

**ACEC/Caltrans DES
Structures Liaison Committee
Meeting Minutes
February 4, 2022**

The meeting of the ACES/Caltrans DES Structures Liaison Committee was held by Virtual Microsoft Teams Meeting on February 4, 2022, from 10:00 AM to 12:00 PM.

I. Call to Order

A. Changes to the Agenda

Bobby Zermeno queried the attendees if there were any updates or changes to the agenda and no changes were requested.

B. Review Previous Meeting Minutes

No changes or comments were made to the 11/19/2021 meeting minutes. The meeting minutes were finalized and approved.

II. DES/ACEC Updates

A. General: Tom Ostrom/Ruth Fernandes

Tom Ostrom, Caltrans DES, began his remarks by thanking the ACEC Industry and Partners because DES has managed to deliver many outstanding projects this past year with support of the A&E partners. He highlighted a few projects that Caltrans would not have been able to do without partnership with the A&E consultants:

- The Gerald Desmond Bridge project while it opened over a year ago, Caltrans is still working on contract acceptance.
- After the 2020 Power Safety Shutdown, Caltrans let over \$100 million in Director's order to address critical fire and life safety concerns in Caltrans ventilated tunnels in Caltrans Districts 1, 4, and 7. That work is wrapping up and Caltrans is embarking on developing SHOPP projects to improve the Fire Life Safety performance of their tunnel inventory.
- The Delta Moveable Bridges, again a series of Directors Orders to address critical operational deficiencies. Caltrans is also partnering with A&E firms to develop a comprehensive risk-based maintenance and operations plan for the moveable bridges.
- Richmond San Rafael Bridge load rating and gusset plate strengthening projects are well underway.

This is in addition to the day-to-day projects across METS, Geotechnical Services, Bridge and Building design and Structure Construction. With the onslaught of work Caltrans sees coming, they are in a good position to maximize their A&E resources with almost every functional unit having new contracts in place or being advertised. Caltrans is looking to have better balance of internal and A&E resources across the subdivisions.

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At this time, it seems like there is ample project funding available. The SB-1 pipeline is reaching full capacity. Overall Caltrans Construction Program has 736 projects at \$11.7 billion. This year Caltrans is delivering on over 1,100 projects valued at \$5.6 billion.

Caltrans has enjoyed a very friendly bidding environment since COVID began:

- Last year the aggregate low bids were 15% lower than aggregate Engineer’s Estimate and Caltrans is currently averaging 6 bidders/project.
- Year to date, low bids are 4.9% lower than the Engineer’s Estimate and the number of bidders is at 5.7 bidders/project.
- Labor shortages, supply chain issues, oil prices and inflation are all causing changes and Caltrans is expecting bid prices to be increasing.

The Caltrans FFY 2022/2023 workload is going up. Biggest contributions is from SB-1 which has \$5 billion annually up to 2027, Clean California and BBMM (Broad Band Middle Mile), and this is without the potential increase from Infrastructure Investment & Jobs Act (IIJA) which was passed and signed into law.

Changes in Budget Category Expenditures 2021-22 Enacted vs. 2022-23 Proposed (\$ in millions)					
Category	CY Enacted 2021-22	BY Proposed 2022-23	Change		
				\$ Change	% Change
State Operations	\$5,717	\$6,039	▲	\$322	5.6%
Capital Outlay	\$6,355	\$7,788	▲	\$1,433	22.5%
Local Assistance	\$5,249	\$6,181	▲	\$932	17.8%
Total	\$17,321	\$20,008	▲	\$2,687	15.5%
Positions	21,170	21,216	▲	46	0.2%

** Please Note – the proposed 2022-23 Governor’s Budget being released on January 10 does not include potential resource changes for project delivery for the Capital Outlay Support (COS) Program; the COS Program submits a May Revise Finance Letter to request project delivery resources.*

Tom mentioned that Caltrans bridge work has taken on more of a tilt towards asset management performance targets. DES is getting approximately 25% of the Capital Outlay Support (COS) increase. This should be across the board of Persons on Board (POB) and A&E PYEs.

Caltrans is edging toward double digit attrition with the “silver tsunami” (retirements). DES has been hiring at a rate that is barely keeping up with the attrition. PECGG is in negotiations on a new agreement for Bargaining Unit 9.

Tom briefly discussed the IIJA and some of those highlights included the following:

- In general terms, IIJA doubles the federal transportation dollars on the state and local systems.

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- IIIJA is bridge friendly and as such California will receive \$849.4 million this fiscal year – more than double the amount of any other state – and an estimated \$29.5 Billion (\$4.2 billion annually over five years), to address highway bridge needs.
- This is approximately 44% more than the state federal aid highway formula under the previous law.
- Current estimates predict Caltrans will receive \$631 million over five years to increase the resilience of its transportation system.

