

Report from California

- California Healthcare Facilities Project
- “Flexibility & Challenges in bringing Lean to California Public Agencies”
- University of California San Francisco’s ‘Best Value’ Pilot Projects
- California Department of Transportation’s Last Planner Pilot Project

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OWNER
ST. JOE

ARCHITECT

CIVIL
ENGINEER

STRUCTURAL
ENGINEER

ELECTRICAL
ENGINEER

MECHANICAL
ENGINEER

CM/GC

OSHPD

STRUCTURAL
SUBCONTRACTOR

ELECTRICAL
SUBCONTRACTOR

ST. JOSEPH CURRENT STATE

APPROVED DESIGNER

PRO. PLAN
BUDGET
PROGRAM

RFP
NE

PRELIM. HIGH
LEVEL SURVEYS
(ALL SUB CONSULTANTS)

SUGGESTED
MODIFICATIONS
(AS BIDDING)

PROGRAM
REORGANIZATION
STUDIES
(LEADING TO "X")

COST VARIATION
(LATE CHANGES)

STRUCT
NARRATIVE

Workshop #1, October 1, 2006

The objective of the California Healthcare Facilities Project is to improve how California hospitals are designed and permitted.

Phased Plan Review

“Phased Plan Review (PPR) is the process that engages the Office of Statewide Health Planning and Development, Facilities Development Division (FDD), at its sole discretion, **early in the project design**, continuing through the development and submission of documents during the conceptualization, criteria design, detailed design, implementation documents, agency review, construction and closeout phases.”

Projects Suitable for PPR

“In concept PPR lends itself to projects employing numerous forms of highly collaborative project delivery methods. However, PPR generally is not suitable for the traditional Design-Bid-Build project delivery approach.”

Results to Date

- Substantial reduction in added project duration to accommodate permitting. PPR project team members at the 12th workshop in November, 2009 reported reduction from 18 months to 6 months. A survey of PPR projects is now underway to get more solid measurement data.
- Widespread adoption of lean concepts & methods and integrated project delivery in the U.S. healthcare sector—well beyond California.
- Major hospital projects using PPR have yet to be completed, but early indications are that they will complete in less time and substantially under market cost; in the 10-20% range.

Flexibility and Challenges in Bringing Lean to California Public Agencies

March 26, 2009
P2SL

David Gehrig, Esq. Linda R. Beck, Esq.
Hanson Bridgett McDonough Holland & Allen

*See the Events page on p2sl.berkeley.edu for slides and papers by each presenter.
Event: March 26, 2009 Lean in Public Sector Construction Conference*

What's the problem?

Well-established features of California public works clash with Lean principles.

What's the Fix?

Find Flexibility in the System
or
Change the System

Changing the law

- New legislation in Feb 2009 authorizes Caltrans and regional transportation agencies to use private-public financing and design-build—though requires a mix of best value selection and competitive bidding.
- A small sample of proposed California legislation:
 - AB 405 would provide design/build authority for all county health care districts
 - AB 153 expanding authority for the California High Speed Rail Authority to allow P3
 - AB 958 would authorize metropolitan water districts to use design/build on some contracts

Cautions

- Statutory changes alone are not enough
- Need to address institutional factors – education is critical
- Protect public confidence that contracting process is fair and open

“Flexibility and Challenges in Bringing Lean to California Public Agencies”

Cardiovascular Research Center January 31, 2009

Cardiovascular Research Center

- 236,000 gross square feet (~22,000 m²).
- Located on UCSF's new 43-acre research campus south of downtown San Francisco.
- 5 floors total, 'L' shaped building plan configuration.
- Institutional building, 50+ year service life.
- Targeting LEED Gold sustainability level, including energy performance that is 20% better than that required by law.
- 3 floors of biomedical (cardiovascular) research labs, 1 floor vivarium, 20,000 square foot cardiovascular clinic, and atrium.
- Building served by centrally-supplied (piped) High-Temperature Hot Water (pressurized, 240 degrees F), Chilled Water, and Process Steam.
- Construction cost \$185 million.
- Fast-track construction to cope with rapid material price escalation in late 2007 (top of bubble).
- Project bid and bought out in ~35 bid packages spread over ~8 months.

