


<b>MANUAL CHANGE TRANSMITTAL</b>		NO. <b>18-1</b>
TITLE: Department of Transportation <i>Construction Manual</i>	APPROVED BY:  Rachel Falsetti Chief, Division of Construction	DATE ISSUED: April 17, 2018
SUBJECT AREA Sections 3-9 and 5-0 of the <i>Construction Manual</i>	ISSUING UNIT Division of Construction	
SUPERSEDES  N/A	DISTRIBUTION  All Requested Manual Holders	

The purpose of this manual change transmittal is to announce updates and corrections to the Caltrans *Construction Manual*. Please note the updates, and print new sections for your manual as needed. Updates are published on <http://www.dot.ca.gov/hq/construc/constmanual/> and are indicated by the date listed in the right-hand column. Specific changes are enumerated below:

### General

- If applicable, updated cross-references to other *Construction Manual* or *Standard Specifications* sections.
- If applicable, updated broken or changed web links and changed titles to other documents or manuals.
- Updated organizational changes to align with policy or procedures updated after publishing the most recent *Construction Manual* edition, July 2017.
- Changed all section footers to update publication date to April 2018.

### Section 3-9, “Payment”

- Section 3-906 provides additional guidance for a collaborative progress payment process when a contractor chooses to actively participate. Section 9-1.16, “Progress Payments,” of the *Standard Specifications* requires Caltrans to make an estimate of work completed each month. Progress payments on many projects already are collaboratively developed, reviewed, and discussed prior to the resident engineer processing the monthly payment.
- Example 3-9.2, “Form Letter for Submitting Proposed Final Estimate to the Contractor,” has been updated in consideration of the language in Section 9-1.17D(1), “General,” of the *Standard Specifications*.

### Section 5-0, “Conduct of the Work”

- Section 5-003, “Preconstruction Conference With the Contractor,” adds the progress payment process to the list of topics and related guidance to be discussed with the contractor.
- Section 5-003 adds guidance on the optional collaborative progress payment process described in Section 3-906.

Section(s)	Background or reason for change	References
Section 3-9, “Payment”	Section is being updated with new policy to allow contractors to collaborate on progress payments	Section 9-1.16, “Progress Payments,” of the <i>Standard Specifications</i> Section 9-1.17D(1), “General,” of the <i>Standard Specifications</i>
Section 5-0, “Conduct of the Work”	Includes discussion of collaborative progress pay in the preconstruction meeting	Section 3-906, “Progress Payments,” of the <i>Construction Manual</i>

### Section 9 Payment

#### 3-901 General

This section covers measurement and payment of bid item work and change order work, partial payments, and payment to the contractor after contract acceptance. The contract provides the following methods to make payment for all work performed:

- Payment for bid item work at unit prices. The contractor establishes the fixed prices of the bid items included in the contract. Fixed prices of bid items should not be confused with the costs to produce the work. Loss of profit, damage, repair, cost escalation, or other unanticipated changes of item costs are the sole responsibility of the contractor unless specifically provided for in the contract.
- Adjustments to contract prices (known as payment adjustments).
- Payment for change order work. Before payment can be made for change order work, the resident engineer must issue an approved change order as described in Section 5-3, “Change Orders,” of this manual. For additional information regarding Caltrans policies on change order work, refer to Section 3-403, “Changes and Extra Work,” of this manual. The methods specified for paying for change order work are bid item prices, force account, agreed price, and specialist billing.
- Deductions and withholds are temporarily or permanently taken from monies due under the contract.

#### 3-902 Measurement

Contract work, as bid on by the contractor, is measured and paid for as bid items. Bid items are measured for payment as units. The unit for each bid item is shown in the Bid Item List as “unit of measure.” Bid items may be measured by units of count, length, area, volume, weight, or lump sum. The Bid Item List also includes the estimated quantity of each bid item. Resident engineers and assistant resident engineers must determine, by measurement and calculation, the quantities of the various bid items actually performed by the contractor.

##### 3-902A Method of Measurement

Check the “measurement” and “payment” clauses in the specifications for the required method of measurement for each bid item. Use the specified method to measure quantities. For more information about measuring quantities for specific bid items, refer to Chapter 4, “Construction Details,” of this manual.

A change in the unit or the method of measurement changes the contract. Do not change the unit or the method of measurement unless the change is provided for in a change order.

##### 3-902B Accuracy

Measure and calculate bid item quantities to a degree of accuracy consistent with the unit price of the item. Give early consideration to the accuracy desired so that all personnel on a given project will measure and calculate uniformly. The general rule is to measure

### Section 9 Payment

#### 3-901 General

#### 3-902 Measurement

to a degree of accuracy that, when calculated, the resulting value will be within 0.2 percent to 0.5 percent. A \$50,000 item should be measured and calculated to result in payment within about \$100.

### 3-902C Source Documents

Enter measurements and calculations for bid item quantities on permanent record sheets that are commonly referred to as “source documents.” Include on each source document the appropriate bid item number, the location of installation (if applicable), the necessary measurements and calculations, and the name of the person preparing the document. Check source document calculations independently, and enter the name of the checker on the document.

Check source document calculations as soon as possible, preferably before the quantity is entered on a progress pay estimate. Always check them before entry on the proposed final estimate. Whenever possible, measure, calculate, and check bid item quantities as the work on a bid item is completed. Resident engineers must assign responsibility for checking calculations to assistant resident engineers in the same manner that other project responsibilities are assigned.

Enter into the system for progress payment the quantities from the source documents. For a description of the progress payment process, refer to Section 5-1, “Project Records and Reports,” of this manual.

### 3-902D Audit Trail

State the source of any figure, calculation, or quantity shown on the source document. For instance, a quantity may be the result of a field measurement, scale weights, a count, or a calculation based on planned dimensions.

Create a clear and easily followed trail for the total pay quantity in the proposed final estimate back to the first measurement or calculation for each bid item.

Consider organizing source documents for each bid item so an easily followed audit trail exists. Category 47, “Drainage Systems,” in Section 5-102, “Organization of Project Documents,” of this manual, provides a very good system, especially for large projects, for organizing source documents for drainage related bid items. Category 48, “Bid Item Quantity Documents,” in the same manual section, describes the numbering system to be used for source documents for other bid items.

### 3-902E Weighing Equipment and Procedures

The following describes the duties and responsibilities of the people involved in weighing and measuring materials and the procedures for ensuring accurate weighing and measuring:

#### *3-902E (1) Personnel*

The process of determining bid item quantities by weighing and measuring includes the following personnel:

- The resident engineer
- Assistant resident engineers
- The district weights and measures coordinator
- The Division of Construction weights and measures coordinator

In addition to Caltrans personnel, the following people are involved in the weighing and measuring process:

- County sealers of weighing and measuring devices
- Representatives of the California Department of Food and Agriculture, Division of Measurement Standards
- Private scale technicians performing *Material Plant Quality Program (MPQP)* testing.

### 3-902E (2) Responsibilities

All Caltrans personnel must be alert for conditions that contribute to failure to obtain the accurate weight and measurement of materials. The following describes the typical duties and responsibilities for verifying compliance with the specifications for weighing and measuring:

#### 3-902E (2a) Resident Engineers

The resident engineer must do the following:

- Verify accurate weighing and measuring through inspection.
- Routinely determine that proper weighing procedures are used.
- Record, or verify recording of, spot-checks of weighing procedures in daily reports.
- Require the contractor to correct any malfunctioning weighing or measuring device.
- Order the resealing and retesting of scales and meters as often as necessary to assure accuracy.
- Determine when weighmaster certificates are to be used. Order the use of weighmaster certificates except when the number of loads is very small or conditions preclude proper weighing procedures. In the daily report, record the reasons for not using weighmaster certificates.

#### 3-902E (2b) District Weights and Measures Coordinator

The district weights and measures coordinator must do the following:

- Provide technical assistance to the resident engineer and assistant resident engineers.
- Provide information to resident engineers regarding the adequacy of scales and the validity of seals.
- When requested by the resident engineer, witness the testing of scales or meters in compliance with the requirements of the *MPQP*.
- Furnish copies of the *MPQP* report to each project using material plants tested in accordance with the *MPQP*.
- Furnish and attach Form CEM-4204, “*MPQP* Acceptance Sticker” to tested scales.
- Maintain a file on the current status of all scales that are commonly used for weighing materials for Caltrans projects in the district.
- On request, provide scale status information to adjacent districts.
- Perform spot-checks of weighing and measuring devices and procedures in the district, and furnish written reports to the resident engineer.

- Determine whether any weighing or measuring problems should involve the California Department of Food and Agriculture, Division of Measurement Standards. Request any such involvement through the Division of Construction weights and measures coordinator.

### 3-902E (2c) Assistant Resident Engineers

Assistant resident engineers act for the resident engineer and, depending on the authority delegated to them, do the following:

- Observe the installation of scales installed primarily for use on a given project. Decide whether such scales and appurtenances meet the requirements of the specifications. When necessary, request assistance from the district weights and measures coordinator.
- Inspect and observe the general condition of all scales used on the project. If the scales are in questionable condition, request advice from the district weights and measures coordinator.
- Request a material plant approval report from the district weights and measures coordinator. If a seal or Form CEM-4204 is not valid, require the contractor to have the scales tested before use.
- Witness scale testing. Determine that the scales have been tested to the capacity for which they are being used on the project. Request that the district weights and measures coordinator observes the procedure.
- Whenever a scale is moved, overhauled, or shows obvious deficiencies, require the scale to be restored to normal operating condition and then retested.
- To observe the weighing of materials, visit the scale house or plant periodically. If necessary, request technical assistance from the district weights and measures coordinator. Check the scale sheets and weighmaster certificates to ensure they are being used properly.
- Spot-check tare and gross weights to see that weighmasters are using the correct tare. Ensure the weighmaster is licensed for the scale location.
- Observe all meters that are required under the contract, and verify that they have been tested and sealed.
- Collect weighmaster certificates at delivery. A Caltrans employee should be present at the work site to collect weighmaster certificates. Sign or initial the weighmaster certificate to indicate that the represented material was used in the work.

When certified summary scale sheets are used, and weighmaster certificates are not used, verify that material shown on the summary sheets has been used in the work. Do this verification by using a tally sheet, a spread record, or a random check. In the daily report, record that the material has been used in the work and the type of verification method. Sign the summary scale sheets to certify that the represented material, less any material deducted from the total, was used in the work.

Return to the contractor a copy of any weighmaster certificates or scale sheets representing loads or partial loads that are not to be paid for. On the weighmaster certificate or scale sheet, indicate the quantity of material not included for payment. Retain a copy for the project records. When a determination is made to reduce the quantity, advise the contractor's foreman or superintendent of the amount and reason for

the reduction. In the daily report, note the reduction and the name of the contractor's employee whom you advised of the reduction.

### 3-902E (2d) Contractors

The following describes some of the duties and responsibilities of contractors and their agents in using scales and measuring devices for measuring and proportioning materials:

- The contractor and materials suppliers must maintain scales and meters within the accuracy specified.
- The owner of the scale or meter must maintain it in good operating condition at all times. If breakdowns or suspected inaccuracies occur, the owner must make repairs. After repairing a commercial device, the owner must notify in writing the county sealer of weights and measures that a repair was made. The device must be resealed before it is used to weigh materials for payment. For noncommercial devices, the contractor must ensure the *MPQP* test is performed. The contractor must notify the resident engineer at least 24 hours before any scheduled testing so that the testing can be witnessed.

Do not directly contact the county sealer of weights and measures for the contractor. The owner of the measuring device must request the testing. The resident engineer may only inform the contractor that such testing is necessary.

The district weights and measures coordinator may contact the Division of Construction weights and measures coordinator on any question regarding the validity of a seal or the legal capacity of a scale.

### 3-902E (2e) Division of Construction Weights and Measures Coordinator

The Division of Construction weights and measures coordinator does the following:

- Ensures the weights and measures program is operating satisfactorily throughout the various Caltrans districts.
- Serves as a contact between the district weights and measures coordinators and the California Department of Food and Agriculture, Division of Measurement Standards.
- Keeps the district weights and measures coordinators informed of the latest equipment and technology being developed throughout the industry.

### 3-902F Final Pay Items

Section 9-1.02C, "Final Pay Item Quantities," of the *Standard Specifications*, defines and specifies the procedure for calculating pay quantities for final pay items.

## **3-903 Force Account**

The force account method, used to determine payment for extra work, consists of adding specified markups to the actual cost of labor, equipment, and material used to perform the extra work.

Section 9-1.04, "Force Account," of the *Standard Specifications* specifies the force account method of payment. Section 5-3, "Change Orders," of this manual contains examples of change orders with payment for extra work at force account.

Normally the contractor will use labor and equipment that is on the site and used for work in progress. The change order will usually specify materials to be used in the extra

## **3-903**

## **Force Account**

work. However, before the work begins, the resident engineer should discuss with the contractor the labor, equipment, and materials to be used. The resident engineer can avoid misunderstandings and inefficiencies by knowing the resources to be used ahead of time. After the work is performed, Caltrans must pay the contractor for material used and at the appropriate rates for the number of hours that labor and equipment was used.

### 3-903A Authorization for Force Account Payment

On the authorizing change order, always show the amount to be paid for extra work at force account as an estimated amount. For the format for change orders, refer to Section 5-3, "Change Orders," of this manual. You may make payment for extra work in excess of the estimated amount shown on the contract change order up to 100 percent of the estimated amount or \$15,000, whichever is smaller. To authorize any additional payment, use a supplemental change order.

### 3-903B Force Account Records

On daily reports, record observations and inspections of extra work in progress in sufficient detail to provide a reasonable basis for agreement on payment. Records must be original, not a copy from other documents.

Include the following information when appropriate to the method of payment for the work:

- Description of work performed. This description must be consistent with the description of extra work authorized by the change order.
- Time and date of inspection.
- The change order number.
- Location of work.
- Types of labor, equipment, and materials used.
- Estimated hours worked.
- General measurement or amount of work accomplished.

Make entries on the day of observation. If clarifying reports are necessary to cover work not previously reported, state the facts as known and date the clarifying report as of the day it is written.

The daily report must also contain a reference to any known off-site work.

