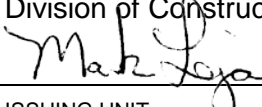


MANUAL CHANGE TRANSMITTAL		NO. 12-8
TITLE: Department of Transportation <i>Construction Manual</i>	APPROVED BY: Mark Leja, Chief Division of Construction 	DATE ISSUED: November 28, 2012
SUBJECT AREA Table of Contents and various sections of the <i>Construction Manual</i>	ISSUING UNIT Division of Construction	
SUPERSEDES	DISTRIBUTION All Requested Manual Holders	

This manual change transmittal delivers the revisions of Chapter 1, Sections 1-0, 1-1, 1-2, 1-3, and 1-5 of the *Construction Manual*. Updated sections may contain updated language, information, corrections, and references resulting from updates to the 2010 *Standard Specifications*, and from policy and procedural changes. Change bars in the margins of the revised sections indicate text that was changed or added.

Please update your manual according to the table below.

Section(s)	Incorporates	Remove Old Page(s)	Insert New/Revised Page(s)
Section 1-0, "Construction Manual Overview"	None	1-0.1 thru 1-0.2	1-0.1 thru 1-0.2
Goldenrod, Section 1-1, "Construction Organization"	None	1-1.i	1-1.i
Section 1-1, "Construction Organization"	None	1-1.1 thru 1-1.8	1-1.1 thru 1-1.8
Goldenrod, Section 1-2, "Public Relations"	None	1-2.i	1-2.i
Section 1-2, "Public Relations"	None	1-2.1 thru 1-2.4	1-2.1 thru 1-2.4
Goldenrod, Section 1-3, "Personnel Development"	None	1-3.i	1-3.i
Section 1-3, "Personnel Development"	None	1-3.1 thru 1-3.4	1-3.1 thru 1-3.4
Section 1-5, "Field Expenses and Purchases"	None	1-5.1 thru 1-5.2	1-5.1 thru 1-5.2

Section 1-0, “Construction Manual Overview”

- Updates information regarding procedure to change *Construction Manual*.
- Updates terminology.

Section 1-1, “Construction Organization”

- Updates terminology to match that currently used in the *Construction Manual*.
- Updates reference to align with 2010 *Standard Specifications*.

Section 1-2, “Public Relations”

- Updates terminology to match that currently used in the *Construction Manual*.

Section 1-3, “Personnel Development”

- Updates terminology to match that currently used in the *Construction Manual*.

Section 1-5, “Field Expenses and Purchases”

- Updates terminology to match that currently used in the *Construction Manual*.
- Deletes reference to obsolete Form FA-0202.

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 Construction Manual Overview

Section 0 Construction Manual Overview

1-001 Purpose

1-001 Purpose

When applying Caltrans policy to the administration of construction contracts, knowing how to not only interpret contract documents and plans but also how to apply engineering experience and judgment is extremely important. The *Construction Manual* cannot replace this valuable experience and judgment.

Caltrans intends this manual as a resource for all personnel engaged in contract administration. The manual establishes policies and procedures for the construction phase of Caltrans projects. However, this manual is not a contract document. It imposes no obligations or requirements on contractors. Resident engineers and other Caltrans personnel who administer Caltrans contracts must never attempt to use the manual as a substitute or supplement to the specifications and other contract requirements.

1-002 Scope

1-002 Scope

This manual covers topics in two general areas:

1. Policies and procedures related to the duties of Caltrans construction personnel. This topic includes internal policies and procedures for the following areas:
 - Safety
 - Training
 - Acquiring and using resources
 - Public relations
 - Coordinating with other Caltrans units and outside agencies and organizations
2. Construction contract administration. This topic includes the following areas:
 - Making timely and accurate contract payments
 - Ensuring and documenting the contractor's compliance with contract requirements

The manual uses the *Standard Specifications* and some of the more frequently used special provisions as the basis for contract administration instructions and guidelines. Before attempting to apply these instructions and guidelines, the engineer working in the field must have a thorough understanding of the specifications and other contract requirements.

The manual contains many references to other publications and documents, including other Caltrans manuals and publications. However, we have made a concerted effort to minimize any repetition of information found in other publications.

**1-003
Format**

1-003 Format

The manual has been carefully organized to reflect, as much as possible, the general organization of the *Standard Specifications*. Chapters are organized to logically lead the user through the general process of contract administration. For quick reference, an outline of many sections is included at the beginning of those sections, and the major headings are shown in the outside margin of each page.

