

MANUAL CHANGE 1	RANSMITTAL	NO. <b>12-1</b>
TITLE:	APPROVED BY:	DATE ISSUED:
Department of Transportation <i>for</i>	Mark Leja Chief Division of Construction	June 25, 2012
SUBJECT AREA	ISSUING UNIT	
Index and other sections of the Construction Manual	Division of Construction	
SUPERSEDES	DISTRIBUTION	
CPB 11-2 CPD 09-6, 08-13, 09-4, 09-12, 10-3	All Requested Manual Holders	

The purpose of this manual change transmittal is to provide updates to the 2001 edition of the Caltrans *Construction Manual*.

This manual change transmittal delivers the revisions of Chapter 2, Sections 1, 2, and 3; Chapter 3, Sections 0, 1, 2, and 3, and Chapter 8, Section 2 of the *Construction Manual*. Updated sections may contain updated language, information, corrections, formatting, and references, especially as they relate to the 2010 *Standard Specifications*. Bracketed *Standard Specification* section numbers refer to the 2006 *Standard Specifications*.

Please update your manual according to the table below.

Section(s)	Incorporates	Remove Old Page(s)	Insert New/Revised Page(s)
Table of Contents	None	TOC.1 thru TOC.2	TOC.1 thru TOC.2
Goldenrod, Chapter 2, Section 1, "Safety"	None	2-1.i	2-1.i
Chapter 2, Section 1, "Safety"	<b>CPD 09-6</b> , "High-Visibility Garment Standards"		
	<b>CPB 11-2</b> , "Construction Safety Checklists"	2-1.1 thru 2-1.8	2-1.1 thru 2-1.10
	Form CEM-0606, "Construction Safety Checklists"		
Goldenrod, Chapter 2, Section 2, "Traffic,"	None	2-2.i thru 2-2ii	2-2.i thru 2-2ii
Chapter 2, Section 2, "Traffic"	<b>CPD 08-13</b> , Accessible Parking Implementation	2-2.1 thru 2-2.16	2-2.1 thru 2-2.22
	<b>CPD 09-4</b> , Use of Slow for the Cone Zone		
	<b>CPD 09-12</b> , Implement Traffic Operations Policy Directive 09-6		

Section(s)	Incorporates	Remove Old Page(s)	Insert New/Revised Page(s)
Section 3, "Major Construction Incidents"			
Chapter 2, Section 3, "Major Construction Incidents"	<b>CPD 10-3</b> . "Major Construction Incident Notification"	2-3.1 thru 2-3.3	2-3.1 thru 2-3.3
Goldenrod, Chapter 3, Section 0, "Introduction"	None		3-0.i
Chapter 3, Section 0, "Introduction"	None	3-0.1	3-0.1
Chapter 3, Section 1, "General"	None	3-1.1	3-1.1
Goldenrod, Chapter 3, Section 2, "Bidding"	None	3-2.i	3-2.i
Chapter 3, Section 2, "Bidding"	None	3-2.1 - 3-2.3	3-2.1 - 3-2.3
Goldenrod, Chapter 3, Section 3, "Contract Award and Execution"	None		3-3.i
Chapter 3, Section 3, "Contract Award and Execution"	None	3-3.1	3-3.1
Goldenrod, Chapter 8, Section 2, "Equal Employment Opportunity"	None	8-2.i	8-2.i
Chapter 8, Section 2, "Equal Employment Opportunity"	None	8-2.1 - 8-2.7	8-2.1 - 8-2.7

# Section 2-1, "Safety"

- Section was updated to incorporate the 2010 *Standard Specification* changes, as well as the following:
  - Emphasizes roles and responsibilities of district staff at all levels for implementing the construction safety program.
  - Incorporates Construction Procedure Directive (CPD) 09-6, "High-Visibility Garment Standards," into subsection 2-105C, outlining Caltrans field staff requirements for Class 2 and Class 3 garments.
  - Announces form CEM-0606, "Construction Safety Checklists," introduced in Construction Policy Bulletin 11-2. Subsections 2-102E "Project Safety Coordinator," and 2-102F, "Project Staff," of the manual require the safety coordinator and field staff to use the form.

# Section 2-2, "Traffic"

- Section was updated to incorporate the 2010 Standard Specification changes, as well as the following:
  - Revises Section 2-207, "Speed Zones," to follow the updated California Manual on Uniform Traffic Control Devices (California MUTCD) requirements.
  - Revises Section 2-214, "Transportation Management Plans," to describe roles and responsibilities and identify the elements that need to be implemented.

- Section 2-214D, "Construction Contingency Plan," provides samples of operations that may require a contingency plan and lists the elements required for a comprehensive contingency plan to help the field engineers during the review process.
- Revises Section 2-215, "Construction Zone Enhanced Enforcement Program (COZEEP)," to clarify that COZEEP is only an enhancement.
- Section 2-216A, "Pedestrian Facilities," requires that preconstruction meetings with contractors include a discussion about work zones. Talks include temporary routes to address how the contractor will comply with CA MUTCD requirements.
- This section also provides guidelines for dealing with the requirements of the Americans With Disabilities Act for temporary pedestrian facilities through construction zones and provides the tools needed to ensure compliance, including:
  - Incorporates CPD 08-13, "Accessible Parking Implementation."
  - Eliminates the need for CPD 09-4, "Use of Slow for the Cone Zone," and CPD 09-12, "Implement Traffic Operations Policy Directive 09-6."

### Section 2-3, "Major Construction Incidents"

- Section was updated to incorporate the 2010 Standard Specification changes, as well as the following:
  - Summarizes procedures to follow during construction incidents.
  - Incorporates revised form CEM-0603, "Major Construction Incident Notification," into Section 2-303, "Reporting Procedures," of the manual. The Division of Construction requires staff to use the revised form when a major incident occurs during construction. The manual section outlines the types of incidents to report and guidelines for the process.

### Section 3-0, "Introduction"

• Section number added to section.

### Section 3-1, "General"

• Section title and reference were updated to align with the 2010 Standard Specifications.

# Section 3-2, "Bidding"

- Section title and references were updated to align with the 2010 Standard Specifications.
- The Minor B threshold amount was updated to \$270,000.
- References to websites were updated.

# Section 3-3, "Contract Award and Execution"

- Section title and reference were updated to align with the 2010 *Standard Specifications*.
- Reference to Plans, Specifications, and Estimates Guide were updated to the current guide.

# Section 8-2, "Equal Employment Opportunity"

- References were updated to align with the 2010 Standard Specifications.
- Summarizes EEO requirements and procedures to follow during contract administration.

# STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

# **CONSTRUCTION MANUAL**

# TABLE OF CONTENTS

# Chapter-Section

1	Caltrans Construction Organization
1-(	Construction Manual Overview
1-1	Construction Organization
1-2	Public Relations
1-3	Personnel Development
1-4	Facilities and Equipment
1-5	Field Expenses and Purchases
2	Safety and Traffic
2-1	Safety
2-2	2 Traffic
2-3	Major Construction Incidents
3	General Provisions
3-(	Introduction
3-1	General
3-2	Bidding
3-3	Contract Award and Execution
3-4	Scope of Work
3-5	5 Control of Work
3-0	Control of Materials
3-7	Legal Relations and Responsibility
3-8	Prosecution and Progress
3-9	Measurement and Payment
4	Construction Details
4-(	0 Introduction
<b>4-</b> ]	0 Dust Control
<b>4-</b> ]	1 Mobilization
<b>4-</b> ]	2 Construction Area Traffic Control Devices
4-1	5 Existing Highway Facilities



### STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

# **CONSTRUCTION MANUAL**

# TABLE OF CONTENTS

# Chapter-Section

- 4-16 Clearing and Grubbing
- 4-17 Watering
- 4-18 Dust Palliative
- 4-19 Earthwork
- 4-20 Erosion Control and Highway Planting
- 4-22 Finishing Roadway
- 4-24 Lime Stabilization
- 4-25 Aggregate Subbases
- 4-26 Aggregate Bases
- 4-27 Cement Treated Base
- 4-28 Lean Concrete Base
- 4-29 Treated Permeable Bases
- 4-37 Bituminous Seals
- 4-39 Asphalt Concrete
- 4-40 Portland Cement Concrete Pavement
- 4-41 Pavement Subsealing and Jacking
- 4-42 Groove and Grind Pavement
- 4-49 Piling
- 4-50 Prestressing Concrete
- 4-51 Concrete Structures
- 4-52 Reinforcement
- 4-53 Shotcrete
- 4-54 Water Proofing
- 4-55 Steel Structures
- 4-56 Signs
- 4-57 Timber Structures
- 4-58 Preservative Treatment of Lumber, Timber, and Piling
- 4-59 Painting
- 4-61 Culvert and Drainage Pipe Joints
- 4-62 Alternative Culverts
- 4-63 Cast-in-Place Concrete Pipe



# Section 1 Safety

# 2-101 General

# 2-102 Duties and Responsibilities

- 2-102A District Deputy Director for Construction
- 2-102B District Construction Safety Coordinator
- 2-102C Construction Engineer
- 2-102D Resident Engineer
- 2-102E Project Safety Coordinator
- 2-102F Project Staff

# 2-103 Managing Safety Hazards

- 2-103A Imminent Hazards
- 2-103B Dangerous Conditions (Serious Hazards)
- 2-103C Minor or Non-serious Conditions

# 2-104 Division of Occupational Safety and Health

- 2-104A Authority and Responsibility
- 2-104B Citations and Civil Penalties
- 2-104C Classes of Employers
- 2-104D Procedures During Division of Occupational Safety and Health Inspections
  - 2-104D(1) Elements of a Cal/OSHA Inspection
  - 2-104D(2) Participation in the Inspection
  - 2-104D(3) Procedures If Citations Are Received

# 2-105 Specific Safe Practices

- 2-105A Code of Safe Practices
- 2-105B Tailgate Safety Meetings

#### Safety Precautions for the Public in Construction Areas 2-106

**Hazardous Materials** 2-107



# Chapter 2

This manual is being updated to reflect changes from the 2006 to the 2010 *Standard Specifications*. Bracketed section numbers refer to the 2006 *Standard Specifications*.

# Section 1 Safety

# 2-101 General

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 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.

Section 1 Safety 2-101 General

2-102 Duties and Responsibilities



# 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.
- 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/flagging/2010\_Code\_of\_Safe\_Practic <a href="mailto:es.pdf">es.pdf</a>

- 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.

2-103 Managing Safety Hazards



• Document the incident in the project's safety report with appropriate references in the resident engineer's daily report.

# 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

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



2-104 Division of Occupational Safety and Health 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

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

2-106 Safety Precautions for the Public in Construction Areas



2-107 Hazardous Materials

# 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.

See Chapter 7, "Environmental," of this manual for additional guidelines for dealing with hazardous waste.



