

**ACEC/Caltrans DES  
Structures Liaison Committee  
Meeting Minutes  
May 3, 2024**

The ACES/Caltrans DES Structures Liaison Committee meeting was held in person on Friday, May 3, 2024 from 10:00 AM to 12:00 PM PST in Room 102 of the Farmers Market Building (#1) at 1801 30th Street in Sacramento, CA.

**I. Call to Order**

Posted meeting minutes are available on the Caltrans website linked below:

<https://dot.ca.gov/programs/engineering-services/special-funded-projects-and-local-assistance>

Garrett Dekker reminded the Committee that meeting minutes do not include attachments unless they are ADA compatible.

**A. Self Introductions**

The meeting began with self-introductions for those present in Sacramento.

**B. Changes to the Agenda**

Garrett Dekker asked for proposed changes to the agenda; no changes were requested.

**C. Review Previous Meeting Minutes (February 2, 2024)**

The previous meeting minutes were distributed prior to the meeting. No comments were received on the minutes.

**II. DES/ACEC Updates**

**A. General: Rich Foley/Jim Foster**

Jim Foster (acting Deputy Division Chief for DES) provided general DES updates and communicated a message from Rich Foley emphasizing the ongoing commitment to enhance interaction and inclusivity within the design community. Caltrans' goal is to foster a collaborative environment and to leverage the collective expertise to address pressing issues. The pursuit of these objectives will remain a key focus in the continued efforts of the committee.

**B. Technical: Structures Technical Policies, Technical Research: Don Nguyen-Tan/Chris Traina**

Structure Technical Policy (STP) Updates: Don Nguyen-Tan

- STP 16: Minor bridge widening and modification due to deactivation of STP 16.8.
- BDM 10.3: New guidelines for foundations with seal courses, significant changes from previous versions.

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- BDM 11.5: Live load distribution for abutment design, a practice used by Caltrans bridge design Academy, is not yet policy. The BDM recommends using this methodology to determine live load for abutment design.
- STP 9.1: Revision to precast prestressed concrete deck panels for precast girders, expanding the width from 8 feet to 12 feet, affecting bridge standard details.
- Deactivated Memos:
  - MTD 8-6: Stay-in-Place Precast Prestressed Concrete Deck Panels for Precast Concrete Girder Superstructures is being replaced by STP 9.1.
  - MTD 8-7: Stay-in-Place Metal Forms for Precast Concrete and Steel Superstructures has been integrated into the California Amendments to AASHTO Article 3.5.1.
  - MTD 9-4: Live Loads and Stresses Historical Background is now obsolete due to the availability of the Bridge Load Rating Manual and BDM 16.4, which detail material properties previously used.

Technical Research Updates: Chris Traina

- Rich Foley and Chris Traina participated in the Advisory Committee meeting and review of the annual slate of research.
  - The Technical Steering Committee (TSC) has ranked 10 proposed projects (budget cap of \$5 million), a reduction from previous years where submissions were unlimited.
    - The top five projects include Generation 2 fragility curve models for steel bridges, developed in collaboration with Georgia Tech for the ShakeCast system, and a notable project at the Concrete Bridge Engineering Institute for training new construction engineers. Additionally, a transportation study at the University of Texas at Austin offers extensive bridge training opportunities.
  - Efforts are also underway to provide guidance on lateral spreading, with a project evaluating simplified procedures for this phenomenon.
  - The ongoing research on Accelerated Bridge Construction (ABC) column connections aims to enhance the structural policy and safety of bridges, particularly in seismic areas.
  - The use of artificial intelligence (AI) in steel bridge inspections represents a significant advancement in maintenance technology. By employing drones

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equipped with AI, the process becomes more efficient and safer, as the AI can accurately identify issues such as corrosion, welding defects, and cracks without the need for human inspectors.

- The research proposals by Dr. Dale from San Diego State University related to the recent earthquake in Turkey are of significant interest. The bridge damage in Turkey in conjunction with the Seismic Design Criteria (SDC) used in the bridge construction provide valuable insights into the effectiveness of the SDC.
- The procurement and contracting cycle for the upcoming year is set to begin on July 1st, 2024. This adjustment aims to alleviate the workload during the busy end-of-year period, allowing for the completion of contract reviews and rankings before the holiday season.
- The team has made significant progress on Grade 80 reinforcement. Follow-up studies are underway to address couplers and buckling in Grade 80 reinforcement, supported by shake table testing.
- Singhan Kim joined as the new research program manager in January, succeeding his predecessor who retired. He will oversee the geotechnical structures program and manage related contracts. The focus for the upcoming year includes key areas outlined in the structures policy, which will guide the research proposals.
- The California state highway system has undergone periodic seismic screenings to identify bridges in need of retrofiting. The most recent screenings in 2015 and 2019, which included updated hazard considerations like increased ground shaking and liquefaction, resulted in a priority list of approximately 640 bridges requiring seismic upgrades. This list is a part of the state highway system management plan, which directs the allocation of seismic retrofit funds.
  - Local agencies, which had been progressing through their own seismic retrofit programs, have now sought to replicate the state's screening process. In response, the California Transportation Commission (CTC) has adjusted its guidelines to prioritize funding for these critical projects. As a result, a new initiative, approved on February 15th with a budget of \$4 million, will extend the screening to approximately 13,000 local agency bridges. This effort is expected to generate a new list of retrofiting needs and potentially create significant work opportunities.
  - The current screening process is an in-house operation within the Division of Engineering Services, Structures Maintenance & Investigations, Headquarters, and Local Assistance Engineers. The immediate goal is to screen as many bridges as possible to facilitate the commencement of actual retrofiting work, prior to involving Consultants.

