

2018 Safety Summit



2018 Safety Summit
Tuesday, December 11, 2018
DoubleTree Hilton, Sacramento

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General

This document provides a summary of the topics and discussions addressed at the Safety Summit 2018 Conference held on December 11, 2018, in Sacramento, California. The attendee list is provided in Attachment D, Sign in Sheets. This document includes the following additional attachments:

1. Attachment A: Caltrans Safety Initiatives Presentation
2. Attachment B: Safety Innovations Presentation
3. Attachment C: Meeting Agenda
4. Attachment D: Sign-In Sheet

Safety Leadership

Presented by Laurie Berman

In 2018, one Caltrans worker was killed along with four contractors. Only one was killed by an errant motorist. The overall goal is zero deaths, and today's focus is for workers, but it applies to everyone. Even maintenance employees as well, they have a dangerous job.

Contractor Safety & Safety Partnership and Culture

Presented by Mike Ghilotti & Mike Spain

Imagine a visualization of what it would be like to go without a person in your life. Mike G. gave a personal account about his son working on one of his projects and having the same concern for his employees as if they were his son. Is being careful really the best we can do. Why haven't we mandated better laws, positive controls? If safety is our number one concern then why are we concerned about excessive traffic and other factors? How does a hard hat and vest ever win against a 7,000 lb. vehicle? Let's take a legislator out to a job...or have them volunteer a loved one. There is a potential to reach zero accidents. First it was a process and procedure then the curve flattened and now what? Culture is the next frontier and is built on behaviors.

Caltrans Safety Partnership & Safety Culture

Presented by Karla Sutliff & Steve Takigawa

A design consultant recently did a safety moment and she learned that they do this at the start of every meeting, definitely a solid example of safety culture. A safety summit is not an award ceremony but rather a commitment to safety. Attending the funeral of a Caltrans employee and seeing their family left behind should never take place.

Work Zone Safety Initiatives

Presented by Randy Weissman & Chris Costigan

There are 37,461 fatalities each year in the United States which is equivalent to (2) – 747's crashing every week. Commercial aviation has been able to achieve 0 fatalities so this is possible in our industry. In California, there are 3,623 deaths each year which is equivalent to approximately 10 deaths a day with more traffic deaths in Los Angeles than homicides. In regards to the 'Road to Zero' effort, 94% of incidents are caused by drunk, drugged, distracted, drowsy, or speeding motorists. The solution to achieve zero incidents must include enforcement, education, and engineering.

Presentation on Caltrans Safety Initiatives

Presented by Jesse Bhullar

In a review of traffic work windows, the development of work windows focus more on minimizing daily disruption to traveling public rather than reducing overall construction project.

The objective should be to develop a process to implement optimal work windows that balance travel disruption and overall project duration using metrics such as road user cost, construction project duration, and requests for extended closures.

Presentation on Safety Innovations –Division of Research, Innovation, and System Information

Presented by Joe Horton

The purpose of the Division of Research, Innovation, and System Information is to provide solutions and knowledge that improve California's transportation system.

The research program includes:

- Conduct preliminary investigations and best practice research
- Support the innovation needs of Caltrans practitioners
- Deliver research products
- Serve as national engagement liaisons

Table Breakout Sessions

Presented by Tammy Roberts

Tammy Roberts acted as a facilitator for the partnering session. The teams then shared their ideas with the entire group. Three breakout sessions resulted, focusing on safety concerns in the following categories:

1. Administrative Specifications
2. Traffic Management in Maintenance and Construction Zones
3. Communication, Training, And Safety Data

Table Breakout Session – Administrative Specifications (AS)

Session AS: Overall Themes

AS-1a: Existing specs and reference material (such as CAMUTCD) allow for many different, inconsistent approaches that affect both cost and safety. Caltrans can get safer performance by requiring via the spec, Contractors to meet the highest standard.

AS-1b: Contractors that invest heavily in safety are generally not lowest bidders – an adjustment should be applied so that high performing firms are not disqualified based on price.