When extra work is performed at force account, decide whether the magnitude of the work warrants the full-time presence of an assistant resident engineer. An assistant resident engineer assigned full time must include in the daily report the number of hours actually worked at the site. When an assistant resident engineer is assigned only part-time, daily reports must present only known facts. On the daily report, record that inspection was "intermittent." A typical entry might read as follows:

Hours reported on report dated 6/26/00 entry based on one inspection during the day. Later found out that crew and equipment worked whole shift instead of half shift [add the date of the supplemental entry and sign the entry].

Include notations concerning decisions to allow or deny payment for work that may be in dispute or not considered a legitimate part of extra work. Similarly, prepare a



supplemental daily report if it is later found that the number of hours or labor and equipment was substantially different than recorded on the original daily report. Such a supplemental daily report might read as follows:

6/24/16 – 10:15 a.m. – Change Order No. 17 – Placing Riprap Lt. of Sta. 500.

Crew of two laborers and foreman with a D-6 crawler tractor with side-boom and operator laid about 150 sq ft of salvaged rubble riprap. Estimate crew and tractor worked about 4 hours.

### 3-903C Tentative Agreements

Do not give copies of daily reports to the contractor's personnel. Do not permit the contractor's personnel to sign or initial daily reports. However, at the earliest possible time, reach tentative agreement on extra work details. With the contractor's foreman, discuss labor, equipment, and materials at the end of each shift or no later than the following shift that extra work was performed. Good communication at this time will help to prevent misunderstanding and arguments over details at a later date.

Use a district "tentative agreement" form if the form complies with district policy. On this form, tentatively agree to and list hours of labor and equipment used in extra work at force account for each change order each day. The form must state that the labor, equipment, and time worked are "acceptable for progress payment purposes." In this way, use of the form does not preclude subsequent audit and adjustment.

### 3-903D Markup for Subcontracted Work

Section 9-1.04A, "General," of the *Standard Specifications* includes an administrative markup for the prime contractor when a subcontractor performs the work.

When an engineer's cost analysis is based on force account, using rates as specified in the contract, include a markup in the calculation of the work performed by a subcontractor in the following situations:

- Changes and extra work at the agreed prices in accordance with Section 4-1.05A, "General," of the *Standard Specifications*.
- Work performed before item elimination in accordance with Section 9-1.06D, "Eliminated Items," of the *Standard Specifications*.
- Bid item adjustment due to increased or decreased quantities in accordance with Section 9-1.06B, "Increases of More Than 25 Percent," and Section 9-1.06C, "Decreases of More Than 25 Percent," of the *Standard Specifications*.
- Payment adjustments for work-character changes are made in accordance with Sections 4-1.05B, "Work-Character Changes," and 9-1.15, "Work-Character Changes," of the *Standard Specifications*.

### 3-903E Owner-Operated Labor and Equipment

For owner-operated labor and equipment, refer to Section 9-1.04A, "General," of the *Standard Specifications*. The method for paying for owner-operated equipment on a force account basis is at market-price invoice. Because owner-operators include labor and equipment markups and the labor surcharge in their invoice price, only apply the applicable administrative markup for the owner-operated labor and equipment invoice. The administrative markup to be applied to the invoice for projects with the time-related

overhead bid item is 10 percent. The administrative markup to be applied to the invoice for projects without the time-related overhead bid item is 15 percent.

### 3-903F Billing for Extra Work at Force Account

The following are the procedures for billing for extra work at force account:

- The contractor must submit change order bills covering extra work under each change order each day that extra work is performed. The contractor must use the Caltrans internet change order billing system to submit change order bills. Refer to Section 5-103E, “Change Order Billing,” of this manual for additional information.
- Field construction personnel must do the following when reviewing change order bills:
  1. Compare change order bills against assistant resident engineer’s daily reports and tentative agreements, if they are used. Make this comparison to verify the correctness of the contractor’s billing, and to avoid the possibility of a duplicate payment for the same work. For a discussion of assistant resident engineer’s daily reports and tentative agreements, refer to Sections 3-903B, “Force Account Records,” and 3-903C, “Tentative Agreements,” of this manual.
  2. The contractor must include everything to be paid for on the change order bill. Do not add any items even though you know them to be legitimate charges. Instead, call the omission to the contractor’s attention. The contractor may submit a supplemental change order bill to include the omitted items.
  3. Delete items for which the contractor is not entitled to payment.
  4. You may correct hours for labor and equipment downward, but not upward.
  5. Do not correct wage rates that the contractor has submitted. Reject any change order bill with incorrect wage rates. Note that Caltrans must pay for extra work at the same wage rate paid by the contractor. Do not refuse to pay a particular wage rate because it is above the prevailing wage rate.
  6. Correct equipment rental codes that are obviously in error, or reject the reports. Verify that the rental codes shown are for the equipment that was actually used.
  7. The person, whether a contractor or Caltrans employee, who makes corrections to a change order bill must print out, sign (not initial) and date the corrected change order bill.
  8. Maintain a log of change order bills received and rejected.

The resident engineer must approve the change order bill to authorize payment for extra work. The resident engineer’s approval of a change order bill for progress payment certifies that payment is in accordance with contract requirements and established administrative procedures.

### 3-903G Labor

The markups to be applied to the cost of labor performed on force account work are specified in Section 9-1.04B, “Labor,” of the *Standard Specifications*, or as changed by the special provisions.

A “labor surcharge” is included in the cost of labor. The *Labor Surcharge and Equipment Rental Rates (Cost of Equipment Ownership)* book in effect at the time the work is performed contains the labor surcharge percentage. One general rate applies to

most crafts, and the book contains several higher rates for certain crafts. The resident engineer must determine the correct surcharge percentage to be used and verify that the percentage has been entered on the change order bill.

At times, a superintendent or owner acts as a working foreman or an equipment operator or works at some other craft. In such situations, make payment on a “value received” basis. Payment will be made for owners or supervisory personnel at the proper rate for the work performed. For example, pay for a superintendent acting as a foreman on force account work at the normal hourly rate for a foreman. Do not prorate the superintendent’s weekly or monthly salary to an hourly rate. In paying for a superintendent on force account work, make the payment on a functional basis and not on a position or classification basis.

On some projects, a superintendent or project manager directs the activities of several foremen or one or more general foremen who directly supervise the foremen. The general foremen are sometimes referred to as superintendents, such as grading superintendents or paving superintendents. This change in nomenclature does not change the functional nature of these positions. They are general foremen or foremen and are not considered to be supervisory or overhead personnel. Make payment at the actual hourly rate paid by the contractor when such personnel function as foremen on force account work.

When paying for salaried personnel, do not authorize force account payment for overtime hours unless the contractor has an established practice of paying overtime to salaried personnel. The usual case is that the weekly or monthly salary covers the number of hours required by the work.

The *Standard Specifications* allow for payment of the actual subsistence and travel allowances paid by the contractor.

Pay per diem and travel allowances on force account only when the contractor is paying these allowances on bid item work.

When 7-day subsistence is included in labor contracts in lieu of per diem and travel time, subsistence will be paid for the entire period involved if the workers are employed full time on force account.

When workers are employed on both force account work and bid item work in the same day, prorate subsistence payments and travel allowances between the contractor and Caltrans. Base the prorated amount on the first 8 hours worked. Do not pay per diem for time worked after the first 8 hours in any one day.

### 3-903H      Material

Payment for material purchased for force account work must be supported by a copy of the vendor’s invoice whenever possible. If no individual invoice is available, as in the case of materials taken from contractor’s stock, a copy of the mass purchase invoice may be used as support. If no invoice is available to support unit purchase prices, submit a statement with the change order bill. In the statement, explain how the unit prices were verified. Any invoice the contractor submits must represent the material actually used.

### 3-903I      Equipment Rental

For equipment used for extra work paid at force account, refer to Section 9-1.04D, “Equipment Rental,” of the *Standard Specifications* or as modified by the special provisions. The following are guidelines for paying for equipment rental.

### 3-903I (1) *Equipment Selection*

In accordance with Section 5-1.03, "Engineer's Authority," of the *Standard Specifications*, approve equipment used on force account work. Before giving approval, determine whether available and suitable equipment is already on the job site or whether equipment not on the job site is required. For example, a piece of equipment on the job site that can perform a given operation satisfactorily may be larger than necessary. Determine if it will be economical to use oversized equipment at its rate or to obtain equipment of the proper size. Obtaining equipment not on the job site necessitates payment for move-in and move-out expenses and for minimum rental periods. The determination may also be based on other factors, such as public safety and the urgency of the work. Availability of equipment on the job site can be determined by using daily diaries, progress schedule, and other contractor-provided information. When there is no contractor-owned equipment available for use and only rented equipment is available on the job site, the engineer may approve the use of the rented equipment at the rental invoice price in accordance with Section 9-1.04D, "Equipment Rental," of the *Standard Specifications*. If both contractor-owned and rented equipment on the job site are suitable and available for use, the contractor-owned equipment should be used.

Some equipment includes accessories as an integral part of the basic machine. When accessories are an integral part of the machine, the rates in the *Labor Surcharge and Equipment Rental Rates (Cost of Equipment Ownership)* book indicate that the accessory is included in the quoted rate. Do not make deductions for accessories on such integral equipment. For unusual situations, consult the Division of Construction. When the accessories are not integral and not necessary for the effort of the extra work, payment is only for the equipment required.

### 3-903I (2) *Equipment Rental Rates*

The *Labor Surcharge and Equipment Rental Rates (Cost of Equipment Ownership)* book contains the cost of ownership rates for most of the equipment used on Caltrans projects. However, the Division of Construction has also established cost of ownership rates for some equipment that is not in the book. These rates are available on the Caltrans Division of Construction website. To establish rates that are not listed in the book or on the website, use the following procedure:

- Obtain a complete description of the equipment, including the manufacturer, model number, horsepower, size or capacity, and accessory equipment.
- If the equipment is nonstandard or unusual, request the following data from the contractor:
  1. Type of equipment (such as segmented, self-propelled, telescoping hydraulic crane, articulated, or rubber-tired roller)
  2. Trade name
  3. Model and serial numbers
  4. Year manufactured
  5. Size, capacity, or both
  6. Type and amount of power
  7. Whether crawler, rubber-tire, or other
  8. Manufacturer or distributor (if local, give address)

9. Initial cost of the basic machine and attachments
10. Operating requirements, costs, or both, if available or unusual
11. Name of owner

- Transmit this information to the Division of Construction. The Division of Construction will establish a cost of ownership rate, codes, and effective time period and advise the district by mail, email, or fax. Use this document as the authority to pay the rate established.
- The contractor must be advised of the codes so that its billings can include them.
- For equipment not on the job site, and in special circumstances, the *Standard Specifications* permit a rate to be paid that is in excess of the rate listed in the *Labor Surcharge and Equipment Rental Rates (Cost of Equipment Ownership)* book. When the contractor proposes a rental rate in excess of the listed rate, verify that the equipment meets all the conditions listed in Section 9-1.04D(1), “General,” of the *Standard Specifications*. The higher rate will constitute a change to the contract and must be established by a change order. Use the following procedures to determine the rate:
  1. Obtain a written statement from the contractor. The statement must include the proposed rate and the justification that Section 9-1.04D(1), “General,” of the *Standard Specifications* requires.
  2. Decide whether the conditions of use and ownership of the equipment meet all the specified criteria for payment of the higher rate.
  3. Submit a change order that provides for the proposed rate. State in the change order whether the table titled “Equipment Rental Hours” is applicable. The table appears in Section 9-1.04D(3), “Equipment Not On the Job Site and Not Required for Original-Contract Work,” of the *Standard Specifications*. If the equipment is used for bid item work, use the normally established rental rates for the entire time the equipment is used for extra work. Include in the change order a clause similar to the following: “In the event this equipment is subsequently used on bid item work, this rate is void.”
  4. Include justification for approval in the change order memorandum, and attach the contractor’s letter.
- Equipment for which the rental rate is not shown in the *Labor Surcharge and Equipment Rental Rates (Cost of Equipment Ownership)* book, but for which the Division of Construction established a rental rate, is eligible for the higher rate, providing all necessary conditions are met.

### 3-903I (3) Time in Operation

The engineer in the field must determine the rental time to pay for equipment in accordance with Section 9-1.04D(2), “Equipment on the Job Site,” of the *Standard Specifications*.

In general, consider equipment to be in operation when all of the following conditions exist:

- The equipment is at the site of the extra work or being used to perform the extra work.
- The equipment is not inoperative due to breakdown.

- The force account work being performed requires the equipment.

Use the following examples as guidelines for determining rental time to be paid for equipment.

- An air compressor is on the job site for 8 hours on a force account operation. It is actually used for only a few periods during the 8 hours, but it is impractical to use it on other work during the standby periods. Pay for the compressor and all accessories used intermittently for the entire period. The engine does not have to be running continuously during the period to qualify for payment. If the air compressor was also used on bid item work intermittently, prorate the 8 hours between the extra work and the bid item work.
- An air compressor is on the job site for 8 hours. It is used for the first 2 hours, but after those hours, it is no longer needed. Pay the rental for only 2 hours whether the contractor chooses to remove it or chooses to leave it at the site of the work. Apply the same reasoning if the time of operation occurred at any other time of the day. In this example, if a pavement breaker was needed intermittently for 2 hours and a tamper intermittently for 2 hours, pay 2 hours for each tool. If the pavement breaker is needed for the first hour and the tamper for a second hour, pay 1 hour for each. Advise the contractor when equipment is no longer needed at the site. In the daily report, record this notice and the time.
- A skip loader is used to load dump trucks, however the skip loader is used only intermittently during the shift because one of the dump trucks broke down. The resident engineer allows the operation to continue because it is critical. Make payment for the loader for the entire shift. In such a situation, the resident engineer must try to do whatever is necessary to balance the operation. When balancing cannot be achieved, decide whether suspending an operation is more economically feasible than allowing it to continue.

Sometimes two pieces of equipment perform extra work at force account, yet the work does not require full-time use of both. In such instances, it is appropriate to accept (but not order) the use of only one operator for both pieces of equipment. Determine the rental time in the same manner as if each piece of equipment had a full-time operator and was used intermittently.

On extra work at force account, pay the same time for a foreman's pickup truck that you would pay for the foreman.

