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Section 1 Safety

2-101 General

Employers must comply with occupational safety and health standards established by federal and state laws. State laws require all employers to provide a safe place of employment reasonably free from danger to life or health and to maintain a written Injury and Illness Prevention Program (IIPP).

The *Caltrans Safety and Health Manual* is the official Caltrans IIPP and can be found on an internal web page on the Office of Health and Safety's intranet page: Employee Safety Manual Online.

The *Caltrans Safety and Health Manual (Safety Manual)* lists safety policies and procedures, provides a centralized reference to operational safety advisories, and standardizes procedures for reporting employee occupational injuries, vehicular accidents, and claims against Caltrans. The *Construction Code of Safe Practices (COSP)*, along with the *Caltrans Safety Manual*, defines standard safety practices for employees involved with inspecting construction activities and operations. The Construction COSP is applicable only to Caltrans personnel performing duties in accordance with their job description. The contractor is responsible for means and methods to complete the work and is required to provide for public safety and to provide safe access to Caltrans employees. Contractors and subcontractors follow the prime contractor's IIPP and COSP. If a subcontractor's IIPP and COSP are more stringent, the subcontractor must follow its own IIPP and COSP.

Federal Highway Administration requirements, the *Standard Specifications*, and contract standard special provisions establish compliance with safety regulations as part of a contract requirement.

2-102 Duties and Responsibilities

Districts are responsible for safety on Caltrans construction projects.

2-102A District Deputy Director for Construction

The district deputy director for Construction should confirm that funding is adequate to maintain a training program to acquaint Caltrans Construction personnel with the basics of construction safety. This training must be a minimum of 4 hours per employee per year and be included in the district's annual training plan. Safety training includes orientation for employees when they receive their first construction assignment. Employees returning to Construction following an absence of 5 years or more should also receive the safety orientation.

Recent California laws have added a responsibility requiring supervisors to make sure that subordinates are implementing all safety requirements and are provided with the tools and the training necessary to protect them from being exposed to any potentially unsafe condition.

2-102B District Construction Safety Coordinator

The district's construction safety coordinator (CSC) acts as a technical advisor to construction field personnel. The CSC is responsible for the following:

- Understanding Caltrans' safety policies; contract specifications; and the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA), California Code of Regulations, Title 8 (8 CCR), "Industrial Relations." Cal/OSHA is the state enforcing agency for safety regulations.
- Making unannounced site visits to ongoing construction projects on a routine and rotating basis. The CSC should also respond promptly to requests from the resident engineer or other Caltrans staff to visit projects to review project safety concerns.
- Collaborating with the resident engineer about specialized contract work, such as full freeway closures and unusual or complex operations, including blasting and confined space operations. The CSC should visit the project periodically to observe the contractor's overall efforts, answer questions, or look at specific areas when the engineer requests it. The frequency of the visits will depend upon the type and complexity of the work.
- Writing a safety review report using Form CEM-0606, "Construction Safety Checklists," and either Form CEM-4501, "Resident Engineer's Daily Report Asst. Resident Engineer's Daily Report," or Form CEM-4601, "Assistant Resident Engineer's Daily Report," of each visit to the project site, and giving the resident engineer the original safety review report and copies to the construction engineer and the construction manager for review and follow-up.
- Being the district's primary contact with the Division of Construction safety engineer and the local Cal/OSHA representative, except for emergencies involving imminent hazards. Refer to Section 2-103A, "Imminent Hazards," of this manual for more information. Maintain regular communication with local Cal/OSHA representatives.
- Administering the district's construction safety training program, structured to meet district needs as mentioned in Section 2-102A, "District Deputy Director for Construction," of this manual, including the mandatory heat illness prevention training required annually for all field staff and the mandatory hazard communication training offered every 2 years.
- Serving as advisor for the construction safety portion of the preconstruction conference, and to the resident engineer on safety related topics.

2-102C Construction Engineer

The construction engineer should review construction projects to verify that the resident engineer is monitoring the contractor's construction safety program. The construction engineer should review the CSC's safety review report and confirm that the resident engineer addresses, adequately closes, and documents closure of items mentioned in the safety review report.

Construction engineers are responsible for the performance of employees under their supervision. They provide them with the training, personal protective equipment, and tools necessary to protect themselves from hazards. As part of the training, construction engineers should stress that under no circumstances should any Caltrans employees instruct the contractor how to correct a deficiency, either orally or in writing. The construction engineer must ensure a project specific Code of Safe Practices is developed for each project.

Construction engineers advise, correct, and reprimand employees for safety violations and should document their reviews of employee safety programs as required by the *Safety Manual*.