Session AS-2: VECF

AS-2a: Should be better leverage to enhance safety.

AS-2b: Safety Enhancement Proposal.

Session AS-3: Standardization of PPE (other safety measures) in Specification

AS-3a: Requirements for baseline/minimum PPE should be included in specification so that bidders are not penalized for including more PPE where necessary.

AS-3b: Minimum requirements for reflectivity.

AS-3c: Minimum requirements for monitoring of work zones (soft language such as “continuously” is too open to interpretation and accounts for disparities between contractor approaches.)

AS-3d: Sign package requirements (while CAMUTC may say can reduce speed up to 10 MPH, Caltrans should specify that contracts will reduce speed by 10 MPH.)

Session AS-4: Safety Submittal in Bidding Process

AS-4a: There should a data points collected and compared in bidding process, specification should call out data points all contractors are required to submit. Data points identified may include – Experience Modification Rate (EMR), Total Recordable Injury Rate, Days Away from Work Case Rate, Lost and Restricted Case Rate, OSHA and other regulatory agency citation history, number of fatalities. There should be a 3-year history required.

AS-4b: A safety multiplier could be applied to contractors with high performing safety programs so that they are more competitive with firms that may be lower priced but have poor safety performance.

AS-4c: A prequalification process should be developed so that contractors must have a historical safety performance in line with or below industry at large.

Session AS-5: Caltrans Expectations for Safety

AS-5a: Caltrans expectation for contractor safety performance should be made clear in the specification. Contractors should be expected to include items to prevent all injuries and incidents, not just meet compliance requirements. The difference between compliance and zero injury performance was discussed here.

AS-5b: Requirements and process around Stop Work Authority. Specification should require Contractor to actively encourage workers to Stop Work. Does Caltrans either support Contractor programs or have their own program that contractors must follow?

Session AS-6: Greater Oversight

AS-6a: Some were of the mind that OSHA (consultation branch) should have a greater partnership with Caltrans and or specification could require bidders to enter into partnerships and pursue OSHA certifications such as VPP, SHARP etc.

Session AS-7: Activity or Task-Based Risk Assessment/Planning

AS-7a: Job Safety Analysis, Task Hazard Assessment and other pre-task hazard assessments are routinely used in the industry to improve safety performance. Many contractors use these items independent of being “required” to. Specification should require all bidders to integrate this process into safety programs.

Session AS-8: Safety Manager

AS-8a: Specification should identify key role and responsibilities for safety, including (not limited to) when safety managers are required, when foreman and superintendent require advanced safety training.

AS-8b: Consideration must be given to complexity of the project (size, risk). Pitfalls here include making a safety manager a commodity that is filled by a sub-consultant that is not integrated into the contractors’ safety program.

AS-8c: Specification should require this role to remain independent of operations.

Session AS-9: Incident Reporting

AS-9a: Specification should identify the time of incidents contractors are required to report, and the timeframe and process for reporting them to give Caltrans greater visibility of performance and potential risks. To be successful, Contractor should not be penalized for reporting but should be encouraged to investigate and share lessons learned with Caltrans. Cases where a contractor fails to report an incident should have consequences for that contractor.

Session AS-10: Itemization for Safety

AS-10a: Specification should itemize safety technologies, controls.

AS-10b: There should be a way for contractors to call out in responses where enhancements are made (i.e. traffic control.)

AS-10c: Caltrans should specifically ask for enhanced safety solution in specifications.

Session AS-11: Training Requirements for Workers Vary by Contractor

AS-11a: Specifications should call out specific training for workers such as OSHA 30/10.

AS-11b: Traffic control engineer qualifications should be identified.

Session AS-12: Auditing and Assessment Process

AS-12a: Joint Safety Reviews should be identified in the specs and Contractor should be able to plan for those activities. This increases Caltrans presence on site, helps build a safety culture, feedback between the contractor and Caltrans, and will improve safety.

Session AS-13: Incentives for Contractors

AS-13a: Incentives for safe performance should be included in the specs.

