issues and institutional challenges. Local agency staff were also keenly aware of the unique opportunity to demonstrate the viability of the P3 approach in California—particularly in a city and region with a long wishlist of transportation capital projects with significant funding challenges.

The Presidio PPP's status as a local and gubernatorial priority diminished Caltrans' institutional and political risk.

During the legal challenges to the project brought by Professional Engineers in California Government (PECG), the local agency, SFCTA, played an active (if quiet) role in successfully withstanding litigation. From the local perspective, in a city not known as a champion of privatization, the necessity of overcoming the state's project development and funding logjam proved to be overwhelmingly compelling.

The availability-pay financial structure was understood by SFCTA staff—and, in time, by local elected officials—as the most feasible means for the state to fulfill its funding commitment to the project without incurring debt.

The challenges faced by Presidio reflect the broader challenges of planning and delivering transportation projects in California. These issues, in turn, mirror the existential challenges

facing USDOT: Caltrans has declining funding, a large and disparate set of programs and mandates, and an institutional structure misaligned with core state-level interests.

The state's big-ticket transportation investment needs are at the metropolitan level, particularly in the mega-regions of northern and southern California. Major transportation project development within these regions is a process driven, by and large, by local and regional agencies—the agencies that control the bulk of new and discretionary revenues. Yet, Caltrans' structure dates from an era in which this capital planning was state driven. PECG, particularly, has stymied reforms, with the aggressive suits against Presidio part of more than 10 years of resistance to design-build and other innovative project delivery methods.

Locally-initiated projects affecting the state highway system remain a laborious and uphill battle of repeated Caltrans design reviews and design exception processes. Due to the state budget gaps of recent years, local agencies now must reimburse Caltrans for the privilege of gaining

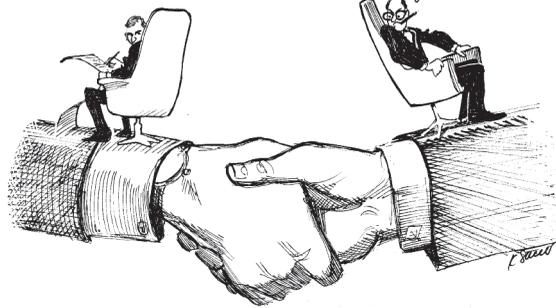
“Caltrans is burdened with declining funding, a large and disparate set of programs and mandates, and an institutional structure misaligned with core state-level interests.”

state review of key Caltrans-required documentation submissions such as Project Study Reports. Efforts to develop design standards for urban and semi-urban contexts have stumbled, perpetuating project delays as local agency staff seek relief from dated, rural standards with little relation to local context or needs (such as pedestrian safety features or transit facilities).

There is a compelling case to be made for formally devolving many of the state's responsibilities

to the local and metropolitan level. In fact, a good deal of this devolvement has already happened, though on an ad hoc and inefficient basis. This would leave Caltrans empowered to focus on asset management and maintenance, interregional and rural transportation, and matters of statewide policy and federal policy coordination.

A political champion eager to tackle the institutional inertia that stands in the way of such reforms has yet to appear. ■



LA Metro aims to prove its P3 management abilities on its \$520-million ARTI bundle highway project next year so that the world's largest contractors will come back with competitive bids for far more ambitious tunneling and multimodal concessions later on.

CALTRANS IS LA METRO'S P3 CHALLENGE

means that Caltrans will apply for and obtain California

"We're going to start with the little one so you guys can road test us before you jump in with us on the big ones," Douglas R. Failing, executive director of Metro's highway program, told listeners on a conference call in mid-July.

But LA Metro and most other local agencies in California that want to try design-build and other alternative delivery approaches on their highways first have to come to terms with Caltrans. The ARTI project will be fully funded by LA Metro's Measure R sales taxes. But Caltrans owns the highways. That

Transportation Commission (CTC) approvals and serve as contracting agency for LA Metro's first P3, with LA Metro in a subsidiary role.

Other than Failing, who was hired away from Caltrans last year, LA Metro has never built a highway, so contractors say they are happier with the devil they know. Having one agency setting the project scope is critical, they say. But Caltrans has had a nearly unbroken string of failures on large projects. Most notably right now is its I-405 Sepulveda Pass project in Los Angeles, which is expected to overrun by 25-50%, close observers say.