**1-004
Changes**

1-004 Changes

The Division of Construction issues Construction Policy Bulletins (CPBs) to change policies and procedures. CPBs supersede any conflicting information, guideline, or instruction in the manual.

Be alert for new or revised specifications that may affect the current manual guidelines for contract administration. As specifications, practices, procedures, and policies change, CPBs will be issued. From time to time, subsequent revisions will be made to the manual.

If you find that a policy contained in this manual is unclear or has been superseded and no CPB has been issued covering the changed policy, you can use the following procedure to recommend a manual change:

- Complete Form CEM-9001, “Construction Manual Proposed Change,” and send it to construction_publications@dot.ca.gov. Explain the reason for the proposed change, and attach a draft of the proposed revision.
- The Division of Construction will review the proposed change and make a decision regarding any future revision.

Section 1 Construction Organization

1-101 General

1-102 Division of Construction Organization

1-102A Division of Construction Chief

1-102B Office Chiefs and Staff

1-102C Construction Field Coordinator

1-103 District Construction Organization

1-103A District Director

1-103B District Construction Deputy Director

1-103C Construction Manager

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1-105A Using Personnel From the Office of Structure Construction

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1-106 Local Projects

Chapter 1 Caltrans Construction Organization

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 Construction Organization

Section 1 Construction Organization

1-101 General

1-101 General

According to the California Government Code, the powers and duties of Caltrans include constructing transportation systems.

The Streets and Highways Code directs Caltrans to lay out and construct all state highways between the termini designated by law and on the locations determined by the California Transportation Commission. This code also authorizes Caltrans to enter into those contracts that are required for Caltrans to perform its duties.

The Caltrans director has delegated to the deputy director of Project Delivery various responsibilities for administering construction contracts. In turn, the deputy director of Project Delivery has delegated many of these responsibilities to the Division of Construction chief.

The majority of Caltrans construction contracts receive federal aid. Consequently, federal regulations take precedence over state law and Caltrans policy.

1-102 Division of Construction Organization

1-102 Division of Construction Organization

The following are the responsibilities of various personnel in the Division of Construction.

1-102A Division of Construction Chief

The Division of Construction chief leads the program to deliver quality transportation products and services. The Division of Construction chief does the following:

- Establishes the division's direction, definition, policies, and objectives.
- Develops and uses performance measures to determine program efficiency and effectiveness.
- Acts as a consultant to the districts and service centers.

1-102B Office Chiefs and Staff

Within the Division of Construction, office chiefs and their staff assist in the following:

- Developing and improving program performance measures.
- Providing reviews to document the understanding and application of processes for administering contracts.
- Providing expert assistance on complex and sensitive contract administration issues.

Office chiefs and their staff collaborate with the construction industry and other stakeholders to improve the administration of construction contracts.

**1-103
District
Construction
Organization**

1-102C Construction Field Coordinator

Construction field coordinators are responsible for the following:

- Counseling assigned districts on Division of Construction policy.
- Validating that district construction contracts are administered fairly and in good faith.
- Advising district construction managers on complex and sensitive issues in construction contracts.

1-103 District Construction Organization

A district must manage all construction contracts in accordance with statutory requirements, Caltrans directives, and Division of Construction policies.

The following include the responsibilities of various district personnel for administering construction contracts:

1-103A District Director

Within district boundaries, the district director must efficiently administer and operate the Caltrans construction activities within the district.

1-103B District Construction Deputy Director

The district construction deputy director must execute the Caltrans construction activities within district boundaries. The duties of the position include the following:

- Planning and directing the activities of the district construction division.
- Budgeting for personnel and other resources as necessary to administer contracts and provide for the work's integrity and safety.
- Obtaining and providing training for all activities related to contract administration and construction engineering.
- Ensuring district construction complies with statutory requirements, Caltrans directives, and Division of Construction objectives.
- Coordinating construction activities with other district functions.
- Recommending to the Division of Construction chief revisions to the policies and procedures outlined in this manual.

1-103C Construction Manager

In districts with large construction programs, the construction manager must execute within district boundaries the assigned portion of Caltrans construction activities. The duties of the position include the following:

- Budgeting for personnel and other resources necessary to administer contracts.
- Obtaining and providing training for all activities related to contract administration and construction engineering.
- Coordinating construction activities with other district functions.

