California Transportation Commission

Project Delivery Workshop

by Michael D. Keever
On-The-Job Training Supportive Services (OJT/SS)

- Provides training to increase the participation of women, minorities, and other disadvantaged individuals in skilled crafts on federal-aid highway construction contracts

- Apprenticeship Program
  - Current OJT/SS contracts include:
    - Field Ironworkers Apprenticeship Program
      - Will train up to 80 new apprentices
      - Including a nationwide women-only boot camp
On-The-Job Training Supportive Services (OJT/SS)

- Pre-Apprenticeship Programs
  - South Bay Workforce Investment Board – Southern California
  - Ladders of Opportunity – Southern California
Future Efforts to Increase Apprenticeship Participation

For 2019, Caltrans will be working directly with Electricians Union of Northern California and the Operating Engineers Union of Southern California
Other Efforts to Increase Job Growth in California

- Expanding Opportunities for disadvantaged individuals
  - Second Chance Initiative
  - Caltrans Parolee Work Crew Program
  - Caltrans Heavy Equipment Mechanics Apprenticeship Program
National Summer Transportation Institute (NSTI)

- NSTI
  - A career awareness initiative designed to introduce disadvantaged secondary school students to all modes of transportation-related careers
  - Encourages students to pursue transportation-related courses of study at the college/university level
Caltrans’ Small Business Program

**SB**
- 25% Overall Goal
- State-Funded Contracts and Procurements
- California Code of Regulations

**DVBE**
- 3% Overall Goal
- State-Funded Contracts and Procurements
- California Code of Regulations

**DBE**
- 17.6% Overall Goal
- FHWA-Assisted Contracts and Procurements
- Code of Federal Regulations
<table>
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<tr>
<th>FY</th>
<th>SB Participation - 25% Goal</th>
<th>DVBE Participation – 3% Goal</th>
<th>DBE Participation</th>
<th>Overall Goal</th>
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<tbody>
<tr>
<td></td>
<td>SB Dollars</td>
<td>%</td>
<td>DVBE Dollars</td>
<td>%</td>
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<tr>
<td>14/15</td>
<td>$349,378,944</td>
<td>28.4%</td>
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<td>15/16</td>
<td>$519,879,000</td>
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<td>17/18</td>
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<td>18/19</td>
<td>$95,056,771</td>
<td>28.40%</td>
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OBEO’s Training and Outreach Objectives

- Training, technical assistance, and advocacy services
- Training to help prepare small businesses to compete for Caltrans’ contracting and procurement opportunities
- Promote awareness of Caltrans’ contracting and procurement opportunities
- Develop comprehensive Senate Bill 1 and Senate Bill 103
New Initiatives To Increase Small Business Participation

- Contractor Boot Camp
- Meet the Primes
- Meet the Buyers
Disadvantaged Business Enterprise Supportive Services (DBE/SS)

- DBE program is guided by USDOT regulations (49 CFR Part 26)

Program Providers

- Northern Region - Humboldt State University - Sponsored Programs Foundation (Districts 1, 2, 3, and 4)
- Central Region - CSU Fresno Foundation (Districts 5, 6, 9, and 10)
- Southern Region - MiraCosta Community College District (Districts 7, 8, 11, and 12)
Industry Involvement

- Statewide Small Business Council
  - Standing committees
  - Ad hoc committees

- DBE Participation Committee
  - Task groups

- Meetings with Industry Organizations
Phases of Project Development

1. Need & Priority Identified
2. Programming & Allocation
3. PA&ED
4. Allocation
5. PS&E (Design)
6. Allocatio
7. Right of Way
8. Construction
9. Closeout

Risk and Uncertainty:
- Low:
  - 80% Known
  - 20% Unknown
- High:
  - 20% Known
  - 80% Unknown

Cost Breakdown:
- Preliminary Engineering (15¢)
- Construction (85¢)

Additional Phases:
- Planning
- Program
- Capital Outlay Support (COS)
- COS Closeout
Project Cost Risk Management