#### *3-903I (4) Equipment Not on the Job Site*

In general, the contractor schedules extra work paid for on a force account basis and uses equipment available on the project. However, circumstances may require use of equipment not on the job site that must be brought in especially for the extra work. The resident engineer should make decisions regarding the type of equipment and its scheduled use. Sections 9-1.04D(3), "Equipment Not On the Job Site and Not Required for Original-Contract Work," and 9-1.04D(4), "Equipment Not On the Job Site and Required for Original-Contract Work," of the *Standard Specifications* specify the requirements for paying for the use of such equipment. These specifications apply when the contractor does not use or uses the equipment for bid item work. Change any previous payment as "equipment not on the job site" to payment as "equipment on the job site" when such equipment is used for bid item work.

Order the equipment removed from the project, pay move-out and possible subsequent move-in costs, or continue paying for the equipment during a suspension in extra work. Perform a cost analysis to determine the most cost-effective alternative. Temporary removal of the equipment to the contractor's shop or a storage area off the project is not removal from the project. To end payment for the equipment, the resident engineer must order its removal.

### *3-903I (5) Non-Owner-Operated Dump Truck Rental*

Section 9-1.04D(5), "Non-Owner-Operated Dump Truck Rental," of the *Standard Specifications* specifies that the resident engineer must establish the hourly rate to be paid for dump truck rental. The actual hourly rate paid by the contractor or the truck broker may be the established rate if it is consistent with rates paid for the same trucks on other work. For help in establishing hourly rates, compare with rates paid for similar equipment on other Caltrans work.

### *3-903I (6) Standby Time*

Pay standby charges for commercial delivery at the invoice rate.

### 3-903J Extra Work Performed by Specialists

Section 9-1.05, "Extra Work Performed by Specialists," of the *Standard Specifications*, allows extra work to be performed by a specialist subcontractor that neither the contractor nor its current subcontractors can perform. In general, specialists are to be used only for minor portions of the work. The specifications also allow for the specialist work to be paid for by invoice if itemized billing is not the established practice of the specialist's industry.

Do the following when considering the use of specialists:

- Before work begins, decide whether the work is normally done by any of the contractor's forces. The contractor's forces include any firms or organizations performing bid item work, including subsidiaries of such firms or organizations and subsidiaries of the contractor. Subsidiaries of a subcontractor are considered to be a part of the subcontractor's organization. If you decide that the contractor's forces can perform the work expeditiously, do not authorize the use of the specialist.
- Allow the contractor to hire a specialist only if an established firm with established rates would do the work.
- Districts must establish procedures to pre-approve invoiced billing. Invoiced billing must not be used to circumvent the force account method for determining payment.

## **3-904 Payment Adjustments**

A payment adjustment is a monetary increase or decrease applied to the unit price of a bid item. The adjustment is a change to the contract and must be made by change order. Payment adjustments are either unit adjustments to the unit price of a bid item or they may be a lump sum increase or decrease applied to a bid item.

Payment adjustments are provided for in Sections 9-1.06, "Changed Quantity Payment Adjustments"; 9-1.15, "Work-Character Changes"; "9-1.17C, "Proposed Final Estimate"; and 9-1.17D(2)(b), "Overhead Claims," of the *Standard Specifications*. Other payment adjustments may be required, depending on the bid items, such as hot mix asphalt and concrete pavement.

## **3-904 Payment Adjustments**

Do not pay for payment adjustments until change orders authorizing the adjustments have been approved.

If you anticipate that payment adjustments in accordance with Sections 9-1.06, “Changed Quantity Payment Adjustments,” or 9-1.15, “Work-Character Changes,” of the *Standard Specifications* will result in decreases in final payment, withhold an amount sufficient to cover the value of the decrease.

For more discussion about determining payment adjustments, refer to Section 5-3, “Change Orders,” of this manual.

#### 3-904A      Changed Quantity Payment Adjustments

When the total pay quantity of a bid item varies from the Bid Item List by more than 25 percent, the variation may be the result of more or fewer units than shown in the Bid Item List required to complete the planned work. The variance may also result from ordered changes or a combination of both of these factors. When the variation exceeds 25 percent, adjust the compensation in accordance with Section 9-1.06, “Changed Quantity Payment Adjustments,” of the *Standard Specifications*, or document in the contract records the reason for not making a payment adjustment. When the accumulated increase or decrease in bid item units shown on a change order exceeds 25 percent of the Bid Item List, the overrun or underrun must be acknowledged and provided for in the current change order. Refer to Section 5-306C, “Methods of Payment,” of this manual for more information on change orders. Provide for this overrun or underrun through one of the following options, whichever is applicable:

- Adjust the contract price in accordance with Section 9-1.06, “Changed Quantity Payment Adjustments,” of the *Standard Specifications*.
- Defer any payment adjustment due to the overrun or underrun.
- State in writing that the bid item is not subject to adjustment. Refer to Section 5-3, “Change Orders,” of this manual for a discussion and examples of change orders providing for payment adjustments resulting from increased or decreased quantities.

##### *3-904A (1)      Increases of More Than 25 Percent*

It is usually appropriate to defer adjustment if work on the bid item has not been completed. Additional change orders may affect the quantity, or the number of units required to complete planned work may not be known. However, as soon as unit costs and final quantities can be reasonably determined, calculate any required unit adjustment and provide for it through a change order. When work on the bid item is completed, apply the unit adjustment to the total number of units in excess of 125 percent of the quantity shown on the Bid Item List.

Unless requested by the contractor in writing, the engineer does not have to adjust the contract price of an item if the bid item cost of the work in excess of 125 percent of the quantity shown on the Bid Item List is less than \$5,000. However, before exercising this right, verify that Caltrans will not gain any economic benefit from an adjustment. On the other hand, make an adjustment if it would decrease cost and the amount of the decrease would exceed the cost of making the adjustment.

##### *3-904A (2)      Decreases of More Than 25 Percent*

If a bid item underruns the quantity shown on the Bid Item List by more than 25 percent, inform the contractor in writing as soon as work on the item has been completed. Unless the contractor requests an underrun adjustment in writing, no adjustment will be made.



### 3-904A (3) *Eliminated Items*

Section 9-1.06D, “Eliminated Items,” of the *Standard Specifications* applies only to bid items eliminated in their entirety. Advise the contractor as soon as it is known that an item will be eliminated. Caltrans will not be responsible for costs incurred for material ordered after notification.

In the change order providing for the elimination of a bid item, ensure it covers the disposition of surplus material. Refer to Section 3-904A (4), “Surplus and Salvaged Material” of this manual for how to handle surplus material resulting from an eliminated item that cannot be returned to the vendor.

### 3-904A (4) *Surplus and Salvaged Material*

Minor differences between quantities of material required to complete the planned work and quantities shown in the Bid Item List or shown in quantity summaries on the contract plans are normal operating differences. Caltrans is not liable for a surplus of material resulting from these operating differences.

If the final quantity of an item is less than 75 percent of the quantity shown on the Bid Item List, include any actual loss due to excess material in the costs as computed in accordance with Section 9-1.06C, “Decreases of More Than 25 Percent,” of the *Standard Specifications*.

Do not make any allowance for material the contractor keeps.

Caltrans recognizes that certain materials or manufactured items required for the planned construction may be unique and not usable by the contractor, the supplier, or for other projects or customers. If such materials or items become surplus by reason of an ordered change, resulting in a direct and unavoidable loss to the contractor, such loss must be compensated. Determine compensation on the basis of actual cost as provided in Section 9-1.06D “Eliminated Items,” of the *Standard Specifications*. The guidelines below describe how to dispose of material that the contractor cannot economically dispose of.

A determination to salvage items made surplus by ordered changes should be based on economic benefit to Caltrans, conservation of the energy and materials required to fabricate the items, or both. Base economic benefit on the following:

- The item’s condition is adequate to perform its function satisfactorily. Damage does not necessarily make an item unsuitable for salvage. Caltrans has the capability to repair some items, so investigate this approach before deciding to dispose of a damaged item. Also consider repair costs when determining the cost-effectiveness of salvaging.
- The value equals or exceeds the difference in the cost of salvaging (including hauling) and the cost of removal and disposal.

Also, an item should be salvaged if it meets one or more of the following conditions:

- It is a stock item with a definite, foreseeable use. Stock items include all items that Caltrans normally uses.
- It is not a stock item, but can be put to immediate use or has a definite, foreseeable use. This classification would include items that can be reinstalled in the immediate project or could be installed on future projects.
- It is part of an electrical installation owned jointly with another agency, and the other agency requests its salvage.

- It can be used immediately for some other beneficial purpose.

Most districts maintain a district salvage yard or other designated areas for receiving salvaged material. Each district also has a district recycle coordinator. Before the delivery of potentially salvageable items, make arrangements with the appropriate person. Materials should not be salvaged until such arrangements are made.

### 3-904B Payment Adjustments for Price Index Fluctuations

Section 9-1.07 “Payment Adjustments for Price Index Fluctuations,” of the *Standard Specifications* specifies payment adjustments for various bid items that contain paving asphalt. The payment adjustment occurs when the California statewide crude oil price index fluctuation exceeds the threshold as described in the contract specifications. Compensation is adjusted when the paving asphalt price fluctuates from the month of the bid date to the month in which the contract item containing paving asphalt was placed. Refer to the example in Section 5-3, “Change Orders,” of this manual.

It is important to make timely payments for price index fluctuations. Increases in the cost of paving asphalt may place financial burdens on contractors and can cause projects to exceed allocated supplemental and contingency funds. The resident engineer is responsible for the following:

- Initiating a change order within 30 days of contract approval.
- Verifying that monthly payment adjustments for paving asphalt are included in monthly estimates when items that contain paving asphalt are used.
- Monitoring monthly expenditures and estimating future months of expenditures of payment adjustments for paving asphalt to avoid exhausting the project supplemental funds and contingency balance.
- Notifying the construction engineer and project manager if you anticipate the project contingency balance will be depleted so that appropriate action can be taken.
- At the time of bid, the contractor has the option to opt out of payment adjustments for price index fluctuations. Form DES-OE-0102.12A, “Opt Out of Payment Adjustments for Price Index Fluctuations,” is included in the bid book. To determine if the contractor has opted out, review the bid book for the project. If the opt out form in the bid book is not completed, then all of the requirements apply to the project.

### 3-904C Work-Character Changes

Before work can be considered a “work-character change,” there must have been an ordered change to the plans or specifications. If such an ordered change materially increases or decreases the unit cost of a bid item, then a work-character change has occurred. Work-character changes are not to be confused with “differing site conditions.” For a discussion of differing site conditions, refer to Section 3-5, “Control of Work,” of this manual.

When calculating the adjustment for a change in work-character, the original bid price bears no relation to the adjustment unless it can be demonstrated that the bid price actually represents the cost of the work. Section 5-3, “Change Orders,” of this manual contains examples of calculations and sample change orders.

### **3-905 Time-Related Overhead**

Section 9-1.11, “Time Related Overhead,” of the *Standard Specifications* applies to projects that have a time-related overhead bid item. This section includes a description of time-related overhead and a description of time-related field- and home-office overhead included in the time-related overhead bid item. The contractor includes time-related overhead costs in the time-related overhead bid item. Overhead that is not related to time is included in the various other bid items. Any contract time adjustments made by change order will result in an equivalent adjustment to the time-related overhead bid item quantity.

The markups for force account work performed by the prime contractor on time-related overhead projects are modified in Section 9-1.04A, “General,” of the *Standard Specifications*.

Refer to Section 5-409, “Overhead Claims,” of this manual for information regarding claims for overhead for projects without a time-related overhead bid item.

#### 3-905A Audit Examination and Reports

When the time-related overhead bid item quantity exceeds 149 percent of the quantity at time of bid, consult with your district management before requesting that the contractor provide an audit of its overhead costs. Refer to Section 5-410, “Audits,” of this manual for more information.

#### 3-905B Payment

Time-related overhead is paid on the monthly progress payment for each working day charged during the pay period. The quantity of time-related overhead is not adjusted for concurrent delays. The quantity of time-related overhead will be adjusted only as a result of critical delays that revise the current contract completion date. Adjustments to contract time are handled as follows:

- If contract time is adjusted by change order, and there are no revisions to working days charged to date, payments for the adjusted time occurs when the original bid item quantity is exceeded.
- If you have charged nonworking days that you later determine to be a critical delay, write a change order to make a time adjustment and promptly pay for the revised working days charged to date.

### **3-906 Progress Payments**

Section 9-1.16, “Progress Payments,” of the *Standard Specifications* requires Caltrans to make an estimate of work completed each month. Such estimates are designated as progress pay estimates. Each progress pay estimate must include payment for work completed up to and including the 20th day of the month. Include payment for change order bills that are submitted on time. Also include payment for extra work performed at agreed price and payment adjustments. Billing for this work must be submitted by the resident engineer during the pay period in which the work was performed.

Caltrans supports a collaborative progress payment process allowing contractor participation in estimating bid item quantities completed for progress payments. Contractor participation in this process is optional, but should be determined at the preconstruction conference. When a contractor provides a submittal of their estimate of item quantities and supporting calculations for work completed up to and including the 20th day of the month, two working days before the progress payment cut-off date, the

### **3-905 Time-Related Overhead**

### **3-906 Progress Payments**

resident engineer will provide Caltrans' estimate of item quantities and supporting calculations to the contractor. One working day prior to the progress payment schedule cut-off date, the contractor and resident engineer will attempt to resolve differences in the estimated quantities. If an agreement cannot be reached for a particular item quantity, the progress payment will be based on Caltrans' estimated quantity for the item. If modifications in estimated quantities are supported, revise the Caltrans estimated quantity and supporting calculations accordingly prior to processing the progress payment. Where the contractor does not submit a timely monthly estimate of item quantities, omits certain item quantities, or does not provide supporting calculations, the collaborative process cannot be used. Other collaborative process arrangements that are mutually agreeable to the contractor and Caltrans may be established.

Resident engineers must transmit to the district construction office the documents and information required to prepare progress payment vouchers. All documents must be in the district office no later than the date established by the district (usually no later than the end of the first working day after the 20th of each month).

District construction must arrange a schedule with the Division of Construction that will accommodate the Division of Accounting.

A monthly estimate and payment must be made if any amount of money is due the contractor.

Show all quantities submitted for payment on source documents. Typically, Form CEM-4801, "Quantity Calculations," is used for this purpose. Form CEM-4801 is shown in Example 3-9.1. The estimate must reflect the totals on the source documents. A source document is defined as the basic document executed to record or calculate quantities, percentages of lump sums, or extra work for payment. Refer to Section 3-902C, "Source Documents," in this manual for a discussion of source documents. Example 3-9.1, "Quantity Calculations," is a sample of a source document.