Session AS-14: De-Brief

AS-14a: Specification should require contractor to participate in a post-job or other timeframe de-brief to review safety performance on the project with Caltrans.

AS-14b: Caltrans could provide contractors with a performance evaluation based solely on safety or integrated with other measures.

Session AS-15: Management of 2nd and 3rd tier contractors

AS-15a: It came up that many larger contractors invest a lot in contractor management and would like to see practices like (pre-qualification, orientation, flow-downs of PPE, risk assessments, etc.) itemized so that all contractors are providing the same level of protections.

Session AS-16: Next steps

AS-16a: Caltrans should evaluate bidding process and include specifications that include key safety requirements and opportunities for setting expectation of zero Injuries (vs. compliance with OSHA)

Table Breakout Session – Traffic Management in Maintenance and Construction Zones (TM)

Session TM-1: Overall Themes

TM-1a: Recommendations to start early in project development (e.g., programming or design phase) in thinking about what types of physical elements could support safety in the work zone.

TM-1b: Ensure adequate budget is allocated early in the project development and/or programming process, and that that budget remains available for the life of the project. In other words, don't cut safety budget at any point. Others noted that safety funding should be identified before the design phase is complete.

- **TM-1b1:** This is particularly important for full closures and buffer lanes, which might affect construction schedule and in thinking about the Traffic Management Plan (TMP).

TM-1c: Some participants noted that consistency in requirements across Districts and projects would allow contractors to have more certainty regarding safety requirements and more standardized approaches to safety. Others noted that there were circumstances under which flexibility should be allowed.

TM-1d: Some noted that sharing the specs and/or menu of safety options early in the process would allow for identification of potential pitfalls and ensure adequate funding.

TM-1e: Some participants suggested that early determination of appropriate safety measures should include an interdisciplinary and/or interorganizational review of the approach to ensure the best-suited safety measures are selected.

TM-1f: Ensure adequate time allocated in schedule so that contractors are not rushed and can focus on safety.

TM-2: Communication

TM-2a: It was noted that the primary factor in project decision-making currently seems to be avoiding traffic impacts.

- **TM-2a1:** Several participants noted that strong communication campaigns can mitigate traffic impacts and that the primary factor in project decision-making should be safety, not avoiding traffic delays.

TM-2b: Support for portable/changeable message signs to alert motorists to upcoming closures; as one method of communication.

TM-2c: Suggestions were made to emphasize community benefits in messaging (e.g., improved worker and public safety, shorter construction windows, etc.)

TM-2d: Start communications, and make it robust, early (during scoping, for example). Make sure budget is allocated for adequate communications.

TM-2e: Example of effective communications campaign: Carmageddon.

TM-2f: Erratic drivers require education.

TM-2g: Consider a colored light/sign/symbol to provide advanced alert to public of an active lane closure.

Session TM-3: Speed Reduction

TM-3a: There was strong support for speed reduction in work zones to improve safety.

TM-3b: Some requested mandatory speed reductions across all districts.

TM-3c: Some requested flexibility to reduce speeds beyond a 10 MPH reduction.

TM-3d: Some advocated for speed reduction during active work. While others indicated that they would like 24-7 speed reductions for the life of the project so that the public is conditioned to reduce speeds in the vicinity of the construction.

TM-3e: Speed feedback signs and radar are effective.

TM-3f: Would like to see automated enforcement of speed violations in construction zones.

Session TM-4: Signage

TM-4a: It was noted that signage is relatively effective for speed reduction in some circumstances, and it is relatively cost effective.

TM-4b: Suggestions were made to use queue warning systems more, especially in unexpected circumstances. It was also noted that they need to be placed appropriately to avoid unintended safety issues and/or lack of effectiveness as the end of queue moves over time.

TM-4c: Some noted that signage regarding instructions for pilot car operations can be ineffective, but other signage is effective. A person, rather than a sign, tended to be more effective in these situations.

TM-4d: Electronic signs seem to be effective.

Session TM-5: Positive Protection

TM-5a: Should be maximized; strong support by participants.

