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Bracketed section numbers refer to the 2006 *Standard Specifications*.

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Employers must comply with occupational safety and health standards established by federal and state laws. These 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. The safety manual lists mandatory 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 safety manual, defines standard safety practices for employees and consultants involved with inspecting construction activities and operations. 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 and the *Standard Specifications* establish compliance with safety regulations as a contract requirement. Enforce compliance with all safety regulations and contract specifications through the use of administrative procedures.

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

New California laws have added a responsibility requiring supervisors to ensure 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 hazard.

2-102B District Construction Safety Coordinator

The district's construction safety coordinator (CSC) must act as a technical advisor to construction field personnel and coordinate district administration of contractor compliance with safety requirements. The CSC must also do the following:

- Be familiar with highway construction procedures, equipment, and construction zone traffic management.

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2-102 Duties and Responsibilities

- Understand Caltrans safety policies and specifications and the California Division of Occupational Safety and Health (usually referred to as Cal/OSHA) regulations. Cal/OSHA is the state enforcing agency for safety regulations.
- Recognize unsafe conditions created by a contractor's operation.
- Make unannounced site visits to ongoing construction projects on a routine and rotating basis. The CSC must also respond promptly to requests from the resident engineer or other Caltrans staff to visit projects to review project safety concerns.
- Collaborate 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 must 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.
- Write a report of each visit to the project site, giving the resident engineer the original report and copies to the construction engineer and the construction manager for review and follow-up.
- Be the district's primary contact with the Division of Construction safety engineer and the local Cal/OSHA representative, except for emergencies involving imminent hazards. Maintain regular communication with local Cal/OSHA representatives.
- Administer the district's construction safety training program, structured to meet district needs as mentioned above in Section 2-102A, including the mandatory heat illness prevention training offered once to all field staff and the mandatory hazard communication training offered every 2 years.
- Serve as advisor for the construction safety portion of the preconstruction conference. If not taking part in the discussion, the CSC must be involved in reviewing the specifications and determining which specific safety areas to discuss with the contractor.

2-102C Construction Engineer

The construction engineer must review construction projects to ensure that the resident engineer is monitoring the contractor's construction safety program adequately and that an effective safety program is underway. While the CSC acts as the construction safety technical advisor, the construction engineer assures that the resident engineer is proactively implementing project safety requirements.

The construction engineer must review the CSC's report and ensure that the resident engineer addresses, adequately closes, and documents the items mentioned in the report. The construction engineer ensures that all deficiencies in the field are abated, signs the report, and sends it back to the CSC for review and signature.

Construction engineers are responsible for the performance of employees under their supervision. They provide them with the training and tools necessary to protect themselves from hazards. They advise, correct, and reprimand employees for repeated safety violations and should document their reviews of employee safety programs.

2-102D Resident Engineer

The resident engineer must ensure that the contractor complies with all aspects of the contract, including applicable safety orders found in the California Code of Regulations, Title 8. To accomplish this, do the following:

- Identify any unsafe conditions and the specific regulations involved. Under no circumstances should the resident engineer instruct the contractor how to correct a deficiency, either orally or in writing.
- Assign a project safety coordinator if needed.
- Involve the district CSC in specialized contract work such as full freeway closures, blasting operations, confined space operations, multi-crane pickups 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 it with other project documents.
- In a special safety report using form CEM-4601, “Assistant Resident Engineer’s Daily Report,” document the construction safety activities of both the contractor and Caltrans project personnel.
- At least weekly, complete a project safety report and file it in Category 6, “Safety,” of the project records.
- Using normal contract administration procedures, ensure that the contractor complies with Caltrans contract requirements and Title 8 safety orders. A proactive approach in addressing and communicating safety with the contractor will create a common understanding, emphasize Caltrans’ priority, and help protect the state from future citations or litigations in case of an accident.
- Give project safety deliberate attention, both at preconstruction conferences and throughout the duration of the contract. Document the safety discussions in the project files. Cover at least the following items:
 1. Address new Cal/OSHA regulations such as those regarding heat illness prevention. Contractors need to train their workers to identify heat illness and implement a heat illness prevention plan.
 2. Make available Material Safety Data Sheets for chemicals or construction materials used on the construction site. The data sheets require provision for eyewash stations, respirators, and other devices.
 3. Make employees aware of other safety items that may pertain to the contract, such as blasting operations, work in confined spaces, personal protective equipment, backup alarms, rollover protective structures, traffic control, shoring and tunneling, and access to elevated work.
- Before starting work, ensure that contractors do the following:
 1. Submit to the resident engineer, as required in the Caltrans *Standard Specifications*, an IIPP that lays out the contractor’s safety policy and addresses, among other things, the use of entertainment and communication devices. The reason for IIPP and COSP submittals is not for review but to ensure that the contractor is complying with Cal/OSHA requirements.