# Section 2 Traffic

- 2-201 References
- 2-202 Objective
- 2-203 Planning

# 2-204 Responsibilities and Procedures

- 2-204A Resident Engineer
- 2-204B State Representative
- 2-204C District Construction Safety Coordinator
- 2-204D Construction Traffic Manager
- 2-204E Construction Engineer

# 2-205 Guidelines for Traffic Control Plans

- 2-205A Basic Instructions
- 2-205B General Considerations

# 2-206 Elements of a Roadway

- 2-206A Geometrics
- 2-206B Crossover Transitions
- 2-206C Existing Ramps
- 2-206D Run-off Areas
- 2-206E Lane Widths
- 2-206F Lateral Shifting
- 2-206G Surfacing Materials—Color and Texture
- 2-207 Speed Zones
- 2-208 Night Work
- 2-209 Delineation
- 2-210 Ramp Closures
- 2-211 Informing the Public
- 2-212 Keeping the Roadway Clear and Clean
- 2-213 Roadways Over Railroad Tracks

# 2-214 Transportation Management Plans

- 2-214A Policy
- 2-214B Definitions



# Section 2 Traffic (continued)

2-214C Responsibilities

2-214C(1) District Traffic Manager

2-214C(2) TMP Manager

2-214C(3) Construction Traffic Manager

2-214C (4) Construction Engineers, Resident Engineers, and Construction Inspectors

2-214D Construction Contingency Plan

# 2-215 Construction Zone Enhanced Enforcement Program

2-215A COZEEP Funding

- 2-215A (1) Estimating COZEEP Funding Requirements
- 2-215A (2) Redirection of Project Funds
- 2-215A(3) Obtaining Additional Funds
- 2-215B COZEEP Responsibilities
  - 2-215B(1) Project Engineer
  - 2-215B(2) Resident Engineer
- 2-215C COZEEP Implementation
  - 2-215C(1) Freeways and Expressways
  - 2-215C(2) Connectors and Ramps
  - 2-215C(3) Conventional Highways
  - 2-215C (4) Risk Factors
- 2-215D COZEEP Administrative Procedures
  - 2-215D(1) Ordering Work
  - 2-215D (2) Completing the Task
  - 2-215D(3) Cancellations
  - 2-215D (4) Recording Work Performed
  - 2-215D (5) Tracking Expenditures
  - 2-215D (6) Reconciling the CHP Invoice
  - 2-215D(7) Problem Resolution

# 2-216 Pedestrian Facilities

- 2-216A Related Caltrans Standards
- 2-216B Requirements of the California Manual on Uniform Traffic Control Devices
- 2-216C Permanent Facilities



# Chapter 2

This manual is being updated to reflect changes from the 2006 to the 2010 Standard Specifications. Bracketed section numbers refer to the 2006 Standard Specifications.

#### Section 2 **Traffic**

#### 2 - 201References

Section 124 of the Streets and Highways Code authorizes Caltrans to close or restrict the use of any state highway whenever it considers such actions necessary for these reasons:

- To protect the public.
- To protect a highway during construction, improvement, or maintenance operations.
- To protect a highway from damage during storms, major earthquakes, or other natural disasters

Traffic control systems conform to the Standard Plans, unless the contract specifies otherwise.

All signs, lights, and devices must conform to Section 12, "Temporary Traffic Control," of the Standard Specifications. For their application, review the current California Manual on Uniform Traffic Control Devices (California MUTCD).

#### 2-202 Objective

The objective of traffic control is to provide for worker protection and the safe passage of public traffic-including bicycles, motorcycles, and pedestrians-through and around construction with as little inconvenience and delay as possible.

#### 2 - 203Planning

Providing for worker safety and the safe movement of traffic through construction zones starts with planning. All contract plans and special provisions must include a traffic control plan. District construction must review it before the district submits the plans, specifications, and estimate to headquarters.

The plan must be adequate for conditions that will occur during construction. The reviewer should determine that the plan can be implemented and that it adequately facilitates the movement of traffic. Discuss comments or suggestions regarding traffic control with district design and traffic units during the project's planning and design phase.

#### 2 - 204**Responsibilities and Procedures**

Key personnel involved in traffic control have certain responsibilities and procedures as follows:

# 2-204A Resident Engineer

The resident engineer (RE) has responsibility and authority for administering the traffic control plan and all other aspects of safety on construction projects. Administration of

2 - 202**Objective** 

2 - 203Planning

2 - 204**Responsibilities** and Procedures



# Section 2 **Traffic**

2-201

References

traffic control may be delegated to another person assigned to the project, preferably the project safety coordinator. For the duties and responsibilities of the project safety coordinator, see Section 2-102E, "Project Safety Coordinator," of this manual.

Once assigned to the project, perform the following administrative duties:

- Compare the traffic control plan to conditions found at the site. Note any unusual local traffic and emergency vehicle movements. At the preconstruction conference, discuss the traffic control plan. For details related to preconstruction conferences, see Section 5-003, "Preconstruction Conferences with the Contractor," of this manual.
- Modifications of the traffic control plan may be considered at this point. Given the specifics of a contractor's needs, it may be possible to provide traffic service improved over the service originally contemplated. Changes the contractor requests must provide at least equal traffic service to receive favorable consideration.
- A change order must cover changes made in contract plans and in specifications that address conditions in the contract that are unanticipated or not fully delineated. Change orders must include plans in sufficient detail to define all elements of the proposed changes and roadway design.
- The district will establish a procedure for preparation, review, and approval of changes related to roadway construction and detour plans that include signs and other traffic control devices. Generally, the district traffic unit is responsible for this review activity.
- Urgent, unpredictable situations—minor or of short duration—usually arise during the work and require good judgment for optimum results. These instances do not require formally approved plans. Define or specify what is to be done, and maintain written records of orders given and actions taken.
- To establish the geometry, markings, devices, and signs that existed during the project, maintain in sufficient detail a record of the placement into service, the changes, and the discontinuance of roadways and detours. The record's form may vary according to the magnitude and complexity of the subject. Dated notations or revisions to plans may be helpful. Dated photographic or video tape records, particularly of points of transition or difficult situations, may be especially valuable.
- If the contractor's operations interfere with vehicular or pedestrian traffic or cause potential safety problems, immediately contact the contractor and request correction of the deficiency. If necessary, direct the contractor in writing to act at once to remedy the unsatisfactory situation. Call on Caltrans work forces only when necessary—because of a physical inability of the contractor or a refusal by the contractor to act. A contractor's failure to perform is cause to order cessation of the operations.

2-204B State Representative

When others administer the contract, oversight of traffic through and around a construction zone involves overseeing and working with the local entity or the private sponsor's resident engineer. The state representative assigned to the project must make sure the resident engineer performs the duties as outlined above.



For changes to the district-approved traffic control plans on contracts administered by others, use the same review and approval process established for Caltrans-administered projects.

As a last resort, the state representative has authority to stop the contractor's operation wholly or in part or take appropriate action when public safety is jeopardized.

# 2-204C District Construction Safety Coordinator

Section 2-1, "Safety," of this manual covers the duties of the district's construction safety coordinator who must periodically review the traffic handling for each project. Some reviews should take place at night, particularly when a major traffic change has taken place. The coordinator must document the reviews in the project records and discuss apparent deficiencies in the traffic control plan or problems in traffic safety with the construction engineer, traffic engineer, and resident engineer. The construction traffic manager or a district traffic unit specialist may perform the traffic reviews, provided the project records include the required documents and discussions.

# 2-204D Construction Traffic Manager

The Traffic Management Plan Guidelines describe the roles and responsibilities of the construction traffic manager (CTM) who works in cooperation with the construction safety coordinator. Responsibilities include:

- Serves as a liaison between construction, the district traffic manager (DTM) and the transportation management plans (TMP) manager.
- Reviews the TMP and traffic contingency plan for constructability issues.
- Acts as a resource for the resident engineer, construction engineer, DTM, and TMP manager during TMP implementation and reviews the contractor's construction contingency plan.

# 2-204E Construction Engineer

The construction engineer is responsible for ensuring that traffic handling through construction projects conforms to specified traffic control plans. If a change order modifies the plans, construction engineers must take steps necessary to ensure that the modified plans are adequate to provide the highest level of traffic safety and service consistent with conditions actually encountered. During routine visits to the project, construction engineers should also review signing, delineation, construction contingency plans, and general traffic handling.

# 2-205 Guidelines for Traffic Control Plans

Follow these guidelines and general considerations for reviewing and approving traffic control plans:

# 2-205A Basic Instructions

Basic instructions usually apply more to the planning and design phase of a project, but they also help provide construction personnel with basic concepts for safe and efficient traffic flow through a highway construction project. Use these guidelines when necessary during construction to make changes in traffic control plans.

• Whenever possible, permit traffic to have continued undiminished use of the existing facilities.

2-205 Guidelines for Traffic Control Plans



- When such use is not possible, accommodate traffic by ensuring a continuous roadway throughout the length of the project, achieved by using one or a combination of the following:
  - 1. The existing unmodified highway.
  - 2. The newly constructed highway or portions of it.
  - 3. Interim-constructed facilities.
  - 4. A detour where traffic, including pedestrians and bicycles, is diverted over a temporary roadway.
  - 5. Allowing traffic to pass through the work in progress.
- Ensure that the temporary roadway is engineered to the highest standards possible, applying the same design considerations as those in the new construction:
  - 1. Geometrics of alignment and roadway section.
  - 2. Surface of the traveled lanes and shoulders or marginal areas.
  - 3. Pavement markings and other delineations.
  - 4. Barrier and guardrail.
  - 5. Signals and lighting.
  - 6. Signing.
  - 7. Pedestrian and bicycle facilities.
- Show the design of the temporary roadway, including pedestrian and bicycle facilities, in the traffic control plan.
- Make safety and convenience the primary design considerations. Economy will be a factor only as necessary to obtain balance between benefits and resources. By itself, cost must not be a primary limiting factor.

# 2-205B General Considerations

No formalized solution and design applies to all situations. The following guidelines are intended only to guide engineering judgment and ingenuity:

- Create a physical facility that will induce motorists to make proper responses to guide their vehicles in the intended path of travel and make it possible for the vehicle to react as intended.
- The traffic lane—the path the car is intended to follow—is the most important single element of the roadway. These elements affect the driver's ability to follow the intended path:
  - 1. The lane's geometry.
  - 2. Pavement surface condition, texture, and color.
  - 3. Pavement markers and other delineation.
  - 4. Signals, lighting, and signing.
- Try to eliminate surprise elements from temporary roadways. Make the environment like the approach highway. If differences must exist, make them clearly apparent.



- Accident concentrations and inconvenience often occur with changes in direction, number of lanes, alignment, and speed. Compensate for a required reduction of one by an improvement of another. For example, compensate for a sharper curve with solutions such as increased lane width or a runoff area.
- Visualize what effect changing conditions of visibility and lighting will create. Glare conditions in rain, at night, or when facing the rising or setting sun may impact driver decisions. Such conditions may alter the apparent pattern of the roadway and cause an eradicated line to appear to be a lane line. Consider how the shape and the light versus the shadow of falsework openings will appear both in daytime and at night. Anticipate needs for special treatments such as lighting.
- Review the project for evidence of driving difficulty. For instance, look for such signs as broken delineators, skid marks, and tire marks on temporary railing, all of which indicate a potential need for improvement. Be aggressive in seeking changes to improve the situation. Continue appraisal throughout the life of the project, since each day a change in condition may impact the facility's effectiveness.
- Reductions in the width or number of lanes affect the capacity and flow of traffic. When severe congestion is forecast because of capacity reductions, include plans for media notification, Construction Zone Enhanced Enforcement Program (COZEEP) services, alternate route development, metering by upstream ramp closures, changeable message signs, highway advisory radios, and monitoring the end of the traffic queue.