2-102D Resident Engineer

The resident engineer verifies that the contractor complies with all aspects of the contract, including applicable safety orders found in the 8 CCR. To accomplish this, do the following:

- Identify unsafe conditions and the specific contract provisions or 8 CCR regulations involved.
- Assign a project safety coordinator.
- Involve the district CSC in specialized contract work such as full freeway closures, blasting operations, confined space operations, multi-crane picks of large loads, or other unusual or complex contractor operations. Consult with the CSC to interpret Cal/OSHA regulations.
- Inform the CSC how unsafe conditions identified in the safety review report were resolved. Complete written documentation of the review and abatement results and file with other project documents.
- Complete a project safety review report every week and file it in Category 6, "Safety," of the project records. Use Form CEM-0606, "Construction Safety Checklists," and either Form CEM-4501, "Resident Engineer's Daily Report Asst. Resident Engineer's Daily Report," or Form CEM-4601, "Assistant Resident Engineer's Daily Report," to support the project safety review report.
- Using contract administration procedures, verify that the contractor complies with Caltrans contract requirements and 8 CCR.
- Develop a project-specific COSP document for Caltrans employees to address all operations in the project for each contract and all contractor operations. Make it accessible to workers in the field and confirm that all project personnel have read and signed it. Keep the COSP in a conspicuous location at the job site office, and a copy in the Category 6, "Safety," of the project files. Refer to Section 2-106A, "Caltrans Division of Construction Code of Safe Practices," of this manual for additional guidance on developing a COSP. A baseline COSP document is on the Division of Construction website:

<https://dot.ca.gov/programs/construction/safety-traffic>

Discuss project safety at the preconstruction conferences, use Forms CEM-0604, "Project Safety Review or Meeting," and CEM-0606, "Construction Safety Checklists," and document safety discussions in the project files for the duration of the project. Cover at least the following items:

1. Address new Cal/OSHA regulations that might be applicable to the contract.
 2. Discuss requirements for contractors to make available the safety data sheets for chemicals or construction materials used on the construction site. Caltrans employees must be able to assess their potential risk from contractor use of products requiring safety data sheets. Verify that Caltrans employees have safe access to safety data sheets, which may require provisions for eyewash stations, respirators, or other devices.
 3. Discuss other safety inspection items that may pertain to the contract, such as blasting operations, work in confined spaces, use of personal protective equipment or backup alarms, traffic control, shoring and tunneling, and access to elevated work.
 4. Discuss known public health conditions and the contractor's obligation to contact the local public health department pursuant to Section 7-1.02K(6), "Occupational Safety and Health Standards," of the *Standard Specifications*.
- Before work is started, confirm that contractors do the following:
 1. Submit an IIPP and the project Code of Safe Practices to the resident engineer, as required by 8 CCR 1509, "Injury and Illness Prevention Program."
 2. Submit permits required before starting certain work, such as: trenching or excavating 5 feet or deeper in which any person is required to descend; demolishing more than 36 feet in height; erecting falsework and scaffolding in excess of 36 feet in height; working in confined spaces; or mining and tunneling.
 3. Notify the regional Underground Service Alert. Refer to Section 4-1902A, "Roadway Excavation," of this manual.
 4. Submit all the contingency plans before starting the construction activities.
 - During the course of work, verify that contractors do the following:
 1. Report to the resident engineer any close call, serious injury or illness, disabling or fatal incidents.
 2. Notify the resident engineer immediately if Cal/OSHA arrives on the project for a site visit. As the site owner, Caltrans staff needs to participate in all Cal/OSHA site visits.

2-102E Project Safety Coordinator

The resident engineer may delegate safety responsibilities to an assistant resident engineer who will act as the project safety coordinator. This delegated work will usually be in addition to other assigned duties but may be full time on large

contracts. If there is significant structures work, the resident engineer may need to coordinate with the structures representative to have a structures project safety coordinator assigned for the structures specialty work. Also, if there is significant electrical work, the resident engineer may need to coordinate with the electrical engineer. To ensure project safety, have an electrical safety coordinator assigned for the electrical specialty work.