2. Develop a project-specific COSP document addressing all operations in the project for each contract and all contractor operations. Make it accessible to workers in the field, and be sure all project personnel have read and signed it. Keep the COSP in a conspicuous location at the jobsite office. A baseline COSP document is on the Division of Construction website:

http://www.dot.ca.gov/hq/construc/publications/code_of_safe_practices.pdf

3. Present a safety training program.
 4. Submit permits required before starting certain work, such as excavation, trenching, shoring, falsework erection, and scaffolding.
- During the course of work, ensure that contractors do the following:
 1. Report disabling or fatal accidents to the resident engineer and to Cal/OSHA.
 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 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. The project safety coordinator acts as a safety advisor to Caltrans project personnel. The project safety coordinator must monitor and document contractor compliance with safety requirements, keep the resident engineer informed, and do the following:

- Monitor ongoing operations on the jobsite daily and check for the contractor's compliance with contract safety requirements.
- 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:

<http://www.dot.ca.gov/hq/construc/forms.htm>

- Prepare a weekly project safety report and file it in Category 6 of the project records.

2-102F Project Staff

Caltrans does not intend that the resident engineer and the project safety coordinator do all monitoring of the contractor's construction safety activities. All construction personnel must consider the safety of the operations in conjunction with their normal inspections. Inspectors—closest to and most familiar with the field operations—must do the following:

- Be familiar with construction zone traffic management, Cal/OSHA regulations, Caltrans safety policies, and specifications. Use Form CEM-0606 to ensure everyone complies with safety regulations and specifications.
- Routinely monitor and document contractor compliance with contract safety requirements. A proactive approach to safety will help eliminate misunderstanding and avoid conflicts with the contractor.

- Request assistance from the project safety coordinator or the district construction safety coordinator when an unsafe condition is observed or if uncertain about a regulation's requirements.

2-103 Managing Safety Hazards

In carrying out Caltrans' responsibilities for ensuring safety compliance as a contract requirement, use the following guidelines:

2-103A Imminent Hazards

Imminent hazards are dangerous conditions that, if not corrected immediately, would likely result in an accident 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 resident engineer must take the following steps:

- Immediately advise the contractor orally of the condition and the need for immediate correction.
- Remove all Caltrans and consultant employees from the hazardous exposure.
- Order the contractor to remove all personnel not needed to make the corrections.
- If the contractor complies, document the incident in the project's safety report with appropriate references in Form CEM-4501, "Resident Engineer's Daily Report."
- If the contractor does not comply, suspend the affected operation. Confirm the suspension order in writing to the contractor.
- Document the incident and the action taken in the resident engineer's daily report.

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

2-103B Dangerous Conditions (Serious Hazards)

Dangerous conditions (sometime referred to as serious hazards) are those that do not present an immediate danger to workers but, if not corrected, could result in a disabling injury and possibly death or develop into an imminent hazard. When a dangerous condition is found to exist, the resident engineer must 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 suspension of the affected operation. Confirm the suspension order in writing to the contractor.
- Document the incident in the project's safety report with appropriate references in the resident engineer's daily report.