The quantity shown on the estimate for a bid item must agree with the sum of the quantities to date on all of the source documents for that item.

The resident engineer is responsible for the accuracy of a progress pay estimate. By approval, the resident engineer verifies that the quantities are correct and that data submitted conforms to the policies of Caltrans. All entries on Form CEM-6004, "Contract Transactions Input," must be checked by other construction personnel for errors such as transposition and wrong numbers.

The resident engineer must review and approve each monthly estimate before district construction office staff can process it for payment. To expedite handling, the resident engineer need not sign the estimate itself to indicate approval. Approval may be by telephone. Confirm telephone approval by sending a memo or a "pre-verification of pay estimate" form letter to the district construction office.

Refer to Section 5-103, "The Contract Administration System," of this manual for technical details on the production of estimates.

### 3-906A Bid Items

Include all bid item work completed satisfactorily in accordance with the contract in progress payments. Do not include in progress payments preparatory or organizational work such as assembling equipment, shop work, forming, or crushing or stockpiling of aggregate (unless provided for in the special provisions). Do not pay for material placed or installed for which you have not obtained the required evidence of acceptability (Form

TL-0029, “Report of Inspection of Material”; Form TL-0624, “Inspection Release Tag”; certificate of compliance; or acceptance tests).

For items bid on a unit basis, include in progress payments work that is substantially complete. Withhold a sufficient number of units to cover the value of the incomplete incidental work. In each case, a source document must be on file showing the details of the quantity’s determination.

Refer to intermediate source documents for items that are bid on a unit basis with a fixed final pay quantity, such as structural concrete and bar reinforcing steel (bridge), to show how partial payment was estimated. Withhold units of work to cover the value of incomplete incidental work. Base the withheld amount on a force account analysis of the remaining incidental work.

The following examples are listed to illustrate the procedure for partial payments:

1. Mobilization Item

The Contract Administrative System (CAS) will automatically calculate and enter partial payments for the item, “Mobilization.”

2. Maximum Value Items

Handle items for which maximum payment is limited until after a time fixed in the contract as follows:

- a. Include on the estimate the quantities completed in the same manner as for any other bid item. The quantity will be extended at the bid price and added to the total of work done.
- b. The system will make a deduction for any overbid.
- c. The system will return the deduction at the time set forth in the contract.

3. Roadway Excavation

In normal situations, material is excavated, hauled, placed in final position in embankment, and compacted, but slope finishing is not done. This is considered incidental work, and a quantity may be withheld to cover the value of the work remaining.

4. Aggregate for Subbase and Base

Material may be produced, hauled, placed, and compacted, but final trimming to tolerance has not been performed. This is incidental work, and a quantity may be withheld to cover the value.

5. Portland Cement Concrete Pavement

Concrete may be in place and cured but not ground to meet surface tolerance. Grinding is incidental work, and units may be withheld to cover the estimated cost.

6. Sewers and Irrigation Systems

Pipe may be placed and backfilled but not tested. Withhold units to cover this work.

7. Fence

Posts and wire or mesh may be in place and securely fastened but bracing wires not completed. Withhold units to cover this incidental work.

8. Structural Concrete, Bridge (Final Pay Quantity)

Bridge construction generally requires erecting falsework to carry dead loads of concrete (or steel) members until they become self-supporting. When falsework supports the superstructure concrete of box girder or slab bridges, make partial payments for the bid item.

When the soffit plywood is complete in place, make a partial payment equivalent to 35 percent of the projected superstructure concrete volume.

Withhold 5 percent for removal of the falsework materials and the final surface finishing of concrete.

9. Bar Reinforcing Steel

Pay for bar reinforcing steel that is complete and in place in the forms. It does not have to be encased in concrete before payment is made.

10. Structural Steel (Final Pay Quantity)

Steel placed is paid by units erected and in place. Withhold units to cover incidental work such as additional bolting and welding.

For work that includes an item for “furnishing,” make no payment for furnishing until all contract requirements have been met, including acceptability of the material and delivery to the project. However, payment may be made for materials on hand, as covered below, for items that qualify and are listed in the special provisions. Refer to the *Bridge Construction Records and Procedures* manual for additional instructions.

For lump sum bid items, if a schedule of values is required, refer to Section 3-906B, “Schedule of Values,” of this manual. Otherwise, pay a percentage of the lump sum bid price as work progresses. Use for this calculation the ratio of the number of working days an item of work has been in progress divided by the estimated total number of working days required to complete the item work. Be aware that such a simplified method might not reflect the value of the work actually completed. Reach an equitable agreement with the contractor for the basis of determining progress payments on lump sum items.

If any work or material on hand paid for on a previous monthly estimate loses value through loss, damage, or failure to function, deduct units representing the lost value from the following monthly estimate. Another example is storm damage requiring repair or replacement in accordance with Section 5-1.39B, “Damage Caused by an Act of God,” of the *Standard Specifications*.

Do not pay for item work added by change order until the change order is approved. However, payment for bid item overruns that are not the result of a change in the contract may be included in the monthly estimate.

3-906B Schedule of Values

A schedule of values is required for specific lump sum bid items such as electrical systems. Building construction will also be a lump sum bid item and will require a schedule of values as specified in the special provisions. Structure Construction will provide a technical review to verify that progress payments can be based on the value of the work in place.

### 3-906C      Extra Work

Do not pay for change order work until the change order is approved. Refer to Section 3-403, “Changes and Extra Work,” Section 3-906D, “Interest,” and Section 5-3, “Change Orders” of this manual, for further information on change orders providing for extra work.

### 3-906D      Interest

Section 9-1.03, “Payment Scope,” of the *Standard Specifications* provides for interest to be paid on unpaid and undisputed progress payments, payments after acceptance, change order bills, claim payments, and awards in arbitration.

Keep a log of the dates when change order bills are received, rejected, and resubmitted. In a timely manner, process all change order bills, and fully document reasons for rejecting change order bills.

Make interest payments for late payments by change order as a payment adjustment at lump sum. Refer to Section 5-3, “Change Orders,” of this manual for more information.

### 3-906E      Materials on Hand

Pay for acceptable materials on hand provided that all specified conditions have been met. Follow the procedure described below:

- Give the contractor Form CEM-5101, “Request for Payment for Materials on Hand.”
- The contractor must initiate payment by submitting in duplicate a properly completed Form CEM-5101. Make no payment for any material if the contractor has not requested payment on the state-furnished form. The contractor must submit a request one week before the end of the estimate period for each estimate. Each request must represent the current status of materials on hand at the time the request is made. Do not honor a request if it does not represent the actual amount on hand.
- Upon receipt of a request for payment for materials on hand, the resident engineer must check that it is filled out properly, includes only eligible material listed in the special provisions, and that the contractor attached evidence of purchase. When the contractor’s supporting evidence of purchase shows that a discount has been allowed, reduce the payment for materials on hand by the amount of the discount.
- Before processing a materials-on-hand request, inspect all materials for acceptability. Materials must have a certificate of compliance or Form TL-0029, “Report of Inspection of Material.” Form TL-0029 is evidence that the material was inspected at the source. In general, accept only completely fabricated units, ready for installation on the project with the following exceptions:
  1. Piling—Steel plate used for steel pipe piling and driven steel shells filled with concrete and reinforcement as described in Section 49, “Piling,” of the *Standard Specifications* may be considered acceptable as raw material. However, pay for such material as raw material only until shop fabrication of the pile is 100 percent complete. After shop fabrication is complete, the estimated fabricated value may be paid, subject to other specified restrictions and administrative guidelines.
  2. Structural Steel—Structural steel used in steel structures as described in Section 55, “Steel Structures,” of the *Standard Specifications* may be considered acceptable as raw material. However, pay for such material as raw material only

until shop fabrication of a usable member (such as a girder or other shape ready for shipment to the job site) is 100 percent complete. After shop fabrication is complete, the estimated fabricated value may be paid, subject to other specified restrictions and administrative guidelines.

3. Sign Structures—Structural steel used in overhead sign structures as described in Section 56, “Overhead Sign Structures, Standards, and Poles,” of the *Standard Specifications* may be considered acceptable as raw material. However, pay for such material as raw material only until shop fabrication of a usable member (such as a sign frame or other member) is 100 percent complete. After shop fabrication is complete, pay for the estimated fabricated value, subject to other specified restrictions and administrative guidelines.
- Verify proper storage of materials listed on Form CEM-5101 in accordance with the following procedures:

*3-906E (1) Materials at the Project*

For all valid requests for material located at or near the project, determine whether the materials are stored in conformance with the contract. To conform to this requirement, the contractor may have to store materials in fenced areas with locked gates, in locked warehouses, or in areas where it is improbable that materials would be lost from any cause. In addition to having controlled storage, the contractor is required by the *Standard Specifications* to provide proper storage and handling so that the materials do not become damaged. Call any indication of improper storage to the contractor’s attention. Withhold payment for materials on hand until the materials are properly stored.

Do not pay for material accepted on the basis of certificates of compliance until such certificates have been received.

The resident engineer or an assistant resident engineer must review Form CEM-5101 to verify that the request is acceptable.

*3-906E (2) Materials Not at the Project*

For materials not delivered to the job site, obtain evidence, and establish the fact of purchase, proper storage, acceptability, accessibility, and other factors. Materials Engineering and Testing Services (METS) maintains representatives in major industrial areas and provides inspection in all other areas for this purpose. The following is the procedure for requesting METS assistance:

- If it is not practical for the resident engineer or assistant resident engineers to verify quantity, quality, location and proper storage, send the duplicate copy of the Form CEM-5101 to METS.
- Upon receipt of Form CEM-5101, METS will immediately notify the appropriate inspection office or offices. The METS representative will notify the resident engineer directly using Form TL-0649, “Inspector’s Report of Material on Hand,” or TL-6037, “Fabrication Progress Report,” that the material has been inspected and that it is in acceptable condition and properly stored. METS will use Form TL-6037 for structural steel, precast prestressed concrete members, or sign structures. For other products, METS will use Form TL-0649.

METS may also indicate on its correspondence, the percent complete of shop fabrication on various structural components. This figure is given for the purpose of reporting



progress on the affected items. Do not use it to increase payment for materials on hand during fabrication.

- Upon receipt of the Form CEM-5101 and the above verification, the resident engineer can approve the partial payment. The contractor must submit a new Form CEM-5101 for each estimate, and the above procedure must be followed. However, it is possible METS may not be able to respond in time for payment on the estimate. METS gives priority to new or changed requests. Therefore, for requests that have not changed since a previous submittal, resident engineers may approve subsequent payments in the absence of any METS reports to the contrary.

On the monthly progress pay estimate, enter the total value of acceptable material as material on site regardless of storage location.

The maximum payment for materials on hand should be such that, when the estimated placing and other remaining costs of the work are added, the contract price is not exceeded. The purpose of this is to prevent payment of more than the contract price for the materials and to leave sufficient funds in the item to complete the work.

### 3-906F Withholds

#### *3-906F (1) Progress Withholds*

Progress withholds are usually determined by noncompliant (unsatisfactory) progress. Whenever a contractor's performance is unsatisfactory, the resident engineer notifies the contractor of the apparent failure.

#### *3-906F (1a) Noncompliant Progress*

Progress is determined by comparing the contractor's actual progress with the curve on Form CEM-2601, "Construction Progress Chart." This requires calculation of the percent of work completed and the percent of time elapsed. If the plot of these percentages falls on or above the curve on Form CEM-2601, progress is considered satisfactory. Otherwise, it is considered unsatisfactory except under extenuating circumstances. Refer to Section 9-1.16E(2), "Progress Withholds," of the *Standard Specifications* for noncompliant progress conditions.

After each progress estimate, update Form CEM-2601. The Contract Administration System (CAS) uses the formula contained on this form to determine progress. For a description of this process, refer to Section 5-1, "Project Records and Reports," of this manual.

The contractor's progress is usually considered unsatisfactory when the contractor's progress curve falls below the curve of the contract progress chart or when successive points on the contractor's progress curve indicate the contractor's progress rate will soon fall below the curve.

The percentage of work completed (except on landscape projects with Type 1 plant establishment) is determined by dividing the amount on the line titled "Total Work Completed" on the "Project Record Estimate" by the "Authorized Final Cost" on the "Project Status." CAS calculates this percentage. Calculations for percentage of work completed for Type 1 plant establishment are shown in Section 3-906F (1b), "Plant Establishment work," of this manual.

CAS computes the percent of contract time elapsed by dividing the number of working days elapsed to the date of the progress estimate, by the original working days specified

in the contract plus “Total time extension days approved to date,” on Form CEM-2701, “Weekly Statement of Working Days.”

Whenever the contractor fails to prosecute the work adequately, evidenced by the plot of actual progress and your concurrence, you must notify the contractor of the apparent lack of progress. If you judge that the work on the remaining work activities will not be completed by the “computed date for completion” as defined in Section 3-804, “Time,” of this manual, you must request that the contractor submit a revised schedule showing how the balance of the work will be carried out.

Occasionally, the resident engineer has information indicating that the percent of time elapsed is different from that which CAS will calculate. The usual reason for this is that pending time extensions have not yet been approved and entered into the system. The percent of time elapsed can be calculated using the anticipated time extension in the formula described above. The resident engineer must document the calculated percent of time elapsed as well as the reasons therefore. Enter the calculated percent of time elapsed in the appropriate place on Form CEM-6101, “Project Record—Estimate Request.” CAS will calculate satisfactory or unsatisfactory progress based on this figure.

Whenever the district believes the contractor’s bonding company should be notified of unsatisfactory progress, advise the Division of Construction of the reasons supporting such an action. If appropriate, the district will initiate the notification.

If the district believes the lack of progress on a contract justifies a meeting, the district arranges a conference to be attended by the contractor’s representatives, the bonding company, and Caltrans. If appropriate, the Division of Construction will arrange the conference. For more information, refer to Section 3-808, “Contractor’s Control Termination,” of this manual.