The project safety coordinator acts as a safety advisor to Caltrans project personnel. The project safety coordinator should monitor and document contractor compliance with safety requirements, keep the resident engineer informed, and do the following:

- Monitor ongoing operations on the job site daily.
- Inform the contractor, orally and in writing, of any operation or activity that does not comply with Caltrans contract requirements or Cal/OSHA regulations. Provide reference to the *Standard Specifications* or the specific regulation violated. Use Form CEM-0606, “Construction Safety Checklists,” to find the appropriate reference. These checklists are on the Division of Construction website:
<https://dot.ca.gov/programs/construction/forms>
- Prepare a weekly project safety review report using Form CEM-0606 and either Form CEM-4501, “Resident Engineer’s Daily Report Asst. Resident Engineer’s Daily Report,” or Form CEM-4601, “Assistant Resident Engineer’s Daily Report,” and file it in Category 6, “Safety,” of the project records.
- Consult with the CSC with project safety questions.

2-102F Project Staff

Caltrans does not intend that the resident engineer and the project safety coordinator do all of the monitoring of the contractor’s construction safety activities. All construction personnel should consider the safety of the operations in conjunction with their normal inspections and to confirm that they have safe access to perform their duties. Inspectors—closest to and most familiar with the field operations—should do the following:

- Be familiar with construction zone traffic management, Cal/OSHA regulations, Caltrans safety policies, and specifications. Use Form CEM-0606 to monitor the contractor’s compliance with safety regulations and specifications.
- Routinely monitor, document, and discuss contract safety requirements with the contractor.
- Request assistance from the project safety coordinator or the district CSC if uncertain about a regulation’s requirements.

2-103 Managing Safety Hazards

In carrying out Caltrans’ responsibilities for verifying safety compliance as a contract requirement, use the following guidelines.

2-103A Imminent Hazards

Imminent hazards are work conditions that, if not corrected, could result in an incident causing severe or permanently disabling injury, or death. When an imminent hazard is found or the contractor permits repeated occurrences of a hazardous condition, the Caltrans representative should take the following steps:

- Advise the contractor orally of the condition and the need for correction.
- Remove all Caltrans employees from the hazardous exposure.
- If the contractor complies, document the incident in the project's safety review report with appropriate references in Form CEM-0606, "Construction Safety Checklists," and either Form CEM-4501 "Resident Engineer's Daily Report Asst. Resident Engineer's Daily Report," or Form CEM-4601, "Assistant Resident Engineer's Daily Report." Document the unsafe work condition, discussions with the contractor, and how and when the unsafe condition was corrected.
- If the contractor does not comply, temporarily suspend the affected operation. Confirm the suspension order in writing to the contractor.

Whenever it is necessary to suspend a contractor's operation, notify the CSC, resident engineer, and the construction engineer of the hazardous condition and the actions taken. Verify that all contractual remedies to address the contractor's safety issues have been exhausted and documentation is fully prepared and filed before considering notifying Cal/OSHA. Involve the CSC as a checker in the process to verify nothing was overlooked. Get permission from the construction manager before calling Cal/OSHA. These actions will limit potential multi-employer liability against Caltrans. Notify the Division of Construction safety engineer about the actions taken. Place the safety review report, including all details leading to the suspension, and copies of orders in Category 6, "Safety," of the contract files.

2-103B Serious Hazards

Serious hazards are work conditions that, if not corrected, could result in a disabling injury and possibly death, or develop into an imminent hazard. When a serious hazard is found, the Caltrans representative should take the following steps:

- Advise the contractor orally of the condition and the need for timely correction. If appropriate, set a compliance deadline.
- Remove all Caltrans and consultant employees from the hazardous exposure.
- If the contractor fails to provide timely correction, consider ordering a temporary suspension of the affected operation. Confirm the suspension order in writing to the contractor. Notify the resident engineer.
- Document the incident in the project's safety review report with appropriate references in the resident engineer's daily report. Document the unsafe work condition, discussions with the contractor, and how and when the unsafe condition was corrected.

2-103C Minor or Nonserious Conditions

Minor or nonserious conditions are ones that could result in minor injuries or might be classified as minor threats to health. When a nonserious or minor condition is found, the Caltrans representative should take the following steps:

- Advise the contractor orally of the condition and the need for correction.
- Remove all Caltrans and consultant employees from the hazardous exposure.
- Document the incident in the project's safety review. Document the unsafe work condition, discussions with the contractor, and how and when the unsafe condition was corrected.
- If the contractor fails to correct the condition or permits a recurrence, notify the resident engineer and CSC.

2-103D Corrective Actions for Safety Hazards

Imminent and serious hazards may require immediate corrective actions; these actions must be taken immediately to correct unsafe work conditions or deficiencies. If the corrective actions cannot be taken immediately, discuss with the contractor how the unsafe condition will be corrected and a timeline for taking action; corrective actions are still to be completed as soon as possible. To confirm the corrective actions were taken, verify with the contractor's project safety representative how and when the unsafe condition was corrected on the next scheduled safety review, as discussed in Section 2-109B, "Project Safety Reviews During the Course of the Work." A follow-up review may be needed to confirm these corrections.