# 2-206 Elements of a Roadway

Following are guidelines for the design of roadways carrying traffic through construction areas:

# 2-206A Geometrics

For conditions shown on the plans that need adjustment, discuss proposed changes with the district traffic unit. Include these considerations for conditions requiring minor changes in the field:

- Design for the speed that vehicles will travel, not the speed one hopes they will travel. The following determine the safe speed of a vehicle:
  - 1. Alignment
  - 2. Profile
  - 3. Cross section
  - 4. Pavement surface character
  - 5. Lateral clearances to obstructions
- On mainline facilities, design the temporary roadway for speeds consistent with the permanent roadway. On highways where the prevailing speed of the approach is limited by alignment, the design speed should be equal to the prevailing speed of the approach roadway. If this equality is not possible, ensure that the design speed differential is no more than 10 mph. Geometrics for a transition at the end of a high-speed approach should be better than those adequate for a situation within the construction area.

# 2-206 Elements of a Roadway



- Locate the transition so it is visible to the approaching motorist. Avoid placing entering transitions on or just beyond horizontal curves or the crest of a summit vertical. The transition should be completed before reaching such features. The ideal transition is on a horizontal tangent with a slightly rising grade at the end of a level approach. Achieving this transition is worthwhile, even though it may extend the traffic control system farther than the minimum necessary just to clear the construction area.
- In the transition, if physically possible, give the driver at least the same effective traversable roadway width—and preferably more—as on the approach roadway. Adequate maneuver room at critical points is an important factor in preventing accidents.
- Design to require the least change in alignment, speed, or both. When changes are necessary, make one change at a time. For example, if the number of lanes must be reduced and the direction changed, complete the lane drop before starting the alignment change.

# 2-206B Crossover Transitions

The following guidelines apply to crossover transitions:

- Design crossover transitions to the highest geometric standards within tolerable limits of cost. Use flat diagonal crossing in preference to reversing curves.
- When crossovers require the removal of median barriers or protective devices, review conditions and, where possible, maintain the integrity of the remaining portions of the devices. For example, anchor guardrail ends and install crash cushions.
- When crossovers are not in use, place positive barriers across entry areas. Include appropriate signage.

# 2-206C Existing Ramps

For temporary modifications of existing ramps, pay close attention to acceleration and deceleration lanes. Reducing standards on existing roadways, such as sharpening curves and shortening auxiliary lanes, can adversely affect operating characteristics. Supplemental construction work may be necessary to retain the existing roadway's effective operating characteristics.

# 2-206D Run-off Areas

Whenever physically possible, establish and maintain a safely traversable area outside the delineated roadway wide enough for a run-off zone. To enhance night visibility, delineate material, equipment, excavations, or obstructions 15 feet or more from the traveled way (outside normal required protection parameters). Creating safe run-off areas may also require ordering staging of certain elements of the work, cleanup grading, and temporary placement or removal of materials.

# 2-206E Lane Widths

Lane widths should be consistent with the widths of the approach roadway. A desirable standard consists of full width lanes plus an effective width of constructed shoulder. To provide extra maneuvering room, provide wider lanes or additional surfaced shoulder width in transitions and critical alignment.



### 2-206F Lateral Shifting

Construction situations frequently require a lateral shifting of traffic in relation to the normal path of travel and may involve dropping a lane. Use the standard formula for taper length shown in the California MUTCD or in the project's traffic control plan details.

Before opening lanes to traffic, remove or obliterate all conflicting lines and markings. Obliterated lines and markings must be unidentifiable as pavement delineation during the day, at night, and under all weather conditions.

### 2-206G Surfacing Materials—Color and Texture

The following guidelines apply to the color and texture of pavement surfacing materials:

- Surface all roadways and detours, except very temporary or minor facilities, with an appropriate material (in most cases asphalt concrete).
- The area where the surfacing joins the existing roadway can be critical. If new asphalt concrete joins existing asphalt concrete, the difference in texture and color between them creates a taper in the new traffic lane that may convey the wrong sense of direction, especially at night or in rain. An inevitable degree of mismatch between the old and new surfaces creates a slight discontinuity that may cause a car to lurch or swerve. Avoid these difficulties by bringing the temporary surfacing back onto the existing highway in a square joint.
- A square joint is even more necessary when asphalt concrete joins portland cement concrete (PCC), because at night and during rainy weather, the joints often stand out more prominently than traffic lane lines.
- When conditions prevent starting the temporary surfacing at a square joint on the existing pavement, a treatment such as a light sand seal can establish the continuity of the traveled lane. Establishing continuity is especially necessary if previous traffic shifts have created confusing or conflicting diagonal joints and have eradicated pavement markings.

# 2-207 Speed Zones

The following guidelines apply to speed zones:

- If the safe operating speed of traffic through a construction area is significantly less than the approach speed of highway traffic, a reduced work-zone speed limit may be established.
- Do not use a reduced speed limit as a substitute for other means of creating a safe roadway.
- Establish reduced speed limits in accordance with procedures in the *California MUTCD*. District construction and traffic units must jointly review and agree to the limits, and it is advisable to discuss the limits with the California Highway Patrol (CHP). Caltrans recommends using COZEEP for any project with a proposed reduced speed zone. See subheading 2-215, "Construction Zone Enhanced Enforcement Program," later in this section.
- To avoid having to obtain more than one speed reduction order per project, ensure that the limits requested in the order cover the maximum distance where reduced

2-207 Speed Zones



speed would be required at any time during the life of the contract. Any part of the project within the limits stated in the order becomes a legal speed zone when signs are placed and displayed.

- It is imperative that the speed limit be posted only for the duration of the conditions justifying the reduction and only in areas of the project where it is unsafe at all times to travel in excess of the posted speed limit.
- Speed limit signing may be considered during work operation when workers are present. When work operations are complete for the day, ensure that the contractor removes or covers the signs immediately. Implement temporary speed limit reductions in conjunction with a COZEEP operation.
- Use the posting of advisory speeds on warning signs to advise the public what speed is considered appropriate at specific locations such as points of curvature or traffic diversion. The selected speed should be what a driver exercising due care would drive in normal conditions of light and weather.

# 2-208 2-208 Night Work

Night Work

Frequently, special provisions restrict work on the existing traveled way to a specified period at night. Based on traffic counts, the district traffic unit determines times for closing lanes and for night work.

The effectiveness of handling traffic through night construction depends on the contract plans and the details of the contractor's operations. Require the contractor to submit and obtain approval of the plan or operations before proceeding with night work. Consider these details:

- Avoid traffic splits if possible. Shift traffic to one side or the other, but do not split it into two traffic streams. This requirement may mean closing an extra lane.
- Confine the work area to as short a distance as practical.
- Work areas should be well lighted, but in a way not to blind drivers of approaching vehicles. If properly shielded, most lights can be mounted on construction equipment. Ensure that lighting intensity complies with the Cal/OSHA requirements.
- Ensure that the contractor's plan of operation provides sufficient room for delivery vehicles so they are not forced to stop in the traffic lanes.
- Providing for exit ramp traffic within the coned-off area may be difficult. Sometimes through traffic tends to follow an exiting vehicle. To expedite the work, it is helpful to close the exit temporarily if traffic patterns and volumes permit.
- In addition to requirements for signs and warning devices shown on the plans for traffic control systems, changeable message signs in advance of the work may be used effectively. See Section 4-1203J, "Portable Changeable Message Signs," of this manual. You may also consult the district traffic unit.
- Ensure that the contractor uses road flares to get motorists' attention only under emergency conditions, and takes care to prevent fires in susceptible high-fire-rated areas.



- For the use of amber flashing lights and for driving and parking in a closed lane at night, see the *Caltrans Safety Manual*.
- Ensure all equipment is visible to traffic, through either illumination or suitable marking.
- During daylight hours, mark sign and lane closure locations in advance. Review lane closure layouts for visibility and effectiveness. When possible, mark cone locations in advance so cones can be placed quickly and accurately and the resulting line of cones will be straight and correctly spaced.
- Construction Safety Orders, Article 11, 1599 (e) requires illuminating flagger stations during the hours of darkness. The traffic control system for flaggers should follow Sheet T13 in the Standard Plans. Ensure that all flaggers are clearly visible to traffic and that their positioning is safe and effective.
- Comply with American National Standards Institute (ANSI) 107-2004.
- Nighttime use for all Caltrans staff requires a Class 3 or equivalent garment. 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 and worn with Class E pants.
- For nighttime operations for contractor staff, the law recommends but does not require Class 3 garments. Caltrans inspectors must make sure that garments worn by the contractor's staff comply at least with ANSI 107-2004 Class 2.
- To maintain cones, signs, and other safety devices, the contractor must patrol the project's traffic control systems.
- Personnel representing Caltrans and the contractor who are capable of and empowered to make decisions quickly if the need arises must be on the job at all times.

# 2-209 Delineation

In accordance with Caltrans policy, no undelineated roadway can be opened to unrestricted or uncontrolled traffic. Before opening a roadway to unrestricted public traffic, the final delineation must be in place on the roadway either by using long-term or short-term temporary delineation or channelizing devices.

For a detailed discussion of acceptable temporary delineation methods, see Section 4-12, "Construction Area Traffic Control Devices," of this manual. For a discussion of final delineation and pavement markings, see Section 4-84, "Traffic Stripes and Pavement Markings."

# 2-210 Ramp Closures

Whenever possible, avoid prolonged closure of freeway ramps when it may adversely affect local businesses. Where ramp closures cannot be avoided, minimize adverse effects.

2-209 Delineation

2-210 Ramp Closures During the planning and design phase of any project, an impact study is made for a proposed prolonged ramp closure. The public distribution of the environmental document includes local businesses that may be affected and notifies them of any public hearing.

District construction must request an impact study for proposed prolonged ramp closures not formally considered in the planning or design phase. Contact the project manager to arrange for the study. It is not necessary to restudy impact previously studied during planning and design unless significant commercial development has occurred in the area in the interim. Before making a decision to approve a change order that would result in a prolonged ramp closure, weigh the results of the study with factors, such as construction costs, travel costs, delay, and safety.

Request an impact study for ramp closures of short duration where the possibility of adverse results or sufficient public concern exists to identify effects on adjacent businesses.

# 2-211 Informing the Public

2-211 Informing the Public

2-212

Keeping the

and Clean

**Roadway Clear** 

Timely publicity can significantly improve traffic behavior on a construction project. A motorist who is forewarned of construction conditions will be more tolerant of delay and inconvenience and probably will be more alert and responsive to construction zone control.

Make information on project road closures, new road openings, traffic rerouting, and changes in traffic conditions available in advance for local publicity. Follow the district's instructions for distributing news releases. For guidelines on public information, see Section 1-206, "Relations with the General Public," of this manual.

# 2-212 Keeping the Roadway Clear and Clean

To ensure safety and convenience, Caltrans or the contractor prepares plans to provide unobstructed roadways. Periodic project safety reviews should note deficient areas and recommend corrective action by the contractor. During these reviews, examine the locations of planned roadside obstacles as well as protective safety devices, signs, striping, detours, falsework, temporary railing, attenuators, and run-off zones. Retain documentation of these reviews in Category 6, "Safety," of the project records.

Frequently, the only exception to an otherwise clean roadside is a localized situation such as a partially completed drainage structure or a pile of rubble. Do whatever is necessary to maintain an unobstructed roadside when construction is not in progress.