1-103D Construction Engineer

The construction engineer must execute the portion of Caltrans construction activities assigned and is accountable for the performance of the assigned construction employees. The duties of the position include the following:

- Supervising assigned personnel.
- Ensuring adequate training for those assigned personnel who are or may be assigned as resident engineers, encouraging diligent pursuit of their Caltrans Resident Engineer Certificate.
- Ensuring that materials and completed work comply with plans, specifications, and design criteria.
- Approving or not approving a resident engineer's recommendation for change orders and time extensions.
- Ensuring that the maintenance of project records complies with this manual.
- Ensuring the performance of all safety-related activities.
- Ensuring compliance with regulations and specifications related to labor and civil rights.
- Collaborating with the district's project development unit on constructability reviews and providing expert assistance on construction matters for design and traffic engineers.
- Ensuring that the practice of civil engineering on assigned contracts complies with the Professional Engineers Act.

1-104 Office of Structure Construction Organization

The Office of Structure Construction is responsible for the technical control of structure work. Engineers from the Office of Structure Construction are assigned to all districts to provide field engineering for structures. The district may request that the assigned structure representative act as the resident engineer on projects where structure work predominates.

The Office of Structure Construction has the ultimate responsibility and authority for decisions relating to the structural adequacy of contract work on structures.

1-104A Office of Structure Construction Chief

For construction contracts, the Office of Structure Construction chief must uniformly provide statewide structure construction services to the districts. The duties of the position include the following:

- Planning and directing the statewide activities of the Office of Structure Construction.
- Budgeting for structure construction personnel and other resources, as necessary, to administer contracts.
- Obtaining and providing training for all engineering activities for structure construction.
- Ensuring that statewide structure construction complies with regulations, Caltrans policies, and program objectives.

1-104

Office of Structure Construction Organization

- Coordinating the statewide activities of structure construction with all district functions and with other Division of Engineering Services functions.
- Recommending to the Division of Construction chief revisions to the Division of Construction's policies and objectives.
- Producing and distributing policies and procedures for inspecting and administering structure construction work.

1-104B Structure Construction Manager

The structure construction manager is responsible for the structure construction staff within a designated area of the state. The area may include one or more districts or a portion of a metropolitan area or district. The duties of the position include the following:

- Assigning structure construction staff within the manager's assigned area, including approving requests to assign structure engineers to act as resident engineers on projects.
- Obtaining and providing adequate training for all structure construction staff within a designated area.
- Advising and assisting the district about change orders and claims involving structure work.
- Providing the structure construction headquarters in Sacramento with status information on all contracts within the manager's area.
- Informing the district managers of structure construction activities within their areas.

1-104C Structure Construction Engineer

The structure construction engineer must execute the structure portion of construction projects and is accountable for the performance of assigned structure construction employees. The duties of the position include the following:

- Supervising the activities of structure construction personnel.
- Ensuring adequate training for assigned structure construction personnel.
- Collaborating with the Division of Engineering Services and the district's design unit on constructability reviews, and providing expert assistance on structure construction methods.
- Ensuring structure materials and completed structure work generally comply with the contract plans, specifications, and design policies.
- Providing concurrence and advice to the district for change orders and time extensions on structure work items.
- Ensuring and verifying that the maintenance of project records complies with this manual.
- Ensuring the performance of all safety-related activities.
- Ensuring that the practice of civil engineering on contracts in the assigned area complies with the Professional Engineers Act.

1-105 Construction Project Organization

The number of state personnel required on a contract varies with the particular circumstances involved. A resident engineer may be assigned to a single contract or may be assigned as resident engineer over several contracts. Field office assistants, assistant resident engineers, and other support personnel are assigned as necessary.

The district must obtain maximum efficiency on the project with a minimum number of personnel. This expectation means that all personnel must have adequate training.

Depending on the project size, a full-time office assistant may be assigned for the clerical work.

In some instances, several smaller projects may be grouped together and administered from a single field office, making it possible to employ full-time clerical office assistants.

Personnel furnished by engineering consultants may be assigned to the project as assistant resident engineers. The resident engineer must be familiar with the terms of the engineering consultant contract. The resident engineer must also monitor the performance of the consultant personnel.

1-105A Using Personnel From the Office of Structure Construction

When structure work predominates, the districts may use structure construction personnel as resident engineers. Upon district request, the Office of Structure Construction will select staff acceptable to the district as resident engineers.

All resident engineers, whether from the Office of Structure Construction or district personnel, report and act through the district.

To ensure optimum use of combined district and structure construction personnel, the project personnel may be interchanged freely when conditions require, particularly when work load varies because of temporary overstaffing or understaffing. In such instances, the resident engineer and the structure representative will assign personnel through agreement with each other. In making their assignments, they will consider the responsibility of structure personnel for the technical control of structure work.