TM-5b: Some indicated that positive protection should be mandatory on all jobs.

TM-5c: Others felt that some flexibility should be provided in contracts. For example, identify when it *should* be used and when it *shall* be used

TM-5d: Identify positive protection measures in design phase.

TM-5e: Buffer lanes important, and particularly effective for operations such as paving.

TM-5f: As number of lanes increase, take more area for buffer to maximize safety.

TM-5g: Physical barriers should be customized by job – movable barriers are good for some jobs.

TM-5h: There was support for Truck Mounted Attenuators (TMA), especially automated TMAs.

TM-5i: Participants noted that some contractors use TMAs for crew safety, regardless of whether they are required.

Session TM-6: Automate Safety Whenever Possible

TM-6a: When you can “remove boots on the ground”, do it. For example, put personnel inside equipment or use automated processes.

Session TM-7: Construction Zone Enhanced Enforcement Program (COZEEP)

TM-7a: Participants noted that COZEEP seems to be effective at reducing speeds.

TM-7b: Need to identify costs for COZEEP in design phase so that adequate budget is allocated.

TM-7c: The best location for the COZEEP officer changes throughout the course of a day and the course of a project; the contractor, the RE, and the officer need to coordinate closely to ensure that COZEEP is effective.

TM-7d: Some noted that they would like the COZEEP officers to take an active role in determining where they need to be throughout the construction window to best support worker and public safety.

TM-7e: Participants noted that it would be helpful to have greater involvement by CHP in discussions moving forward.

TM-7f: Need more COZEEP support and it needs to be tailored to the job's needs

TM-7g: Allocate sufficient funds for robust COZEEP early.

TM-7h: Arizona requires an officer at every construction site – Caltrans should consider.

TM-7i: Because of safety concerns for employees, some contractors direct their staff not to work without COZEEP – even if it affects their financial bottom line. Caltrans should prioritize COZEEP similarly.

TM-7j: Need alternatives for when COZEEP not available.

Session TM-8: Longer Work Windows

TM-8a: Strong support for longer work windows as reducing the number of times/days crews are exposed to traffic, especially work site set up (with cones, signage, etc.), reduces worker risk.

TM-8b: Allow for longer windows in the Traffic Management Plans to support safety.

Session TM-9: Closures

TM-9a: Need closures to cover longer distances for safety.

TM-9b: Longer lane closure hours would support safety.

TM-9c: Partial Closures

- TM-9c1: Use crossover lanes to mitigate lane closures.
- TM-9c2: Requests were made for longer durations of lane closures (8+ hours), which would increase safety and allow for more productive work.

TM-9d: Full Closures

- TM-9d1: Work very well, especially “super closures”.
- TM-9d2: This approach supports safety and construction and maintenance efficiency.

Session TM-10: Temporary Paint/Striping

TM-10a: Support for this tool because it is durable, doesn't get blown away or hit by traffic (for example, cones need to be retrieved by workers if they get dislocated; this is dangerous for workers and motorists; not an issue for temporary paint.)

Session TM-11: Automated Devices

TM-11a: Automated flaggers were viewed positively because they get personnel off the roadway and alert approaching traffic so that they are paying more attention.

Session TM-12: Need for Flexibility in the Selection of Safety Measures

TM-12a: For example, in some circumstances, motorists might go around rumble strips so a different tool should be used for speed reduction in those cases

TM-12b: Potential safety measures.

Session TM-13: Changing Mindsets and Behavior

TM-13a: It was noted that sometimes safety is viewed as an impediment to construction or maintenance work when it should be acknowledged that by implementing appropriate safety measures time and money can be saved.

TM-13b: Employees and contractors need to feel it is ok to ask for budget for safety measures.

TM-13c: Value safety as much as mobility in all aspects of project planning and implementation: consider safety in schedules, work windows, determination of safety measures.

Session TM-14: Low Bid Issue

TM-14a: Participants perceived that because Caltrans awards contracts to the lowest bidder the incorporation of robust safety measures is not incentivized and may be disincentivized.