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- Updates on this screening process will be provided, with the possibility of a detailed presentation in the next six months to further inform all stakeholders.

**C. Contracting Opportunities: Hamid Sadraie/Sid Pedaballi**

Contracting Updates: Hamid Sadraie

- DPAC Look Ahead Report Summary:
  - Design Projects:
    - Water/Wastewater Project Development Services: Covers phases from preliminary engineering to construction, budget under \$10 million, expected in September 2024.
    - On-call Professional Services for LIDAR Photogrammetry: Budget under \$10 million, expected in June 2024.
  - Construction, Engineering, and Inspection Projects:
    - North Region (Districts 1-3): Budget slightly over \$20 million, commencing this month.
    - District 5 Project: Budget a little over \$30 million, commencing this month.
    - District 4 Projects: Two separate projects, one budgeted at \$30 million and the other just over \$20 million, both starting in June 2024.
  - Materials Engineering and Testing Projects:
    - North Region (Districts 1-3): Encompasses all project types including design, bid, build, CMGC, and design-build, with a budget slightly under \$20 million, scheduled for August.
    - South Region (Districts 7, 8, 9, 11, and 12): Covers similar project types with a budget over \$20 million, expected to commence in October.
    - Central Region (Districts 4-6): Includes all project types as well, with a budget under \$20 million, set to start in September.

**D. Local Assistance: Robert Peterson**

Andy Chou provided the Local Assistance and Highway Bridge Program (HBP) for Local Agencies update:

- Caltrans Headquarters has announced a staffing update for the HBP team. Linda Newton retired at the end of March. The position for her replacement has been posted.

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- The Bridge Preventive Maintenance Program (BPMP) guidelines have been updated to provide clearer eligibility criteria and project delivery requirements.
  - These updates are now available on the website shown below:
    - <https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/highway-bridge-program>
  - Additionally, two sample cover letters have been provided for local agencies' reference.
- Cost escalation applications for construction projects, such as LAPG 6-A's or 6-D's, require the inclusion of cost escalation rates based on anticipated construction start dates.
  - The HBP adheres to the cost escalation rate approved by the CTC. This rate is updated annually on the HBP website.
  - For this year, the cost escalation rate is set at 4.89%. This is an annual rate, and for projects expected to start in five years, the rate would be applied accordingly to account for the anticipated cost increase over that period. Note that this rate is applicable only to the Construction phase and does not extend to the preliminary engineering (PE) or right-of-way phases.
  - The CTC approved rates can be found on the CTC website. However, for ease of access, these rates are also available on the HBP website, typically located near the bottom of the page under references.
- Message to Local Agencies: 'Deliver, Deliver, Deliver,' to ensure the maximum utilization of the funds before they are no longer available.
  - There is a desire to expedite construction projects due to the time-sensitive nature of the available funding. The Infrastructure Investment and Jobs Act (IIJA) funds are not permanent and are currently in the third year of a five-year availability period.
  - Agencies are encouraged to obtain necessary clearances such as NEPA clearance or re-evaluation, and right-of-way certifications to progress to the construction phase.
  - Obligation Authority, along with Expedited Project Selection Procedures (EPSP) and post-programming, are currently active, allowing for the advancement of projects that are ready. Agencies with ready projects should request advancement to capitalize on the available funds.
  - Note that once a project heads toward construction, at advertisement and award, it is common for initial cost estimates to be exceeded. When costs exceed the programmed amount, local agencies have the option to submit a revised LAPG 6-D form. This form is a request for a programming adjustment based on the latest bid analysis and results.

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- Agencies are encouraged to submit any PE or right-of-way cost adjustments and include a snapshot of the current engineer's estimate in the 6-D to track cost escalation. Agencies nearing construction authorization (within six months) should submit a 6-D to update the TIP with the latest engineer's estimate. Discrepancies between the federal FTIP and the latest estimates can cause funding and authorization issues.
- When awarding a contract, if the lowest bid received is significantly lower than the pre-authorized engineer's estimate, it presents an opportunity to reassess and adjust the construction work estimates.
- If a project requires redesign to meet updated design and construction standards, the associated costs may not be eligible to be covered by federal funds. It is evaluated on a case-by-case basis.