Tom also discussed some highlights of the Competitive Bridge Programs:

- \$12.5 billion Bridge Investment Program for economically significant bridges.
- \$15 billion dedicated to megaprojects that will deliver substantial economic benefits to communities.
- This is all being sorted out in Caltrans Programming and Asset management programs.
- Caltrans expects a budget adjustment to account for the Federal Funds.

Tom closed his remarks with there is a tremendous amount of work coming. There is going to be competition for bridge, material, and geoscience professions. There will be tremendous pressure on Caltrans support groups like DPAC and their personnel divisions to keep up with these demands. It is a good time to be in the transportation sector!

A question was raised as to whether Caltrans would be looking to continue with current contracts supplementing them or would be readvertised, and Tom mentioned those discussions are on-going.

It was also noted that Caltrans initiative is to go fully electronic/digital in 5 years.

B. Technical: Structures Technical Policies, Technical Research: Sudhakar Vatti/Gudmund Setberg

Sudhakar Vatti, Caltrans OSFP/SLA, stated that Caltrans has incorporated all comments on the Complex Bridge Procedure Caltrans incorporate all comments. The next step is updating the manual and no additional meetings will be needed.

Gudmund Setberg, Caltrans SD, informed the group that STP Bridge Bearings 14-1 is going through ADA compliance and will be posted next week

Jack Abcarius asked Gudmund whether it was Caltrans's intent to make temporary structures the designer's responsibility or if it would remain with the contractor? Gudmund responded stating that it was not Caltrans's intent to transfer this responsibility to the designer.

C. Contracting Opportunities: Shira Rajendra / Sid Pedaballi

Shira Rajendra, Caltrans PPM & OE, reported that presently Caltrans DES is at the height of procuring/awarding contracts. He mentioned that selected firms are going through independent audits and requested anything A&E consultants can do to respond quickly and

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push forward the information is appreciated. He reiterated that current contracts are 5-years, but design task orders are only for the first 3-years. So they will be looking to replace contracts every 3-years. If workload pushes, they could possibly look to advertise in next 18 months.

Shira mentioned that Source Inspection Contracts are being advertised for North and South. Construction Inspection Contracts are being advertised and next year there will be a Local Agency Source Inspection Contract that will be advertised. It is being forecasted that A&E budget will grow 10% next year. They are also looking to try to use a new formula incorporating bridge condition and lane miles, so that square foot factors in.

D. Local Assistance: Robert Peterson (0:19:20)

Robert Peterson, Caltrans HQ/LA reiterated to the group that the Highway Bridge Program (HBP) has not been accepting new projects into the program. There is hope that with the new funding there will be a blend of continuation funding on current projects, repayment of AC projects, possible advancement of current projects and acceptance of new projects. Robert also mentioned that subgroups like Safety and Fix It First will be tasked to come forward with recommendations on where funding should go.

Robert discussed some potential training opportunities as they are looking to provide training in smaller modules, record in virtual world and make available. Also, information on Value Analysis and areas where this can be improved, and better communication will be coming out. There will be an Office Bulletin coming out for High-Cost Bridge Policy which will be approved by the Statewide Committee. It will include requiring more Local Agency funding towards the project. Also, there may be additional funding opportunities through the IIJA. The high-cost agreement goes from \$20 million up to \$40 million.

A question was posed as to how effective the Bridge Investment Credit (BIC) Program has been. Robert said that it is still in place, there have been discussions, but as of yet no recommended changes. However, he did note that it is not entirely clear how well this program is working.

E. Statewide ACEC Committee: Garrett Dekker

Garrett Dekker reported that three guidance documents were updated and will be released in the coming weeks: DEER Guidance in PDPM Chapters 1, 2, 9, 12 and 21, DIB 89-02 Class IV Bikeway Guidance Revision 2 (policy on Complete Streets), and a Traffic Calming Guidance Memorandum (February 2022). The Joint Training Certification Program has been moving forward as normal, and enrollment is heavy. Technicians should look to schedule appointments about three months ahead of certification expiration. DPAC reported on a new streamlined process for contracting. They are providing ongoing training on items that will be considered non-responsive in the future. They are trying to send immediate letters to primes with missing information, rather than deem proposals non-responsive. DPAC thinks the changes made to the cost proposal format is easier to comply with and should save time on

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the contract negotiations. Broadband is still an active goal for the State, and Caltrans is currently getting the design criteria lined-up with CPUC. Clean California projects are now underway.

F. Construction Management and Inspection Updates: Mike Francis / Hank Doll /Jon Rohrer

Gudmund mentioned that the Grade 80 Rebar topic and the gradual approach of implementation would be discussed during the formal presentation later in the meeting. Caltrans is interested in learning about carbon fiber rebar, or possible retaining wall implementation with alternative rebars.