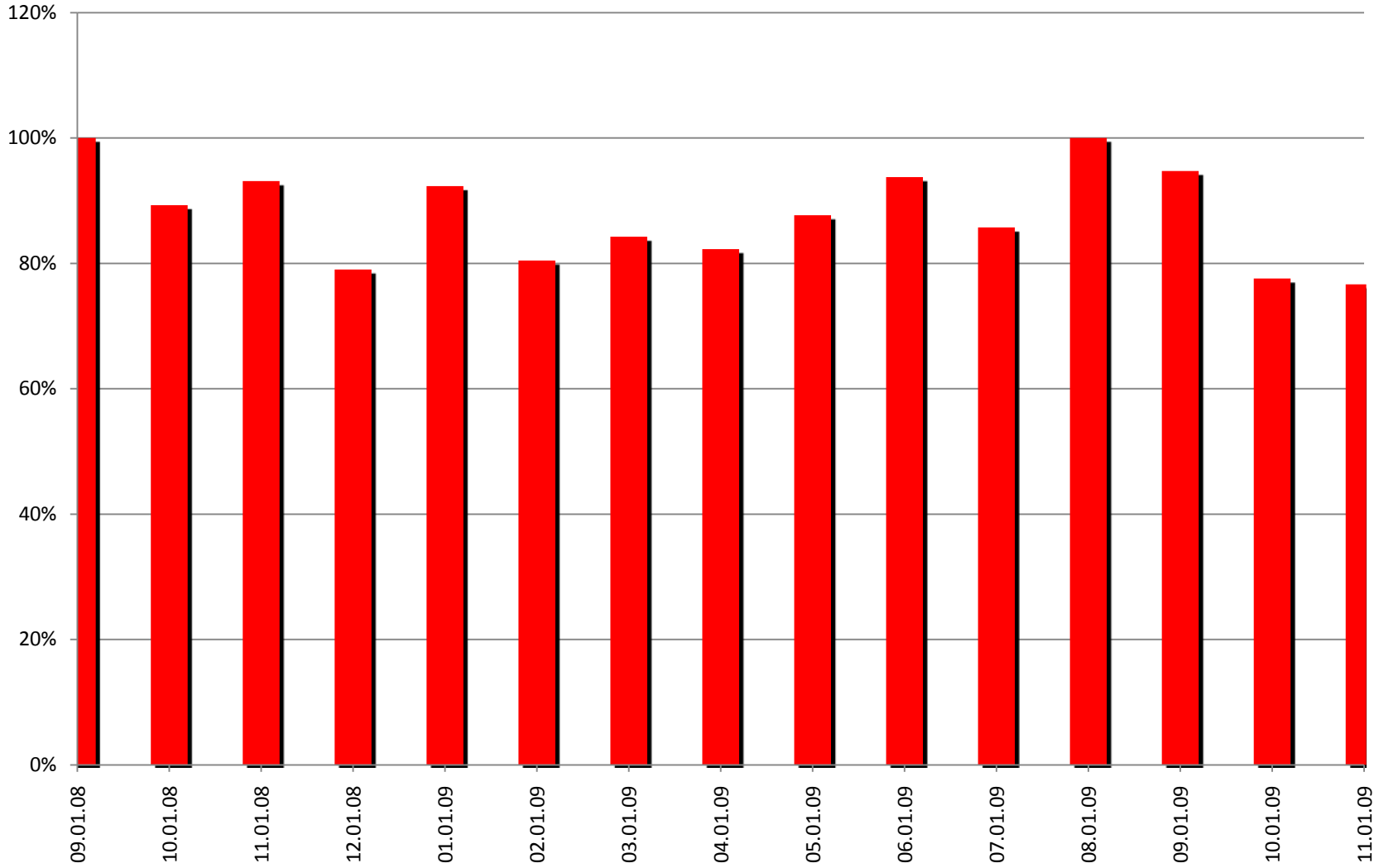
Delivery Method & Selection

- Owner holds separate contracts with the Architect and with the CM/GC.
- Delivery method is CM@Risk (CM/GC – Construction Manager/General Contractor) with design-build subs for mechanical, electrical, plumbing, exterior envelope, fire protection.
- CM/GC and design-build subs selected using Best Value method. First time Best Value used in selection of CM@Risk CM/GC in UC system – pilot project.
- To apply Best Value, bidders answer detailed questionnaire that assesses their ability to manage projects of this type. Questionnaire evaluates bidders in 5 areas:
 - Demonstrated Management Competency
 - Safety
 - Labor Compliance
 - Financial Condition
 - Relevant Experience
- Scores earned on Questionnaire are divided into bid price to determine lowest bid cost per evaluation point. Award is made to bidder with lowest cost/point.