Because of the specialized training of structure and transportation personnel, prolonged use of either in the work of the other must be avoided.

1-105B Resident Engineer

Under the general direction of a construction engineer, the resident engineer is responsible for the contract administration and construction engineering of all assigned projects. As a Caltrans representative, the resident engineer acts within the authority of the following:

- The State Contract Act
- Section 5-1.03 [5-1.01], "Engineer's Authority," of the *Standard Specifications*
- This manual
- Any other applicable administrative instructions

The construction engineer is the resident engineer's counselor on the intent and application of any portion of the contract. On complex or sensitive construction issues, the resident engineer and construction engineer should consult with the construction field coordinator.

1-105 Construction Project Organization

A registered professional engineer must be responsible for the engineering integrity of a construction project. The resident engineer, in charge of the project, bears this responsibility, and must be a licensed professional engineer in the State of California, as defined by the Professional Engineers Act.

Selecting a person to act as resident engineer is dependent upon the following:

- The work's magnitude and complexity
- The type of work
- The degree of independent control and direction to be exercised
- Pursuit or completion of the Caltrans Resident Engineer Certificate Program

Only the person best qualified for a specific project should be selected as the resident engineer.

The civil service classification of a resident engineer is related to the project's size and complexity as well as to the staff size required to properly administer the assigned contract or contracts. Normally, the person selected as resident engineer will be a registered professional engineer at the transportation engineer level. On complex projects (or a group of projects) that require a large staff to monitor the contractor's operations, a senior level engineer may be necessary. Complexity, rather than monetary value, governs the assignment of resident engineers.

The resident engineer must thoroughly study the assigned project, becoming familiar with all its facets. The resident engineer must analyze the plans, estimate, and preliminary quantity calculations, and determine if the estimated quantities cover all work items contemplated. If the resident engineer discovers any major discrepancies, the engineer must take appropriate action. The resident engineer must also thoroughly study the requirements of environmental commitments and permits, including pollution and erosion control plans.

If it becomes apparent at any time that the probable unobligated balance of funds, with due regard for the amount of work remaining, is not sufficient to complete the project, the resident engineer must bring the situation to the supervisor's attention. To permit contract expenditures to overrun allotted funds seriously reflects on the resident engineer's ability. For the procedure to obtain additional funds, refer to Section 5-203, "Obtaining Additional Funds," of this manual.

Once assigned, the resident engineer should remain on the project until its completion, including the completion of all project documents and administrative matters.

1-105C Structure Representative

Under the general direction of a structure construction engineer, the structure representative must inspect, document, and field test materials for all structure work on a project. As a service to the resident engineer, the structure representative will also provide claim positions and draft change orders. As a representative of the Division of Engineering Services, the structure representative acts within the authority of the following:

- The State Contract Act
- The *Standard Specifications*
- This manual

- The *Bridge Construction Records and Procedures* manual
- Other applicable administrative instructions

Under the general direction of a construction engineer and a structure construction engineer, the structure representative must administer all assigned contracts. When acting as a resident engineer, the structure representative has authority commensurate with this responsibility.

The structure representative acting as resident engineer should consult the construction engineer whenever the structure representative is unsure about the intent and application of any portion of the contract.

The person responsible for the structural integrity of a construction contract must be a registered professional engineer. If the structure representative is not registered, that person must defer to the structure construction engineer any decisions and actions that constitute the practice of civil engineering, as defined by the Professional Engineers Act.

1-105D Assistant Resident Engineer

The assistant resident engineer must ensure the performance of assigned work complies with the requirements of the plans, *Standard Specifications*, and special provisions. The duties of the position include the following:

- Ensuring the contractor complies with all contract requirements.
- Performing, or calling for, required tests to ensure work quality.
- Keeping complete, accurate, and concise records of the work and quantities.
- Keeping the resident engineer informed of work progress and problems.
- Responding to any contractor questions about plans and specifications. The assistant resident engineer must not direct the contractor's work but must immediately notify the contractor when work is not in compliance.
- As a representative of Caltrans, acting professionally at all times.
- Working effectively by knowing construction methods and inspection techniques.

1-105E Field Office Engineer

The field office engineer must maintain complete and accurate project records. These records may include the following:

- Monthly progress pay estimates
- Extra work reports
- Change orders
- Labor and equipment records
- Correspondence
- Personnel records

Once assigned, the field office engineer should remain on the project until its completion.