TM-14b: Some expressed that safety measures should be mandated on all jobs so that contractors would be bidding on a comparable level of safety measures.

TM-14c: Others also noted that if Caltrans specifies exactly what the safety measures are, that allows firms to bid on comparable safety programs and then firms that include safety measures are not unintentionally dinged for including safety.

Session TM-15: Next Steps

TM-15a: T-sheets need to address pedestrian safety issues.

TM-15b: Would be interesting to analyze data to identify conditions for most work zone accidents.

TM-15c: Make sure safety specs are followed – increase number of inspectors available for compliance.

TM-15d: Some would like to see more opportunities for construction to occur during the day so that workers aren't exposed to hazards of night drivers.

TM-15e: Rumble strips seem to be effective in alerting drivers.

TM-15f: What are best practices elsewhere that California could learn from? Domestically and internationally?

TM-15g: HSIP funds are available now for safety equipment; Caltrans should take full advantage of these funds.

TM-15h: It would be nice to have a method to identify erratic drivers headed towards a work zone so that workers can move to safety.

TM-15i: It would be nice to have a highly reflective material that can be dropped on pavement in place of flairs.

TM-15j: Some participants would like to see a more expedited approval process for safety products; so that they can be deployed in the field sooner.

TM-15k: Some also requested that the State clarify the process for safety product approval.

Table Breakout Session – Communication, Safety, and Safety Data (COM)

Session Com-1: Overall Themes

COM-1a: No measurables on safety – there is no accountability.

COM-1b: Need to standardize specifications.

COM-1c: Safety discussion is missing on both project and global level – need to change the culture, encourage personal connections and create value.

COM-1d: Incentivize safety performance.

COM-1e: Caltrans and the industry need to collaborate and communicate on the job:

- **COM-1e1:** Everyone is working towards the same goal and should be respectful and friendly.
- **COM-1e2:** Treat every job like it is a win-win partnership between the industry, Caltrans and the public.
- **COM-1e3:** Be direct and flexible.

COM-1f: Share goals and set expectations together – Caltrans and industry.

COM-1g: Need a commitment from both industry and Caltrans on safety deliverables within the industry.

Session Com-2: Issues

COM-2a: Caltrans needs to listen and act – needs to communicate on the job level.

COM-2b: There is a lack of uniformity in traffic control set up.

COM-2c: There is a lack of coordination among different jobs regarding closures.

COM-2d: Caltrans does not understand risk/work and how safety applies.

COM-2e: Both industry and Caltrans do not spend enough time talking about safety together – everyone needs to be a better team.

COM-2f: No one communicates near misses; therefore no one can learn from them.

COM-2g: There is timely reporting of incidents, but only to Caltrans, need to include the contractors – need to share incidents both “up and down” – need to share with everyone.

COM-2h: There is a misalignment of expectations – what is important to Caltrans, the contractor, the legislature – everyone is speaking “past” each other instead of communicating with each other.

COM-2i: Safety data is missing e.g. incident data – what data should be communicated and how is it processed?

COM-2j: There is a lack of communication with the public – both Caltrans and the industry need to communicate about the project before, during and after it starts.

COM-2k: There is no joint training – no industry standard for traffic control.

COM-2l: Safety discussions are not happening or occurring enough.

COM-2m: There is a fear of retribution.

COM-2n: Subcontractors need to be given an equal voice.

COM-2o: There is no standardization across the industry – all jobs have different goals.

COM-2p: There is a conflict between production and safety.

COM-2q: Districts operate in silos.

COM-2r: There is no unity – no one is talking with each other.

Session Com-3: Possible Solutions

COM-3a: Host structured safety meetings to share incidents and accidents, measurables, safety measures, and to learn how to interface and work together.

COM-3b: Have written forms to identify safety issues and solutions; safety evaluation form currently conducted in a silo – need to include contractor.

COM-3c: Host OCIP monthly meetings between insurance brokers and staff.

COM-3d: Provide incentives on bid item to measure contractors' safety (a payment item.)