Rich Foley announced they have completed 3 sessions of Winter Training. This year's program has mostly focused around problem sets and exercises. The attendees have homework that is due the next day and they end up having five 3~4-hour sessions. How this may be adapted to the ACEC community is still unknown and Jon Rohrer will be following up with Jeff Abercrombie the Caltrans sponsor for this year Winter Training. As of this meeting, there were still no specific dates selected for the ACEC training.

III. Sub-committees

A. ABC (Accelerated Bridge Construction): Garrett Dekker

Garrett reported that the only update on ABC is that the Caltrans/FHWA ABC Peer Exchange is rescheduled for May 24 and 25 in 2022.

B. CMGC/Design-Build (Lessons Learned): Mark Reno)/Sudhakar Vatti

Mark Reno let the group know that the workshop is tentatively scheduled for the third quarter of 2022. It is unknown whether the event will be held in person or virtually. He requested that anyone with interesting CMGC projects or experiences reach out to Mark or Sudhakar. Mark is planning to reach out to Elias Kurani, Dan Adams, Sudhakar, and Gudmund to setup an initial planning meeting with Caltrans in March to discuss.

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

Bobby Zermeno reminded the group that the Caltrans Bridge Design BIM Committee Webinar was set for Friday February 11, 2022. All attendees contact information has been provided to Bobby and he will be sending out the virtual WebEX meeting invite the week of February 7, 2022. Gudmund reiterated that BIM is a high focus of Caltrans efforts right now and is looking to collaborate with the A&E industry.

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D. Technical Subcommittee: Jack Abcarius/Sudhakar Vatti

1. Review of H&H DRAFT STP 2.6 HYDRAULIC Design for Structures over Waterways (to replace MTD 16-1)

Jac Abcarius with NV5 briefly discussed some of the on-going activities which have been done with the initial review of STP 2.6, but also mentioned that a very collaborative meeting with meaningful discussions had taken place. Jack asked that Cathy Avila from Avila and Associates summarize some of the discussions and takeaways from the meeting that was held on January 26, 2022 which included representatives from Caltrans Design, OSFP, HBP Programming, Structures Hydraulics as well as consultant representatives. The following are just some highlights, the full meeting minutes will be made available after finalizing them with Caltrans:

- Finalization of the STP 2.6 is on hold until reference documents within STP (for tsunami, scour, slr, etc) are also finalized.
- Guidance documents are not finalized yet but the goal is to finalize the guidance as well as the STP at the same time. Consultants will get an opportunity to provide comments.
- Implementation of the Check Flood is expected to occur within the next 6 months. The implementation of the Check Flood will come as an amendment to the CA Amendments and Caltrans will notify the public when the change has been adopted.
- In 2022 Caltrans will be issuing addendum(s) to the Caltrans Amendments to AASHTO. Abutments will now be designed for the Check Flood per FHWA/AASHTO and not the Q100 + Live Load as described in the Ch 3 CA Amendments. Until this formal addendum is in place, designs must follow current practice.
- Caltrans will allow the abutment footings being placed above the scour elevation, if necessary (constructability, etc.), as long as the exposed piles are designed to remain stable. Abutments need to be designed as bents.
- Caltrans will accept scour reference elevations other than the thalweg if it is proven that non-erodible soils are present and/or that the stream is not susceptible to migration.
- On new bridges, Rock Slope Protection will serve to protect the embankment or roadway fill only. Therefore, designing this rock based on the 50-year discharge, consistent with the Highway Design Manual, is appropriate.
- There are concerns with the semantics of freeboard requirements stated in the Highway Design Manual 800 and the STP. How these documents line up and provide similar designs is being discussed internally at Caltrans and will be discussed again.

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All parties involved in this meeting felt that a lot of progress was made and that they are on course with some revisions that will be beneficial to bridge designs. There will be some follow-up meetings that will be reported on at a later date.

No other technical questions have been received at this time. Jack reminded the group to reach out to him in the event that any questions arise.

E. Education Training/Seminar/Webinar: Y. Nien Wang/ Lance Schrey (0:44:18)

1. Virtual Joint Caltrans DES/ACES BIM Webinar February 11th 11 am – Bobby Zermeno

Bobby had covered the information during the subcommittee report.

2. Caltrans Winter Training

This was reported on earlier in the meeting.

3. CMGC Lessons Learned Webinar

This was also reported on earlier that this will be a 3rd Quarter webinar.

4. Virtual Tunneling Webinar March 16th 10 am

Concrete Tunnel Lined Segments – It will be determined later on how many can attend and how registrations will be handled.