The much larger Bay Bridge budget fiasco in San Francisco led Gov. Jerry Brown to call for a full review of Caltrans last

Letter to Editor

The column in your June opus entitled "Advice on How to Sell the P3 Value Proposition" was quite interesting but focused largely just on P3-oriented benefits. A fundamental point is missed; decisions are made between alternatives. So examining the pros and cons of non-P3 procurement is most pertinent. The usual generalities supporting non-P3 procurement include: why give the project business

away (and associated power and resources); our public sector is just as capable; and we don't have to pay for profit or higher interest rates.

Advocates of P3s should thus also focus on: (1) recent major project and/or project management experience (if any) and performance (i.e., the Big Dig or the Bay Bridge fiascos) of the public sector agencies that will be involved; (2) who would pay for cost or

schedule overruns, the taxpayer or a P3 concessionaire; (3) the clear contractual responsibility and liability of a P3 concessionaire; and (4) identification of senior personnel in the public and private sectors who will be involved under different procurement scenarios, and their relative professional experience.

Ray Tillman
New York, NY

■ **Quals Sought For LA Metro's First P3 (6/13, p. 4)**

Statements of Qualification are due by 3 pm on July 19 at the Los Angeles County Metropolitan Transportation Authority for DBFOM teams interested in competing for the Accelerated Regional Transportation Improvements on I-5 north of Los Angeles. The RFQ (P3-2210-01) and other documents are available at <http://ebb.metro.net/ebb/precis.asp?SolicitationID=2598> LACMTA contact person is Don Dwyer at (213) 922-6387.

The project is a \$700-million bundle of six projects delivered as a single contract through an availability-payment approach. It includes a \$305-million, 13.5-mile HOT-lane system on I-5 north of Los Angeles, two segments of SR 71 to close a 4.3-mile gap south of I-10, sound walls and pavement rehab work.

Meantime, LACMTA received 18 expressions of interest in early June from P3 teams forming now to bid on the \$6-billion Sepulveda Pass rail/highway project. A formal procurement is not expected to start for well over a year but retiring Mayor Antonio Villaraigosa was eager to alert developers of the opportunity during his tenure.

month. But any changes aren't likely to be made fast enough to affect the ARTI project.

Arthur Leahy, executive director of LA Metro, is girding for the challenge: "We're not going to give them our money and not watch how they spend it," he says.

Contractors are used to contending with imperfect owners—and vice versa. A key concern for ARTI bidders is who Caltrans will select to run the procurement and oversee the design-build contract. A national highway builder suggests that Caltrans and LA Metro adopt the joint management approach used on the award-winning T-Rex design-build project in Denver, where Colorado DOT and the regional transit agency created a dedicated project management team and hired a consultant, Randy Pierce, to be project director.

That's not being contemplated at this point, says Kome Ajise, former Caltrans P3 director, who was recently elevated to be Deputy Director of Planning and Modal Programs. He will continue to lead Caltrans's three-person P3 office, he says, but also will oversee rail, highways, planning, aeronautics and modal agencies throughout the state.

He says Caltrans will establish a "very clear, single-sponsor voice in dealing with the private sector," with one signatory to the ARTI contract. Caltrans District 7 in Los Angeles will lead the contract management effort. Ajise will be in Sacramento, but will remain very much involved, he says.

Ajise ran the fast-track P3 procurement for the Presidio Parkway, which until recently was mired in multi-jurisdictional San Francisco muddle. His hands-on work there has won him high praise, but he has been the only effective Caltrans presence, says a project executive.

"Beyond Kome it's very thin," he says.

The challenge for Caltrans and LA Metro, he says, is to institutionalize lessons learned on the Presidio Parkway DBFOM project and to apply them on ARTI.