COM-3e: Educate Caltrans inspectors; have inspectors onsite more.

COM-3f: Provide DMV training.

COM-3g: Provide state-sanctioned training.

COM-3h: Share all closures and detours to GPS apps.

COM-3i: Take the fear out of reporting – make it constructive.

COM-3j: Channel communications to a jobs' safety staff to ensure consistency – should it be at the PM level?

COM-3k: Commit to collaboration.

COM-3l: Host monthly committee meetings.

COM-3m: Host social gatherings e.g. all staff BBQs to encourage sharing.

COM-3n: Set goal for Caltrans e.g. number of man time hours without incident.

COM-3o: Need to supply resources to ensure safety – safety is related to cost.

COM-3p: Include an allowance item for safety – use partnering to enhance safety.

COM-3q: Develop a common language across all disciplines – common requirements – standardization.

COM-3r: Create an external webpage on safety (through Caltrans) to include Best Practices – Near Misses – Safety Alerts; report out better on initiatives.

COM-3s: Create a Worker Safety Month.

COM-3t: Create safety award program to incentivize safety on all jobs.



Caltrans Safety Summit

Tuesday, December 11, 2018

DoubleTree Hilton Hotel
2001 Point West Way, Sacramento

Summit Facilitator: Tammy Roberts

Time	Topic	Speaker
8:00 – 8:30	Registration and Networking	
8:30 – 8:40	Welcome	Tammy Roberts Facilitator
8:40 – 8:50	Safety Leadership	Laurie Berman , Director California Department of Transportation
8:50 – 9:10	Contractor Perspective Safety Partnership and Culture	Mike Ghilotti , President Ghilotti Brothers Mike Spain , Skanska <i>USA Civil West California District</i>
9:10 – 9:30	Caltrans Safety Partnership Safety Culture	Karla Sutliff , Deputy Director Project Delivery Steve Takigawa , Deputy Director Maintenance and Operations
9:30 – 10:10	Work-zone Safety Initiatives ➤ California Office of Traffic Safety ➤ California Highway Patrol	Randy Weissman , Chief Deputy Operations, California Office of Traffic Safety Chris Costigan , Assistant Chief California Highway Patrol
10:10 – 10:25	BREAK	
10:25 – 11:25	Caltrans Safety Initiatives ➤ Division of Traffic Operations ➤ Division of Research, Innovation, and System Information ➤ Division of Construction	Jesse Bhullar , Division Chief Division of Traffic Operations Joe Horton , Office Chief Safety, Innovation, and Cooperative Research Division of Research, Innovation, and System Information Bob Finney , Acting Division Chief Division of Construction

11:25 – 11:30	What to expect in the Afternoon: Breakout Sessions	Tammy Roberts Facilitator
11:30 – 1:00	LUNCH on your own	
AFTERNOON CONCURRENT BREAKOUT SESSIONS • Administrative Specifications (e.g.: Construction Safety Manager, Construction Traffic Safety Manager, Risk Modifier) • Traffic Management in Maintenance and Construction Zones (e.g.: Buffer Lanes, Full Closures, Max Speed Postings in Construction Zones) • Communication, Training, Safety Data (e.g.: Communicate Progress on Initiatives, Communicate Significant Accidents on Construction and Maintenance Sites to Caltrans and Industry, Joint Training on Construction Traffic Safety for Caltrans, Industry, and CHP) Each session will focus on the topic and will discuss: • Best Practices/What is working well • Opportunities to Improve		
1:00 – 2:00	1 st Concurrent Breakout Session	Shelley Brown Facilitator
2:00 – 3:00	2 nd Concurrent Breakout Session	Jessica Sisco Facilitator
3:00 – 4:00	3 rd Concurrent Breakout Session	Sara Mockus Facilitator
4:00 – 4:15	BREAK	
4:15 – 4:45	Report from Breakout Sessions	Facilitators
4:45 – 5:00	Summary and Next Steps Adjourn	Bob Finney , Acting Chief Division of Construction