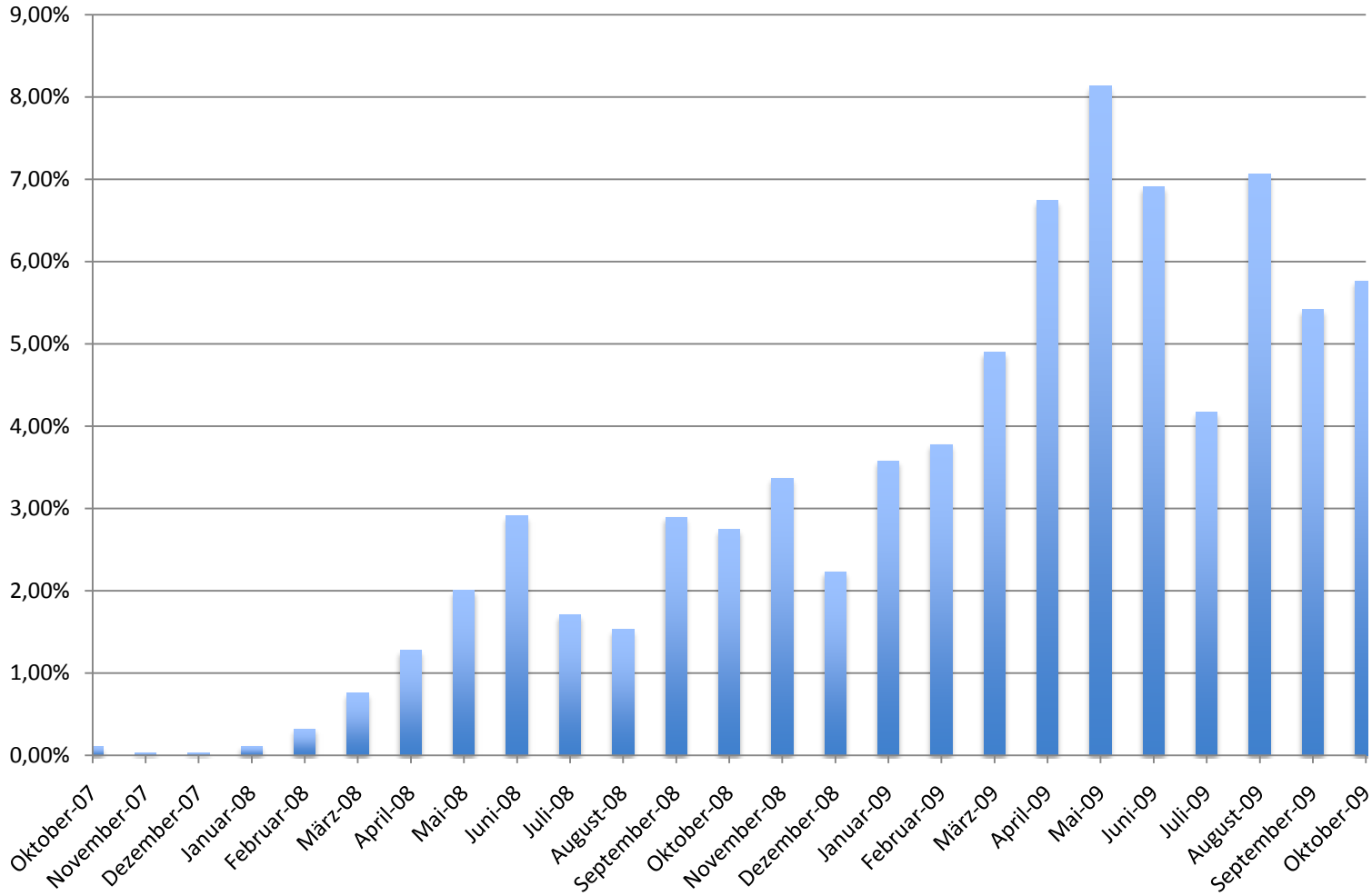
Incentive Plan

- Project team earns incentive as team, or not – this incentivizes cooperation amongst team members.
- Separate incentive pools for pre-construction services and for construction.
- Pre-construction Services pool incentivized two areas:
 - Buyout within range of -5% to +2% of target cost. (Achieved)
 - Marketing of project in time of high bid-price inflation – payout tied to achieving goals in the number of bidders submitting bids for each bid package. (Achieved)
- Half of construction incentive pool is tied to schedule milestone performance – schedule divided into 11 milestone phases, each with its own incentive pool.
- Half of construction incentive pool is tied to Last Planner statistics – schedule divided into five 6-month Last Planner incentive periods.
 - If Plan Percent Complete is averaged over a 6 month period between 55% and 65%, the team earns 1/2 of the incentive for that period.
 - If Plan Percent Complete is averaged over a 6 month period between 65% and 75%, the team earns 3/4 of the incentive for that period.
 - If Plan Percent Complete is averaged over a 6 month period above 75%, the team earns all of the incentive for that period.
 - Individuals working on the project participate in half of the incentive award, and their companies participate in the other half.