IV. Discussion Items

1. Grade 80 Reinforcement: Don Nguyen-Tan

Don Nguyen-Tan, Caltrans DES Structure Design, gave a presentation on Caltrans Grade 80 Reinforcing Steel Implementation. A PDF of the slides was provided and will be distributed, but the following were the highlights:

- **Schedule of Implementation**
 - February 2021 – Develop implementation strategy, develop nSSP, planning for materials testing
 - February 2022 – **Phase 1:** Implement Gr 80 for non-seismic critical members
 - December 2022 - Estimated date Gr 80 implemented for initial construction projects
 - End of 2023 - Upon completion of **Phase 1:** Implement Gr 80 for seismic critical members and other transportation-related structures
- **Industry Communication** – Looking at costs, lead times and industry outreach

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- Provide estimates to CRSI and historical materials suppliers for timeline and approximate quantities (complete)
- Collaborate with CRSI and private labs regarding test methods and lab capabilities (in progress)
- **Risk Mitigation** - Initial high costs or delays due to supply issues and lead times
 - Delays due to lead times, additional testing, additional inspection, and rejected material
 - *Suppliers indicate delays due to the change would be minimal, very little in the production process is changing*
 - District customers may be negatively affected
 - *Suppliers indicate that demand from Caltrans should not be enough to cause a shortage*
 - *Cost will not be affected in either direction in long run by Caltrans demand*
- **Industry Communication**
 - Demand from Caltrans will not significantly change total demand and should not affect price
 - Delays not expected due to little change in manufacturing process
 - Newer mills use quench and tempered, older use microalloys. Industry is moving toward quench and tempering which is less expensive and with a more stable price
 - Manual method for uniform elongation practiced by suppliers already
- **Risk Mitigation** - Testing, acceptance activities, and variability in quality
 - Gr 80 will require quality assurance testing initially to collect data on variability
 - More types of tests may be required for Gr 80, resulting in higher testing volume
 - New test methods required, some without a national standard. New test methods may need to be adopted and new lab accreditation established
 - *Narrowing in on an estimate of additional testing and required test methods*
 - *Manual uniform elongation test in latest ASTM revision draft*
- **Risk Mitigation** – Couplers and T-heads
 - Uncertainty that Gr 80 accessory supply can meet demand
 - *Suppliers indicate that coupler supply should meet demand (meeting with suppliers Jan 6th)*
 - Uncertainty of the quality of existing products
 - *Problem statements submitted which include evaluation of products on current market*
 - *No fatigue data currently*

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- **Current Effort**
 - Problem statement for developing coupler and T-head criteria
 - *Submitted*
 - Develop acceptance criteria for reinforcement
 - *r/h, testing, CRSI technical guidance*
 - *Smaller mills cannot easily control r/h*
 - Welding Requirements
 - *METS Steel Committee reviewing options, but welding will likely be more expensive and require more testing and inspection than for Gr 60*
- **Welding – Welding will likely be more expensive and require more testing and inspection than for GR 60**
 - AWS D1.4 going through major revision which may address Gr 80
 - Option: Hoops will remain Gr 60 until ultimate butt splicing is resolved
 - Design guidance needs to be updated to realize reduced bars where volumetric ratio is used
- **Structure Construction Input**
 - Revisions to contract specifications
 - Project Plans
 - Bridge Construction Memos Section 52
 - Training
- **Tracking Sustainability**
 - Environmental Product Declarations currently do not differentiate between Gr 60 and Gr 80
 - Task team will work to develop a way to track this goal
- Don then asked for suggestions for the team and no suggestions were pushed forward

Meeting adjourned 11:55:00

V. 2022 Meeting Schedule

~~February 4, 2022 (1st Friday)~~
May 13, 2022 (2nd Friday)

August 19, 2022 (3rd Friday)
November 18, 2022 (3rd Friday)

VI. Distribution:

A. Caltrans:

Tom Ostrom	Caltrans DES	Gudmund Setberg	Caltrans SD
Kevin Keady	Caltrans SPI	Michael B. Johnson	Caltrans SMI
Rich Foley	Caltrans SC	Shira Rajendra	Caltrans PPM & OE
Roberto Lacalle	Caltrans GS	Sudhakar Vatti	Caltrans OSFP/SLA
Tim Greutert	Caltrans METS	Sid Pedaballi	Caltrans OPD & SCM

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Robert Peterson Caltrans HQ/LA John Lammers Caltrans SC

B. ACEC Regular Committee Members:

Member 1: Districts 1,2,3,9,10:	Mark Reno	Quincy Engineering
Member 2: District 11:	Jack Abcarius	NV5
Member 3: District 4:	Garrett Dekker	Moffatt & Nichol
Member 4: Districts 7,8,12:	Michael Van Duyn	HNTB
Member 5: Districts 5,6:	Bobby Zermeno	Cornerstone Structural Engineering
Member 6 (CM&I): Districts 1-6 and 9-10	Hank Doll,	
Member 7 (CM&I): Districts 7-8 and 11-12	Jon Rohrer, HDR	