2-104 Division of Occupational Safety and Health

This section provides information about the organization of Department of Industrial Relations, Cal/OSHA, its enforcement powers, and its inspections.

2-104A Authority and Responsibility

Caltrans enforces contract requirements, not safety orders. The law requires Cal/OSHA to enforce safety orders and promote safe workplaces and practices. Cal/OSHA achieves this function through four independent units—a rule-making function, an enforcement function, an independent appeals board, and a Consultation Services Branch, described as follows:

- The Occupational Safety and Health Standards Board (Standards Board) adopts, amends, and repeals safety orders. Both state and federal law require that the safety orders be no less restrictive than federal Occupational Safety and Health safety orders.
- The Division of Occupational Safety and Health enforces the safety orders as adopted by the Standards Board by issuing citations, orders, and notices; by proposing civil penalties; and by specifying the abatement changes that must be made to correct an unsafe condition.

- Citations issued by Cal/OSHA for violations may be appealed to the Occupational Safety and Health Appeals Board for a hearing and, in rare instances, appealed to a Superior Court.
- The Consultation Services Branch provides consultative assistance to employers and employees through services including on-site visits, remote consultation, educational outreach, and partnership programs. Please be advised that the CSC must be consulted, because the CSC is the single point of contact with Cal/OSHA.

To allow Cal/OSHA to accomplish its mission, the California Labor Code gives Cal/OSHA authority to enter and inspect any place of employment to verify that the contractor is observing safe conditions and practices. If necessary, this Right of Entry can be enforced with a warrant.

2-104B Citations and Civil Penalties

If Cal/OSHA uncovers and documents unsafe conditions or work practices, it may issue citations. The severity of the violations cited determines the civil penalties, and the penalty amount is based on procedures established in the regulations. Public agencies are not exempt from these penalties.

Violations—classified as regulatory, general, serious, willful, or repeat—result in monetary penalties. Failing to abate hazards or making false statements also mandates penalties.

Under the multi-employer liability clause, Cal/OSHA has authority to cite all employers who are observed as having employees exposed to a hazard at a multi-employer worksite. Cal/OSHA identifies an exposing, creating, controlling, or correcting employer as defined in Section 2-104C, “Classes of Employers,” in this manual, for each unsafe condition found. It bases employers’ degree of responsibility on their awareness of the condition, the foreseeability of the condition, and reasonable steps they take to protect employees.

In addition to receiving civil penalties, both Caltrans and contractor managers can be held criminally responsible. To be held criminally responsible, the manager must knowingly or negligently allow a serious violation, repeatedly violate safety orders, or directly refuse to correct a known unsafe condition. Criminal penalties may include 6 months to 1 year in jail and fines.

Occasionally, Cal/OSHA will issue an informational memorandum when it encounters a condition or potential condition to which no employee has been exposed, but if an employee were to be exposed, a safety violation would exist. Cal/OSHA treats all informational memorandums as willful violations.

2-104C Classes of Employers

California Department of Industrial Relations recognizes four types of employers, any of which may be cited by its Cal/OSHA for safety violations. The classification may result in more than one employer cited for the same violation. The California Labor Code identifies these employer categories:

Exposing employer—the employer whose employees were exposed to the hazard.

Creating employer—the employer who created the hazard.

Controlling employer—the employer who was responsible by contract or through actual practice for the safety and health conditions on the worksite, the one who had the authority for verifying that the hazardous condition was corrected.

Correcting employer—the employer responsible for correcting the hazard.

On a standard contract put out to bid with plans and specifications, the prime contractor is the controlling employer in accordance with Section 7-1.02K(6)(a), “General,” of the *Standard Specifications*.

Caltrans may be the exposing employer if Cal/OSHA observes that Caltrans employees were exposed to a hazard and the employees failed to remove themselves from exposure to the hazard or ask the contractor for correction to provide safe access to the work. Addressing and documenting safety and communicating it to the contractor would help create a common understanding, emphasize Caltrans’ priority, and help in protecting the state from being cited under any of the four employer categories.

2-104D Procedures During Division of Occupational Safety and Health Inspections

This section describes what takes place during a Cal/OSHA inspection and what resident engineers and their assistants should do while it is carried out.

2-104D (1) Elements of a Cal/OSHA Inspection

Every Cal/OSHA inspection has three elements: the opening conference, the walk-through inspection, and the closing conference.