1-105F Specialists and Coordinators

The complexity of many Caltrans projects has resulted in the use of many district specialists and coordinators. These include the following:

- Materials and plant specialists
- Weights and measures coordinators
- Survey coordinators
- Labor compliance personnel
- Safety coordinators
- Traffic handling, signing, and electrical specialists
- Landscape specialists
- Environmental - construction liaison
- Storm water coordinator
- Schedule analysts
- Claims engineers
- Partnering coordinators
- Change order specialists
- Progress payment specialists
- Construction coordinators

In the absence of a Caltrans policy on a specific job problem, the authority of the resident engineer will prevail over that of a specialist or coordinator.

1-106 Local Projects

1-106 Local Projects

Local construction projects are either “State Administered,” “Locally Administered,” or “Administered by Private Sponsor.” For the responsibility of state personnel on local projects, see Chapter 9, “Projects Funded by Other Agencies,” of this manual.

Section 2 Public Relations

1-201 General

1-202 Relations Among Caltrans Personnel

1-202A The Resident Engineer and Staff

1-202B The Resident Engineer and the District

1-203 Relations With the Contractor

1-204 Relations With Utility Companies and Other Public Agencies

1-205 Relations With Property Owners

1-206 Relations With the General Public

Chapter 1

Caltrans Construction Organization

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 Public Relations

Section 2 Public Relations

1-201 General

1-201 General

The subject of public relations is divided into the following categories:

- Internal relations among Caltrans personnel
- Relations with the contractor
- Relations with utility companies and other public agencies
- Relations with property owners
- Relations with the general public

1-202 Relations Among Caltrans Personnel

1-202 Relations Among Caltrans Personnel

Within Caltrans, public relations is divided into two subcategories: relations between the resident engineer and staff, and relations between the resident engineer and the district.

1-202A The Resident Engineer and Staff

Development and maintenance of good relations between Caltrans personnel is largely a matter of adequate communication and a clear division of responsibility. Employees must know precisely what their responsibilities are, and they must be given the authority to handle these responsibilities.

The most important communications are between project personnel and the resident engineer. It is recommended strongly that resident engineers hold short staff meetings each workweek. At these meetings the resident engineer should brief assistant resident engineers on the week's operations, announce any changes or new assignments of responsibility, and discuss any other pertinent subjects.

Resident engineers should provide personnel with an opportunity to demonstrate their strongest capabilities and highest capacity for responsibility. The resident engineer should ensure that assistant resident engineers have an opportunity to gain experience in the various construction phases.

Assignment rotation is encouraged as long as the effectiveness of the overall operation does not suffer. Similarly, if feasible, assign personnel to operations different from those handled on previous projects. Newly assigned personnel should study the applicable portions of the *Standard Specifications*, special provisions, plans, this manual, and any other applicable Caltrans publications. An individual should not be required to perform new duties until the resident engineer is assured that the person is capable of performing them correctly and effectively.

1-202B The Resident Engineer and the District

Communication is a two-way responsibility. Resident engineers should adequately inform their supervisors of facts so the supervisors are not embarrassed by learning about project events from outside sources. Conversely, good management practice requires that supervisors keep their personnel informed of decisions affecting an employee's area of responsibility. Communication has failed whenever a resident engineer first hears about a district decision from outside sources.

An important phase of internal relations is the necessity for working with other functional units within the organization. People in other units do their work with information available to them, just as construction forces do. They, too, have problems in their work. When there is a difference of opinion on some part of the project, whether it is about design, traffic handling, or some other feature, the resident engineer should approach the other party with an open mind to discuss the problem.

1-203 Relations With the Contractor

1-203 Relations With the Contractor

In communicating with the contractor and the contractor's personnel, it is important that the resident engineer take a clear position. It is far better to start on a basis of administering the contract firmly in accordance with the plans and specifications than it is to correct a situation caused by laxity later in the contract's life.

The employees assigned to construction must have a thorough knowledge of the plans and specifications governing the contract. Clear evidence of possession of this knowledge will go a long way in promoting smooth relations with the contractor's personnel. If the resident engineer and assistant resident engineers know the plans and specifications thoroughly, the contractor's personnel will respect the resident engineer's judgment in cases where interpretation becomes necessary. A satisfactory relationship between Caltrans and the contractor at all levels is an important result of smooth relations between the resident engineer and the contractor's superintendent.