One piece of that, he says, is to deconstruct the SR 125 bankruptcy story so that the staff of Caltrans and LA Metro understand:

- Caltrans's role in contributing to the huge overruns which helped to sink the fully private toll road project;
- that taxpayers were not affected by the private investors' losses;
- that the San Diego Association of Governments (Sandag) saved over \$100 million by purchasing the bankrupt private road instead of building a parallel highway that has been in its regional plan for years;
- that the credit quality of the federal TIFIA loan for the project was improved over the original terms during the workout with the private lenders.

A veteran of the design-build/P3 conflict with California is a skeptic. "Generally," he says, "the industry understands that Caltrans:

> "Doesn't understand D-B and doesn't want to. A few higher ups are the exception but they don't seem to have any control over their organization;

> "Would like to demonstrate that D-B doesn't work (and has convinced many California legislators that it doesn't):

> "Would like to subvert the D-B processes they get involved with to show that it doesn't work." ■

■ PEGC's California Roads Monopoly Could Crack (6/13, p. 4)

The time has never been better to promote P3 projects in California, says a veteran of the political battles with the Professional Engineers in California Government (PEGC) to allow design-build and P3s there. The long delays, huge cost overruns and now the cascade of Caltrans design mistakes preventing the opening of the San Francisco Bay Bridge, has highlighted the inability of the state's unionized engineers to deliver megaprojects.

But it's not just megaprojects.

An appendix to the Value for Money study done by Arup and Parsons Brinckerhoff in 2010 for the Presidio Parkway P3 analyzed Caltrans cost estimates for 114 projects in 2009. Among the findings:

- Budget vs. actual costs were generally accurate 80% of the time for projects up to \$100 million.
- Projects from \$100 million to \$300 million had an 80% chance of overrunning estimates by 15%.
- There was an 80% chance that projects estimated by Caltrans to cost \$300 million or more would overrun by 55%. The five projects in this data set excluded outliers like the San Francisco-Oakland Bay Bridge.

This optimism bias on large projects in Caltrans' estimates makes public-private comparisons difficult. Opponents of the Presidio Parkway P3 pointed to the low DBB bid for phase one—40% under estimate—as reason to question doing the second phase using a P3 delivery method. In the final accounting, however, the \$500 million DBB price was substantially over the estimate.

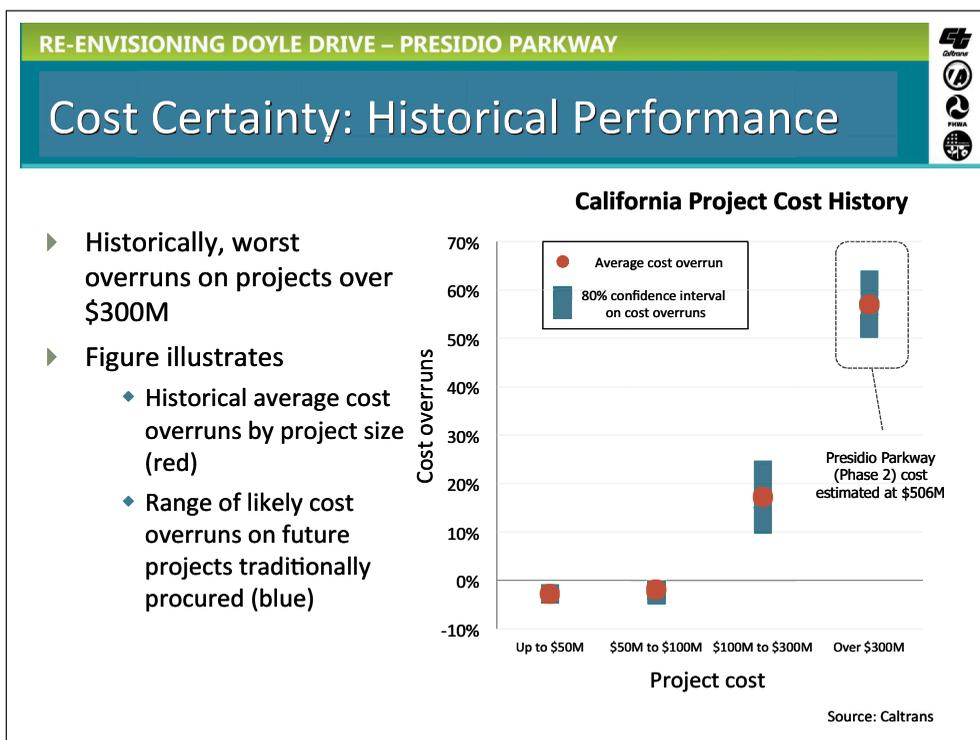
There are many factors that contribute to the high probability of overruns on large urban projects. At the top of the list is the large number of project interfaces between contractors.