Keep all traffic control facilities in good repair with a continuing program of inspection, replacement, and cleaning.

2-213 Roadway Over Railroad Tracks

# 2-213 Roadways Over Railroad Tracks

When construction activities involve railroad right-of-way or grade crossings, contact the district railroad liaison agent to ensure that all processes are complete and that the contractor may begin work. The railroad company should be represented at a preconstruction meeting to discuss the schedule of work over or near railroad facilities.

The district railroad liaison agent must report to the Public Utilities Commission any proposed detours that include a railroad crossing at grade where the volume of state highway traffic will materially increase normal traffic using the crossing. Provide the



following information to the district railroad liaison agent who will forward it to the Public Utilities Commission:

- The Public Utilities Commission crossing number shown on the railroad crossing sign.
- Existing protection at the crossing.
- Date the detour will be put into use and the estimated time it will be in use.
- Estimated volume of traffic to be detoured over the crossing.
- Whether additional protection is proposed.

If construction involves structure work, send a copy of the above information to the Office of Structure Design.

Contractors must make their own arrangements with the railroad representative to move materials or equipment across railroad tracks. If that action is required, a contractor must obtain a private crossing agreement.

# 2-214 Transportation Management Plans

A transportation management plan (TMP) is a program of activities for minimizing or alleviating work-related traffic delays by effectively applying traditional traffichandling practices and innovatively combining various strategies: public awareness campaigns, motorist information, demand management, incident management, system management, alternate route planning, and construction methods and staging. Depending on the complexity of the work or the magnitude of anticipated traffic impacts, a TMP may provide lane closure charts, standard special provisions for maintaining traffic, traffic control plans, and—for major projects—a separate comprehensive report. Caltrans' "Transportation Management Plan Guidelines" provide more information on the recommended level of detail for TMPs.

# 2-214A Policy

The Federal Highway Final Rule 23 Code of Federal Regulations 630, Subpart J, referred to as "Work Zone Safety and Mobility," requires Caltrans to adopt a policy that implements TMPs on all federally funded highway projects. TMPs must be consistent with the final rule guidelines for developing and implementing the policy.

Caltrans requires TMPs for all planned activities on the state highway system. During the project initiation or planning stage, Caltrans considers TMP measures with associated road user costs and additional construction costs to the fullest extent feasible. TMPs include strategies to minimize work-related traffic delays while reducing the overall duration of work activities where appropriate. Strategies that may result in a net reduction of overall delay for motorists include full facility closures, extended weekend closures, continuous weekday closures, A+B contract specifications, and performance-based, traffic-handling specifications.

# 2-214B Definitions

Major lane closures—those expected to result in significant traffic impacts despite the implementation of TMPs.

Significant traffic impact—an individual traffic delay of 30 minutes or more above normal travel time during recurring congestion on the existing facility. TMP strategies are designed to maintain additional delays below this maximum threshold, that is, less

# 2-214 Transportation Management Plans



than 15 or 20 minutes. With approval from the District Lane Closure Review Committee, you may exceed the 30-minute maximum delay.

# 2-214C Responsibilities

The district construction office and the resident engineer must ensure that the contractor's activities are compatible with the TMP that affects the project.

2-214C(1) District Traffic Manager

- Acts as the single focal point for all traffic impact decisions resulting from planned activities on the state highway system.
- Determines the extent of a TMP.
- Facilitates review and approval of TMP measures and planned lane closure requests.
- Directs the termination or modification of active planned lane closure operations when traffic impact becomes significant, without compromising traveler or worker safety.

2-214C (2) TMP Manager

• Acts as the single focal point for development and implementation of TMPs.

2-214C (3) Construction Traffic Manager

- Serves as a liaison between construction, the DTM, and the TMP manager.
- Reviews the TMP and traffic contingency plan for constructability issues.
- Acts as a resource for the resident engineer, the DTM, and the TMP manager during TMP implementation.
- Reviews the contractor's contingency plan.

# 2-214C (4) Construction Engineers, Resident Engineers, and Construction Inspectors

- Ensure full implementation of approved TMPs in close coordination with the DTM so disruption to the traveling public is minimized.
- Work with the DTM to ensure that project activities conform to the TMP, that contingency plans are implemented when necessary, and that disruption to the traveling public is minimized and does not exceed limits established in the TMP.
- Include the district TMP manager, the DTM, and the public information officer as appropriate in preconstruction or work planning meetings.
- Determine when the contractor must submit a construction contingency plan.
- Ensure that the contractor is prepared to comply with TMPs related to work performance.
- Notify district communication centers or transportation management centers when unforeseen traffic impacts result from planned work.
- Notify district communication centers or transportation management centers to report the status of lane closures in a timely manner (when closures are put in place, picked up, and canceled) to provide accurate information to the public.



Provide specific details when reporting, especially when a planned lane closure might be picked up late and significant traffic impacts result.

• Coordinate work activities with the CHP and other local and regional transportation stakeholders as appropriate.

During construction, district construction directs the implementation of TMP elements that are part of the main contract or encroachment permit. Contract managers direct their respective separate contracts or agreements, such as for rideshare activities, transit activities, and public awareness campaigns.

Give special effort to ensure that changeable message signs, highway advisory radio, and other media tools provide accurate and timely information to motorists regarding lane closure times. Caltrans can enforce contractor compliance with lane closure pickup deadlines in two ways:

- A "maintaining traffic" standard special provision allows assessing the contractor a contract payment deduction for the value of a traffic delay when the contractor exceeds the lane closure window. The minimum penalty is \$1000 for each 10 minutes, but it can greatly exceed the minimum depending on traffic volumes and the highway facility. The DTM calculates the delay penalty during PS&E.
- The state representative can suspend the contract work.

Caltrans can order a contractor or Caltrans forces (such as maintenance) to pick up a lane closure early if traffic impacts become significant because of either a project incident or activities outside the project area. Caltrans should order early pickup only when traveler and worker safety will not be compromised. The "maintaining traffic" special provisions for capital projects provide for compensating contractors for early pickup. Encroachment permit provisions require the permittee to pick up a closure early without compensation.

# 2-214D Construction Contingency Plan

The contractor develops a construction contingency plan to identify operations, equipment, processes, and materials that may fail and delay opening lane closures. The contingency plan identifies alternative or additional equipment, materials, or workers necessary to ensure continuing operations and on-time opening of closures if a problem occurs. If the equipment, materials, or workers are not onsite, the contingency plan specifies the method of mobilizing these items and the time required to complete the mobilization.

Critical pieces of equipment are those necessary to complete the planned work in the closure, for which no close onsite substitutes exist, and which—if rendered inoperative—would cause the closure to be kept in place past the pickup time in the closure charts.

Critical work operations are those performed in a lane, shoulder, or ramp closure that would make the traveled way unsafe or render any portion of the traveled way unsuitable for public traffic use. The operations would, therefore, cause the closure to be kept in place past the pickup time indicated in the closure charts.

The contractor develops a contingency plan and submits it within 1 day of the resident engineer's request or as specified in the standard special provisions. Discuss the contingency plan at the project partnering or preconstruction meeting.



Samples of operations that may require a contingency plan:

- Any activity requiring a full roadway closure
- Blasting
- Rapid-set PCC operations, including PCC slab replacement
- Roadway excavations that encroach on the traveled way and are not protected by K-rail
- Cold planing hot mix asphalt for depths of 2 inches or greater
- Hot mix asphalt paving
- Asphalt or concrete grinding
- Chip seal
- Asphalt or concrete pavement sealing operations
- Bridge work
- Placement of reinforcing steel or structural members
- Falsework erection or removal, including adjustments
- Bridge demolition
- Striping

A construction contingency plan describes:

- Critical stage for each operation when the alternative or additional equipment, materials, or workers must be activated.
- Communication equipment (for example, cell phones) and procedures to follow when communicating with the resident engineer's field representatives during contingency plan activation.
- Intended amount of work to be done during each lane, shoulder, or ramp closure. Describe the work by length, width, and unit of measure conforming to the appropriate progress pay items.
- Operation work schedule with a timeline set at 20-minute intervals.
- How the contractor will meet the projected rates for material delivery to the jobsite. Materials produced offsite and delivered to a jobsite, such as asphalt concrete and concrete, can encounter numerous delays including plant breakdown, loss of trucking, or trucking delayed by traffic congestion because of accidents or the project itself.
- Beginning and ending times for critical work operations for work conducted in lane, shoulder, or ramp closure.
- A general time-scaled logic diagram displaying the major activities and sequence of planned operations that comply with special provision requirements.
- A set of contingency action plans for each stage of the operations to prevent late opening of the traffic lanes. Clearly identify early-finish and late-finish milestones for every major activity. The contingency action plans must include detailed operations undertaken in case a major activity passes the late-finish milestone.



- Anticipated cooling times needed for asphalt concrete pavements before opening a lane, shoulder, or ramp to public traffic.
- Anticipated times for beginning the closure pickup.
- Anticipated length of time, rounded to the nearest 5 minutes, to pick up the lane, shoulder, or ramp closures.
- Timelines for the contractor and the engineer to meet at the worksite, review progress, and forecast the time when work will be stopped to open the lane, shoulder, ramp, or route to the public.

The contractor verifies or updates the contingency plan at the same time as submitting the written schedule of planned closures. If a revision is required, the contractor should not close any lanes until the resident engineer has reviewed the contingency plan.

# 2-215 Construction Zone Enhanced Enforcement Program

Caltrans and the CHP have an interagency agreement that is the basis for the Construction Zone Enhanced Enforcement Program (COZEEP). It is an enhancement tool for construction zones and is not intended as a replacement for other temporary traffic control (TTC) measures. Caltrans contracts, procedures, and guidelines form the basis for safe traffic-control measures throughout its construction projects and establish a baseline for operations statewide. COZEEP is not a baseline measure—an important fact when resources are limited and CHP personnel may not be available when requested. Under the agreement, Caltrans pays the CHP for furnishing officers and cars for construction zones.

To implement COZEEP, use the guidelines below, intended to apply COZEEP resources more uniformly throughout the state. Use the guidelines when determining when and how to use COZEEP on a project. Document the reasons for COZEEP use.

# 2-215A COZEEP Funding

Consult your district COZEEP coordinator for a current estimate of hourly and mileage COZEEP cost.

# 2-215A (1) Estimating COZEEP Funding Requirements

The project engineer should include the project estimate funds necessary to provide COZEEP as state-furnished materials and services. The pending file for the project maintained by the resident engineer should include the basis of that estimate.

The cost estimate used in the plans, specifications, and estimate is based on the expected number of events needing COZEEP identified during project development. The cost estimate should include an estimated number of COZEEP service hours and travel time converted into an equivalent dollar cost.

When estimating COZEEP hours, take the following CHP operating policies into account:

- CHP policy requires two officers in each unit between 10:00 p.m. and 6:00 a.m. (Caltrans obtained an exception to have one officer per vehicle whenever two or more units are in close proximity of one another on the same project.)
- The CHP memorandum of understanding requires a minimum payment of 4 hours per officer. Caltrans reimburses CHP officers who provide COZEEP services on overtime at time and a half.

2-215 Construction Zone Enhanced Enforcement Program



• Time and mileage are based on officers' starting and stopping times at their reporting station and include travel to and from the project.

The district COZEEP coordinator will provide current hourly and mileage reimbursement costs for the project location.