Proper and ethical contract administration requires the exercise of several essential attributes. Ideally, resident engineers and assistant resident engineers should be experienced, resourceful, and considerate, in addition to having a thorough knowledge of the specifications and the work to be done.

Numerous collateral duties are also included in contract administration. These duties, which are as important as good engineering, include the following: competent record keeping, well-monitored personnel activities, enforcement of labor laws, and oversight of safety.

The primary responsibility, however, is to ensure that the rights of both Caltrans and the contractor are equally and impartially enforced. The taxpayers are entitled to what they pay for, and the contractor is entitled to payment for constructing the work as defined by the contract.

In general, there are two types of specifications: "end-result" and "method." For work governed by end-result specifications, the engineer determines "what" and the contractor decides "how."

Method specifications are more restrictive as to the contractor's options. Deviations from specified methods require change orders. Deviations must also provide equal or better results while preserving the contract's integrity. Finally, the rights of unsuccessful bidders must be protected.

If any doubt exists about a contractual matter, the resident engineer has an obligation to clarify in writing the Caltrans' position for the contractor.

1-204 Relations With Utility Companies and Other Public Agencies

Good public relations with internal and external stakeholders will have a beneficial effect in completing a construction project within scope, schedule, and budget. Preconstruction discussions that may affect Caltrans functional units or local agencies and communities should involve all stakeholders.

The resident engineer should make early personal contact and establish a good working relationship with staff of affected utility companies and other agencies. Such agencies may include: local school districts, local transit agencies, permitting agencies, California Highway Patrol and local police organizations, local bicyclist and pedestrian advocacy groups, local community groups, and any other government agency or local group with interest in the project. Early personal contact with staff from these agencies and groups will acquaint them with upcoming construction operations and will enable them to have input and schedule their work or services to the best advantage of all concerned.

1-205 Relations With Property Owners

Another important part of public relations is courteously dealing with the property owners near the project. The owners are the ones most affected by construction operations.

By courteously listening to the property owner's problem, request, or question and by taking the time to explain or answer, the resident engineer can generate faith that Caltrans is not an impersonal organization running roughshod over the general public or the individual. Sometimes this approach will reduce unreasonable demands and complaints by the property owner.

Construction operations (for example, temporary closures of streets and driveways and construction noise, especially at night) may have an adverse affect on nearby residents and businesses adjacent to the project. Informing business owners and residents near the project about the reason for, and the duration of, the activity will go a long way toward a higher degree of acceptance and tolerance. Timely notice is important. Also consider rescheduling construction activity around major business or public events.

The necessity for residential relocations should be considered during constructability reviews and if necessary discussed at project development team meetings. Details for temporary relocations appear in Section 10.10.05.01 of the *Right of Way Manual*.

If nighttime noise levels become an issue during construction and temporary relocation of residents is not addressed in the project files, contact the construction field coordinator for guidance.

Start public relations early. The fullest possible cooperation of the contractor's organization should be solicited to achieve good public relations most effectively. By calling on property owners together, the resident engineer and the superintendent can assure owners that inconvenience and the nuisance of noise and dust will be kept to a minimum. For some projects on metropolitan freeways, contractors have distributed their own informational folders to property owners. This practice should be encouraged.

1-204

**Relations With
Utility Companies
and Other Public
Agencies**

1-205

**Relations With
Property Owners**

1-206
Relations With the
General Public

1-206 Relations With the General Public

The main differences in public relations with property owners and the general public occur in the scope of coverage and the degree of personal contact. When highway construction information must be conveyed to large numbers of highway users (including those who commute regularly over a particular route and those who use the route only occasionally), contact the public information officer early in the project. The most satisfactory method is for the officer to make full use of the press, radio, internet, and television to publicize the upcoming work.

Another proven method of promoting good public relations is to use district personnel as speakers at meetings of the local chamber of commerce and service clubs. Resident engineers so inclined might consider joining a service organization. Frequent notices and progress reports in the local press are also very common and effective methods of keeping the public informed of changing project conditions.

On advice by the resident engineer, the district should also issue press releases. The district should contact members of the local press before the job starts, inform them how they can contact the proper person for information throughout the contract, and invite them to tour the project with the resident engineer. In special cases, the district may prepare and distribute pamphlets to motorists who are delayed as they pass through construction. If the traveling public outside of the district will be affected, the Caltrans information officer in Sacramento must be advised directly.

Project personnel should always keep in mind that they are representatives of Caltrans and the State of California. As such, they are expected to conduct themselves in a manner that will command respect and be a credit to the organization.