Opening conference—The Cal/OSHA inspector requests the highest level of onsite management, makes introductions, and states the reason and purpose of the inspection. The inspector asks questions about the employer, such as the size of the organization, number of employees on site, and employee addresses and their phone numbers. The inspector may also ask about the employer’s IIPP, emergency contact numbers, and the addresses of the medical facilities closest to the job site. The inspector asks the employer for permission to make a walk-through site inspection and invites the employer to join the inspection.

Walk-through inspection—The inspector will tour the site observing the work in progress, condition of the site, and work practices followed. The inspector may interview employees about their training, work procedures, and protective equipment. During the inspection, the inspector may take photographs and measurements. If it is a post-incident investigation, the inspector identifies and interviews witnesses and may request contact information such as name, address, and phone number. The inspector notes violations observed, findings that will probably result in a citation during the closing conference.

Closing conference—After completing the walk-through inspection, the inspector meets with managers, supervisors, and employee representatives to discuss the

violations and proposed citations. The inspector bases citations on the observations and on manager, supervisor, and employee statements. The inspector may hold this conference immediately after the walk-through inspection or defer it. Although the closing conference is usually conducted in person, the inspector may conduct it on the phone.

2-104D (2) Participation in the Inspection

As a matter of policy, Caltrans cooperates and participates with Cal/OSHA. Caltrans employees are not required to make any statement that may be harmful to their interests or those of Caltrans. If uncomfortable with answering any questions, politely decline. In the event of an inspection, do the following:

Opening conference—Notify the CSC and the construction engineer that Cal/OSHA is planning to inspect. If the CSC is not available, notify the district safety officer of the pending inspection. If the CSC or safety officer can arrive in a reasonable length of time, request a delay of the walk-through inspection until their arrival. The resident engineer or representative should participate in the inspection, and the construction engineer should also participate.

Walk-through inspection—Participate in and document the inspection. Record what areas were inspected, who was interviewed, and what violations the Cal/OSHA inspector mentioned. For Caltrans records, take the same photographs and make the same measurements as the Cal/OSHA inspector.

Closing conference— Participate in the closing conference. The construction engineer or another representative should also participate. If the district safety officer or CSC is not present, insist that the closing conference be delayed until one of them can attend. If the inspector proposes citations, remain open and noncommittal.

2-104D (3) Procedures if Citations are Received

If you receive citations by personal delivery or mail, take the following actions:

- Notify the district safety officer, CSC, and construction engineer that a citation has been served.
- Fax a copy of the citation to the Office of Employee Health and Safety in the Division of Safety and Management Services at (916) 227-2639 or email a copy of the citation to:

Safety.Suggestions.HQ@dot.ca.gov

- For citations related to structure work, confirm that structure representatives notify Structure Construction in the Division of Engineering Services.

Work with the district safety officer, CSC, and the Office of Health and Safety in the Division of Safety and Management Services to resolve citations. If necessary, arrange for legal support.

2-105 Emergency Contracts

Emergency contracts, discussed in Section 5-501, “General,” of this manual, present additional safety concerns for Caltrans. Cal/OSHA could consider Caltrans as the controlling employer for emergency work, because Caltrans is defining the work and agreeing to the means and methods to complete the work.

Section 5-506, “Initial Stages of the Project,” of this manual discusses documenting all discussions regarding safety.

Section 5-508, “Prosecution of the Work,” of this manual discusses prosecution of the work and requires verification that the proposed means and methods are safe and effective.

2-106 Caltrans-Specific Safe Practices

Every employee has the responsibility to be informed of and follow the specific policies and practices discussed in the *Safety Manual*.

2-106A Caltrans Division of Construction Code of Safe Practices

California Code of Regulations, Title 8, Section 1509, (8 CCR 1509) “Injury and Illness Prevention Program,” requires that every employer adopt a written COSP. Verify that one is prepared for every project. Verify that it includes project-specific items. If unique contract safety items are not addressed in the COSP, consult with the CSC to have additional COSPs prepared for the project and included in the project file. If the contractor has developed a project-specific COSP item that they request Caltrans amend into the Caltrans COSP, consult with the CSC. The project file should contain documentation that all employees sign to acknowledge they have read and understood the COSP.

2-106B Tailgate Safety Meetings

Cal/OSHA safety orders require tailgate or toolbox safety meetings. As stated in 8 CCR 1509, the meetings must be held at least once every 10 working days.

Construction engineers or resident engineers should conduct a tailgate safety meeting with all employees who are new to the project to discuss the project and potential safety issues that might arise because of contractor operations.