**E. Statewide ACEC Committee: Garrett Dekker**

Garrett Dekker shared updates from the Statewide ACEC Committee.

- Local Assistance:
  - Sub-consultants now have a route to bypass the prime consultant for submitting financial data to Caltrans. Details were shared in a local assistance blog post on January 25th.
- Design:
  - SB 706 has enabled Caltrans to initiate eight progressive design-build projects. The pilot project, the Coronado Bridge, has been advertised with the Statement of Qualifications (SOQ) due shortly.
- Construction:
  - Full-service construction contract templates have been finalized and are now available for district use. Advertisements for these contracts can be expected.
  - Caltrans is creating a guidance document for consultants to access the Caltrans Digital Network, requiring the use of an iOS device and adherence to specific protocols.
- DPAC:
  - The committee is addressing requests for rate reductions during contract negotiations with Caltrans, aiming to resolve discrepancies and streamline the negotiation process.

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**F. Construction Management and Inspection Updates: John Lammers/Frank Martin/Jon Rohrer**

There will be an upcoming update to the Trenching and Shoring manual, which is currently in the QA phase. Although it is not a major revision, it aims to correct existing errata and other minor details.

**III. Sub-committees**

**A. ABC (Accelerated Bridge Construction): Garrett Dekker/Habib Hotaki**

Habib Hotaki gave the ABC update:

- The Kings River Bridge in District 6 recently underwent a site visit, demonstrating the successful implementation of a seismic pocket connection, a detail based on UNR research. This ABC method allowed for the rapid erection of precast bin caps (drop caps).
- In District 3, the Willows Loop project is currently in the design phase. This ABC project features steel press-brake formed tub girders, full-depth deck panels, and ultra-high-performance concrete (UHPC) connections.
- New NSSPs for UHPC have been developed with TransLab as part of an emergency project to repair wheel ruts on concrete pavements. Details are similar to UHPC overlays constructed in other states. This advancement is expected to open the use of UHPC for bridge deck overlays.

Garret Dekker introduced Sebastian Varela, with Mark Thomas, as the new co-chair of the ABC subcommittee.

**B. Alternative Project Delivery Methods: Mark Reno/Jason Chou**

Scott McCauley provided the update on behalf of Mark Reno.

- Mark Reno is planning a presentation for an upcoming quarterly meeting to focus on the use of alternative delivery processes by Caltrans and local agencies. The aim is to consolidate views from Caltrans and local agency consultants for a comprehensive presentation. Mark is currently targeting August or November for the presentation.

**C. BIM (Building Information Model): Doug Dunrud/Bobby Zermeno**

Bobby Zermeno provided the update:

- The inaugural 2024 BIM for Infrastructure Summit, hosted by Caltrans, was a two-day event in March aimed at enhancing industry understanding and awareness of BIM for infrastructure. With around 120 attendees, including Caltrans personnel, contractors, and design firms, the summit featured presentations, discussions, and panels. The event

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marked the beginning of a three-step, decade-long roadmap towards advancing BIM implementation within the industry.

- Caltrans has been actively involved in various pilot projects to enhance infrastructure and streamline construction processes. These projects encompass a range of innovative techniques and technologies, including the use of digital as-built documentation, automated machine guidance for data collection, and the development of subsurface utility databases.

Mina Pezeshpour added a few items to the discussion:

- On May 1, 2024, Devin Porr was appointed to program director for the Division of Program and Project Management. Devin will oversee staff developing requirements and ensuring ADA compliance.
- Task teams are being formed, with an open invitation for consultants to participate. Communication will be maintained with Bobby to coordinate task team efforts. The goal is to expedite projects, aiming to reduce project timelines by five years. Standardization across the 12 Districts is a priority to ensure consistency.
- The Phase 1 report of AASHTO TPF-5(372), focusing on bridge infrastructure, is anticipated to be published soon. This report is the culmination of efforts from 26 state entities involved in various task teams. Although the report is complete, it has not yet been posted on the official website.

**D. Technical Subcommittee: Garrett Dekker (Jack Abcarius)/Jason Chou**

Garrett noted that there were no new questions submitted to the subcommittee since the last meeting.