Section 3 Personnel Development

1-301 General

1-302 District Role

1-303 Supervisor Role

1-304 Individual Duties

1-305 Resources and Budgeting

1-306 Subject Matter, Trainees, and Instructors

1-307 Just-in-Time Training

1-308 Training Methods

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 Personnel Development

Section 3 Personnel Development

1-301 General

1-301 General

Personnel development is essential for successfully implementing Caltrans' mission, vision, goals, and strategic priorities. Moreover, most construction employees want to learn new job skills. A comprehensive training and development program helps in recruiting and retaining new construction staff. It is in the best interests of Caltrans to train staff early in their careers, reinforce that training as time passes, and update staff job skills as changes in policy and technology affect the way Caltrans conducts business and serves its stakeholders.

Base staff development needs on Caltrans' fundamental goals and objectives. Design each training and development activity to produce construction personnel who are prepared to perform their essential job duties.

1-302 District Role

1-302 District Role

District construction will do the following:

- Identify training needs based on the following:
 1. The employee's current knowledge and skills.
 2. Additional job skills necessary for the employee's success in the current job assignment.
 3. Skills the employee will need for future job assignments.
- Include training and development planning in each employee's yearly individual development plan.
- Provide each employee with adequate training and development opportunities that will facilitate the implementation of the employee's training and development plan.
- For each construction employee, maintain a historic record of completed training and development sufficient to enable a supervisor to evaluate the employee's construction knowledge and skill level.

1-303 Supervisor Role

1-303 Supervisor Role

Supervisors will do the following:

- Ensure that each employee under their direct supervision is capable of performing the assigned duties.
- Periodically review subordinates' qualifications and use that information when making decisions about new job assignments.
- When evaluating staffing needs and planning job assignments, carefully consider cross-training opportunities for all staff, if collective bargaining agreements and

memorandums of understanding allow such opportunities. A well cross-trained staff has the following abilities:

1. More flexibility in completing a job
 2. More ability to collaborate
 3. Stronger ability to adjust to changing project conditions
- Establish a succession plan, indicating who will back up the supervisor and the employees when they are absent. Update the plan each year based on staff performance, and ensure the unit training and development plan supports the advancement of interested employees.
 - Take immediate action to correct any known deficiency in an employee's capability to perform currently assigned tasks.
 - Encourage the development of subordinates, and foster a working environment in which employees are encouraged to learn new job skills.
 - Assist employee participation in external training opportunities they request. Such training must benefit the employees' professional career development. Ensure the training schedule does not have a significant negative effect on the employees' work. This training must also conform to current departmental guidelines for career related training.

1-304 Individual Duties

1-304 Individual Duties

Each individual employee will do the following:

- As directed by the supervisor, attend training activities and learn the skills and acquire the knowledge necessary to meet the standards for satisfactorily completing job assignments.
- Attend a training class when scheduled to do so.
- Be responsible for evaluating their own ability to perform the essential job duties for each task they are asked to perform. If the individual does not feel properly trained or qualified to execute a specific job task, then that person must notify the supervisor.
- In the planning of activities for training and development, consider future promotional opportunities. Planning for training and development requires the employee to maintain a basic level of knowledge necessary to efficiently perform current job duties and also requires the employee to expand knowledge to include job duties for the next position on the individual's career path.
- Obtain prior approval from the supervisor to attend a training activity.
- Accurately report training expenditures, including filling out the "G" number column on the time reporting system. In addition, employees are to follow the procedures for requesting and documenting training detailed in the Learning Management System on Caltrans' intranet.

1-305 Resources and Budgeting

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As a minimum, individual construction employees must devote 2 percent of regularly scheduled work time to "in-service occupational training." In the 2 percent occupational training goal, do not include training other than that required in the occupational training plan. In addition to the resources for the 2 percent goal will be



resources to sufficiently plan, prepare, and execute training instruction required to support the district's training and development plan. On average, organized in-service training may be distributed so that the average employee will spend approximately 2 percent of the time as a trainee.

1-306 Subject Matter, Trainees, and Instructors

The district construction administration must ensure the completeness and accuracy of the information disseminated through training and development activities. The Division of Construction, Office of Training and Environmental Compliance, will support, coordinate, and assist the district to the full extent of its abilities and resources.

Instructional subject matter for a course should be sufficiently broad to encompass all aspects of an operation or area of activity to which a person may be assigned. Occupational instruction should be offered close to the time when personnel will be required to use the job skills.