95-99% of Projects

Supplemental Funding and Greater Than 20% Allocation Requests

Watch List

Caltrans HQ - Project Change Management

Caltrans District - Project Change Management
FY 17/18 BID RESULTS AND AWARDED PRICE AS % OF EE

Data set is 476 projects awarded in the FY 17/18 FY
More Bidders Equals Lower Costs

Average Number of Bidders per Project

Low Bid equals Engineer's Estimate

Average Percentage Low Bidder was Above or Below Engineer's Estimate

Number of Bidders per Project (Projects Bid Opened from July 2004 to December 2017)
Bidding Environment

Construction Cost Index (2002 through 2018)

2018 quarter to quarter comparison, shows steep growth in CCI.

Rolling 12 month comparison of 2017 Q3 and 2018 Q3 shows tempering.
Bidding Environment

Low Bid vs. Engineer’s Estimate

18/19 data through October 2018

18/19 data through December 2018
Bidding Environment

Low Bid vs Engineer's Estimate
(Cumulative Tracking FY 18/19)
Factors Potentially Influencing Construction Costs

- General inflation
- Market conditions
  - Material shortage
  - Labor costs
- Highway construction spending
- Unforeseen events
- Insufficient bid competition
Industry Engagement

Ongoing Caltrans/Industry Working Groups

• Enhanced 12 Month Look Ahead
• Specification Modifications
• Changes in Business Practices
What We are Doing to Improve Cost Estimating?
Cost Estimating Improvement Initiative

- Improved Estimating Tools
- Identification of Best Practices
- Quantification of Risk
- Training
- Business Intelligence
- Construction Cost Escalation Study
Construction Cost Escalation Study

- Research and assess Caltrans’ construction cost escalation practices and existing forecast methodology
- Generate risk-adjusted forecasts for the California Highway Construction Cost index (CHCCI)
- Develop regional factors to account for different price dynamics across the State
Price Trends Forecast
Environmental Laws

- Clean Water Act
- Clean Air Act
- NEPA
- Endangered Species Act
- Fish and Game Code
- CA Coastal Act
- Resource Conservation and Recovery Act
- CERCLA (Superfund)
- Farmland Preservation
- California Environmental Quality Act (CEQA)
Environmental Costs

- Determinable
  - Support
  - Specific Capital expenses
  - Right-of-way

- Undetermined
  - Design decisions
  - Environmental Avoidance
Environmental Documents

SHOPP Projects
- Categorical Exemptions – Over 90%
- Initial Studies/Negative Declarations – Almost 9%
- Environmental Impact Reports – 0.5%

STIP Projects
- Categorical Exemptions – 33%
- Initial Studies/Negative Declarations – 41%
- Environmental Impact Reports – 26%
SHOCC Projects
Environmental vs Total Project Costs

Data set = 434 SHOCC Projects that achieved Construction Completion in FYs 14/15, 15/16, or 16/17
Distribution of Environmental Cost/Total Project Cost for SHOPP

Number of Projects by Environmental Cost/Total Project Cost (%)

- Over 10%: 10
- 5% to 10%: 25
- 2% to 5%: 104
- Under 2%: 606

Data set = 745 SHOPP Projects that achieved Construction Completion in FYs 14/15, 15/16, or 16/17
Efficiencies

- NEPA Assignment
- Advance Mitigation
- AB 1282 – Transportation Permitting Task Force
NEPA Assignment

- Reduces reviews
- Time-savings for projects
- Requires waiver of immunity
Advance Mitigation

- Accelerate transportation project delivery
- Improve environmental outcomes
- Enhance communication with stakeholders
- Ensure the Program account is self-sustaining

Advance Mitigation Projects
Purchase or Create Mitigation
AB 1282

Establishes the Transportation Permitting Task Force

Statutory Goals:

- Early engagement
- Reasonable deadlines
- Greater certainty of permit approval requirements
Questions?