# 2-215A (2) Redirection of Project Funds

The detailed estimate will show the initial funding level for COZEEP as supplemental funds for state-furnished materials and services. If additional funds are required during the life of the project, the resident engineer can transfer available contingency funds to "state-furnished materials and services—COZEEP." Likewise, the resident engineer may transfer unused COZEEP funds to the contingency fund and use them for other purposes.

# 2-215A (3) Obtaining Additional Funds

Additional funds may be obtained for capital projects and maintenance funded projects as follows:

- Capital projects—if insufficient funds are available in both supplemental work funds and contingency funds, propose a fund request. The request may be processed under the G-12 process or require a California Transportation Commission supplemental vote. Process, justify, and document the request the same way as any other fund request.
- Maintenance funded projects—on maintenance projects, obtain additional funding through a request to the district maintenance unit.

# 2-215B COZEEP Responsibilities

The resident engineer and project engineer share responsibilities for COZEEP implementation and funding allocation.

2-215B (1) Project Engineer

- On every project that requires the contractor to close traffic lanes, the project engineer must assess the need for COZEEP as part of the project's safety review, constructability review, or both. The project engineer may recommend which specific construction operations should use COZEEP.
- The project engineer should include adequate COZEEP funds in the project estimate. Look in the resident engineer's pending file for design assumptions and estimate calculations.

# 2-215B (2) Resident Engineer

- The resident engineer must administer the COZEEP program on the project. If COZEEP services are not available, exercise judgment about whether to allow the work to proceed. If you do not permit the work to proceed and the controlling operation is adversely affected, you may grant a time extension in accordance with Section 8-1.10 [8-1.07], "Liquidated Damages," of the 2010 *Standard Specifications*.
- If the contractor requests additional CHP support beyond what the project plan includes, you may, if appropriate, write a change order. The contractor bears costs



and expenses for additional support from the CHP, and Caltrans deducts associated costs from monies due the contractor.

- When evaluating cost reduction proposals and change orders requested by the contractor, take into account the costs and savings for COZEEP services.
- Initiate and obtain CHP sign-off of Form CEM-2101, "COZEEP Daily Report." At the end of each week, report to the district COZEEP coordinator the COZEEP services used during that week.

### 2-215C COZEEP Implementation

Use the following criteria and risk factors to determine when COZEEP is needed on a project:

# 2-215C(1) Freeways and Expressways

Provide COZEEP for the following situations:

- Day or nighttime temporary closures of all lanes in the same direction of travel (full freeway closures).
- Nighttime closures of two or more lanes on a freeway with three or more lanes of travel in the same direction.
- Other closures determined on a project-specific basis.

Generally, COZEEP is not necessary when only one lane is closed on freeways with four or more lanes in the same direction of travel.

# 2-215C (2) Connectors and Ramps

For all lane closures on freeway-to-freeway connectors and for night closures of exit and entrance ramps, evaluate the risk factors. Daytime ramp closures do not usually need COZEEP.

# 2-215C(3) Conventional Highways

For complete highway closures and nighttime closures of one or more lanes on multilane highways, evaluate project-specific risk factors. In general, lane closures on two-lane highways and daytime closures on multi-lane highways do not require COZEEP.

# 2-215C (4) Risk Factors

The risk factors below are not an all-inclusive list. Safety reviews conducted during the project's development may identify other risks. If so, also consider these risks in the decision-making process.

- A median barrier, bridge rail, or retaining wall may block worker escape routes. Lack of escape options increases the likelihood of motorist-involved accidents that will disrupt traffic flow.
- Night construction activities (for example, replacing pavement slab, replacing bridge joint seals, and replacing pavement markers) that do not create an obvious construction zone except while operations are in progress create an unexpected condition for drivers, even those familiar with the highway.
- Construction activities such as night paving are a risk factor when they require a large number of trucks into and out of the work area.



- End-of-queue management is desirable at locations where traffic queues are unavoidable.
- Speed management is desirable at locations such as rural freeways and expressways where traffic has been flowing in a high-speed, free-flow way for a significant period before encountering the work zone.
- Rural locations with a high volume of truck traffic, steep downgrades, or both, also pose a high risk factor.

# 2-215D COZEEP Administrative Procedures

The following procedures are intended to assist resident engineers in obtaining and tracking COZEEP services and to help Caltrans reconcile the CHP billing system and facilitate payment to the CHP.

# 2-215D (1) Ordering Work

The statewide master agreement for COZEEP requires that all Caltrans requests for support be received by the supporting CHP area office during normal working hours and at least 72 hours before the time needed.

# 2-215D (2) Completing the Task Order

- To order work by the CHP, complete and use Form CEM-2102, "COZEEP/MAZEEP Task Order." Before ordering the work, and while preparing the task order check that:
  - 1. CHP support is appropriate for the type of work to be performed.
  - 2. The request has been submitted in a timely manner.
  - 3. The project has sufficient funds available to pay for the CHP support.
- Ensure that the task order, which has five parts, is completely filled out. Most parts are self-explanatory. In Part 4, identify a Caltrans project supervisor, usually the resident engineer or an assistant resident engineer.
- You may submit a single task order to cover more than 1 day. For example, a project that will occur on Monday through Thursday for the next week would require only one task order. Task orders must specify by date and time when a service is needed.
- Once the task order is completed and signed by the Caltrans person requesting the services, fax or send it to the local CHP area office. The CHP coordinator at the local CHP area office will complete, sign, and return the form to the Caltrans construction office.

# 2-215D (3) Cancellations

• If it becomes necessary to cancel the work, write or call the local CHP contact person listed in Part 4 of the task order as soon as possible. The statewide agreement requires that cancellations be made during normal working hours and at least 24 hours before the time that the CHP is to arrive on the project. Also confirm it in writing using Form CEM-2103, "COZEEP/MAZEEP Cancellation Form." Once contact is made, the CHP coordinator will return the completed cancellation form.


- In accordance with the agreement, cancellations received less than 24 hours before work is to begin will be charged a cancellation fee (\$50). If you cannot contact the officer in advance and the officer actually reports for duty, the fee will be equal to 4 hours of overtime pay. The local CHP contact person will note in the cancellation form if Caltrans is being charged a cancellation or 4-hour overtime fee. If the cancellation form indicates a fee is being charged, retain the form in the project records under Category 21, "Construction Zone Enhanced Enforcement Program," and send a copy to the district COZEEP coordinator.
- For more information on cancellations, refer to the current COZEEP agreement.

### 2-215D (4) Recording Work Performed

When the officer or officers arrive at the project site, the senior CHP uniformed officer will check in with the Caltrans project supervisor who must initiate form CEM-2101, "COZEEP Daily Report." The daily report number will also be the project identifier number. In the daily report, enter a description of the services the CHP provided (for example, traffic breaks, stationary patrol upstream of the work area, or circulating patrol), and complete the CHP officer and CHP vehicle information. At the end of the shift, the senior CHP officer onsite must estimate travel time and mileage for each officer from the project site to the CHP office. Calculate the total estimated travel time and mileage, and enter the total on the COZEEP daily report. Both the senior officer and the project supervisor must sign the completed COZEEP daily report.

The CHP has 5 working days to notify Caltrans if the actual travel time, mileage, or both, are greater than the allowances estimated on the daily report. Submit the CHP notification to the person who issued the daily report. If a notice of change is received, attach a copy to your copy of the COZEEP daily report, and submit the original to the district COZEEP coordinator.

### 2-215D (5) Tracking Expenditures

Once the district COZEEP coordinator receives the COZEEP daily reports, they must be logged into the COZEEP service summary to track COZEEP use. A spreadsheet may be used for the summary.

The CHP will submit the COZEEP service summary electronically for payment with a confirming hard copy to the district COZEEP coordinator.

### 2-215D (6) Reconciling the CHP Invoice

CHP invoices will include monthly charges for services provided. The invoice backup will include the COZEEP service summary and copies of cancellation notices. Invoices must include the agreement number and be submitted monthly in arrears, in triplicate, within 60 calendar days of date of service.

The CHP sorts and subtotals the COZEEP service summary by project, including cost information. Within 45 calendar days of receipt of the invoice, the district COZEEP coordinator reviews and approves the summary and submits it for payment to the Caltrans Division of Accounting Services, which uses it as the "receiving record" for payment.

During the term of the contract, the CHP may increase or decrease the rates shown in the contract by notifying the Caltrans statewide contract managers, who will notify the district coordinators. For this reason, district coordinators should not return an invoice



to the CHP because the billing rates shown on the invoice do not agree with the rates in the contract. Instead, the district coordinator should contact the statewide contract manager to verify the correct billing rates.

### 2-215D (7) Problem Resolution

Remove from the COZEEP service summary inconsistencies between the information Caltrans gives the CHP and the internal information CHP obtains from its payroll system. Return exceptions to the district and area offices involved for resolution. Make every effort to resolve disputes at the lowest level (between the resident engineer and the CHP coordinator at the local CHP area office). If an impasse occurs, the district COZEEP coordinator and the designated CHP division office contact must act as the second level of review. The last level of review will be the COZEEP statewide coordinator.

### 2-216 Pedestrian Facilities

2-216

**Pedestrian Facilities** 

Work zone activities can disrupt the public's mobility and access. Caltrans maintains safe and convenient access for pedestrians and bicyclists, who are susceptible to disruptions because of their slower speeds and sensitivity to uneven surfaces, noise, airborne dust, road debris, and fumes.

Considering the needs and control of all road users is an essential part of highway construction, utility work, maintenance operations, and the management of traffic incidents through a TTC zone. Users include motorists, bicyclists, and pedestrians within the highway, including persons with disabilities, defined by the Americans with Disabilities Act of 1990 (ADA). The *California MUTCD* Part 6 contains figures that can be adapted for traffic-handling plans. Figures 6H-28 and 6H-29, "Sidewalk Detour or Diversion," and "Crosswalk Closures and Pedestrian Detours" of the *California MUTCD* are examples for accommodating the needs and control of pedestrians.

The design phase of a project considers accommodating pedestrians through a TTC.

2-216A Related Caltrans Standards

These Standard Specifications sections apply to pedestrian facilities:

- Section 7-1.02A, "General," requires the contractor to comply with current laws, regulations and decrees.
- Section 7-1.04, "Public Safety," requires that the contractor provide for the safety of the public during construction.
- Section 12, "Temporary Traffic Control," directs the contractor's attention to the *California MUTCD*.
- Section 12-7, "Temporary Pedestrian Walkways," requires the contractor to maintain pedestrian access.

Ensure that the contractor adheres to the following:

• If the contractor's operations require the closure of one accessible pedestrian facility, provide a travel path that replicates, if possible, the most desirable characteristics of the existing walkway. Take special care to consider areas in schools or senior citizen center locations.



- When construction affects the pedestrian facility, the contractor should maintain a continuous unobstructed path connecting existing accessible elements (parking lots, bus stops, and so forth) through the project.
- Provide advanced notification of sidewalk closures.
- Keep pedestrian facilities clear of obstructions. Traffic control devices, equipment, and other construction materials and features must not intrude into the usable width of the sidewalk, temporary pathway, or other pedestrian facility.
- In addition to required openings through falsework, provide accessible pedestrian facilities during pile driving, footing, wall, and other bridge construction operations where an accessible route was available before construction began.
- Provide hand railings on each side of pedestrian walkways as necessary to protect pedestrian traffic from construction operation hazards. Maintain railings and walkways in good condition.
- Provide protective overhead covering as necessary to ensure protection from falling objects and dripping from overhead structures.
- A pedestrian traffic handling plan may be required if the contract plans do not identify the affected facility.
- The contractor is responsible for accommodating pedestrians through the TTC whenever the work disrupts pedestrian facilities.