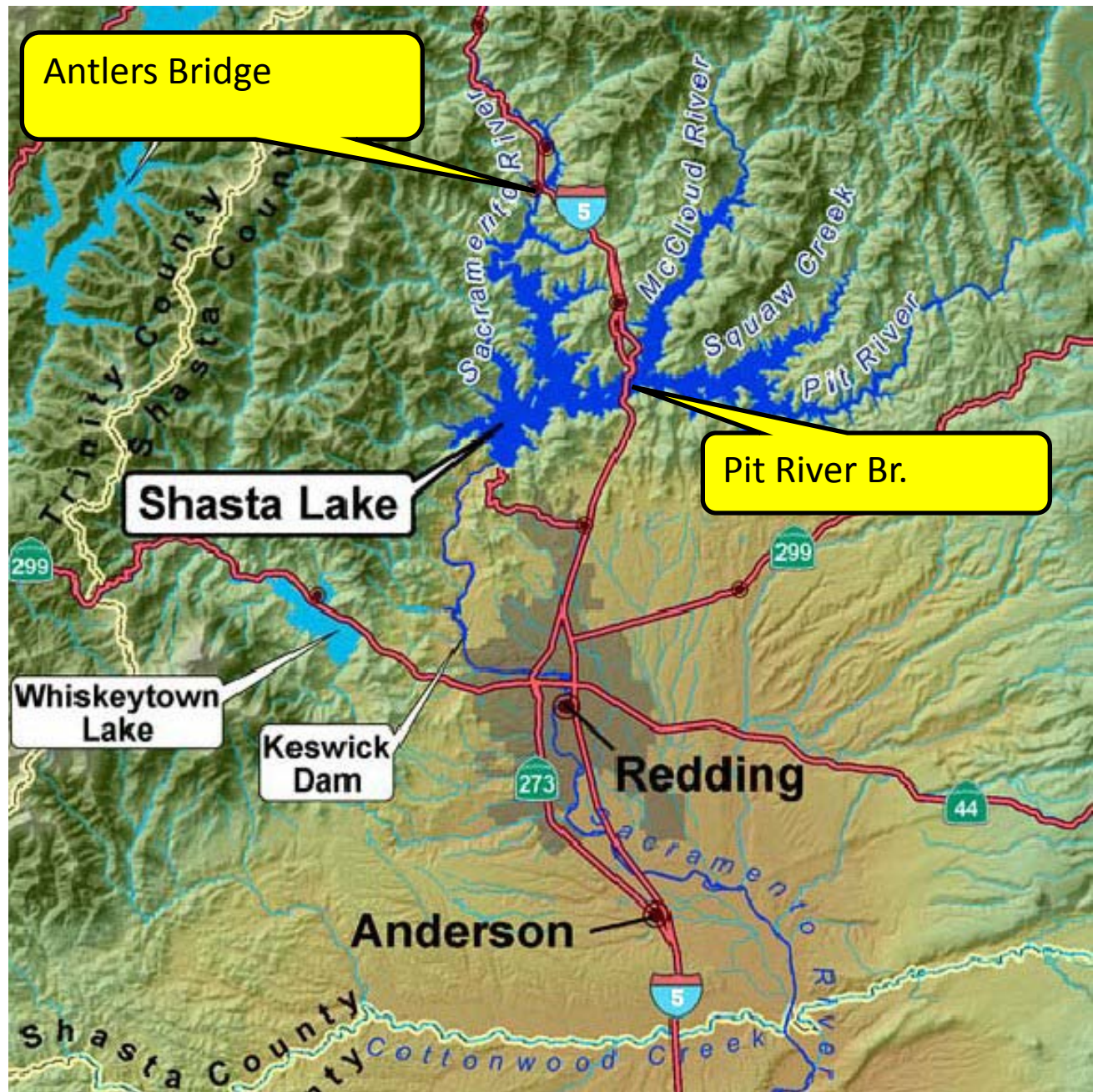
PPC



% Billed by Month



Caltrans Last
Planner Pilot
Project: Antlers
Creek Bridge



Antlers Bridge Replacement

Built 1943

Existing Bridge

- 1328' Continuous Truss
- 245' Main Span (9)
- Cellular Piers
- Spread Footings

Proposed Bridge

- 1970' CIP Segmental Box
- 590' Main Span (5)
- Large Diameter CIDH Pile Bents (12)

Last Planner Pilot Project

- Phase (pull) scheduling
- Identification and removal of constraints on scheduled tasks
- Breakdown of scheduled tasks into operations
- Collaborative design of new, critical and repetitive operations through first run studies
- Reliable promising
- Root cause analysis of plan failures
- Metrics: tasks anticipated (TA), tasks made ready (TMR), and percent plan complete (PPC)

Key Points

- Things are changing in California public sector projects.
- Though incredibly complex and restrictive, there are opportunities for lean project delivery within existing California law.
- The primary constraint is lack of leadership—which appears as contracting officers refusing to take personal risk with little or no prospect of gain.
- But we're also changing laws to get greater flexibility, and we're getting results:
 - Phased plan review with the state permitting agency
 - Caltrans authorized to do PPP and design-build; Antlers Creek pilot project
 - UCSF legislative exemption—Cardiovascular Research Building

Topics

- California Healthcare Facilities Project
- Flexibility of Health Services in California
California
- University of California's Value Pilot Projects
Value Pilot Projects
- California Department of Transportation's Last Planner Pilot Project

Questions?

Comments?