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Managing Safety Hazards

2-103C Minor or Non-serious Conditions

Minor or non-serious conditions are ones that could result in minor injuries or might be classified as minor threats to health. When a non-serious or minor condition is found to exist, the resident engineer must take the following steps:

- Advise the contractor orally of the condition and the need for correction.
- Document the incident in the project's safety report.
- Protect Caltrans and consultant employees from exposure.
- If the contractor fails to correct the condition or permits a repeated occurrence, notify the CSC.

2-104 Division of Occupational Safety and Health

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

2-104A Authority and Responsibility

The law requires Cal/OSHA to enforce safety orders and promote safe workplaces and practices. Cal/OSHA achieves this function through three separate agencies—a rule-making function, an enforcement function, and an independent appeals board, 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.
- Cal/OSHA is responsible for administering the safety orders as adopted by the Standards Board.
- 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.

To allow Cal/OSHA to accomplish its mission, the California Labor Code gives Cal/OSHA the authority to enter and inspect any place of employment to ensure 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 has a duty to 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 at a multi-employer worksite. Cal/OSHA identifies an exposing, creating, controlling, or correcting employer (defined in next subsection) 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 the civil penalties noted above, 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 can be as severe as 6 months to 1 year in jail and may include 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 always classifies a violation of an informational memorandum as a willful violation.

2-104C Classes of Employers

California recognizes four different types of employers, any of which can be cited by Cal/OSHA for safety violations. The classification can 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 actually 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 ensuring the hazardous condition was corrected.

Correcting employer—the employer responsible for correcting the hazard.

Caltrans may be the exposing employer if a Caltrans employee is allowed to work in an unsafe location or participate in an unsafe act. Taking a proactive role in 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 above 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 onsite, addresses, and 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 jobsite. 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-accident 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 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 that Cal/ OSHA is planning to inspect. If the CSC is not available, notify the district safety officer and construction engineer 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 must 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 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 and construction engineer that a citation has been served.
- Fax a copy of the citation to the Office of Safety and Health in the Administrative Service Center.
- For citations related to structure work, ensure structure representatives notify the Office of Structure Construction.

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

2-105 Specific Safe Practices

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

2-105A Code of Safe Practices

Cal/OSHA safety orders require that every employer adopt a written COSP. Ensure that one is prepared for every project. Ensure that it includes items unique to a specific

project as well as portions of the contractor's code that affect Caltrans employees and consultants. The project file must contain documentation that all employees and consultants have read and understood the COSP and received a project safety orientation.

2-105B Tailgate Safety Meetings

Cal/OSHA safety orders require tailgate or toolbox safety meetings. As stated in Construction Safety Order 1509, "Injury and Illness Prevention Program," the meetings must be held at least once every 10 working days.

Section 2-05, "Tailgate Safety Meetings for Field Personnel," of the *Caltrans Safety and Health Manual* contains specific instructions for tailgate meetings. Follow that section and district policy.

2-105C High-Visibility Garment

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

- For daytime use, a Class 2 garment is required. Its attached label must identify the garment as Class 2 and should clearly state that it is an ANSI 107-2004 garment.
- For nighttime use, a Class 3 or equivalent garment is required. The following options meet Class 3 requirements:
 1. A Class 3 "sleeved" vest with the ANSI 107-2004 Class 3 label.
 2. A newer Caltrans rain jacket with an attached ANSI 107-2004 Class 3 label.
 3. A Class 3-equivalent garment—a Class 2 vest with the ANSI 107-2004 label worn with Class E pants.

2-106 Safety Precautions for the Public in Construction Areas

Construction sites receive many visitors, including non-construction staff from Caltrans; personnel from federal, state, and local agencies; property or business owners; and members from the media. All visitors must follow Caltrans personal protection equipment requirements and construction *Code of Safe Practices* requirements unless their agency's is more stringent.

Many construction activities and areas have a tendency to attract onlookers, especially children. Moving construction equipment poses a potential danger to onlookers.

Resident engineers and assistant resident engineers must be aware of 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 all sites that have potential dangers.

2-107 Hazardous Materials

If unanticipated hazardous materials are encountered on the project, immediately 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 for dealing with hazardous waste.

2-106 Safety Precautions for the Public in Construction Areas

2-107 Hazardous Materials