At the preconstruction conference, discuss the need for temporary pedestrian facilities and ADA requirements. For details related to preconstruction conferences, see Section 5-003, "Preconstruction Conferences with the Contractor," of this manual.

### 2-216B Requirements of the California MUTCD

When planning for pedestrians in TTC zones, ensure that the contractor considers the following items:

- Avoid leading pedestrians into conflicts with worksite vehicles, equipment, and operations and with vehicles moving through or around the worksite.
- Provide pedestrians with a reasonably safe, convenient, and accessible path that replicates as nearly as practical the most desirable characteristics of the existing sidewalks or footpaths.

When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities must be detectable and include accessibility features consistent with those present in the existing pedestrian facility. Refer to Part 6, Chapter 6D of the *California MUTCD*. If the pedestrian facility existing before construction began was accessible to pedestrians with disabilities, the one provided during TTC should also be accessible.

Do not sever or move a pedestrian route for non-construction activities such as parking for vehicles and equipment.

Maintain a width of 60 inches throughout the length of the pedestrian pathway. When it is not possible to maintain a width of 60 inches, provide a 60 x 60-inch passing space at least every 200 feet to allow individuals in wheelchairs to pass. The path must have a clear width of no less than 48 inches. Verify that no fixed objects (cabinets, poles, and so forth) will reduce the path width at any point.



The path must be stable, firm, and slip resistant. Pedestrian facilities must be surfaced with asphalt concrete, portland cement concrete, or timber. Dirt is not an acceptable surface.

The cross slope must be no greater than 1:50 (2 percent) and the running slope no greater than 1:20 (5 percent).

Signs and other devices mounted lower than 7 feet above the temporary pedestrian pathway should not project more than 4 inches into accessible pedestrian facilities. Refer to Part 6, Section 6D.02 of the California MUTCD. Place a barrier across the full width of a closed sidewalk. A person with a visual disability traveling with the aid of a long cane should be able to detect it.

Unless the contractor can provide a reasonably safe route that does not involve crossing the roadway, use appropriate advance signing to direct pedestrians to cross to the opposite side of the roadway. In urban and suburban areas with high vehicular traffic volumes, place the signs at intersections. Midblock worksites should not cause pedestrians to skirt the worksite or make a midblock crossing. Refer to Part 6, Section 6H, and figures 6H-28 and 6H-29 of the California MUTCD.

Consider separating pedestrian movements from both worksite activity and vehicular traffic. When pedestrians are routed adjacent to live traffic, provide barrier protection to prevent vehicles from entering the pedestrian facility.

Do not use tape, rope, or plastic chain strung between devices as controls for pedestrian movements. They are not detectable by persons with visual disabilities.

Whenever feasible, temporary pedestrian facilities should follow the ADA checklist in the *Temporary Pedestrian Facilities Handbook* available at:

http://www.dot.ca.gov/hq/construc/safety/Temporary\_Pedestrian\_Facilities\_ Handbook.pdf

Document the reasons why an item does not follow ADA guidelines.

2-216C Permanent Facilities

Ensure that the contractor constructs permanent new facilities and alterations to existing facilities in accordance with the contract plans and specifications.

Additional resources for consideration:

- Caltrans Design Information Bulletin 82-04, "Pedestrian Accessibility Guidelines for Highway Projects," which addresses requirements for new construction and alterations of existing facilities.
- Standard Plans A88A, A88B, A90A, A90B, ES-4C, ES-5C, and ES-7A.

Contact the district design unit to develop plans to add a permanent facility by change order.

During the inspection process, check that all contractor-installed finished elements comply with dimensions and installation requirements.

Do not exceed the maximums shown in the requirements. They are absolute.



# Section 3 Major Construction Incidents

## 2-301 General

## 2-302 Reportable Accidents and Incidents

- 2-302A Accidents
- 2-302B Unusual or Extraordinary Construction Occurrences
- 2-302C Highway Closure Notification

#### **Reporting Procedures** 2-303

## 2-304 Guidelines



This manual is being updated to reflect changes from the 2006 to the 2010 Standard Specifications. Bracketed section numbers refer to the 2006 Standard Specifications.

#### Section 3 **Major Construction Incidents**

### 2-301 General

This section provides guidelines for reporting and dealing with accidents and major incidents on construction projects. For more detailed guidelines on reporting, see Chapter 19, "Special Reporting of Serious Injury, Illness, or Fatality," of the Caltrans Safety Manual. The chapter also discusses special reporting for a serious occupational injury, illness, or fatality connected with employment activity.

### 2-302 Reportable Accidents and Incidents

Below are descriptions of accidents and construction incidents to report.

### 2-302A Accidents

Report accidents that:

- Have resulted in serious injury to or death of a contractor's employee.
- Have involved serious injury to or death of a state or a consultant employee. •
- Have involved serious damage to equipment owned by the state, a consultant, or the contractor.
- Have resulted in the serious injury to or death of a member of the public in the construction zone or were influenced in any way by construction-related activities, conditions, equipment, or personnel.
- Were catastrophic or have received wide media coverage.
- Have involved vehicles entering the active work zone.
- Have involved vertical or horizontal clearance issues.
- Had no injuries, but had a high potential for being fatal or disabling, such as falsework or guying system failures, overturned cranes, high-voltage power line contacts, trench excavation or shoring failures, gas or fuel line fires or explosions, hazardous utility breaks, and collisions with structures under construction or their supporting falsework that caused displacement of a major member.

### 2-302B Unusual or Extraordinary Construction Occurrences

Unusual or extraordinary construction occurrences are reportable incidents that may not be classified as accidents, such as these:

- Disasters that result in major damage to a state facility or project work.
- Situations that result in the evacuation of the project, the immediate area, or both. .
- Any other events that affect the state facility or project work and may generate media coverage.

## Section 3 Maior Construction **Incidents**

2-301 General

### 2 - 302**Reportable** Accidents and **Incidents**



- Encounters of previously unknown hazardous material on a construction project.
- A hazardous spill on a roadway within construction project limits.
- An incident causing major traffic delays.

2-302C Highway Closure Notification

Report routine planned lane closures to the district dispatch center or the traffic management center (TMC) as required by district policy.

Report to the district dispatch center or the TMC any situation that requires unplanned closures of traffic lanes or the highway.

If the contractor cannot remove a lane closure by the specified pickup time, notify the district dispatch center or the TMC before that time. Provide accurate information to allow the TMC to notify the California Highway Patrol, the media, and the public of possible delays.

2 - 303Reporting **Procedures** 

2 - 304

Guidelines

### 2-303 Reporting Procedures

Immediately report all reportable accidents and major incidents to the district TMC, the district dispatch center, or-when TMC or the center is closed-the Caltrans Highway Information Center, Use Form CEM-0603, "Major Construction Incident Notification."

Email an initial report to Major Incident Reports@dot.ca.gov. The Office of Safety and Health in the Division of Administrative Services and the Division of Construction check this email box. Also send copies of the report to the district construction safety coordinator and district management.

If email is unavailable, fax the form to the numbers at the top of the form, the district construction safety coordinator, and district management.

When necessary, Form CEM-0603 may also be used to email or fax an updated report providing supplementary information.

### 2-304 Guidelines

Caltrans construction personnel who respond to major incidents in construction zones must do the following:

- Take appropriate action without jeopardizing public or employee safety.
- Document all incident details paying special attention to traffic controls set up and the contractor's activity at the time of the incident. Take pictures of the jobsite along the incident location and file them with the incident details in Category 6, "Safety," of the project file.
- Provide timely and accurate information to management to document the extent of the incident and to identify major issues and current actions.
- In the event of a closure or restriction, restore the transportation facility to full operation as quickly as possible.
- Mitigate the effect on the public or the project caused by unusual or extraordinary occurrences.

The district construction deputy director must activate a construction incident response team when warranted by the sensitivity and severity of a major incident. The team's principal purpose is to provide incident information to Caltrans managers and the



media. The team enables the resident engineer to focus on restoring the transportation system, the project, or both. The team may also advise the resident engineer on technical matters. The construction engineer heads the team, which may also include:

- A representative of the district public relations staff.
- Technical personnel from other Caltrans functional areas such as safety, traffic, structures, design, or environmental.

Report hazardous material encounters and hazardous spills as outlined in 2-303, "Reporting Procedures," earlier in this section. For more information on procedures to follow in the event of hazardous material encounters or hazardous spills, see Section 7-106, "Environmental Hazards and Safety Procedures," of this manual.

As described in Section 2-214D, "Construction Contingency Plan," of this manual, the contractor must have a contingency plan for reopening closed traffic lanes.





# Section 0 Introduction

- 3-001 Scope
- 3-002 Purpose



This manual is being updated to reflect changes from the 2006 to the 2010 *Standard Specifications*. Bracketed section numbers refer to the 2006 *Standard Specifications*.

## Section 0 Introduction

### 3-001 Scope

Each section in this chapter of the *Construction Manual* corresponds to one of the first nine "General Provisions" sections of the *Standard Specifications*. This chapter contains guidelines and procedures for administering these sections of the *Standard Specifications*. The chapter also includes guidelines and procedures for topics within the scope of the *Standard Specifications* sections, but not specifically covered by them.

### 3-002 Purpose

The purpose of this chapter is to ensure that the "General Provisions" sections of the *Standard Specifications* are enforced and administered uniformly for all Caltrans contracts by providing and establishing guidelines and procedures for administering contracts.

As with the entire manual, this chapter is not part of the contract and places no burden or obligation on the contractor. It is not a substitute for reading and understanding the General Provisions. It is, however, necessary reading for resident engineers and others who assist and support them in contract administration. This chapter answers many frequently asked questions about the procedures for administering contracts.

## Section 0 Introduction

3-001 Scope

### 3-002 Purpose



This manual is being updated to reflect changes from the 2006 to the 2010 *Standard Specifications*. Bracketed section numbers refer to the 2006 *Standard Specifications*.

## Section 1 General

Sections 1-1.06, "Abbreviations," and 1-1.07, "Definitions," [Section 1] of the Standard Specifications define terms, abbreviations, and symbols the specifications use for units of measure. Section 1 also defines symbols that the engineer's estimate uses for units of measure. The Standard Plans also contain a list of abbreviations and symbols.

Resident engineers and others preparing contract documents and correspondence must be familiar with the terms and symbols and use them correctly.

Section 1 General



# Section 2 Bidding

- 3-201 General
- 3-202 Advertisement
- 3-203 Bid Opening
- 3-204 Communication With Bidders
- 3-205 Disclosure of Construction Estimates
- 3-206 Names of Prospective Bidders





This manual is being updated to reflect changes from the 2006 to the 2010 Standard Specifications. Bracketed section numbers refer to the 2006 Standard Specifications.

#### Section 2 **Bidding**

### 3-201 General

Section 2, "Bidding," of the Standard Specifications covers proposal requirements and conditions that apply to a contractor bidding on a project. The Office of Office Engineer must adhere to this section's requirements. District construction personnel must be familiar with this section, including the contractor's responsibilities and options after bids have been opened.