**E. Education Training/Seminar/Webinar: Michael Van Duyn/Lance Schrey**

Garrett provided the following updates:

- The ABC Workshop was held on March 7, 2024 at the Capital Event Center in Sacramento. It was a half-day event attended by 128 professionals, including consultants, Caltrans employees, public agency representatives, and individuals from the construction industry. The workshop was deemed successful.
- Future efforts will focus on increasing participation from the construction sector and refining sponsorship strategies.
- The workshop received positive feedback from an anonymous survey with 36 responses, indicating the success and value of these events.
- The objective is to host the ABC Workshop biennially, alternating between in-person and virtual formats. The next session is planned to be virtual, allowing broader participation, especially for those from Southern California who faced difficulties attending the previous in-person event in Sacramento.



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Lance Schrey provided the following updates:

- The recent Caltrans Education Committee meeting, featuring CMGC lessons learned with Jason Chao and George Delano, was opened up to Consultants and had a significant turnout with 45 to 50 attendees. Currently, the meetings typically held the third Thursday of the month are virtual, with considerations for future in-person sessions being explored.

Scott McCauley provided the following updates:

- The winter training session, focusing on a range of topics including alternative delivery, prestressing, soil nails, ground anchors, and ABC, was successfully conducted last month. It garnered appreciation from over 116 attendees across six sites, including consultants and local agency representatives. Positive feedback highlighted the dedication of Caltrans and the trainers.
- Looking ahead, there's an anticipation for the ACEC to contribute more substantially in terms of information and materials once next year's topic is decided.

#### **IV. Discussion Items**

##### **A. STP 2.6 Update: Don Nguyen-Tan**

The team has prepared the STP with four different options for review by the Structural Policy Board, which will determine the direction to take. The options include various approaches. The date for the next board meeting, where these options will be presented and discussed, is yet to be scheduled. The main point of discussion will be the policy on deep foundations for abutments, as other matters have reached consensus.

##### **B. Construction Inflation**

Garrett Dekker noted that the construction industry has experienced significant cost increases in recent years, with a noted doubling of the structure cost index over the last three to four years. This surge has surpassed the 5% annual increase previously mentioned by the Construction Technology Center (CTC). The rapid escalation in costs has made it challenging to predict project expenses accurately. In response to high construction bids, there is a mechanism for requesting additional funding, which is crucial for maintaining the flow of funding to construction projects. However, the high volume of requests due to increased bids may impact the overall funding distribution and project timelines.

The ongoing increase in construction costs, particularly for bridge replacement projects, has impacted the prioritization and funding of infrastructure projects. While the Federal Highway Administration (FHWA) focuses on bridge replacement costs, other project scopes are not analyzed for federal funding distribution.

##### **C. Annual Report**

The annual report has been finalized and posted to the OSFP/SLA website.

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**D. Caltrans 100 Year Anniversary**

Lance Schrey reported that Caltrans' 100 Year Anniversary event featured seven kiosks, keynote speakers Rick Land, Will Kempton, Rich Foley, Vassil Simeonov, Dave Kim and Rick Land, and two food trucks. Attendees had the opportunity to inspect drill equipment and bridge accelerometers, devices used on bridges to measure vibrations. Overall, the event was well-received and provided a chance for reunions and networking.

The event also highlighted the collaborative efforts of various teams, including a golf tournament with over 40 participants, video vignettes created by different branches as well as consultants.

**V. Miscellaneous Questions: Open Forum**

None.

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**VI. 2024 Meeting Schedule:**

Q1: February 2, 2024 (1st Friday)  
Q2: May 3, 2024 (1st Friday)

Q3: August 2, 2024 (1st Friday)  
Q4: November 1, 2024 (1st Friday)

**VII. Distribution:**

**A. Caltrans:**

Rich Foley	Caltrans DES	Sid Pedaballi	Caltrans PD & SCM
Jason Chou	Caltrans SES	Robert Peterson	Caltrans HQ/LA
Jim Foster	Caltrans SES	John Lammers	Caltrans SC
Nina Choy	Caltrans GS	Don Nguyen-Tan	Caltrans BD
Tim Greutert	Caltrans METS	Chris Traina	Caltrans EE
Sudhakar Vatti	Caltrans BD	Mike Lee	Caltrans SM&I
Vassil Simeonov	Caltrans SM&I		
Hamid Sadraie	Caltrans PPM & OE		

**B. ACEC Regular Committee Members:**

<b>Member No.:</b>	<b>District(s):</b>	<b>Contact:</b>
1	1, 2, 3, 9, 10	Mark Reno, <i>Conzor</i>
2	11	Jack Abcarius, <i>NV5</i>
3	4	Garrett Dekker, <i>Moffatt &amp; Nichol</i>
4	7, 8, 12	Mike Van Duyn, <i>HNTB</i>
5	5, 6	Bobby Zermeno, <i>Cornerstone Structural Engineering Group</i>
6 (CM&I)	1-6, 9-10	Frank Martin, <i>Psomas</i>
7 (CM&I)	7-8, 11-12	Jon Rohrer, <i>HDR</i>

**Attachments:**

None