### 3-906F (1b) Plant Establishment Work

For specifications and administrative guidelines for plant establishment time requirements refer to Section 20-4, “Plant Establishment Work,” of the *Standard Specifications*, and Section 4-2002C (8), “Plant Establishment Work,” of this manual. In general, a withhold for unsatisfactory progress should be waived only for landscape projects or on other projects only after a corrected entry has been made for “percent time elapsed” as covered for Type 1 and Type 2 plant establishment.

For projects with Type 2 plant establishment, the percent of time elapsed and percent of work completed is determined in the normal manner as described above.

For projects with Type 1 plant establishment, compute the percent of time elapsed and the percent of work completed as follows for the periods before the start of plant establishment. After the start of Type 1 plant establishment, the resident engineer will decide if the progress is satisfactory. In general, consider progress satisfactory if the contractor entered the plant establishment period on time and carries out plant-establishment work on time. Progress will be considered unsatisfactory if there will be an overrun in contract time due to a delayed start of Type 1 plant establishment.

Determine the percentage of work completed by dividing the value of work accomplished by the authorized contract amount minus the authorized plant establishment work.

$$\% \text{ Complete} = \frac{\$ \text{ Value Completed Work}}{(\$ \text{ Total Auth. Contract Amt.} - \$ \text{ Plant Estab. Work})}$$

Determine the percent of time elapsed by dividing the number of working days elapsed to the time of the estimate on Form CEM-2701 by the total contract time limit plus “Total change order days approved to date” on Form CEM-2701 and minus the length of the plant establishment period.

$$\% \text{ Time} = \frac{\text{Working Days Elapsed}}{(\text{Orig. Cont. Time} + \text{Time Ext. to date} - \text{Plant Estab. Period})}$$

Compare these two percentages to the curve on Form CEM-2601, “Construction Progress Chart.” If progress is satisfactory, check the “Override Unsatisfactory Progress” on Form CEM-6101, “Project Record—Estimate Request.”

### *3-906F (2) Performance Failure Withholds*

Whenever the contractor fails to comply with a contract part, including timely submittal of a required document, the resident engineer notifies the contractor of the apparent performance failure. For example, performance failure withholds may be taken for the following required documents:

- Quality control plan
- Baseline schedule
- Updated schedules
- Revised schedules
- Time impact analyses
- Final schedule
- Traffic control plans
- Traffic contingency plan
- Water pollution control plan
- Storm water pollution prevention plan

The resident engineer gives the contractor 7 days from this notification to either provide the submittal or a request for information. If neither is provided on time, the resident engineer should take the performance failure withhold in the next progress pay estimate. If the contractor submits a request for information, the resident engineer should allow another 7 days from the time the request for information is answered in full before taking the performance failure withhold. Refer to Section 9-1.16E(3), “Performance Failure Withholds,” of the *Standard Specifications*. Other withholds such as progress withholds, stop notice withholds, and penalty withholds are separate and may be taken simultaneously if justified.

### *3-906F (3) Stop Notice Withholds*

Refer to the Division of Accounting all inquiries regarding bills for labor, material, or equipment rental not paid by Caltrans’ contractor. Detailed information for construction payments, legal withholds, labor compliance withholds, levies and liens, including stop notice contacts can be found on the Division of Accounting “Major Construction Payment & Information” website:

<http://www.dot.ca.gov/hq/asc/oap/payments/>

### 3-906F (4) Penalty Withhold

For penalty withholds, refer to Sections 7-1.02, “Laws,” and 9-1.16E(5), “Penalty Withholds,” of the *Standard Specifications*. Penalty withholds may become a deduction if appropriate. Withholds may be required in accordance with Sections 7-104, “Air, Water, and Noise Pollution Control”; 7-105, “Permits, Licenses, Agreements, and Certifications”; and 8-102, “Labor Compliance Responsibilities,” of this manual.

### 3-906G Deductions

Deductions (as opposed to withholds) are those amounts held back for specific purposes. The resident engineer must identify, initiate, and control all deductions. Refer to Section 5-103F (1c), “Deductions,” of this manual for information on administering deductions.

Make a deduction from payment to the contractor as soon as the liability for the event requiring a deduction has been determined. It is preferable to base deductions on known amounts resulting from agreements or actual billings, but, if necessary, they can be estimated.

Resident engineers must keep source documents and summary sheets in the appropriate contract records to cover all deductions. In the absence of any information to the contrary, CAS will carry deductions forward from the previous month.

Whenever the contractor’s progress is unsatisfactory and the project has progressed to a point where a reasonably accurate estimate of probable liquidated damages can be made, the resident engineer must deduct an amount sufficient to cover probable liquidated damages. Make the deduction in lieu of any withhold for unsatisfactory progress. Enter the amount and description of deductions on Form CEM-6101, “Project Record—Estimate Request,” and check “Override Unsatisfactory Progress,” to prevent the withhold.

### 3-906H Supplemental Progress Payments

Resident engineers are responsible for the completeness and accuracy of each progress payment. Supplemental progress payments are used to correct omissions or make adjustments to a previously processed progress payment estimate for work performed within that pay estimate period. Supplemental progress payments may be run only between the completion of the original monthly progress payment and the 15th of the following month.

Refer to Section 5-103F, “Generating Estimates,” of this manual for the process of generating a supplemental progress payment.

### 3-906I Negative Estimates

The resident engineer is responsible for the accuracy of all payment estimates, including progress payment, after acceptance, semifinal, and final estimates. Negative estimates reflect an overpayment made to the contractor. When a negative estimate is necessary, you must prepare a brief justification and submit it with the estimate request to the district construction office. The district construction office must obtain concurrence from the deputy district director of construction, or delegate, and the Division of Construction’s field coordinator before running the negative estimate.

When a negative estimate is approved for processing, the Division of Accounting bills the contractor for the amount due. If, for any reason, you believe that the contractor should not be billed, notify the district construction office and the Division of Construction progress pay coordinator. Once notified, the Division of Construction

progress pay coordinator, with the Division of Construction field coordinator's concurrence, will notify the Division of Accounting not to bill the contractor.

Section 3-907E, "Payment Offset," of this manual describes another method available to the resident engineer and the Division of Accounting to resolve overpayment to the contractor.

### **3-907 Payment After Contract Acceptance**

Caltrans makes final payment as soon as possible after the contract is accepted and the contractor submits the required documents requested by the resident engineer. Any estimate covering a payment after contract acceptance is identified either as "after acceptance," "semifinal," or "final."

Soon after the contract is accepted, meet with the contractor to discuss submitting required information to complete the contract. If the contractor does not submit required data within 4 weeks after acceptance, you must notify the contractor in writing that Caltrans will issue the proposed final estimate and deduct the appropriate amount. Section 5-406, "Claims Resolution Process," of this manual lists the timeline for completing payment steps after the acceptance process.

#### 3-907A Payment Before Final Estimate

A payment after acceptance but before the proposed final estimate must adhere to Section 9-1.17B, "Payment Before Final Estimate," of the *Standard Specifications*. The purpose of this type of progress payment is to release all money due the contractor that exceeds any amounts withheld under the contract. When determining amounts to be paid or deducted for this type of estimate, the following applies:

1. Include payment for the following:
  - a. Any work completed since the previous estimate
  - b. Any errors that may have been discovered and corrected
  - c. Any labor compliance deficiencies that have been cleared
2. Include payment for any overbids on maximum value items, including the mobilization item. You do not need to take any additional action for this step.
3. When delinquent or inadequate payrolls exist, make a deduction from the payment.
4. When the contractor has failed to correct deficiencies in its equal employment opportunity program, make a deduction from the payment. These deficiencies include failure to submit Form CEM-2402F, "Final Report—Utilization of Disadvantaged Business Enterprises First-Tier Subcontractors."

The deductions will be in the same amount as for any progress estimate. Refer to Section 8-1, "Labor Compliance," Section 8-2, "Equal Employment Opportunity," and Section 8-3, "Disadvantaged Business Enterprises and Disabled Veteran Business Enterprises," of this manual.

5. To cover any outstanding documents required under this contract, make a deduction from the payment. These outstanding documents include the following:
  - a. Reduced prints of working drawings

### **3-907**

### **Payment After Contract Acceptance**

- b. Outstanding payrolls that are not yet delinquent
- c. Or any information upon which to base the proposed final estimate, such as payment adjustments of contract unit prices

The deduction, regardless of the number of outstanding items, will be the lesser of 10 percent of the “Subtotal Amount Earned Without Mobilization,” or \$10,000, and at least \$1,000.

In addition to the steps listed above for determining amounts to be paid or deducted for an estimate after contract acceptance, the resident engineer must also do the following:

1. Notify the district of what deductions are applicable.
2. Compound the deductions when a combination of the following situations, which were outlined above, occur:
  - a. The contractor has delinquent or inadequate payrolls.
  - b. The contractor failed to correct deficiencies in its equal employment opportunity program.
  - c. The contractor failed to honor requirements related to disadvantaged business enterprises.
3. Also compound permanent deductions. Permanent deductions include items such as material royalties, railroad flagging charges, material testing, out-of-specification material, or restaking charges. Also considered permanent are deductions for anticipated liquidated damages. (When warranted, anticipated liquidated damages can be made on progress estimates. However, anticipated liquidated deductions will need to be made permanent on the after-acceptance estimate. To do so, release anticipated liquidated damages; then take actual liquidated damages under liquidated damages on the after-acceptance estimate.)
4. When you make deductions for outstanding items, advise the contractor in writing of the specific missing items.
5. Before processing an after-acceptance estimate, run the following two reports, “Status of CCO,” and “CCO master listing.” These reports will show any adjustment of compensation credit or deferred time not yet taken.

### 3-907B Proposed Final Estimate

The purpose of the proposed final estimate is to obtain formal agreement regarding final payment. For this type of estimate, follow these guidelines:

- Submit the proposed final estimate to the contractor within the time frame outlined in Section 5-406, “Claims Resolution Process,” of this manual.
- Before processing the proposed final estimate, ensure all change order bills submitted by the contractor are processed and ready for payment. Ensure the estimate’s issuance is not delayed for change order bills that remain outstanding.
- If the contractor has not submitted required information in a timely manner, the proposed final estimate must still be issued. In this situation, the following guidelines apply:
  1. Any time before a proposed final estimate is issued, the district may exercise an option described in Section 9-1.04C, “Materials,” of the *Standard Specifications*. This section identifies the conditions under which Caltrans may

establish the cost of materials when valid copies of vendors' invoices are not forthcoming. When the district decides to establish such costs, use the following procedure:

- a. If the established cost is necessary to determine compensation, complete the pending change order, and have it unilaterally approved. To determine compensation, refer to Sections 9-1.06, "Changed Quantity Payment Adjustments," or 9-1.15, "Work-Character Changes," of the *Standard Specifications*.
  - b. If the established cost is necessary to make force account payment on an existing change order, include this established cost as a lump sum payment on a supplemental change order. Also, unilaterally approve this supplemental change order.
2. On the proposed final estimate, you may list (in the amount the district determines to be payable) any force account billings that have not been paid because of a dispute. Upon return of the proposed final estimate, the contractor must reiterate the disputed extra work, which must be handled like any other claim. Do not list in the proposed final estimate any force account billings the contractor has not yet submitted. It is the contractor's responsibility to either submit these bills before the proposed final estimate or list them as exceptions to the proposed final estimate.
  3. The district will show the required deduction on the proposed final estimate in the same manner as for any other deduction when the contractor has the following outstanding items:
    - a. Delinquent or inadequate payrolls
    - b. Deficiencies in its equal employment opportunity program
    - c. Violations of requirements related to disadvantaged business enterprises

(These items are also described in Section 3-907A, "Payment Before Final Estimate," of this manual.) When such deductions are shown, include a statement similar to the following on the letter that accompanies the proposed final estimate: "The amount of \$\_\_\_\_\_, which has been deducted for nonsubmittal of documents required by the contract, will be paid when all such documents have been received."

- Submit Form CEM-6101, "Project Record—Estimate Request," to the district office with the proposed final estimate box checked to initiate the proposed final estimate.
- The proposed final estimate is to be prepared and sent to the contractor by the district construction office. It should include the following:
  1. A letter transmitting the proposed final estimate to the contractor. This letter should include the statements shown in Example 3-9.2, "Form Letter for Submitting Proposed Final Estimate to the Contractor."
  2. A form for the contractor's acceptance of the amounts listed in this estimate. Ensure the form contains wording similar to the wording in Example 3-9.3, "Acceptance Statement Form."
  3. The proposed final estimate report showing the status of item payments generated by CAS along with the "schedule of extra work" and "schedule of

deductions” reports. Samples of these reports are shown in Examples 3-9.4 through 3-9.8.

4. If deductions for items such as staking charges, laboratory charges, railroad flagging charges, and overruns of contract time are not finalized and shown on the reports, a list of their estimated maximum amounts must be attached.
- Use separate correspondence, not the proposed final estimate, for funds deducted for labor violations and wage restitution (as opposed to outstanding or inadequate payrolls).
  - When money is due on the proposed final estimate, ensure the semifinal estimate processed immediately after reflects the same “totals” as the proposed final estimate. If you follow this approach, the contractor will submit claims based on the “statement of total amount earned,” rather than a “revised” number.
  - To establish the beginning of the 30 days during which the contractor may submit written claims, send the proposed final estimate by certified mail, “return receipt requested,” or overnight delivery.
  - From the issuance of the proposed final estimate to the receipt of the contractor’s response, do not enter into any negotiations, written or verbal, concerning the proposed final estimate or potential claims, except as described in the next bullet. During this time, negotiating or communicating with the contractor (or issuing change orders) may negate the finality of the proposed final estimate. If the finality is negated, the contractor may have 30 days from the most recent communication to respond.
  - If you discover an error that requires a decrease in a quantity, send a letter to the contractor stating the discovery of an error, and specify the item and amount of the change. Also, state that the error will be addressed after the contractor returns the proposed final estimate. If the contractor discovers and brings to your attention any errors or discrepancies, handle this situation through separate correspondence covering only the affected items. For example, if the contractor disputes the quantity of an item, send a letter to the contractor stating that the item must be listed as an exception to the proposed final estimate. In the letter, also state that the item will be analyzed after the return of the proposed final estimate and exceptions, also known as the “Acceptance Statement.”
  - When the contractor returns the “Acceptance Statement,” proceed in accordance with the appropriate option below:
    1. If the returned Acceptance Statement has no exceptions (administrative claims or contract claims) and all documents required under the contract have been received, prepare the final estimate. Refer to Section 3-907D, “Final Payment and Claims,” of this manual for more information.
    2. If the returned Acceptance Statement has no exceptions, but some documents are still outstanding, continue pressing the contractor, in writing, for the missing documents. If amounts due the contractor exceed the deductions by more than \$300, prepare and process a semifinal estimate.
    3. If the documents have not been received in approximately 60 days, request advice from the Division of Construction field coordinator about further action.