Tailgate safety meetings should be project-specific. Topics to discuss might include: upcoming work; specialty work, such as crane critical picks and confined space entry; review of incidents; or the most recent project safety review report. Record the meetings on Form PM-S-0110, “Safety Meeting Report,” to include all the attendees.

Under Cal/OSHA safety orders, contractors and subcontractors are required to hold their own tailgate safety meetings for the benefit of their own employees.

Section 02.05, “Tailgate Safety Meetings for Field Personnel,” of the *Safety Manual* contains instructions for tailgate meetings. Follow that section and district policy.

2-106C Safety Stand-down

This section defines requirements for implementing a safety stand-down based on a significant recent safety incident. The safety stand-down will include Caltrans and optional participation by contractor personnel at job sites to improve the safety culture and awareness. The severity of a safety incident will establish the criteria for determining which jobs require the stand-down and who participates. The stand-down may be at the affected job site or extend to all going jobs throughout the district, region, or state. Additionally, safety stand-downs encourage field personnel to stop work, focus on safe work practices, and to reaffirm their commitment for incorporating safe work practices into daily work habits and operations.

2-106C (1) Introduction and Purpose

Caltrans is committed to protecting the safety and health of its employees and improving productivity through prevention of illness and injury. A safety stand-down is implemented as part of improving safety communication under the Caltrans Injury and Illness Prevention Program (IIPP). The stand-down's goal is to raise awareness among Caltrans Construction staff, contractors, and contractor employees on incident prevention and working to enhance safety to eliminate injuries and fatalities in construction work zones. The term "safety stand-down" is used in construction to describe the temporary work stoppage to inform job-site workers of recent safety issues that have resulted in an injury, fatality, or a hazard at a construction job site.

The safety stand-down must be conducted after an incident results in a serious injury or fatality involving the public, a contractor, a consultant, or Caltrans staff. Unlike the required tailgate safety meeting, which is held at least every 10 working days, the safety stand-down must be held that day or the next work shift, to prevent a similar subsequent incident from posing a potential hazard to the workers or the traveling public.

The triggering incident must be reported upward through the management chain of command for determination and implementation of a safety stand-down in the district, region or statewide. When a better understanding of root cause of the incident is known, a follow up discussion or additional stand-down may be required to inform personnel of needed operational changes.

2-106C (2) Reporting Level

Depending on the incident type, a safety stand-down is to be conducted and reported at the following levels:

2-106C (2a) Project

At the project level, safety stand-down is conducted after the occurrence of non-fatal recorded safety incident on the project. A non-fatal recorded safety incident includes serious injury involving Caltrans staff, contractor's employee, consultant employee, member of the law enforcement or member of the public in the project work zone that required any in-patient hospitalization, even if to be discussed during the next shift or when understanding of the root cause is known at the project level. As

described in Chapter 2, “Safety Meetings,” of the *Safety Manual*, “close-call incidents are incidents that did not result in contact, injury, or damage.” Close calls are reported via the mobile app for the Major Construction Incident Notification form using a smart phone or tablet and then tracked in a database where information is collected and stored.

Direction Level: The resident engineer in responsible charge has the authority to require project staff to conduct the safety stand-down and decide the appropriate next course of action at the project level. The resident engineer may consult with the construction engineer before conducting a safety stand-down.

2-106C (2b) District or Region

A district or regionwide safety stand-down is required after a fatality involving a member of the public in a work zone.

Direction Level: The deputy district director of Construction has the authority to direct project staff within the district or region to conduct a safety stand-down and decide the appropriate next course of action at the district or region level.

2-106C (2c) Statewide

A statewide safety stand-down is triggered by the following:

- Work zone fatality involving contractor and consultant, or both
- Work zone fatality involving law enforcement
- Work zone fatality involving Caltrans employees

Direction Level: The Division of Construction chief has the authority to direct all Construction staff throughout the state to conduct a safety stand-down and to decide the appropriate next course of action at the statewide level.

2-106C (3) Contractor’s Participation, Work Suspension, and Participation from Law Enforcement

Depending on the incident type, each safety stand-down has different participants and duration. Participation by the contractor staff is voluntary. The suspension of time to participate is a mutually agreed suspension of time as defined in “working day” definition 2.2.3 in Section 1-1.07B, “Glossary,” of the *Standard Specifications*.

Law enforcement partners, such as California Highway Patrol, must be invited to participate in the safety stand-down when triggering incident involves member of the law enforcement.