### 3-202 Advertisement

Before the plans and specifications are made available to the public, California law requires publication of contract information in the California State Contracts Register. Before bid opening, Caltrans will allow a minimum of 3 weeks (more if the project is complex) for contractors to purchase plans and specifications and prepare their bids. Emergency projects may have a shortened advertisement period.

### 3-203 Bid Opening

For projects in Northern California (Districts 1, 2, 3, 4, 5, 6, 9, and 10), bids open in Sacramento on Tuesdays and Wednesdays. For projects in Southern California (Districts 7, 8, 11, and 12), bids open in Irvine in the District 12 headquarters on Thursdays.

The Division of Procurement and Contracts advertises and opens bids for projects estimated to be below \$270,000, which are designated as minor B. Bids for minor B projects in Northern California open in Sacramento, while bids for minor B projects in Southern California open in Irvine.

### 3-204 Communication With Bidders

To protect the integrity of the bidding process, no bidder must be given a real or perceived advantage over any other bidder. Use the following guidelines to ensure that any information provided to one bidder is also provided to all other potential bidders for a particular project.

- Only designated district construction personnel must answer bidder inquiries. The design engineer, construction field personnel, or other non-designated Caltrans personnel must never respond to bidder inquiries.
- Thoroughly investigate bidder inquiries, and provide timely and conclusive responses.
- Distribute or post written responses to all plan holders by fax, internet, or other similar means.
- Number the responses to facilitate bidder comments and the follow-up questions to responses. Specify the date responses are posted.

### 3 - 204Communication With Bidders

California Department of Transportation • Construction Manual • June 2012 **Bidding** 



Section 2 **Bidding** 

3-201 General

3-202 Advertisement

3-203 **Bid Opening**  • Include the following language with all responses published or posted:

Responses to bidder inquiries, unless incorporated into formal addenda to the contract, are not a part of the contract, and are provided for the bidder's convenience only. In some instances, the question and answer may represent a summary of the matters discussed rather than a word-for-word recitation. The availability or use of information provided in the responses to bidder inquiries is not to be construed in any way as a waiver of the provisions of 2-1.30 [2-1.03], "Job Site and Document Examination," of the *Standard Specifications* or any other provision of the contract, the plans, *Standard Specifications*, or special provisions nor to excuse the contractor from full compliance with those contract requirements. Bidders are cautioned that subsequent responses or contract addenda may affect or vary a response given previously.

- Refer directly to the plans, specifications, and other provisions of the contract. Quote specific sections of the *Standard Specifications* and special provisions, as well as specific sheet numbers and details on the plans and *Standard Plans*.
- Ensure conclusive responses. If an inquiry cannot be answered conclusively by directly referring to the contract provisions and requires some measure of amplification, confirm the statewide interpretation by consulting with the district construction office, the Division of Construction, the Division of Engineering Services, or other program with the necessary knowledge. Give special emphasis to assessing the need for an addendum. Before giving a response that involves inquiries regarding construction methods, obtain direction from the district construction office. Routinely route inquiries and proposed responses through appropriate support and construction functions. Before bid opening, route all inquiries and responses to the resident or construction engineer responsible for administering the project.
- If an inquiry indicates the contract should be modified, issue an addendum. Before publicly posting any referrals to the addendum, issue it. When an addendum is issued in response to an inquiry, post "Per Addendum No.--, dated \_\_\_\_\_" as the inquiry response. The district office engineer must notify the Office of Office Engineer as soon as possible of addenda proposed or under consideration. Responses to inquiries, whether made orally or in writing, do not become part of or change the contract. However, they may be used in defending Caltrans or the contractor's position in a dispute when the industry has been given related knowledge before bidding.
- Rarely respond with "Bid it as you see it." However, such responses may be appropriate, depending on the scope of the particular issue, the timing of the bidder inquiry, and other factors.
- It may be impractical to post responses to certain inquiries submitted too close to the bid opening date. Although you should aggressively pursue the investigation of all bidder inquiries, Caltrans may consider the particular circumstances and waive posting a response, if warranted.
  - Post all responses, including "Bid it as you see it" responses.



- Consider written bidder inquiries only when the bidder submits a completed "Bidder Inquiry" form when the contract requires one.
- Even if the contract does not require written bidder inquiries, Caltrans strongly encourages using the form to the extent practical because the form helps manage bidder inquiries and responses. Office of Office Engineer has samples of this form.

### 3-205 Disclosure of Construction Estimates

Until bids are opened, the engineer's estimate of the cost of each contract item, supplemental fund allocation, contingency fund allocation, state-furnished materials allocation, and any other portion of the project estimate are not public information.

Before bid opening, bidders may know only the total allocated funds available on a specific project. This information is available for minor A and major projects. The weekly advertisement for bid listing provides the information either in hard-copy form or on the internet:

http://www.dot.ca.gov/hq/esc/oe/

To get minor B project funds allocation information, call the Sacramento office at (916) 227-6075, send a fax request to (916) 227-1950, or use the internet:

http://www.caltrans-opac.ca.gov/refguide.pdf

### 3-206 Names of Prospective Bidders

For all projects except minor B construction projects, the names of prospective bidders can be obtained by requesting a "Plan Holders List" in writing or by fax from the Caltrans plans counter in Sacramento, fax (916) 654-7028, or from the internet:

http://www.dot.ca.gov/hg/esc/

3-205 **Disclosure of** Construction **Estimates** 

3-206 Names of **Prospective Bidders** 



# Section 3 Contract Award and Execution

- 3-301 General
- **District Recommendation** 3-302





This manual is being updated to reflect changes from the 2006 to the 2010 Standard Specifications. Bracketed section numbers refer to the 2006 Standard Specifications.

#### Section 3 **Contract Award and Execution**

### 3-301 General

Section 3, "Contract Award and Execution," of the Standard Specifications outlines the requirements for award and execution of the contract.

The Office of Office Engineer awards unit prepares and processes the documents necessary to award or reject a project. Districts recommend award of the contract or rejection of bids.

Construction is responsible for administration of the contract and generally assumes this responsibility at the time of award. Section 3-802A, "Work Before Contract Approval," of this manual covers administrative details.

### 3-302 District Recommendation

Ready to List and Construction Award Guide, Section 14, "District Recommendation for Award," describes the district recommendation procedure in detail, including questions to ask contractors.

The district must not reveal the award recommendation to any contractor or external agency or entity until Engineering Services, Office of Office Engineer makes the final award decision. The Office of Office Engineer will inform the contractor of Caltrans' decision.

Section 3 **Contract Award** and Execution

3-301 General

3-302 District Recommendation



# Section 2 Equal Employment Opportunity

8-201	General
8-202	Laws, Regulations, and Specifications
8-203	Preconstruction Conference
8-204	Onsite Interviews
8-205	Federal-Aid Project Equal Employment Opportunity Posters
8-206	Contractor Employee Title VII Complaints—Discrimination Complaint Processing
8-207	Equal Employment Opportunity Title VI Complaints and Contract Administration
8-208	Contracts Containing "Federal Requirements Training Special Provision"
8-209	Contractor's Annual Equal Employment Opportunity
8-210	Deducting Payment for Failure to Submit Reports
	Example 8-2.1Sample Letter to the ComplainantExample 8-2.2Sample Letter to the Contractor

This manual is being updated to reflect changes from the 2006 to the 2010 *Standard Specifications*. Bracketed section numbers refer to the 2006 *Standard Specifications*.

## Section 2 Equal Employment Opportunity

### 8-201 General

This section presents the requirements for administration of the nondiscrimination and equal employment opportunity (EEO) provisions of the contract. The total EEO program is complex and involves functional units outside of construction. Requirements in this section apply primarily to activities and responsibilities resulting from contractual requirements and are not necessarily complete for either Caltrans or the contractor insofar as the total responsibilities and activities.

### 8-202 Laws, Regulations, and Specifications

California requirements for public works contractors on the subjects of nondiscrimination and EEO are located in Title VI of the Civil Rights Act of 1964, Section 12990 of the Government Code, Title 2 of the regulations of the Fair Employment and Housing Commission, and Sections 8107 and 8203 of the California Code of Regulations.

Section 7-1.02I(2), "Nondiscrimination," [7-1.01A(4), "Labor Nondiscrimination"] of the Standard Specifications and Section 7-1.11B of FHWA-1273 II, "Nondiscrimination," in the required federal contract provisions of the specifications call the contractor's attention to these and other requirements. Under the terms of the contract, the contractor is responsible for its subcontractors' compliance.

### 8-203 Preconstruction Conference

The resident engineer or district labor compliance officer must discuss the nondiscrimination and EEO provisions of the contract at the preconstruction meeting and advise the contractor of the requirements in Title VI of the Civil Rights Act of 1964. See Section 5-0, "Conduct of the Work," of this manual for details on preconstruction conferences.

### 8-204 Onsite Interviews

District labor compliance officers or project personnel conduct onsite interviews with employees of the contractor and subcontractors. Conduct employee interviews for nondiscrimination and EEO at the rate of at least two employees per contract, per month including at least one interview from the prime contractor and each subcontractor until the contract is accepted or all employees on the project have been interviewed. Record interviews on form CEM-2504, "Employee Interview: Labor Compliance/EEO," or form CEM-2504 (Spanish), "Entrevista de Empleado: Labor Compliance/EEO," if applicable. EEO interviews are done in conjunction with the labor compliance interviews as a means of verifying that the contractors and subcontractors are in compliance with the EEO and the labor nondiscrimination contract provisions mandated by state and federal statutes and regulations. Section 2 Equal Employment Opportunity

8-201 General

8-202 Laws, Regulations, and Specifications

8-203 Preconstruction Conference

8-204 Onsite Interviews



When an employee's responses to the EEO questions in form CEM-2504 indicate possible violations, the district labor compliance officer must forward a copy of that interview to the Division of Construction labor compliance unit for further action. See Section 8-102A (3), "Interviews With Contractor Personnel," of this manual for more information.

8-205

**Federal-Aid Project Equal Employment Opportunity Posters** 

8-206 **Contractor Employee** Title VII Complaints— Discrimination **Complaint Processing** 

## 8-205 Federal-Aid Project Equal Employment Opportunity Posters

Ensure the contractor's EEO policy and the "Equal Employment Is the Law" poster are posted in a prominent location on the project for all employees to review for the duration of the contract. Check to see that the contractor has these posted when visiting each construction location. The "Equal Employment Opportunity Is the Law" poster must also be posted in the resident engineer's and contractor's office.

The district labor compliance officer verifies that the policy and poster are displayed at offsite locations during a source document audit. If the contractor is noncompliant, the district labor compliance officer provides additional posters and writes a memo advising the resident engineer of the contractor's compliance status for inclusion in the project file.

### 8-206 Contractor Employee Title VII Complaints—Discrimination **Complaint Processing**

A complaint that implicates the contractor's employment practice is considered an EEO complaint based on Title VII of the Civil Rights Act of 1964. EEO complaints may originate as a direct complaint from the contractor's employees or as a result of a contractor employee interview. When a complaint is received, document all EEO complaints in a diary, a memo to the project files, or on form CEM-2504. The public, contractors, suppliers, and vendors may also present these complaints. File the original EEO complaint in the project records and send a copy of the complaint to the district labor compliance officer.