4. If the Acceptance Statement is returned with exceptions, initiate the claims procedure as outlined in Section 5-4, "Disputes," of this manual.
5. If the Acceptance Statement is returned requesting a payment adjustment in accordance with Section 9-1.17C, "Proposed Final Estimate," of the *Standard Specifications*, determine if the payment adjustment is warranted. If the payment adjustment is warranted, make the payment in the same manner as for any other adjustment and unilaterally approve in the district. The following is an example of a calculation to determine this payment adjustment:

Example:

Contractor's original bid (including mobilization)	\$100,000
90 percent of Contractor's bid	\$ 90,000
Final estimate of total work (including mobilization, extra work, and less permanent deductions)	\$ 85,000
Difference	\$ 5,000
Adjustment of Overhead Costs (10 percent of difference)	\$ 500

6. When the Acceptance Statement is not returned within the specified 30 days, verify it has not been lost in transit and then proceed in accordance with the appropriate option below:
  - a. If all documents have been received, prepare and process the final estimate.
  - b. If some documents are still outstanding, request advice from the Division of Construction's field coordinator about further action.
  - c. If the contractor includes in the Acceptance Statement any claim that is postmarked or hand-delivered more than 30 days after the date the contractor received the proposed final estimate, the claim is considered late and will not be processed. On a hand-delivered claim, record the date the claim arrived, who delivered it, and who received it. Retain the envelope for a claim that arrived through the mail to establish the date the claim was sent. Inform the contractor of the late filing by using a letter worded in a similar way to the letter below. This notification will constitute the final administrative action on a late claim.

**Notification to Inform the Contractor of a Late Filing:**

Contractor \_\_\_\_\_,

The statement of claim included in your letter dated \_\_\_\_\_, was submitted to us more than 30 days after you received copies of the proposed final estimate for Contract No. \_\_\_\_\_, (County Route and Mile-Post).

A final estimate is, therefore, being processed for issuance to you as provided in Section 9-1.17C, "Proposed Final Estimate," of the *Standard Specifications*.

Sincerely,

District Construction Office

- d. If the contractor includes claims with the return of the proposed final estimate, the district should immediately acknowledge the receipt of the claims by sending a written statement similar to the following:

**Acknowledgment of the Receipt of Claims:**

Your written statement of claims has been received. The engineer will base the determination of your claims upon the investigation of your statement.

The investigation of your claim statement will begin immediately. If it is determined that additional information is required, you must furnish it within 15 days of the request in accordance with Section 9-1.17D(2), "Claim Statement," of the *Standard Specifications*. You may request in writing an extension of time to a specific date. Our purpose is to provide you with the engineer's final determination on claims in the minimum possible time, consistent with the assurance that all the facts are available for consideration.

- e. If the initially submitted claim statement is obviously deficient in information, use a paragraph similar to the following example in lieu of the second paragraph above:

**Notification of Deficiency of Information:**

Your initial submission appears to be deficient as to the following:  
[Select appropriate item or items.]

1. Statement of contractual basis for claim
2. Information as to compliance with Section 4-1.05A, "General," Section 5-1.43, "Potential Claims and Dispute Resolution," or both of the *Standard Specifications*
3. Breakdown of amount claimed due
4. Other, as applicable

Please submit any further information you wish to have considered by [date, approximately 15 days after the contractor will receive the letter]. If you will require additional time to prepare your supplementary statement, please request an extension in writing specifying the date to which the extension is requested. The engineer intends to make the final determination on claim matters in the minimum possible time, consistent with the assurance that all the facts are available for consideration.

- f. Examine claims expeditiously. For detailed instructions, refer to Section 5-4, “Disputes,” of this manual.

### 3-907C Semifinal Estimate

A semifinal estimate is any estimate prepared after issuing the proposed final estimate and before preparing the final estimate. The primary purpose of a semifinal estimate is to make timely payment for all nondisputed items that have not been paid on a previous estimate. However, semifinal estimates can also be issued to make payment if some, but not all claims, have been resolved.

The proposed final estimate need not show a zero balance for money owed to the contractor. If the proposed final estimate does identify money owed to the contractor, immediately run a semifinal estimate after the proposed final estimate. Do not wait for any response from the contractor to the proposed final estimate. Do not issue any other estimates until 30 days after issuing the proposed final estimate.

Normally, use the same procedures to issue a semifinal estimate as those to issue a progress estimate.

### 3-907D Final Payment and Claims

Submit a final estimate only after one of the following conditions has been met:

- The contractor has submitted all required documents, and complete agreement on payment has been reached.
- The district director’s determination of claim has been issued.
- The contractor does not respond to the proposed final estimate in the specified time but has submitted all required documents.
- Or, the district has been advised by the Division of Construction field coordinator to proceed.

Refer to Section 5-406, “Claims Resolution Process,” of this manual for more information. As soon as the district approves the final estimate, it must use a transmittal letter. The letter must state the following: “Submitted herewith in accordance with Section 9-1.17D(3), ‘Final Determination of Claims,’ of the *Standard Specifications* is a copy of the final estimate for your Contract No. X.”

A copy of the transmittal letter is to be sent to the resident engineer to be retained in the project files.

The district transmits only the final estimate because the disbursing office of the Division of Accounting will mail to the contractor the corresponding copy of the progress payment voucher.

#### *3-907D (1) Material to Submit with the Final Estimate*

Before payment of a final estimate, the Division of Construction progress pay staff must ensure that administrative details have been completed. For this purpose, the district must forward the following data before or with all final estimates:

- Submit the proposed final estimate as originally submitted to the contractor, including transmittal letters.
- Submit the Acceptance Statement returned by the contractor. If the contractor has refused to sign the statement, submit it with an explanation of the contractor’s refusal.

- Submit a transmittal letter containing, but not limited to, the following:
  1. A list of the forms and attachments being transmitted or an explanation as to why a form or attachment is missing. Include letters from the Division of Construction authorizing the submittal of the final estimate without certain documents and stating the action taken or to be taken as a result of the missing documents.
  2. A statement about the use of materials agreements. If there are no materials agreements, state this.
  3. A statement that reduced prints of all shop drawings for highway bridges and railroad bridges have been received from the contractor. If such drawings are not required, please state so.
  4. Correspondence or documents explaining or authorizing the differences between the proposed final estimate and the final estimate.
  5. Form CEM-2402F, “Final Report—Utilization of Disadvantaged Business Enterprises, First-Tier Subcontractors.”

### 3-907E      Payment Offset

A payment offset is a method of obtaining monies due to Caltrans on one contract by levying against future payments being made to a contractor on another Caltrans contract. Offsets may be taken to obtain adequate funds for any amount due and for determinations made by an arbitrator. The offset process should be completed within 90 calendar days of contract acceptance except when an offset for a determination by an arbitrator is required.

Many stakeholders are involved in the payment offset process. The following should be considered when choosing an active contract to apply an offset against:

1. There should be sufficient payments pending.
2. It should be bonded by the same bonding company if possible.
3. It should be administrated within the same district.

To begin the payment offset process, send a letter to the contractor, bonding company, and offset bonding company. The contractor and the bonding companies have 20 calendar days from receipt of the letter to request a meeting to discuss the offset.

If the contract or bonding companies do not request a meeting, execute the offset. If a meeting is requested, a meeting will be held within 10 calendar days of receipt of the request. The meeting is conducted by the district director or as delegated to at least a supervising transportation engineer.

The resident engineer prepares a summary of the facts, minutes of the meeting, and a final determination report. If the offset is warranted, notify the district administering the contract being offset, the contractor, and bonding companies of the final determination, and the amount of the offset. If the contractor or the bonding companies do not request a hearing, execute the offset. If the hearing officer determines that an offset is not warranted, continue through the collections process administered by the Division of Accounting. The Division of Accounting executes only those offsets authorized by the Division of Construction.

### **3-908      Arbitration**

If the contractor has diligently pursued and exhausted the administrative procedures specified in the contract for Minor A projects and major projects, the contractor is entitled to file for arbitration of its claims 240 days after contract acceptance even if the district director determination of claims has not been issued.

The Caltrans Legal Division handles all construction contract arbitrations. Refer to Section 5-411, “Arbitration,” of this manual for more information.

### **3-908 Arbitration**

### Example 3-9.1. Quantity Calculations

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

## QUANTITY CALCULATIONS

CEM-4801 (REV 11/1992) CT# 7541-3520-0

JOB STAMP		ITEM	FILE NO.
07-1381U4		8 - Temp Railing (Type K)	48-8-2
07-LA-210-47.5/57.3		LOCATION	SEGREGATION YES <input type="checkbox"/>
Fed. No. (NONE)		Ramp 3	NO <input checked="" type="checkbox"/>
		CALC. BY	DATE
		A. Sistantre	09/17/2012
		CHK. BY	DATE
		R. Engineer	09/18/2012

Field Measurement:	X	Estimated Quantity:	1,500
Field Counted:	NO	Unit of Measure:	feet
Final Pay Item:	NO	Unit Price:	\$8.00/foot
		75% of item:	1,125 feet
		125% of item:	1,875 feet
Remarks or other calculations:			
500 feet placed on September 10, 2012 at Maple Street offramp, Station 3+00 RT			
Material Inspection/Release: Certificate of compliance obtained on September 5, 2012.			
Pay this estimate: 500 feet			
Previously paid: 250 feet			
Total to date: 750 feet			

POSTED BY	DATE	POSTED TO
O.E. Ngineer	09/20/2012	CEM 6004, page 4 line 5

## ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

### Example 3-9.2. Form Letter for Submitting Proposed Final Estimate to the Contractor

Subject: Proposed Final Estimate

In accordance with the provisions of Section 9-1.17D(1), "General" of the *Standard Specifications*, attached (in triplicate) is a proposed final estimate for

\_\_\_\_\_  
(Contract)

\_\_\_\_\_  
(Dist. Co. Rte. M.P)

Please review the proposed final estimate and, if satisfactory, indicate your approval in the space provided on the attached Acceptance Statement. Return three copies of the Acceptance Statement to this office. One copy is for your files.

Please note the following portion of Section 9-1.17D(1), "General" of the *Standard Specifications*, which states:

"If you accept the proposed final estimate or do not submit a claim statement within 30 days of receiving the estimate, the Engineer provides you the final estimate and the Department pays the amount due within 30 days. This final estimate and payment is conclusive except as specified in sections 5-1.27, ("Records"), 5-1.47, ("Guarantee"), and 9-1.21, ("Clerical Errors"). If you submit a claim statement within 30 days of receiving the Engineer's proposed final estimate, the Engineer provides you a semifinal estimate and the Department pays the amount due within 30 days. The semifinal estimate is conclusive as to the amount of work completed and the amount payable except as affected by any claims or as specified in sections 5-1.27, 5-1.47, and 9-1.21."

Your promptness in returning the signed copies, indicating your approval, will expedite payment of the final estimate. Alternatively, a signed qualified approval by reason of a written statement of claims will expedite payment of a semifinal estimate. A statement of claims must include a notarized certificate containing the language required in Section 9-1.17D(2)(c), "Declaration," of the *Standard Specifications*.

If claims are submitted in connection with this contract, you will be expected to comply fully with Section 9-1.17D(2), "Claim Statement," of the *Standard Specifications*. The engineer will base the determination of claims upon the investigation of your statement, in which you are expected to present your position fully as to the contractual basis of the claim; compliance with contract requirements such as Sections 5-1.43, "Potential Claims and Dispute Resolution," subsections A through D; or 9-1.17D, "Final Payment and Claims," of the *Standard Specifications*, if applicable; a breakdown of the total amount claimed; and all other information you consider to be in support of your claim.

As further provided in Section 9-1.17D(1), "General," of the *Standard Specifications*, in case neither approval nor a statement of claims is received, postmarked or hand delivered, before the 31st day, a final estimate in the amount of this proposed final estimate will be issued. Your date of receipt of this proposed final estimate establishes the beginning of the specified 30 days.