2-106C (4) Documentation

Use Caltrans Form PM-S-0110, “Safety Meeting Report,” and refer to Section 02.07, “How to Document Safety Meetings” of the *Safety Manual*, to document the safety stand-down as a safety meeting. Find the *Caltrans Safety Manual* at:

<https://hs.onramp.dot.ca.gov/employee-safety-manual-online>

2-106D High-Visibility Garment

The following are required for all Caltrans staff during field operations:

- For daytime use, a minimum of a Class 2 garment is required. Its attached label must identify the garment as Class 2 and should clearly state that it is American National Standard Institute (ANSI)/International Safety Equipment Association (ISEA) 107- 2004, or equivalent subsequent revisions.
- During hours of darkness, a Class 3 garment is required. A Class 3 garment may be used in the daytime. The following options meet Class 3 requirements:
 1. A Class 3 “sleeved” vest with the ANSI/ISEA 107-2004, or equivalent subsequent revisions, Class 3 label.
 2. A Caltrans rain jacket with an attached ANSI/ISEA 107-2004, or equivalent subsequent revisions, Class 3 label.
 3. A Class 3-equivalent garment—a Class 2 vest with the ANSI/ISEA 107-2004, or equivalent subsequent revisions, label worn with Class E pants.

2-107 Safety Precautions for the Public in Construction Areas

Construction sites receive many visitors, including nonconstruction staff from Caltrans; personnel from federal, state, and local agencies such as the Department of Water Resources, Department of Fish and Wildlife, and Air Quality Management District; property or business owners; and members of the media. All visitors not associated with the contractor should follow Caltrans’ personal protection equipment requirements and *Construction Code of Safe Practices* requirements unless their agency’s is more stringent. Resident engineers and assistant resident engineers should monitor for potential hazards to the general public and work with the contractor to take reasonable precautions to exclude the public from the construction area. Provide fencing, if practical, and “no trespassing” signs at sites that have potential dangers.

2-108 Hazardous Materials

If unanticipated hazardous materials are encountered on the project, notify the district hazardous waste coordinator who will advise you and may assist in the disposal procedures. The coordinator may also suggest extra safety measures to take to protect the public and workers.

Refer to Chapter 7, “Environmental Stewardship,” of this manual for additional guidelines on hazardous waste.

2-109 Project Safety Reviews

Caltrans is committed to working with the construction industry to improve safety for construction projects by performing safety reviews. The Caltrans’ designated project safety coordinator is to conduct weekly safety reviews throughout the duration of the project by using Form CEM-0606, “Construction Safety Checklists.” In addition, Caltrans safety staff (resident engineer or designated project safety coordinator) is to meet every other week with the contractor’s assigned project safety representative

to perform a joint safety review of the project and document this project safety review using Form CEM-0604, "Project Safety Review or Meeting." This review may consist of jointly touring the job site to inspect temporary traffic control systems and other worker safety protection devices and protocols. It is recommended to use Form CEM-0606, "Construction Safety Checklists," to perform joint safety reviews and to aid in the inspection of safety requirements for the ongoing construction operations.

2-109A Project Safety Meeting Before Work Begins

Before the start of construction, a preconstruction conference with the contractor must be held as described in Section 5-003, "Preconstruction Conference with the Contractor," of the *Construction Manual*. In addition to this meeting, a separate kick-off project safety meeting must be held with the contractor's designated project safety representative at least 3 business days before the start of job site activities in accordance with Section 5-1.28, "Project Safety Reviews," of the *Standard Specifications*, to perform the following:

- Discuss project operations and safety requirements.
- Identify project safety personnel for Caltrans, such as the district Construction safety coordinator, resident engineer, or designated project safety coordinator, and contractor safety personnel, their contact information, and certifications, such as traffic control technician, or flagger.
- Review requirements for calling in lane closure information and discuss when the Traffic Management Center is to be notified for emergency responses as mentioned in Section 2-303, "Reporting Procedures," of this manual.
- Determine schedule for all planned project safety field reviews.
- Discuss the Construction Zone Enhanced Enforcement Program (COZEEP) plan and contact information if it is proposed for the project.
- Review the Positive Work Zone Protection plan if included in the project.
- Discuss traffic detours and staging, pedestrian detours, and bicycle detours if applicable.

To document the safety kick-off meeting, use Form CEM-0604, "Project Safety Review or Meeting," and file a copy of Form CEM-0604 in Category 6, "Safety," of the project records.

2-109B Project Safety Reviews During the Course of the Work

In accordance with Section 5-1.28, "Project Safety Reviews," of the *Standard Specifications*, an every-other-week project safety review after the start of job site activities is to be performed by the resident engineer or designated project safety coordinator with the contractor's project safety representative. In addition, a joint project safety review is also conducted after any incident that results in serious injury, illness, or fatality to the contractor's personnel, the subcontractor's or

supplier's personnel, or any other persons present at the job site. The structure representative or designee is to attend when structure work is active.