“At each intersection of all these elements you have decision points on the critical path and some will be missed, causing a domino effect” on cost and schedule, says José Luis Moscovich, former executive director of SFCTA, who worked with Caltrans on the Presidio Parkway P3.

To manage the process, you need experienced public managers who have done it before, he says, “but they don't exist.” Salaries for public transportation agency employees in California are 60% of the private sector, he says. “It's the system, not the people. We're bleeding talent and generating projects that can't be done” using traditional DBB delivery.

PEGC members do nearly 100% of the highway design and contract administration in the state and have won the right to do \$250 million worth of design work on the California high-speed rail project. This monopoly control of the design and oversight of transportation projects can have insidious effects: A contractor preparing to bid on LA County Metro's first P3 project (see below) welcomed the decision a few weeks ago to make Caltrans the lead contracting agency, but that's mainly because of the near certainty that Caltrans would assert control later anyway.

LA Metro is planning three much larger P3 highway projects on which it hopes to take the lead itself. The cost-sharing agreement with Caltrans has not been signed for this first P3. Presumably, much of the \$600 million-plus in funding will come from sales taxes collected in LA County, so LA Metro may yet get its way. ■



Optimism Bias In Public Works Cost Estimating

Source: *Presidio Parkway Analysis of Delivery Options*
Arup/PB Joint Venture, February 2010

E1 Optimism Bias

There is ample evidence in the literature of cost overrun in traditional public works procurement, although comprehensive statistical analyses are rare and difficult to compile. The table below summarizes the results of the Team's risk analysis conducted specifically for the Project. Cost overrun results were calculated by the Team, based on a Department-provided database, along with domestic and international data from the literature showing the systematic tendency to under-estimate final costs in large-scale road projects (also known as "optimism bias").

Assumption	Average	Standard Deviation	50th Percentile	80th Percentile	Notes/ Source
Project-specific risk analysis (DBB option only)	N/A	N/A	N/A	29%	Project-specific risk assessment at 80% confidence developed by an experienced technician and contractor team through Monte Carlo simulation. Figure is based on FHWA estimate including contingency versus the estimated budgeted cost.
Department contracts above \$50 million	3%	30%	(5%)	18%	Department database for 83 construction contracts with budgeted costs above \$50m in 2009\$. Figures are based on the Department's Engineer's Estimate including Contingency and Supplemental Work versus the Final Total Cost.
Department contracts above \$100 million	25%	61%	10%	39%	Department database for 26 construction contracts with budgeted costs above \$100m in 2009\$. Figures are based on the Department's Engineer's Estimate including Contingency and Supplemental Work versus the Final Total Cost.
Department contracts above \$300 million	76%	70%	N/A	N/A	Department database for 5 construction contracts with budgeted costs above \$300m in 2009\$. Figures are based on the Department's Engineer's Estimate including Contingency and Supplemental Work versus the Final Total Cost.
Bent Flyvbjerg Database	N/A	N/A	15%	32%	Bent Flyvbjerg with COWI for The UK Department for Transport Procedures for Dealing with Optimism Bias in Transport Planning, June 2004. The figures are based on budget estimates versus Project Capital Expenditures (cost overrun).
U.S. Government Accountability Office	41%	45%	32%	55%	Government Accountability Office / Resources, Community & Economic Development Division (GAO/RCED-97-47), "Managing costs of Highway Projects," February 1997. Figures are based on estimate versus Final Total Cost.
UK HM Treasury VfM Guidelines (UK Green Book)	N/A	N/A	6*	66*	HM Treasury / Mott McDonald "Review of Large Public Procurement (UK Green Book)," July 2002. Figures are based on Risk Assessment of project cost estimates.*

* These figures do not represent a percentile range but rather upper and lower bound figures.
 Source: Arup/PB