Sincerely,

District Construction Office

**Example 3-9.3. Acceptance Statement Form**

Subject: Acceptance Statement	
Attachment to transmittal letter	
Dated _____	Contract Identification _____
I have examined the quantities of bid items and amounts indicated as payment for extra work and the deductions on the proposed final estimate dated _____. I agree to accept the total of \$_____ as indicated, as the total amount earned for all work performed on the above contract, except as may be indicated below	
	_____ Contractor
Exceptions (check one)	_____ By
<input type="checkbox"/> None	
<input type="checkbox"/> As indicated per attached letter dated _____	
	_____ Title
	_____ Date



### Example 3-9.4. Sample of the Proposed Final Estimate

PROGRAM CAS145		STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION			PAGE		
DATE 06/13/12		P R O J E C T R E C O R D - E S T I M A T E			04-888884		
TIME 10:46 AM		P R O P O S E D F I N A L E S T I M A T E			ESTIMATE NO. 29		
BID OPENING 11/10/09		C O A S T A L M O U N T A I N C O N S T R U C T O R S , I N C .			WORK PERFORMED THROUGH 05/21/12		
R.E. NAME: MAYA, TYKE		8884 GOLDENEYE COURT			DATE OF THIS ESTIMATE 06/13/12		
LOCATION		SANTA ROSA, CA 95402			IN SONOMA COUNTY ABOUT 9 KM EAST OF		
04-SON-128-41.8/44.7					PETALUMA FROM ADOBE ROAD TO 0.2 KM		
					WEST OF ARNOLD DRIVE		
FED. AID NO. ACHS-P128(42)E ,STP-P128(42)E		CONSTRUCT RETAINING WALLS					
ITEM NO.	ITEM DESCRIPTION	UNIT	CONTRACT PRICES	ORIGINAL AUTH. AMT	THIS ESTIMATE QUANTITY	TOTAL ESTIMATE QUANTITY	\$ AMOUNT
001	PROGRESS SCHEDULE (CRITICAL PATH METHOD)	LS	2,500.0000	2,500.00		0.900	2,250.00
002	SMALL BUSINESS UTILIZATION REPORT	EA	250.0000	2,250.00		6.000	1,500.00
003	TIME-RELATED OVERHEAD	WDAY	410.0000	180,400.00		440.000	180,400.00
004	TEMPORARY FENCE (TYPE BW)	M	8.2000	30,094.00		3,844.860	31,527.85
005	TEMPORARY FENCE (TYPE ESA)	M	6.2000	11,718.00		1,986.150	12,314.13
006	TEMPORARY SHORING	M2	137.0000	104,120.00		44.400	6,082.80
007	TEMPORARY CREEK DIVERSION SYSTEM (LOCATION 1)	LS	16,000.0000	16,000.00		1.000	16,000.00
008	TEMPORARY CREEK DIVERSION SYSTEM (LOCATION 2)	LS	18,500.0000	18,500.00		1.000	18,500.00
009	TEMPORARY CREEK DIVERSION SYSTEM (LOCATION 3)	LS	16,000.0000	16,000.00		1.000	16,000.00
010	TEMPORARY CREEK DIVERSION SYSTEM (LOCATION 4)	LS	23,000.0000	23,000.00		1.000	23,000.00
011	TEMPORARY CREEK DIVERSION SYSTEM (LOCATION 5)	LS	16,000.0000	16,000.00		1.000	16,000.00
012	TEMPORARY CREEK DIVERSION SYSTEM (LOCATION 6)	LS	23,000.0000	23,000.00		1.000	23,000.00
013	CONSTRUCTION SITE MANAGEMENT	LS	2,500.0000	2,500.00		1.000	2,500.00
014	PREPARE STORM WATER POLLUTION PREVENTION PLAN	LS	2,500.0000	2,500.00		0.905	2,262.50
015	TEMPORARY SILT FENCE	M	8.0000	35,040.00		4,507.200	36,057.60
016	TEMPORARY GRAVEL BAG BERM	M	5.5000	14,080.00		295.000	1,622.50
017	TEMPORARY CONSTRUCTION ENTRANCE	EA	1,700.0000	10,200.00		15.000	25,500.00
018	TEMPORARY COVER	M2	3.1000	7,967.00		988.000	3,062.80
019	TEMPORARY CHECK DAM	M	6.4000	832.00		1,457.000	9,324.80
020	MOVE-IN/MOVE-OUT (TEMPORARY EROSION CONTROL)	EA	825.0000	4,950.00		9.000	7,425.00
021	TEMPORARY DRAINAGE INLET PROTECTION	EA	118.0000	7,080.00		70.000	8,260.00
022	TEMPORARY HYDRAULIC MULCH (BONDED FIBER MATRIX)	M2	0.7500	12,900.00		48,149.850	36,112.39

Example 3-9.5. Sample of the Project Record Estimate, Summary of Payment

PROGRAM CAS145										STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION		PAGE 7	
DATE 06/13/12										P R O J E C T R E C O R D - E S T I M A T E		04-888884	
TIME 10:46 AM												ESTIMATE NO. 29	
BID OPENING 11/10/09												WORK PERFORMED THROUGH 05/21/12	
R.E. NAME: MAYA, TYKE												DATE OF THIS ESTIMATE 06/13/12	
ITEM NO.	ITEM DESCRIPTION	UNIT	CONTRACT PRICES	ORIGINAL AUTH. AMT	THIS ESTIMATE QUANTITY	THIS ESTIMATE \$ AMOUNT	TOTAL ESTIMATE QUANTITY	TOTAL ESTIMATE \$ AMOUNT					
SUBTOTAL CONTRACT ITEMS WITHOUT MOBILIZATION													
ADJUSTMENT OF COMPENSATION													
EXTRA WORK													
SUBTOTAL AMOUNT EARNED WITHOUT MOBILIZATION													
151	MOBILIZATION	LS	440,000.0000	440,000.00		678.00	1.000	9,895,807.47					
ORIGINAL CONTRACT AMOUNT													
TOTAL WORK COMPLETED													
MATERIALS ON HAND ON SITE													
MATERIALS ON HAND ELSEWHERE													
DEDUCTIONS													
TOTAL													
ITEMS FOR WHICH CONTRACT PRICE EXCEEDS MAXIMUM VALUE													
N O N E													
DATE CONTR	DATE WORK	JOB COM-	WORKING	WEATHER NON-	C.C.O.	OTHER	PERCENT	PERCENT					
APPROVED	DAYS	STR	DAYS	WORKING DAYS	DAYS	DAYS	COMPLETED	ELAPSED					
01/06/10	565	01/20/10	440	0	0	0	100%	100%					
MAYA, TYKE													
RESIDENT ENGINEER													
PROGRAM CAS145													
DATE 06/13/12													

### Example 3-9.6. Schedule B – Extra Work and Adjustment of Compensation

```

PROGRAM CAS145  S C H E D U L E   O F   E X T R A   W O R K  PAGE NO. 1
DATE 06/13/12                                     EST. NO.29
TIME 10:46 AM
R.E. NAME: MAYA, TYKE                                04-888884
-----
CCO REPORT      REPORT TYPE OF WORK(+) WORK  BR CONTR
NO.  NUMBER      AMOUNT PERFORMED  (-) DATE  WK RPT.NO C O M M E N T S
-----
001 0583          299.24 E.W. @ F.A. (+) 050312 N 1039.0
      0584          1,040.25                050312 N 1040.0
      0585          2,005.32                051512 N 1045.0
010 0103        16,640.84 A.C. @ U.P. (+) 123111 N 100RS0
035 0003          5,742.24 E.W. @ F.A. (+) 061411 N 0662.0
054 0005        21,651.92 E.W. @ F.A. (+) 121911 N ABL2 0
058 0003          629.20 E.W. @ F.A. (+) 050112 N 1041.0
      48,009.01 TOTAL THIS ESTIMATE
      2,518,826.34 TOTAL PREVIOUS ESTIMATE
      2,566,835.35 TOTAL TO DATE

```

### Example 3-9.7. Schedule of Extra Work

```

PROGRAM CAS145  S C H E D U L E   O F   E X T R A   W O R K  PAGE NO. 1
DATE 06/13/12                                     EST. NO.29
TIME 10:46 AM
R.E. NAME: MAYA, TYKE                                04-888884
-----
CCO REPORT      REPORT TYPE OF WORK(+) WORK  BR CONTR
NO.  NUMBER      AMOUNT PERFORMED  (-) DATE  WK RPT.NO C O M M E N T S
-----
001 0583          299.24 E.W. @ F.A. (+) 050312 N 1039.0
      0584          1,040.25                050312 N 1040.0
      0585          2,005.32                051512 N 1045.0
010 0103        16,640.84 A.C. @ U.P. (+) 123111 N 100RS0
035 0003          5,742.24 E.W. @ F.A. (+) 061411 N 0662.0
054 0005        21,651.92 E.W. @ F.A. (+) 121911 N ABL2 0
058 0003          629.20 E.W. @ F.A. (+) 050112 N 1041.0
      48,009.01 TOTAL THIS ESTIMATE
      2,518,826.34 TOTAL PREVIOUS ESTIMATE
      2,566,835.35 TOTAL TO DATE

```

### Example 3-9.8. Schedule of Deductions

```

PROGRAM CAS145  S C H E D U L E   O F   D E D U C T I O N S  PAGE NO. 1
DATE 06/13/12                                     EST. NO.29
TIME 10:46 AM
R.E. NAME: MAYA, TYKE                                04-888884
-----
DEDUCTION DESCRIPTION      AMOUNT  EST  THIS  TOTAL
                           NO.      ESTIMATE  ESTIMATE
-----
ADMINISTRATIVE
RESTAKING CHARGE REQ 62    -1,065.00  18
RESTAKING CHARGE REQ 65    -1,065.00  22
                           0.00      -2,130.00
LABOR COMPLIANCE VIOLATION
MISSING PAYROLLS           -10,000.00  20
RETURN PAYROLL DEDUCTION    10,000.00  21
MISSING PAYROLLS           -10,000.00  29
                           -10,000.00      -10,000.00
TOTAL DEDUCTIONS           -10,000.00      -12,130.00

```

## Section 0 Conduct of the Work

## Section 0 Conduct of the Work

### 5-001 Resident Engineer's Pending File

### 5-001 Resident Engineer's Pending File

For guidance and information, the project engineer assembles and forwards to the resident engineer a set of letters, memorandums, and other data titled "resident engineer's pending file." This file must contain all pertinent information, comments, and advice that may be useful on the specific project to which the resident engineer is assigned. A detailed list of the information that should be included in the resident engineer's pending file is contained in Chapter 15, "Final Project Development Procedures," Section 2, "Construction," of the *Project Development Procedures Manual*. The file usually includes the following:

- Memorandums between programs, service centers, and districts, especially comments about preliminary reports and dummy special provisions.
- Special requirements that are enumerated in the freeway agreement and that may require action by the resident engineer. For instance, a special requirement may be notification of the date work begins on locally owned facilities.
- Memorandums about materials from the Materials Engineering and Testing Services (METTS) or the district Materials Unit.
- Copies of right-of-way agreements that require work to be done under the contract or that affect the project's construction.
- Copies of "Notice to Owner," which covers utilities and their completion status.
- Copies of the partially completed Form FA-2134, "Utility Account Action Request," which the resident engineer will use for the installation and coordination of utility services. Forward this form to the Division of Accounting and the district signals and lighting coordinator. If there is no form and the plans have utilities, contact the district signals and lighting coordinator to ensure proper procedures are followed. This form is available on the Division of Accounting's intranet website.
- Copies of correspondence giving the background of any unusual project features.
- All pertinent engineering data previously prepared in connection with the project. This data should include the project engineer's quantity calculations.
- Copies of the project report, preliminary report, and materials reports.
- A copy of the "materials information" as given to prospective bidders.
- A copy of the environmental document, including any permits, agreements, and commitments.
- A separate summary of all environmental commitments, as well as any special instructions or explanations for meeting permit and other legal requirements and commitments to other agencies.
- A copy of the risk register that documents possible construction issues. More information can be obtained from the *Project Risk Management Handbook: A*

*Scalable Approach*, located at:

[http://www.dot.ca.gov/hq/projmgmt/guidance\\_prmhb.htm](http://www.dot.ca.gov/hq/projmgmt/guidance_prmhb.htm)

- The resident engineer must consult with the project engineer who forwarded the file if the file has any of the following problems:
  1. Information appears to conflict.
  2. Information appears to be missing.
  3. Additional information or explanations are required.

**5-002  
Preconstruction  
Conference With  
Caltrans Personnel**

**5-002 Preconstruction Conference With Caltrans Personnel**

Before the start of construction, the resident engineer should review the job with the following people:

- Project manager
- Project engineer
- Right-of-way agent
- Hydraulics engineer
- Traffic engineer
- Materials engineer
- Maintenance superintendent
- Environmental construction liaison
- Construction stormwater coordinator
- Environmental planner
- Public information officer
- Landscape architect (if landscape work is included in the project)
- Local agencies and communities
- Affected utility companies
- Federal Highway Administration (FHWA) transportation engineer (only for projects of division interest)
- Others who may have a direct interest in the project

At this preconstruction stage, such a review will significantly aid in explaining the reasons for certain design features such as the following:

- Right-of-way obligations
- Signing and traffic handling difficulties
- Materials sites
- Selected material
- Foundation treatment
- Potential slides
- Environmental commitments
- Potential drainage and maintenance problems, including erosion control and water pollution

The resident engineer must ensure implementation of environmental mitigation

measures included in the project approval. To be fully informed of the environmental mitigation measures, commitments, or concerns on projects that are related to environmental commitments, the resident engineer must review the environmental commitment record and meet with the assigned environmental staff. At the same time, the resident engineer can reach agreement on both the assistance required from environmental specialists, and the tentative schedule and plan for environmental monitoring.

On projects involving structure construction personnel, preconstruction conferences are mandatory and should be held as soon as possible after bids are opened. The conferences should include structure and construction engineers, the resident engineer, and the structure representative. These personnel should reach agreement regarding the following items:

- Office facilities. The district must provide suitable office space and furniture for both district and structure field personnel. When the office facilities are trailers, the resident engineer and structure representative should occupy the same trailer. When the office facilities are in a building, the engineer and the representative should occupy adjacent rooms. This arrangement facilitates the assignment of the structure engineer as acting resident engineer during extended absences of the assigned resident engineer.
- Personnel for the total work. Conference participants must discuss the total work (both road work and structure work) and take full advantage of instances in which people could be used interchangeably to reduce the number of people on the project. When the contractor's schedule is available, meeting participants must review the personnel required.
- Division of the work. The items should be categorized as road work and structure work. In some cases, the item may be divided by portions of items or by phases of the work. Before the start of work, Structure Construction requires from the structure representative a written report on this categorization of the work.

### **5-003 Preconstruction Conference With the Contractor**

Before the start of work, a conference must be held. Depending on the project's complexity, more than one conference may be desirable to limit the scope and number of individuals attending. The conferences must include the resident engineer and structure representative and may include principal assistants, the construction engineer, the district construction deputy director, the contractor's superintendent, and other key personnel. Specialists should be included, too, such as the district labor compliance officer and the district safety coordinator. Alternatively, the resident engineer may cover the respective responsibilities.

When environmental commitments have been made that affect or constrain the contractor's operations, the environmental-construction liaison and other appropriate environmental specialists should attend the preconstruction conference with the contractor.

Meeting participants should discuss, among other items, the following:

- Work plans
- Contingency plans
- Equipment to be used

### **5-003 Preconstruction Conference With the Contractor**

- Progress schedule
- Layout of job
- Labor compliance
- Equal employment opportunity
- Safety requirements
- Temporary pedestrian access routes
- Americans with Disabilities Act (ADA) requirements for permanent pedestrian facilities
- Environmental commitments and permits
- Water pollution control requirements
- Job-produced materials quality control and acceptance testing
- Buy America requirements
- Progress payment process

This discussion affords both parties a common understanding of the proposed work and the problems and possible solutions that may be expected during the life of the contract.

The contractor should receive notice of the items that will be discussed. Among other documents, the contractor must bring a copy of the contractor's "Code of Safe Practices" and a water pollution control plan. The project file must contain a record of the conferences (or the reason for omitting a conference). Depending on the conference's complexity, the record can be a relatively complete set of minutes or a copy of the resident engineer's daily report.