During the project safety review, job hazard analyses for active work activities and work activities planned to start within 5 working days are discussed in accordance with Section 5-1.29, "Job Hazard Analyses," of the *Standard Specifications*. Job hazard analyses are submitted as informational submittals only. Even though it is only an informational submittal, review each job hazard analysis thoroughly and note safety concerns, issues, or hazards, as well as related hazard control measures, preventive or corrective actions that need to be brought to attention to the contractor's project safety representative, and discuss these concerns or issues during the project safety review. Any noncompliant safety checklist item on the completed Form CEM-0606, "Construction Safety Checklists," performed weekly by the Caltrans designated project safety coordinator should be discussed in the joint project safety review. Proposed actions to correct deficiencies or bring noncompliant safety checklist items into compliance are to be discussed during the project safety review.

The project safety review is documented on Form CEM-0604, "Project Safety Review or Meeting." As required in Section 5-1.28, "Project Safety Reviews," of the *Standard Specifications*, project safety review documentation must be submitted by the contractor to the engineer and correct deficiencies within 3 business days from the day the project safety review is completed or as directed by the engineer. Signatures of engineer and contractor's project safety representative are required on this form. Additional safety items can be added to the form as needed to include the construction operations occurring at the job site. File a copy of the form used for every-other-week project safety review in Category 6, "Safety" of the project records.

2-109C Post-Project Safety Meeting

Upon contract acceptance, in accordance with Section 5-1.28, "Project Safety Reviews," of the *Standard Specifications*, the resident engineer is to schedule a post-project safety meeting with the contractor to determine how effectively the joint safety reviews were run, to review safety issues that arose during the project, and to discuss lessons learned for possible future safety enhancements. The post-project safety meeting is to be documented on Form CEM-0604, "Project Safety Review or Meeting," and filed in Category 6, "Safety," of the project records. Lessons learned should also be shared with the project development team.

2-110 Job Hazard Analyses

In accordance with California Code of Regulations, Title 8, Section 3203(a)(4), (8 CCR 3203(a)(4)), "Injury and Illness Prevention Program" and 8 CCR 1511(b), "General Safety Precautions," the contractor is required to prepare a job hazard analysis for each work activity to be performed on the job site. Mandating the use of job hazard analyses in project safety reviews will improve communication of job site safety hazards and thus add safety measures for workers and motorists through work zones. In accordance with Section 5-1.29, "Job Hazard Analyses," of the

Standard Specifications, each job hazard analysis must be submitted to the resident engineer as an informational submittal.

2-110A Job Hazard Analysis Elements

Each job hazard analysis (JHA) submitted must identify the following:

1. Work activity description
2. Existing and predictable hazards associated with the work activity
3. Hazard control measures, and preventive or corrective actions to be taken for the work activity

Even though it is only an informational submittal, make sure each job hazard analysis contains all the listed components.

2-110B Job Hazard Analysis Submittal

In accordance with Section 5-1.29, “Job Hazard Analyses,” of the *Standard Specifications*, each job hazard analysis (JHA) must be submitted at least 5 working days before the start of a work activity to provide time for the engineer and Construction staff to review the JHA. The JHA does not need to be approved by the resident engineer, because it is only an informational submittal. However, after reviewing the JHA, note what safety concerns, issues, and hazards, as well as related hazard control measures, and preventive or corrective actions that may be discussed with the contractor in the project safety reviews. Provide copies of the job hazard analyses to Construction personnel who will be monitoring the work activities. File copies of submitted JHAs in Category 6, “Safety” of the project files.

2-110C During the Course of Work

The contractor’s project safety representative is required to discuss job hazard analyses for active work activities and work activities planned to start within 5 working days with the resident engineer in accordance with Section 5-1.29, “Job Hazard Analyses,” during the project safety reviews required under Section 5-1.28, “Project Safety Reviews,” of the *Standard Specifications*. Bring to the contractor’s project safety representative’s attention any noted safety concerns, issues or hazards, as well as related hazard control measures, and preventive or corrective actions from the review of the submitted JHA. Require the contractor’s project safety representative to address these concerns or issues.

When equipment or methods change as a result of a change to the hazards previously identified, the contractor is required to submit a revised job hazard analysis within one working day of the identified change, as specified in Section 5-1.29, “Job Hazard Analyses,” of the *Standard Specifications*.