Personnel and consultant trainers who prepare and conduct training must be qualified in the subject matter and in the theory and techniques of training. Assistance for determining training expertise and training for trainers is available through the Division of Construction.

1-307 Just-in-Time Training

Some contract special provisions provide for "just-in-time training," which is joint training with industry and construction staff. This training should include all contractor and Caltrans staff who are directly involved in the construction operation. The objective of this training is to introduce new practices, improve workmanship, improve quality, and to provide current and timely training to the people actually performing the work.

1-308 Training Methods

In-service training can be handled in various ways. Depending on the particular subject, different methods may be appropriate. In all instances, encourage instructors to use learning techniques that involve their students rather than techniques that simply use lecture. Whenever possible, students should be provided with the opportunity to perform a task shortly after receiving instruction and watching a demonstration. Classes for inspectors should be participatory and include "guided discussions" that encourage and promote an exchange of ideas and experiences among participants.

Caltrans construction uses the following basic training references:

- Construction Manual
- Standard Specifications
- Standard Plans
- District construction manuals
- *Highway Construction Checklists*
- *California Manual on Uniform Traffic Control Devices*
- *Maintenance Manual*
- California Test Methods
- Other technical publications

1-306 Subject Matter, Trainees, and Instructors

1-307 Just-in-Time Training

1-308 Training Methods

The Division of Construction also has a number of training videos available for checkout. Many districts also have training videos available for staff viewing.

A highly effective method of industrial training and development is on-the-job training and mentoring by pairing less experienced staff with seasoned construction personnel. The supervisor must be careful to pair individuals with compatible personalities. The mentor should be knowledgeable and well versed in current Caltrans standards. The student can enhance the effectiveness of this training technique by respecting the experience of the mentor, being genuinely interested, and being actively involved in the training process.

Occupational training must be accomplished as an organized effort followed by on-the-job experience. Certainly no substitute exists for experience, and often a well-regulated, on-the-job training program is an excellent method for the completion of instruction.

The districts must make every effort to coordinate their training activities with the other districts. For example, each of three districts may have only two or three people in need of training in a specific subject. It is preferable, therefore, to combine employees from the three districts to create one class. The districts and the Office of Structure Construction can also exchange qualified instructors.

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 5 Field Expenses and Purchases

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1-501 General

1-501 General

This section contains guidelines for paying for travel expenses and obtaining goods and services.

1-502 Travel Expenses

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The Division of Accounting Services administers payment for travel expenses that Caltrans employees incur.

Supervisors must ensure employees do not abuse travel expenses. The *Caltrans Travel Guide*, issued by the Division of Accounting Services, contains instructions and the policy for submitting travel expense claims.

Pay particular attention to the charging information on travel requests and travel expense claim forms. Employees who attend training or work on task forces must obtain from the group coordinator or leader the correct charging information.

1-503 Miscellaneous Purchases

1-503 Miscellaneous Purchases

Whenever possible, obtain supplies and equipment from district warehouses and stockrooms. Use the procedures established in the district for obtaining these supplies. See the *Caltrans Acquisition Manual*, issued by the Office of Procurement and Contracts of the Division of Administrative Services, for information and guidelines about acquiring the following:

- Commodities
- Supplies
- Equipment
- Furniture
- Information technology products and services

For items that are unavailable through district warehouses, use commercial vendors. The following two procedures are the most frequently used by field personnel to purchase from such vendors.

1-503A Cal-Cards

Cal-Cards are credit cards used to purchase items that are not available in district warehouses and stockrooms. For guidelines and information about Cal-Cards, see the *Cal-Card Handbook* on the web site of the Office of Procurement and Contracts of the Division of Administrative Services. To use Cal-Cards, use the procedures established by the Office of Procurement and Contracts and the districts.

In general, use the Cal-Card for office and engineering supplies necessary to support the construction project.

1-503B Cash Purchase Transactions

You may make cash purchases of no more than \$50 plus tax for the following:

- Incidental supplies not stocked by the district
- Minor emergencies, services, or other nontravel outlays

Typical cash purchases include items such as postage stamps and post office box rental fees. Obtain and submit receipts for all cash purchases.

For reimbursement for approved purchases, submit Form FA-3202, "Travel Expense Claim."

1-504 Service Contracts

1-504 Services Contracts

The resident engineer uses service contracts to obtain services or rent equipment to fulfill construction engineering obligations. For many services, such as repair of office equipment, a master service contract may be in existence. For other services, such as repair of state-owned buildings used for field offices, obtain a specific service contract. Do not use service contracts to purchase supplies or finished articles.