The police, fire department, public transportation agency, schools, and other affected agencies should receive any information developed from the meetings that will affect these agencies' operations.

The list below presents guidelines for the preconstruction conference. These are reminders only. Items will be included if applicable to a specific project. Also, consider any previous experience of a particular contractor with Caltrans projects. Further, the district construction office may have completed some of the items; therefore, those items need not be included at the conference.

- Introduce all participants, including in your introduction statements about each person's responsibilities for the project.
- Discuss superintendence as well as lines of authority for both contractors and Caltrans personnel. If you have not yet received it, request the written information required by Section 5-1.16 "Representative," of the *Standard Specifications*.
- Discuss the subcontracting requirements covered in Section 5-1.13, "Subcontracting," of the *Standard Specifications*.
- When required by the special provisions, discuss railroad insurance.
- Discuss requirements related to labor compliance and equal employment opportunity. Advise the contractor of the deadlines for submitting payrolls and other required documents. Also advise the contractor of the contractual and administrative deductions that will be applied for noncompliance. Provide the necessary Department-furnished forms and posters.



- Review the contract's safety requirements.
- Discuss the requirements that pedestrian access must be provided when construction activities require the closure of an existing pedestrian route. The contractor must provide notice 5 business days prior to closing an existing pedestrian route and the temporary pedestrian access route must be inspected for compliance with ADA standards prior to allowing use. If the contract does not have a bid item for Temporary Pedestrian Access Route and existing pedestrian routes must be closed to perform the work, the contractor must submit a work plan for a temporary pedestrian access route.
- For pedestrian facilities, discuss that every pedestrian facility constructed on the project will be inspected and that dimensions and slopes of the completed facilities must meet those specified or the work may have to be removed and replaced. Also discuss the preconstruction and post construction survey requirements for pedestrian facilities when identified in the contract by a survey bid item.
- Advise the contractor that contract administration forms are available on the Division of Construction website.
- Discuss the procedure for inspecting materials, particularly the early submittal of Form CEM-3101, "Notice of Materials to Be Used."
- When the contract requires, discuss the contractor's quality control plans.
- Discuss the communication of job-produced materials quality control testing and acceptance testing, including identification of high-priority tests, shipping of samples, lines of communication for test results, timeframes for reporting quality control and acceptance test results, and any contractual testing dispute resolution processes.
- Discuss the requirements for submitting working drawings.
- Discuss the progress schedule (if the contract requires). If the contract requires a critical path method schedule, discuss the provisions for submitting, reviewing, updating, and revising it. Refer to Section 3-801, "Schedule," of this manual.
- Discuss weighing procedures, weight limitations, and the Caltrans policy on overloads. For more information, refer to Section 3-519B, "Load Limits," of this manual.
- Discuss the progress payment process. Advise the contractor of administrative procedures and deadlines for payment for material on hand, which must be submitted on Form CEM-5101, "Request for Payment for Materials on Hand." Discuss specification requirements for force account, contractor force account work report documentation, and submittal of change order bills on or before the 15th day of the month. Discuss the resident engineer's role in (1) submitting change order bills for extra work at agreed price and payment adjustments, (2) reviewing contractor's submitted change order bills, (3) revision of bills to match Caltrans records, if necessary, and (4) approval of both undisputed and revised bills by the 20th of the month. Also discuss withholds (progress, performance failure, stop notice, penalty) and deductions (administrative, equal employment opportunity, labor compliance violation, liquidated damages).
- Discuss the optional collaborative progress payment process in Section 3-906, "Progress Payments," of this manual, and determine if the contractor will participate.



Share the location of the progress payment schedule cut-off date table (<http://www.dot.ca.gov/accounting/paysch.html>).

- Discuss the requirements for submitting survey requests and any significant survey issues.
- Review the contract provisions about water pollution control. Discuss the contractor's water pollution control plan.
- Review the contract provisions and the environmental commitments record for environmental permits and agreements. Discuss the contractor's plan for implementing environmental commitments and environmental work windows.
- Remind the contractor to submit a program to control water pollution before beginning work.
- Discuss the requirements for handling public traffic.
- Discuss any unusual project features.
- Remind the contractor of the contractual procedures to follow in the event of disagreements. Emphasize the necessity for timely written notices and required submittal of completed CEM-6201D, "Initial Potential Claim Record"; CEM-6201E, "Supplemental Potential Claim Record"; and CEM-6201F, "Full and Final Potential Claim Record."
- Discuss the scheduling of utility work. For a discussion of utility preconstruction conferences, refer to Section 3-518C, "Nonhighway Facilities," of this manual.

#### **5-004 Resident Engineer's Daily Report**

#### **5-004 Resident Engineer's Daily Report**

The following instructions are directed to the resident engineer:

- For each day during the project's life, make a daily report on Form CEM-4501, "Resident Engineer's Daily Report or Assistant Resident Engineer's Daily Report."
- Include any information that may be pertinent even though no activity may have occurred. For example, such information could include support for determining working or nonworking days. Include the following in the daily report:
  1. Important discussions and agreements with the contractor. Record these on the day discussed. Give the names of specific persons to whom instructions were given or with whom agreements were made. If the contractor objects or comments, note these items, too. Actual quotations on significant discussion points can be useful. Through letters to the contractor, confirm important verbal instructions. Also refer to Section 5-4, "Disputes," of this manual.
  2. A general statement about the type of work done. Include the controlling operation and any facts concerning the work's progress.
  3. Weather conditions such as maximum and minimum temperatures and precipitation, among other items. Expand on exceptional weather conditions.
  4. Statements of any other important facts pertaining to the contract that are not specifically covered elsewhere in the contract records.
- Keep the report concise, yet include any important information. The report should not contain routine matters, such as quantities placed, that can be found in other records.

- Promptly send one copy of the daily report to the construction engineer, who will review the copy. After the review, the construction engineer may discard the copy or file it until the project's completion, in accordance with district policy. Retain the original copy with the project records.

### **5-005 Assistant Resident Engineer's Daily Report**

To report the activity for a contract item, assistant resident engineers must submit a report for each contract day. Complete the report on Form CEM-4601, "Assistant Resident Engineer's Daily Report." Also, use this form for reporting extra work and for labor compliance. The form contains a narrative portion and a tabular portion.

The narrative portion of the assistant resident engineer's report should include statements about the contractor's operation and the activities of the individual preparing the report. The description of the contractor's operation should include the following:

- The location where the work was performed
- A brief description of the operation
- The quantities placed or the amount of work completed for the day
- Significant statements by the contractor

The statement of the assistant resident engineer's activities should be sufficient to demonstrate the performance of duties such as those outlined in Chapter 4, "Construction Details," of this manual. Record observations of contractor compliance or noncompliance, actions taken, statements made to the contractor, and approvals given.

Use the tabular portion of Form CEM-4601, to report the following:

- Extra work. For details, refer to Section 3-906C, "Extra Work," of this manual.
- Hours worked by labor and equipment. Provide sufficient detail to permit a review of the contractor's costs in a manner similar to force account. Using the publication titled *Labor Surcharge and Equipment Rental Rates (Cost of Equipment Ownership)*, sufficiently identify equipment to enable the determination of applicable rental rates. Sufficiently identify the labor classification to enable determination of the appropriate wage rate. Also record the equipment's arrival and departure dates, as well as idle time for breakdowns or other reasons. This information can be used to make a possible adjustment of compensation due to an overrun or an underrun of quantities, a change in character, a protest, or a potential claim. The *Labor Surcharge and Equipment Rental Rates* book is available on the Caltrans website at:  
  
<http://www.dot.ca.gov/hq/construc/equipmnt.html>
- The name of the contractor or subcontractor performing the work. When the report will be used to determine compliance with the contract's labor provisions, you must include the names or identification numbers of the contractor's personnel or report these separately. However, if the report is not for determining compliance with the contract's labor provisions, you only need to include in the tabular portion of the daily report the respective classifications of the work being performed and the number of hours worked on the date the report covers.

Distribute the assistant resident engineer's reports as follows:

- Retain the original of all reports in the project files in the field office.

### **5-005 Assistant Resident Engineer's Daily Report**

- File reports covering extra work according to the procedure in Section 5-102, “Organization of Project Documents,” of this manual.
- Distribute all other copies in accordance with district policy.

Refer to Section 5-102, “Organization of Project Documents,” of this manual for details to consider when establishing a system for handling assistant resident engineer’s reports on a specific project.

## **5-006 Maintenance Reviews**

### **5-006 Maintenance Reviews**

Keep maintenance superintendents and supervisors informed of the start of work and job progress for all construction projects within the superintendents’ and supervisors’ maintenance areas. Before the start of construction, send a copy of Form CEM-0101, “Resident Engineer’s Report of Assignment,” to the maintenance region manager.

Provide the maintenance superintendents and supervisors an opportunity to review the contract with the resident engineer and to conduct a joint field review of the job site within the first 2 weeks of construction. The intent of this field review is to accomplish the following:

- Discuss the scope of the project.
- Coordinate contingency planning for traffic management.
- Discuss Caltrans’ maintenance responsibility as described in Section 3-519, “Maintenance and Protection,” of this manual.
- Discuss complex construction activities that could affect adjacent maintenance operations.
- Discuss features requiring special attention.
- Discuss manufacturers’ warranties and service instructions.
- Schedule regular reviews. When the contract work is 50 percent complete, schedule at least one review, unless both construction and maintenance representatives agree the review is unnecessary.

When the project nears 90 percent completion, invite the maintenance superintendent, supervisor, or both, for a final field review of the project. Ensure this review includes identifying all items necessary to comply with the construction National Pollutant Discharge Elimination System permit. A copy of the permit is available at the State Water Resources Control Board website:

[http://www.waterboards.ca.gov/water\\_issues/programs/stormwater/caltrans.shtml](http://www.waterboards.ca.gov/water_issues/programs/stormwater/caltrans.shtml)

During the 90 percent field review meeting, the resident engineer and maintenance superintendent or supervisor, or the district maintenance storm water coordinator will complete Form MTCE-0023, “Construction to Maintenance 90% BMP Completion Walkthrough.” Form MTCE-0023 is available on Caltrans’ Electronic Forms Management website:

<http://cefs2.dot.ca.gov/jsp/forms.jsp>

Using this form will assist in identifying, discussing, and documenting the project elements such as structural treatment best management practices (BMPs), drainage systems, and permanent erosion and sediment controls, while noting their functionality and communicating any specific instruction related to maintaining them. This review should provide the resident engineer sufficient time to correct deficiencies prior to contract acceptance and verify that elements such as structural treatment BMPs drainage

systems, and permanent erosion and sediment controls are constructed in accordance with the project plans and specifications.

The resident engineer should work closely with the district maintenance personnel to make minor field adjustments to the project. The project manager must approve any amendments to the contract plans or specifications that significantly affect project cost, scope, or schedule.

Prior to construction contract acceptance and in accordance with Section 3-523, “Final Inspection and Contract Acceptance,” of this manual, the resident engineer must schedule a final inspection with maintenance. During the final inspection, update Form MTCE-0023 to reflect changes and corrective actions implemented since the 90 percent walkthrough. Both the resident engineer and the maintenance representative must sign the form when they have completed their final inspection. File a copy of the form in Category 63, “Project Completion Documents,” and send copies to the district pollutant-discharge coordinator, district design stormwater coordinator, and district construction stormwater coordinator. The maintenance representative will maintain the original and is responsible for sending a copy to the maintenance regional manager.

When the work is complete or nearly complete and just before construction contract acceptance, the resident engineer must notify the maintenance superintendent or supervisor to facilitate the transfer of maintenance and responsibility from the contractor to Caltrans forces.

#### **5-007 Federal Highway Administration Involvement in Contract Administration**

When assigned the responsibility for a construction contract, the resident engineer first must determine if it is a federal-aid contract and, if so, the federal-aid classification for the contract. The resident engineer should review the construction contract and the resident engineer’s pending file, and talk to the project manager to determine the project’s federal-aid classification.

FHWA funded projects are classified as either projects of division interest or delegated projects to indicate their involvement in the project as stated in the stewardship agreement between FHWA and Caltrans. Information on this stewardship agreement can be found on the Division of Budgets website:

<http://budgets.onramp.dot.ca.gov/fhwa-oversight>

Caltrans assigns project numbers to federally funded projects, and Caltrans and FHWA jointly determine project classifications. Caltrans then adds a suffix “N” or “E” to the end of the project number. Projects with the suffix “N” are projects of division interest. Projects with the suffix “E” are delegated projects.

##### **5-007A Federal Highway Administration Involvement on Projects of Division Interest—N**

Caltrans and FHWA will jointly determine projects of division interest responsibilities on a project-by-project basis and usually as part of the project development team process. They will establish which project responsibilities will be retained by FHWA and which will be delegated to Caltrans in a project of division interest agreement. The resident engineer should receive a copy of the project of division interest agreement in the resident engineer’s pending file or from the project manager. Before the start of construction, the construction senior engineer must review the agreement with the FHWA transportation engineer and discuss FHWA’s involvement on the project.

#### **5-007 Federal Highway Administration Involvement in Contract Administration**

The resident engineer is required to submit a copy of the CEM-6303, “Final Acceptance Checklist for Federal-Aid Projects of Division Interest (PODI),” to the FHWA transportation engineer along with a copy of the proposed final estimate. FHWA will document the project status and final voucher the project with these documents.

5-007B Federal Highway Administration Involvement on Delegated Projects—E

Caltrans is responsible for most federal approvals and oversight requirements on delegated projects. Resident engineers are not formally required to communicate with the FHWA transportation engineer except for Buy America requirements and when there are changes to the federal environmental requirements. FHWA has delegated to Caltrans some of FHWA’s authority and responsibility for compliance with National Environmental Policy Act and other environmental laws. Resident engineers should review the project environmental documents and discuss with the district environmental-construction liaison, to determine if FHWA involvement is necessary when there are changes to the environmental requirements for the project. Information on Buy America requirements and FHWA involvement can be found in Section 3-604, “Buy America,” of this manual. Informal discussions with FHWA for technical guidance are encouraged.

Caltrans receives federal-aid funds indirectly from the California Office of Traffic Safety (OTS). Construction projects with a federal-aid number and OTS designation contain the same special provisions as delegated projects. The same procedures apply to OTS projects as delegated projects.