The district labor compliance officer sends complainants a letter notifying them of their rights under the Civil Rights Act of 1964. The letter also provides a complete list of resolution options, including:

- Use of the employer's internal EEO program for investigation and resolution.
- Filing a complaint directly with the California Department of Fair Employment and Housing (DFEH).
- Filing a complaint directly with the United States Equal Employment Opportunity Commission.

A copy of the following items should be included in the letter:

٠ Form DFEH-159 "Guide for Complainants and Respondents," a DFEH brochure available on the internet:

http://www.dfeh.ca.gov/res/docs/Publications/DFEH-159.pdf

http://www.dfeh.ca.gov/res/docs/Publications/DFEH-159s.pdf

Instructions on "Filing a Charge of Employment Discrimination," are available on the internet:

http://www.eeoc.gov/employees/howtofile.cfm



For a sample letter to the complainant, see Example 8-2.1 at the end of this section.

In addition, the district labor compliance officer sends a notification letter to the prime contractor that an employee has alleged discrimination and that the employee was given notice of available recourse. The labor compliance officer must not divulge the employee's name. The letter reminds the contractor of its obligation to conduct an investigation pursuant to contract requirements. For a sample letter to the contractor, see Example 8-2.2 at the end of this section.

The district labor compliance officer refers the issue to the Division of Construction, including copies of the letter to the complainant, the letter to the contractor, and the employee interview form. Take further district construction actions only on the advice and guidance of the Division of Construction.

### 8-207 Equal Employment Opportunity Title VI Complaints and Contract Administration

The Civil Rights Act of 1964, Title VI, Section 601 states in part, "No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance."

Any complaint indicating that the practices of Caltrans have the effect of discrimination is considered a Title VI complaint. It may originate from a direct complaint made by the public or by a contractor. Refer Title VI complaints that occur during construction to the district labor compliance officer, who refers the complaint to the Division of Construction. The division reviews the complaint, gathers relevant documents, and refers it to the Discrimination Complaint Investigations Unit to process the complaint and take further action as necessary.

During construction, amendments to the contract may occur by change order. Some change orders may invoke Title VI complaints or violate the principles of environmental justice. Environmental justice is the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. Examples include new traffic detours; changes in the length or limits of the project; mitigation measure changes; materials changes; and changes in contract-mandated material borrow, disposal sites, or setup of portable asphalt or concrete plants.

Take affirmative measures to ensure nondiscrimination and preservation of environmental justice when administering changes. If a change requires Title VI mitigation measures, the resident engineer may conduct community meetings, prepare press releases, or hire public relations consultants to keep communities informed on project scope and schedule changes. Consult with the Division of Construction's Labor Compliance Officer, the design project engineer, and the project manager as necessary to evaluate the impacts of any significant change including compliance with Title VI requirements.

# 8-208 Contracts Containing "Federal Requirements Training Special Provision"

Federal-aid projects use the training special provision when a project is of sufficient size and duration to support full training periods. When the special provision provides a number of required trainees or apprentices, Section 7-11D, "Training," of the *Standard Specifications* applies. The intent of the provision is to enhance contractors' EEO

8-207 Equal Employment Opportunity Title VI Complaints and Contract Administration

8-208 Contracts Containing "Federal Requirements Training Special Provision"

California Department of Transportation • Construction Manual • June 2012



programs through on-the-job training. Training and upgrading of minorities and women toward journeyman status are the primary objectives of the provision. However, the contractor must not use the training program to discriminate against an applicant for training. The provision states the number of apprentices or trainees the contractor must use on the project and provides guidance on actions the contractor must take. In addition, the provision provides for reimbursement to the contractor for each apprentice or trainee used on the project.

Before the work involving apprentices or trainees begins, the resident engineer requests that the contractor submit a training plan with the number of apprentices or trainees in each classification, the training program to be used, and the start date for training in each classification. Review the training plan to confirm that it meets the requirements of the training specification. Subcontractors who will be using apprentices or trainees must provide a plan for them. Apprentices and trainees must be employed under programs currently approved by the United States Department of Labor, Office of Apprenticeship Training, Employer and Labor Services (DOL). Contractors must submit evidence of apprentice or trainee registration in an approved training program to the resident engineer or district labor compliance officer. Contractors may use trainees only when the trainee wage schedule for the specific classification is listed in the federal wage determination applicable to the contract.

The resident engineer may accept a training program not currently approved by DOL as long as the program meets the EEO requirements of the federal contract special provisions. Contractors must submit a request to the resident engineer for approval of such programs before their use on the project. Submit the contractor's request to the district labor compliance officer who forwards it to the Division of Construction for verification of conformance to federal requirements. If the training program meets the requirements, the Division of Construction will submit the program to the Federal Highway Administration (FHWA) with a recommendation for approval. Upon approval from the FHWA, the division will notify the district labor compliance officer and resident engineer. Notify the contractor of the training program approval.

Write a change order, as specified in the contract, to provide the appropriate compensation for the apprentices or trainees. The total amount of the change order should reflect the contractor's plan for use of apprentices or trainees. No markup will be applied to the specified hourly rate.

During construction, the contractor must give periodic reports demonstrating performance regarding training requirements. Tailor reporting periods to the duration of the project. For example, a year-long project should require at least quarterly reports. Review the reports for conformance with the contractor's training plan before approving reimbursement for training hours. Do not reimburse the contractor unless the reports have been provided. Reimburse the contractor for training in excess of the required number of apprentices or trainees as long as evidence of registration in a DOL program is provided. When an apprentice or trainee quits the project, the contractor must provide the reason. The contractor will have fulfilled contract requirements if applicable training has been provided to the specified number of apprentices or trainees.

8-209 Contractor's Annual Equal Employment Opportunity



The United States Code of Federal Regulations, Title 23, Section 230.121 requires prime contractors and subcontractors, regardless of tier, to submit the FHWA form-

1391 to the resident engineer for review. The form shows the composition of the contractor's workforce by race and gender for each job category. The requirement applies to all contractors, regardless of tier, who have federal-aid contracts exceeding \$10,000 and who worked any part of the last full week of July. Contractors are subject to a progress pay deduction for failure to submit a satisfactory form. Section 8-210 below lists applicable procedures and amounts.

### 8-210 Deducting Payment for Failure to Submit Reports

Make EEO deductions in situations where the contractor or subcontractor fails to submit the required training plan, does not post the necessary EEO information, or fails to provide FHWA form-1391, "Federal-Aid Highway Construction Contractors Annual EEO Report."

Before taking a deduction, notify contractors found in noncompliance in writing, advising them of the specific deficiencies. Refer to Section 5-103F(1c), "Deductions," of this manual for instructions on taking the deduction.

8-210 Deducting Payment for Failure to Submit Reports



## Example 8-2.1 Sample Letter to the Complainant (Employee)

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN, Jr., Governor DEPARTMENT OF TRANSPORTATION DIVISION OF CONSTRUCTION 1120 N STREET P. O. BOX 942874 SACRAMENTO, CA 94273-0001 Flex your power PHONE (916) 654-2157 FAX (916) 654-6345 Be energy efficient! TTY 711 [The telephone and fax numbers must be those of the signature block regardless of who signs the letter. REMOVE THIS NOTE BEFORE PREPARING THE LETTER.] [Date] [Employee's Name] [Address] [City, State, Zip] Re: [Caltrans Contract Number, Federal ID Number, and Project Description] Dear [Employee's Name]: This letter confirms our discussion on [Date] where you informed us that you believe you have experienced discrimination and allege [Company Name] discriminated against you based on [race, color, national origin, sex, age or disability]. The district labor compliance officer reviewed the allegations and notified [Company Name] in writing, that you have been provided a complete list of resolution options, including the use of the employer's internal equal employment opportunity program for investigation and resolution. Your name was not given to [Company Name]. The California Department of Transportation (Caltrans) monitors discrimination complaints against sub-recipients of state or federal financial assistance. However, Caltrans has no statutory or regulatory authority to conduct an investigation of alleged discrimination complaints between the contractor and the contractor's employee. Caltrans has no authority to gather evidence, subpoena documents, depose witnesses, or file equal employment opportunity cases on behalf of a contractor's employee. Caltrans ensures that the contractor conducts an equal employment opportunity investigation, and documents oversight activities in the project records. You must file a complaint with the California Department of Fair Employment and Housing or the United States Equal Employment Opportunity Commission within specific statutory deadlines from the date of the alleged discriminatory act. For more information, please refer to enclosed form DFEH-159, "Guide for Complainants and Respondents. If you have questions relating to the information referenced above, please contact [Labor Compliance Officer's Name] at [Labor Compliance Officer's Telephone Number]. Sincerely, [District Labor Compliance Officer's Name] District Labor Compliance Officer District [Number] Construction Form DFEH-159, "Guide for Complainants and Respondents" Enclosures: "Filing a Charge of Employment Discrimination," available online at: http://www.eeoc.gov/employees/howtofile.cfm **Division of Construction** c. Office of Business and Economic Opportunity



## Example 8-2.2 Sample Letter to the Contractor

STATE OF CALIFORNIA-BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN, Jr., Governor DEPARTMENT OF TRANSPORTATION DIVISION OF CONSTRUCTION 1120 N STREET P. O. BOX 942874 SACRAMENTO, CA 94273-0001 PHONE (916) 654-2157 Be energy efficient FAX (916) 654-6345 TTY 711 [The telephone and fax numbers must be those of the signature block regardless of who signs the letter. REMOVE THIS NOTE BEFORE PREPARING THE LETTER.] [Date] [Contractor's Name] [Address] [City, State, Zip] Re: [Caltrans Contract Number, Federal ID Number, and Project Description] Dear [Contractor's Name]: The California Department of Transportation (Caltrans) has been notified that a current or former employee of [Company Name] filed (or) plans to file a formal complaint of discrimination. The current or former employee is alleging discrimination based on [race, color, national origin, sex, age or disability]. The district labor compliance officer provided the complainant a complete list of resolution options, including 1) the use of the employer's internal equal employment opportunity program for investigation and resolution and 2) filing a complaint with the California Department of Fair Employment and Housing or with the United States Equal Employment Opportunity Commission. Caltrans complies with nondiscrimination laws and regulations, including Title VII of the Civil Rights Act of 1964. Title VII states, "It shall be an unlawful employment practice for an employer: (1) to fail or refuse to hire or to discharge any individual or otherwise to discriminate against any individual with respect to their compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin or (2) to limit, segregate, or classify their employees or applicants for employment in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect their status as an employee, because of such individual's race, color, religion, sex, or national origin." Caltrans ensures that its activities or programs are nondiscriminatory. No one may intimidate, threaten, coerce, or engage in other discriminatory conduct against anyone because he or she has either taken action or participated in an action to secure rights protected by the nondiscrimination statutes. Any individual alleging such harassment, retaliation, or intimidation may file a complaint with the California Department of Fair Employment and Housing or with the United States Equal Employment Opportunity Commission. If you have questions, relating to the information referenced above, please contact the Office of Business and Economic Opportunity at (916) 324-1700. Sincerely, [District Labor Compliance Officer's Name] District Labor Compliance Officer District [Number] Construction c: Division of Construction Office of Business and Economic Opportunity Subcontractors (if applicable)

California Department of Transportation • Construction Manual • June 2012

